2013 WETLAND DETERMINATION DATA FORMS

Point ID	Cowardin	Vierick	Sheet
T1-1	PSS1B	IIC1	1
T1-2	UPLAND	IIB2	1
T1-3	PEM1C	IIIA3	1
T1-5	PSS4B	IIB1	1
T2-6	PSS1/EM1C	IIB2	5
T2-8	PSS1/EM1C	IIB1	5
T2-9	PSS1/4B	IIC2	2
T2-10	PSS4B	IID1	5
T2-11	PEM1C	IIIA3	2
T3-12	PSS1/EM1B	IIB1	7
T3-13	UPLAND	IA3	7
T3-14	PSS1/EM1C	IIB1	7
T3-16	PSS1/EM1B	IIB1	7
T3-17	UPLAND	IA2	7
T3-19	PEM1B	IIIA3	7
T4-18	PFO4/PSS1B	IA2	9
T4-20	PEM1C	IIIA3	9
T4-21	UPLAND	IIC1	9, 10
T4-23	UPLAND	IA2	9, 10
T4-25	UPLAND	IIB1	9
T4-26	PSS1B	IIB1	9
T4-27	PSS1/4B	IIC2	9
T5-28	PSS1B	IIC1	11
T5-29	PSS1/EM1B	IIB1	11
T5-30	PSS4C	IIB1	11
T5-31	PSS1B	IIC1	11
T5-32	PSS1/EM1C	IIB2	11
T5-33	PFO4/SS1B	IA2	11
T5-34	PSS1/4B	IIC2	11
T5-35	PEM1B	IIIA3	11
T6-36	PSS4/EM1B	IID2	14
T6-37	PFO4/SS4B	IA2	14
T6-38	UPLAND	IA2	14
T6-40	PSS1/EM1B	IIC1	14
T6-42	UPLAND	IC2	14
T8-44	PSS4/EM1B	IIC1	27
T8-45	UPLAND	IB2	27
T8-46	PSS1/EM1B	IIC1	27
T8-47	PSS1/EM1B	IIC1	27
T8-48	UPLAND	IA3	27
T8-49	PEM1B	IIIA3	27
T8-50	PSS1/EM1B	IIB1	27
T9-52	PSS1B	IIB1	29

Point ID	Cowardin	Vierick	Sheet
T9-53	UPLAND	IIB1	29
T9-54	PSS1B	IIC1	29
T9-55	PSS3/EM1B	IIC1	29
T9-56	PSS1B	IIB1	29
T9-57	PSS1/EM1B	IIB1	29
T9-58	PSS1B	IIC1	29
T9-60	PSS1B	IIC2	29
T9-61	PSS1/EM1B	IIB2	29
T10-62	UPLAND	IC2	31
T10-63	UPLAND	IC1	31
T10-64	UPLAND	IA3	31
T10-66	UPLAND	IID2	31
T10-68	UPLAND	IIC1	31
T11-65	UPLAND	IA3	34
T11-67	UPLAND	IB2	34
T11-70	UPLAND	IC2	34
T11-72	PFO4/SS1B	IA2	34
T11-74	PSS4/EM1B	IIC1	AUX
T12-73	PSS1B	IIB1	AUX
T12-75	UPLAND	IIC1	AUX
T12-76	PFO4/SS1B	IA2	AUX
T12-77	PFO4/SS1B	IA2	AUX
T12-78	UPLAND	IB3	AUX
T12-80	UPLAND	IB2	AUX
T12-82	UPLAND	IC2	AUX
T12-84	PSS4/EM1B	IIB1	AUX
T12-86	PSS1C	IA3	AUX
T13-79	UPLAND	IA2	AUX
T13-81	UPLAND	IA2	AUX
T13-88	UPLAND	IA2	AUX
T13-90	UPLAND	IA2	AUX
T13-92	UPLAND	IIB1	AUX
T14-83	UPLAND	IC2	AUX
T14-85	UPLAND	IA2	AUX
T14-87	PSS1/EM1B	IIC1	AUX
T14-94	PSS1/EM1C	IIB1	AUX
T14-96	PSS1B	IIC1	AUX
T14-98	UPLAND	IA2	AUX
T14-100	UPLAND	IB2	AUX
T15-102	UPLAND	IA2	AUX
T15-106	UPLAND	IIB2	AUX
T15-106	UPLAND	IIB2	AUX
T15-108	R3UB1	W	AUX

Point ID	Cowardin	Vierick	Sheet
T15-110	UPLAND	IC1	AUX
T16-112	UPLAND	IA3	AUX
T16-114	PEM1B	IIIA3	AUX
T16-116	PEM1	IIIA3	AUX
T16-118	UPLAND	IA3	AUX
T16-120	UPLAND	IIB1	AUX
T16-89	UPLAND	IA2	AUX
T16-91	PEM1C	IIIA3	AUX
T16-93	PSS1/EM1B	IIC1	AUX
T16-97	PSS1/EM1C	IIB2	AUX
T17-99	PSS1C	IIC1	AUX
T17-103	PSS1B	IIC1	AUX
T17-124	PSS4/EM1H	IID2	AUX
T17-126	PSS4/EM1C	IID1	AUX
T18-105	PEM1B	IIIA3	AUX
T18-107	UPLAND	IB2	AUX
T18-109	UPLAND	IA1	AUX
T18-128	UPLAND	IC1	AUX
T18-130	UPLAND	IB1	AUX
T19-111	PSS1/EM1B	IIC1	38
T19-113	UPLAND	IC2	38
T19-132	PSS1/EM1C	IIB1	38
T19-134	UPLAND	IB3	38
T20-117	PSS1/EMB	IIB1	39
T20-119	UPLAND	IC2	39
T20-136	UPLAND	IC2	39
T20-138	PSS1/EM1B	IIC1	39
T21-121	PEM1C	IIIA3	42
T21-123	UPLAND	IA2	42
T21-125	PSS1/EM1B	IIB2	42
T21-140	UPLAND	IC2	42
T21-142	PSS1/EM1C	IIB2	42
T21-144	PSS1/EM1C	IIC1	42
T21-146	UPLAND	IC2	42
T21-148	PSS1C	IIB1	42
T22-127	UPLAND	IC2	43
T22-129	UPLAND	IC2	43
T22-131	UPLAND	IC1	43
T22-150	UPLAND	IA2	43
T22-152	PEM1C	IIIA3	43
T22-158	UPLAND	IA2	43
T23-135	PSS1/EM1B	IIC2	45
T23-137	PSS1B/EM1B	IIC1	45

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T23-139	UPLAND	IIC2	45
T23-160	PSS1/EM1B	IIC1	45
T23-162	PEM1H	IIIA3	45
T24-141	PSS1B/EM1B	IIB1	47
T24-143	PSS1B/EM1B	IIB2	47
T24-168	PSS1C/EM1C	IIB1	47
T24-170	PFO4/SS1B	IA2	47
T25-145	UPLAND	IA2	48
T25-147	PSS1/EM1B	IA2	AUX
T25-149	UPLAND	IC2	AUX
T25-172	UPLAND	IC2	48
T25-174	UPLAND	IIB1	48
T25-176	PSS4/EM1B	IIC1	48
T26-151	UPLAND	IA2	53, 54
T26-153	UPLAND	IA2	53, 54
T26-178	UPLAND	IA2	53
T27-155	UPLAND	IA2	59
T27-157	UPLAND	IA2	59
T27-159	PSS1B	IA3	59
T27-180	UPLAND	IA2	59
T27-182	PSS1/EM1B	IIB2	59
T27-184	PFO4/SS1B	IA2	59
T28-161	PFO4/SS1B	IA1	105
T28-163	UPLAND	IA3	105
T28-186	UPLAND	IA1	105
T29-165	UPLAND	IA1	63
T29-167	PFO4/SS1B	IA2	63
T30-169	PSS1/EM1C	IIB1	107
T30-171	UPLAND	IA3	107
T30-173	UPLAND	IC2	107
T30-175	PEM1B	IIIA3	107
T30-188	UPLAND	IA3	63
T30-190	PSS1/EM1C	IIB1	63
T30-194	UPLAND	IA2	63
T30-196	PSS1B	IIB1	63
T31-177	UPLAND	IA3	108
T31-179	UPLAND	IC2	108
T31-181	UPLAND	IA3	108
T31-198	UPLAND	IIB2	107
T31-200	UPLAND	IA2	107
T31-202	PSS1/EM1B	IIC2	107
T32-183	PSS1/EM1C	IIB1	115
T32-185	UPLAND	IA2	115

Point ID	Cowardin	Vierick	Sheet
T32-206	UPLAND	IA2	108
T32-208	PSS1,B	IIC1	108
T32-210	PEM1C	IIIA3	108
T33-212	UPLAND	IC1	115
T34-187	UPLAND	IA2	119, 122
T34-214	PEM1B	IIIA3	119, 122
T34-216	UPLAND	IA2	119, 122
T34-218	UPLAND	IA2	119, 122
T35-191	UPLAND	IA3	125
T35-193	PSS4B	IA3	125
T35-195	PEM1B	IIIA3	125
T35-220	PEM1C	IIIA3	124
T35-222	PFO4/SS1B	IA2	124
T35-224	PSS1/PEM1C	IIC2	124
T35-226	PFO4/SS1B	IA2	124
T35-228	PSS1/EM1C	IA3	124
T36-197	PFO4/SS1B	IA2	130
T36-199	PSS1C	IIB1	130
T36-203	UPLAND	IA2	130
T36-230	PFO4/SS1B	IA2	130
T36-232	UPLAND	IA2	130
T36-234	PFO4/SS1B	IA2	130
T36-236	UPLAND	IA2	130
T36-238	PEM1B	IIIA3	130
T37-205	PSS1/4B	IA3	141
T37-207	PSS1/EM1B	IIC1	141
T37-240	UPLAND	IA1	141
T38-209	UPLAND	IA2	161
T38-211	UPLAND	IA3	161
T38-213	UPLAND	IC2	161
T39-215	UPLAND	IC2	143
T39-217	UPLAND	IA2	143
T39-219	UPLAND	IA2	142, 143
T39-246	UPLAND	IA2	143
T39-250	UPLAND	IA2	143
T40-221	UPLAND	IA2	146
T40-223	PFO4/SS1B	IA2	146
T40-225	UPLAND	IA1	146
T40-252	UPLAND	IA2	146
T40-254	UPLAND	IA2	146
T41-227	UPLAND	IA2	150
T41-229	UPLAND	IA2	150
T41-256	UPLAND	IA2	150

Point ID	Cowardin	Vierick	Sheet
T41-258	PFO4/SS1B	IA2	150
T41-260	PEM1C	IID1	150
T42-262	UPLAND	IA2	70
T43-235	UPLAND	IA2	154
T43-237	UPLAND	IA3	154
T43-264	PEM1C	IIIA3	154
T43-266	PSS1/EM1B	IIC1	154
T43-268	UPLAND	IA2	154
T44-239	PFO4/SS1B	IA2	160
T44-241	R3UB3	W	160
T44-243	UPLAND	IA2	160
T44-270	PFO4/SS1	IA2	160
T44-272	PFO4/SS1	IA2	160
T44-274	UPLAND	IA2	160
T45-245	UPLAND	IA2	103, 162
T45-247	UPLAND	IIC2	103
T45-276	PSS1B	IIB2	103
T45-278	PEM1C	IIIA3	103, 164
T100-500	PSS1/EM1H	IIC2	72
T100-501	PSS1/EM1B	IIC2	72
T100-502	PSS1B	IIC1	72
T100-503	PSS1/4B	IA3	72
T100-504	UPLAND	IA3	72
T100-505	UPLAND	IA3	72
T100-506	PEM1B	IIIA3	72
T101-507	UPLAND	IC2	75
T101-508	PSS1B	IA3	75
T101-511	UPLAND	IA2	75
T101-512	PSS1/EM1C	IIC1	75
T101-513	UPLAND	IA2	75
T101-514	PFO4/SS1B	IA2	75
T101-516	UPLAND	IA3	75
T102-515	UPLAND	IA2	77
T102-517	UPLAND	IIC1	77
T102-519	UPLAND	IIC1	77
T103-223	UPLAND	IA2	80
T103-518	UPLAND	IA2	77
T103-520	PFO4/SS1B	IA2	77
T103-521	PEM1/SS1B	IIB2	80, 81
T103-522	UPLAND	IA2	77
T103-525	PSS1/EM1B	IIB1	80
T104-527	UPLAND	IIC1	84, 85
T104-530	UPLAND	IA3	80, 81

Point ID	Cowardin	Vierick	Sheet
T104-531	PSS1/EM1B	IIB1	84
T104-532	UPLAND	IIB1	80, 81
T104-533	PSS1/EM1B	IA3	84
T104-534	PEM1	IIIA3	80, 81
T104-535	PFO4/SS1B	IA2	84
T105-537	UPLAND	IIC1	87
T105-539	UPLAND	IA2	87
T105-541	UPLAND	IA2	87
T105-543	UPLAND	IIC1	87
T106-536	PSS1/EM1B	IIC1	84
T106-538	PSS1/EM1B	IIB1	84
T106-540	PSS1/EM1C	IIB1	84
T106-545	PFO4/SS1B	IA2	89
T106-547	PEM1B	IIIA3	89
T106-549	PFO4/SS1B	IA2	89
T106-551	PSS1/EM1B	IIC2	89
T107-542	PSS1/EM1	IIB1	87
T107-544	UPLAND	IA3	87
T107-546	R3UB	W	87
T107-548	UPLAND	IA3	87
T107-553	PSS3B	IA2	91, 92
T107-555	PSS1B	IIB1	92
T107-557	PUBH	W	92
T108-550	PEM1C	IIIA3	89
T108-552	PFO4/SS1	IA2	89
T108-554	PFO4/SS1B	IA2	89
T108-556	PFO4/SS1B	IA2	89
T108-559	UPLAND	IA2	94, 95
T108-561	PSS1/EM1B	IIB1	94, 95
T108-563	PEM1C	IIIA1	94, 95
T108-563b	UPLAND	IA3	94, 95
T108-565	UPLAND	IC2	95
T108-567	PFO4/SS1B	IA2	95
T109-558	PSS1/EM1B	IIC1	91, 92
T109-560	PSS1B	IB3	92
T109-562	PSS1/EM1B	IIB1	92
T109-564	PSS1/EM1B	IIC2	91, 92
T109-569	UPLAND	IA2	97
T109-571	UPLAND	IA2	97
T109-573	R3UBH	W	97
T109-575	PSS1/EM1B	IIB1	97
T109-579	PFO4/SS1B	IA2	97
T110-568	UPLAND	IA2	94

Point ID	Cowardin	Vierick	Sheet
T110-570	UPLAND	IA2	94
T110-572	UPLAND	IA2	94
T110-574	PFO4/SS1B	IA2	94
T110-576	UPLAND	IA2	94
T110-581	PFO4/SS4B	IA2	251
T110-583	PEM1B	IIIA3	251
T110-585	UPLAND	IB1	251
T110-587	UPLAND	IIB2	251
T111-578	PFO4/SS1B	IA2	97
T111-580	UPLAND	IA2	97
T111-582	UPLAND	IA2	97
T111-584	PFO4/SS1B	IA2	97
T112-588	UPLAND	IC1	251
T112-590	UPLAND	IC1	251
T112-592	UPLAND	IB1	251
T114-589	UPLAND	IA2	249, 250, 251
T114-591	UPLAND	IA2	249, 250, 251
T114-593	UPLAND	IA2	249, 251
T114-595	PEM1B	IIIA3	249, 250
T114-596	UPLAND	IA1	249, 250
T114-598	UPLAND	IA1	249
T114-600	UPLAND	IA3	249
T115-597	PFO4B	IA2	247
T116-599	PFO4/SS1B	IA2	245
T116-601	PSS1/EM1B	IIC1	245
T116-603	PSS4/EM1B	IIA2	245
T116-604	PFO4/SS4B	IA2	245
T116-606	PEM1B	IIA3	245
T117-605	PSS4B	IA3	240
T117-607	UPLAND	IA2	240
T117-608	PSS1/EM1C	IIC2	240
T117-609	UPLAND	IA3	240
T117-610	PFO4/SS1B	IA2	240
T117-612	PEM1B/PSS1B	2	240
T118-620	PFO4/SS1B	IA2	98
T118-621	PSS1B	IIB2	98
T118-622	UPLAND	IA2	98
T118-623	PSS1B	IIC1	98
T118-624	UPLAND	IA2	98
T119-627	UPLAND	IA2	100
T119-628	PFO4/SS1B	IA2	100
T119-629	PSS1	IIB	100
T120-631	UPLAND	IA2	165

Point ID	Cowardin	Vierick	Sheet
T120-632	PSS1B	IIB1	165
T120-633	UPLAND	IB1	165
T120-634	PSS1B	IIC1	165
T120-635	UPLAND	IA2	165
T120-636	PEM1	IIIA3	165
T120-637	PSS1B	IIB1	167
T121-639	UPLAND	IC1	167
T121-640	UPLAND	IA1	167
T121-641	PSS1B	IIB1	167
T122-642	UPLAND	IA3	169, 170
T122-643	PSS1B	IA3	169, 170
T122-644	UPLAND	IC1	169, 170
T123-646	UPLAND	IB1	172
T123-647	UPLAND	IA2	172
T123-648	UPLAND	IIB1	172
T123-649	UPLAND	IA3	172
T123-650	PSS1B	IA3	172
T123-651	PSS1/4H	IIC1	172
T123-652	UPLAND	IB1	172
T123-653	PEM1C	IIIA3	172
T124-654	PSS1C	IIC1	174
T124-655	PSS1B	IIC1	174
T124-656	PEM1C	IIIA3	174
T124-657	UPLAND	IB1	174
T124-659	UPLAND	IA2	174
T125-660	UPLAND	IC2	175
T125-662	UPLAND	IA2	175
T125-663	PFO4/SS1B	IA2	174, 175
T126-664	PSS1B	IIC1	176
T126-665	PSS1/EM1B	IA3	176
T126-666	UPLAND	IA3	176
T126-667	UPLAND	IA2	176
T126-668	UPLAND	IIB1	176
T126-669	PSS1/EM1B	IIC1	176
T126-670	PSS1/EM1B	IA3	176
T126-672	UPLAND	IC1	176
T127-673	PSS4/EM1C	IID	183
T127-674	PSS1/EM1B	IIC2	183
T127-675	UPLAND	IA2	183
T127-676	UPLAND	IA2	183
T127-677	PSS1/EM1B	IIC1	183
T127-678	PSS1/4B	IA3	183
T128-683	UPLAND	IIB1	189

Point ID	Cowardin	Vierick	Sheet
T128-684	PSS1/4B	IIA1	189
T128-685	PFO4/SS1	IA2	189
T128-686	UPLAND	IA2	189
T128-687	PFO4/SS1/4B	IA2	189
T128-688	UPLAND	IC2	189
T128-689	PSS1/EM1C	IIC1	189
T129-679	PEM1	IIIA3	190
T129-680	PSS1/EM1B	IIA2	190
T129-682	PFO4/SS4B	IC2	190
T130-690	PSS4/EM1B	IIC1	191
T130-691	PSS1/EM1B	IIC2	191
T136-729	PSS1B	IIB1	233
T136-731	PSS1/EM1B	IIB	232, 233
T138-718	UPLAND	IB1	193
T138-722	PSS1B	IIB1	193
T138-739	PFO4/PSS4B	IA3	193
T138-741	PSS4/EM1B	IIB1	193
T138-743	UPLAND	IA2	193
T138-745	PSS1/EM1B	IIB1	193
T139-724	PSS4B	IIC2	194
T139-730	UPLAND	IA2	194
T139-732	PSS4/EM1B	IIC2	194
T139-747	UPLAND	IA2	194
T139-751	PSS1B	IIC2	194
T139-755	UPLAND	IA2	194, 195
T139-757	PSS1/EM1B	IIB1	194, 195
T140-734	PSS1/EM1B	IIC1	200
T140-736	UPLAND	IA2	197, 198, 199
T140-738	PFO4/SS1B	IA2	197, 198, 198
T140-761	PEM1B	IIIA3	198, 199
T140-763	PSS1/EM1B	IIB1	198, 199
T140-765	UPLAND	IC2	197, 198
T141-740	PSS1B	IA3	201
T141-742	PSS1/EM1B	IIC2	201
T141-767	UPLAND	IA3	201
T141-769	PSS1/EM1B	IIB1	201
T142-744	UPLAND	IA3	203
T142-746	PSS4C	W	203
T142-773	PFO4/PSS4B	IA	203
T142-777	UPLAND	IA2	203
T143-750	PSS1/EM1B	IIB1	206
T143-752	PSS1/4B	IIB1	206
T143-779	UPLAND	IA1	206

Point ID	Cowardin	Vierick	Sheet
T143-785	PSS1/EM1B	IIB1	206
T143-787	PEM1B	IIIA3	206
T144-754	PSS4/EM1B	IIB1	209
T144-756	PSS4/EM1	IA2	209
T144-760	PFO4/SS1C	IA2	209
T144-791	UPLAND	IIC1	209
T144-793	UPLAND	IA2	209
T145-760	UPLAND	IA2	221
T145-762	PSS4/EM1B	IIA2	221
T145-764	PFO4/SS1B	IA2	221
T145-795	UPLAND	IA2	221

Point ID	Cowardin	Vierick	Sheet
T145-797	UPLAND	IC1	221
T145-799	UPLAND	IA3	221
T146-766	PSS4/EM1C	IA3	217
T146-768	PSS1/4B	IIA2	217
T146-770	PSS1/EM1C	IID2	217
T146-801	PFO4/PSS1B	IA2	217
T146-803	PSS1B	IA2	217
T147-772	UPLAND	IC2	215
T147-774	PSS4B	IIA1	215
T147-805	PFO4/PSS1B	IA2	215
T147-807	UPLAND	IA3	215

Photo Point	Sheet
D1	21
D2	21
D3	21
D4	21
D5	21, 22
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D8	22
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D10	22
D11	22
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D31	134
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D36	137
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D42	137
D42b	137
D43	134
D44	137
D45	134, 135
D47	135
D48	136
D49	135
D50	136
D51	135
D52	136

Photo Point	Sheet
D53	135
D54	136
D55	135
D56	136
D57	135
D59	135
D60	136
D61	135
D62	136
D64	136
D70	136
T2-7	2
T6-39	14
T7-43	17
T8-51	27
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Photo Point	Sheet
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T144-789	209

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/17/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T1-1
Investigator(s): EG, AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): Interior Alaska Lat: 67.15066190 Long: -157.04350300 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1B, IIC1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: The sample point was taken at the transition between an emergent area and scrub\shrub vegetation on the north side of transect 1	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Vaccinium uliginosum	85	Yes	FAC
2. Dasiphora fruticosa	20	No	FAC
3. Juniperus communis	1	No	UPL
4. salix spp	22	No	FAC
5. Arctostaphylos alpina	30	Yes	FACU
6. Dryas integrifolia	15	No	FACU
Total Cover: 173			
50% of total cover: 86 20% of total cover: 34			
Herb Stratum			
1. Equisetum arvense	5	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 5			
50% of total cover: 2 20% of total cover: 1			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	132	x 3 = 396
FACU species	45	x 4 = 180
UPL species	1	x 5 = 5
Column Totals:	178 (A)	581 (B)

Prevalence Index = B/A = 3.26

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
___ Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 30
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: The sample point was taken on the north side of the transect near a transition area between an emergent area and a scrub\shrub area. Vegetation is problematic and exhibits morphological adaptations. Hydric soils were present as well as wetland hydrology.

SOIL

Sampling Point T1-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2		100		0				organics w\ roots
2-7	2.5Y 3/1	90	10YR 5/6	10	RM	M	Sandy Loam	saturated, prominent redox
7-16	10YR 4/2	80	10YR 5/8	20	RM	M	Loamy Fine Sand	prominent redox

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
X Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 16

Hydric Soil Present? Yes

Remarks: Saturation occured at 7 inches. The soils are problematic, likley due to geomorphic position.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 10
Saturation Present? Yes Depth (inches): 7
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/17/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T1-2
Investigator(s): EG, AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 3
Subregion (LRR): Interior Alaska Lat: 67.15051680 Long: -157.04290440 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland, IIB2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: Sample location was taken on the north side of the transect within a salix spp thicket. A drainage feature ran north-south through the sampling location. Photos 6972-6976.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. salix spp	70	Yes	FAC
2.			
3.			
4.			
5.			
6.			
Total Cover: 70			
50% of total cover: 35 20% of total cover: 14			
Herb Stratum			
1. Poa palustris	30	Yes	FAC
2. Viola epipsila	5	No	FACW
3. Comarum palustre	15	Yes	OBL
4. Polemonium acutiflorum	3	No	FAC
5. Equisetum arvense	20	Yes	FAC
6.			
7.			
8.			
9.			
10.			
Total Cover: 73			
50% of total cover: 36 20% of total cover: 14			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	15	x 1 = 15
FACW species	5	x 2 = 10
FAC species	123	x 3 = 369
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	143 (A)	394 (B)

Prevalence Index = B/A = 2.76

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 5
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: Potentilla palustris = Comarum palustre. USACE name change.

SOIL

Sampling Point T1-2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	organic	100		0				
2-16	10YR 2/1	100		0			Sandy Loam	no saturation

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 16

Hydric Soil Present? No

Remarks: No indicators of hydric soil.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: No hydrological indicators were observed at the sample location, A drainage feature was parallel to the sample location ~ 4 ft lower than the drainage feature described in sample pt T1-3

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/17/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T1-3
Investigator(s): EG, AM, CF, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Drainageway Local relief (concave, convex, none): concave Slope (%): 0
Subregion (LRR): Interior Alaska Lat: 67.15046380 Long: -157.04264290 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PEM1C, IIIA3
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: Drainage feature flows south to emergent wetland where it ends.photos 6978-6982. South is willow thicket	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. salix spp	13	Yes	FAC
2.			
3.			
4.			
5.			
6.			
Total Cover: 13			
50% of total cover: 6 20% of total cover: 2			
Herb Stratum			
1. Carex rostrata	70	Yes	OBL
2. Calamagrostis canadensis	30	Yes	FAC
3. Comarum palustre	25	Yes	OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 125			
50% of total cover: 62 20% of total cover: 25			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	95	x 1 = 95
FACW species	0	x 2 = 0
FAC species	43	x 3 = 129
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	138 (A)	224 (B)

Prevalence Index = B/A = 1.62

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 30
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 30 percentage

SOIL

Sampling Point T1-3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-11	organic	0		0				pit dug in inundated area

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks: inundated with 2.5 inches of water.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

X Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
X Water Marks (B1)
__Sediment Deposits (B2)
X Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes Depth (inches): 2.5
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: drift deposits approximately 3 feet above ground surface.

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/17/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T1-4
Investigator(s): EG, AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): concave Slope (%): 0
Subregion (LRR): Interior Alaska Lat: 67.15020250 Long: -157.04263190 Datum: WGS84
Soil Map Unit Name: _ NWI classification: R2UB1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**

Remarks: The sample location was taken at a stream flowing north-south. The willow thicket described in sample pt 4 is located on the northern side of the sample point. Bank full width is about 90ft, wetted width 60ft. Water is clear with rocks and cobbles (1-2in diameter) with sandy bottom. The water was fast moving with portions of pooling. Riparian area extends 60-90ft and contains salix spp. Evidence of beaver and wolf tracks with scat. Photos 6983-6986. Stream Crossing and associated riparian area.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	0 (A)	0 (B)

Prevalence Index = B/A = 0.00

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 0 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T1-4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Stream Crossing and associated riparian area.

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/17/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T1-5
Investigator(s): EG, AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Drainageway Local relief (concave, convex, none): concave Slope (%): 2
Subregion (LRR): Interior Alaska Lat: 67.14600520 Long: -157.02706310 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS4B, IIB1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**

Remarks: The sample point was taken on the east side of the alignment on the north side of transect 1. The area had few tussocks with sparse alders mixed in isolated pockets. Photos 6987-6991.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Rubus chamaemorus	30	Yes	FACW
2. Empetrum nigrum	31	Yes	FAC
3. Betula nana	20	No	FAC
4. Rhododendron groenlandicum	22	Yes	FAC
5. Vaccinium vitis-idaea	11	No	FAC
6. Vaccinium uliginosum	10	No	FAC
Total Cover: 124			
50% of total cover: 62 20% of total cover: 24			
Herb Stratum			
1. Calamagrostis canadensis	5	No	FAC
2. Eriophorum vaginatum	5	No	FACW
3. Carex media	5	No	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 15			
50% of total cover: 7 20% of total cover: 3			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	40	x 2 = 80
FAC species	99	x 3 = 297
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	139 (A)	377 (B)

Prevalence Index = B/A = 2.71

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 15
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 30
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: Vegetation is consistent with the west side of the transect. Scrub\shrub intermixed with emergent near a drainage feature.

SOIL

Sampling Point T1-5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10		100		0				organic material not fully decomposed water leached with reddish color

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

X Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 10

Hydric Soil Present? Yes

Remarks: The organic soil with slightly decomposing with reddish water.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 6
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: water table present saturation in some portions.

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/17/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T2-6
Investigator(s): EG, AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): convex Slope (%): 2
Subregion (LRR): Interior Alaska Lat: 67.11383960 Long: -156.97421590 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/EM1C, IIB2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: The sample point was taken on the south side of the transect in an emergent wetland with pockets of saturation and inundation. Photos 3108-3112.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Betula nana	15	Yes	FAC
2. Vaccinium uliginosum	20	Yes	FAC
3. Rhododendron groenlandicum	10	Yes	FAC
4.			
5.			
6.			
Total Cover: 45			
50% of total cover: 22 20% of total cover: 9			
Herb Stratum			
1. Calamagrostis canadensis	41	Yes	FAC
2. Carex media	15	No	FACW
3. Eriophorum vaginatum	30	Yes	FACW
4. Eriophorum angustifolium	6	No	OBL
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 92			
50% of total cover: 46 20% of total cover: 18			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	6	x 1 = 6
FACW species	45	x 2 = 90
FAC species	86	x 3 = 258
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	137 (A)	354 (B)

Prevalence Index = B/A = 2.58

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 5
% Cover of Wetland Bryophytes: 20 Total Cover of Bryophytes: 35
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T2-6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3		100		0				peat mat
3-10		100		0				organics with root mass throughout

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

X Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 10

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: pockets of saturation and inundation observed intermittently at location.

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/17/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T2-7
Investigator(s): EG, AM, CF, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Stream terrace Local relief (concave, convex, none): convex Slope (%): 3
Subregion (LRR): Interior Alaska Lat: 67.14258150 Long: -157.02737600 Datum: WGS84
Soil Map Unit Name: _ NWI classification: R2UB1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**

Remarks: shungnak river. Bankfull width 145 feet and 100 feet wetted width. Cobbles 1 inch to 8 inches sandy. Riparian consists of salix and cal can and car ros. Photos 6992 to 6997. Moose track.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. salix sp	60	Yes	FAC
2. Vaccinium uliginosum	35	Yes	FAC
3. Comarum palustre	10	Yes	OBL
4. Petasites frigidus	5	Yes	FACW
5.			
6.			
Total Cover: 110			
50% of total cover: 55 20% of total cover: 22			
Herb Stratum			
1. Equisetum arvense	20	Yes	FAC
2. Delphinium glaucum	2	Yes	FACW
3. Calamagrostis canadensis	30	Yes	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 52			
50% of total cover: 26 20% of total cover: 10			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	10	x 1 = 10
FACW species	7	x 2 = 14
FAC species	145	x 3 = 435
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	162 (A)	459 (B)

Prevalence Index = B/A = 2.83

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 10 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T2-7

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/17/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T2-8
Investigator(s): EG, AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 0
Subregion (LRR): Interior Alaska Lat: 67.11501350 Long: -156.97380220 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/EM1C, IIB1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**

Remarks: Sample point was taken near the centerline on the south side of the alignment. The topography slopes downhill pooling at sample location from about 3-5 percent slope. Pockets of inundation observed at sample location, along with saturation. Photos 3113-3117. PSS wetland.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Betula nana	31	Yes	FAC
2. Alnus viridis	5	No	FAC
3. Rhododendron groenlandicum	20	No	FAC
4. Vaccinium uliginosum	40	Yes	FAC
5. Vaccinium vitis-idaea	15	No	FAC
6. Andromeda polifolia	41	Yes	OBL
Total Cover: 152			
50% of total cover: 76 20% of total cover: 30			
Herb Stratum			
1. Calamagrostis canadensis	50	Yes	FAC
2. Eriophorum vaginatum	24	Yes	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 74			
50% of total cover: 37 20% of total cover: 14			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	41	x 1 = 41
FACW species	24	x 2 = 48
FAC species	161	x 3 = 483
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	226 (A)	572 (B)

Prevalence Index = B/A = 2.53

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 5 Total Cover of Bryophytes: 44
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: Small pockets of saturation and inundation observed at sample location.

SOIL

Sampling Point T2-8

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8		100		0				saturated peat mat
8-16		100		0				saturated organics

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

X Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 16

Hydric Soil Present? Yes

Remarks: Saturated organics with permafrost.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 10
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Pockets of saturation and inundation.

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/17/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T2-9
Investigator(s): EG, AM, CF, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): convex Slope (%): 1
Subregion (LRR): Interior Alaska Lat: 67.14258150 Long: -157.02737600 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/4B, IIC2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: location shrub/scrub wetland. photos 6998 to 7002.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Betula nana	30	Yes	FAC
2. Empetrum nigrum	10	No	FAC
3. Alnus viridis	5	No	FAC
4. Vaccinium vitis-idaea	25	Yes	FAC
5.			
6.			
Total Cover: 70			
50% of total cover: 35 20% of total cover: 14			
Herb Stratum			
1. Carex rostrata	70	Yes	OBL
2. Eriophorum vaginatum	10	No	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 80			
50% of total cover: 40 20% of total cover: 16			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	70	x 1 = 70
FACW species	10	x 2 = 20
FAC species	70	x 3 = 210
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	150 (A)	300 (B)

Prevalence Index = B/A = 2.00

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 78
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: spagnum 70 percent reindeer lichen 8 percent

SOIL

Sampling Point T2-9

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	organic	100		0				roots
2-6	10YR 3/2	100		0				roots and organics
6-14	5Y 3/2	100		0				

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
X Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 14

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 14
Saturation Present? Yes Depth (inches): 6
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/17/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T2-10
Investigator(s): EG, AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 2
Subregion (LRR): Interior Alaska Lat: 67.11623190 Long: -156.97474300 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS4B, IID1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**

Remarks: sample point was taken on the transition zone between the southern end of PEM/SS wetland in sample point 8 and the northern boundary to sample point 10 on the south side of the alignment. Review problematic soils. Photos 3118-3122. PSS wetland.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Betula nana	10	No	FAC
2. Arctostaphylos alpina	16	No	FACU
3. Vaccinium vitis-idaea	25	No	FAC
4. Rhododendron groenlandicum	15	No	FAC
5. Vaccinium oxycoccos	85	Yes	OBL
6. Arctostaphylos alpina	15	No	FACU
Total Cover: 166			
50% of total cover: 83 20% of total cover: 33			
Herb Stratum			
1. Carex media	20	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 20			
50% of total cover: 10 20% of total cover: 4			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	85	x 1 = 85
FACW species	20	x 2 = 40
FAC species	50	x 3 = 150
FACU species	31	x 4 = 124
UPL species	0	x 5 = 0
Column Totals:	186 (A)	399 (B)

Prevalence Index = B/A = 2.15

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 5
% Cover of Wetland Bryophytes: 10 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: review problematic vegetation.

SOIL

Sampling Point T2-10

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3		100		0				organics
3-13	10YR 4/4	100		0			Loamy Fine Sand	no saturated
13-17	5YR 4/1	85	2.5YR 2.5/4	15	RM	M	Loamy Sand	prominent redox

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
X Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: none
Depth (inches): 0

Hydric Soil Present? Yes

Remarks: soils were not saturated. A mixture of redox features present. Likley problematic soils, depleted matrix 13-17 inches.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
X Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 10
Saturation Present? Yes Depth (inches): 10
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/17/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T2-11
Investigator(s): EG, AM, CF, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): concave Slope (%): 1
Subregion (LRR): Interior Alaska Lat: 67.14258150 Long: -157.02737600 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PEM1C, IIIA3
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: emergent marsh in between scrub/shrub wetland. photos 7003 to 7007.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. salix sp	20	Yes	FAC
2. Betula nana	5	Yes	FAC
3.			
4.			
5.			
6.			
Total Cover: 25			
50% of total cover: 12 20% of total cover: 5			
Herb Stratum			
1. Carex rostrata	80	Yes	OBL
2. Eriophorum vaginatum	30	Yes	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 110			
50% of total cover: 55 20% of total cover: 22			

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 15
(Where applicable)

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	80	x 1 = 80
FACW species	30	x 2 = 60
FAC species	25	x 3 = 75
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	135 (A)	215 (B)

Prevalence Index = B/A = 1.59

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T2-11

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
X Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks: Inundated soil

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

X Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
X Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes Depth (inches): 2
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/18/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T3-12
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): none Slope (%): 2
Subregion (LRR): Interior Alaska Lat: 67.09832470 Long: -156.91080190 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/EM1B, IIB1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**

Remarks: Photos 3123-3127. Sample point was taken on the south side of the alignment within inundated tussocks. Spruce saplings appear on west side of the sampling point near a small drainage feature. Differences between the scrub/shrub area and the open emergent area is visible from the areial. PSS wetland .

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Alnus viridis	15	No	FAC
2. Picea mariana	25	Yes	FACW
3. Vaccinium uliginosum	45	Yes	FAC
4. Rhododendron groenlandicum	21	No	FAC
5. Vaccinium vitis-idaea	14	No	FAC
6. Rubus chamaemorus	9	No	FACW
Total Cover: 129			
50% of total cover: 64 20% of total cover: 25			
Herb Stratum			
1. Eriophorum vaginatum	35	Yes	FACW
2. Carex media	6	No	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 41			
50% of total cover: 20 20% of total cover: 8			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	75	x 2 = 150
FAC species	95	x 3 = 285
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	170 (A)	435 (B)

Prevalence Index = B/A = 2.56

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 15
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: Sphagnum was dispersed inbetween the tussocks. Vegetation cover primarily scrub/shrub layer.

SOIL

Sampling Point T3-12

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10		100		0				saturated organics

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- X Histosol or Histel(A1)
- X Histic Epipedon (A2)
- __Hydrogen Sulfide (A4)
- __Thick Dark Surface (A12)
- __Alaska Gleyed (A13)
- __Alaska Redox (A14)
- __Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

- __Alaska Color Change (TA4)[4]
- __Alaska Alpine Swales (TA5)
- __Alaska Redox With 2.5Y Hue
- __Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- __Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 10

Hydric Soil Present? Yes

Remarks: saturated organics with permafrost.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- __Surface Water (A1)
- __High Water Table (A2)
- X Saturation (A3)
- __Water Marks (B1)
- __Sediment Deposits (B2)
- __Drift Deposits (B3)
- __Algal Mat or Crust (B4)
- __Iron Deposits (B5)
- __Surface Soil Cracks (B6)
- __Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __Marl Deposits (B15)
- __Hydrogen Sulfide Odor (C1)
- __Dry Season Water Table (C2)
- __Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- __Water-stained Leaves (B9)
- __Drainage Patterns (B10)
- __Oxidized Rhizospheres along Living Roots (C3)
- __Presence of Reduced Iron (C4)
- __Salt Deposits (C5)
- __Stunted or Stressed Plants (D1)
- __Geomorphic Position (D2)
- X Shallow Aquitard (D3)
- __Microtopographic Relief (D4)
- __FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: saturated organics.

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/18/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T3-13
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Stream terrace Local relief (concave, convex, none): convex Slope (%): 2
Subregion (LRR): Interior Alaska Lat: 67.10308720 Long: -156.91356750 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: sample location upper stream terrace in between stream and oxbow north end of corridor.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	20	Yes	FACU
2.			
3.			
4.			
Total Cover: 20			
50% of total cover: 10 20% of total cover: 4			
Sapling/Shrub Stratum			
1. salix sp	50	Yes	FAC
2. Vaccinium uliginosum	80	Yes	FAC
3. Rhododendron groenlandicum	20	No	FAC
4. Empetrum nigrum	5	No	FAC
5. Arctostaphylos alpina	25	No	FACU
6.			
Total Cover: 180			
50% of total cover: 90 20% of total cover: 36			
Herb Stratum			
1. Equisetum arvense	15	Yes	FAC
2. Petasites frigidus	5	Yes	FACW
3. Epilobium lactiflorum	2	No	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 22			
50% of total cover: 11 20% of total cover: 4			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	7	x 2 = 14
FAC species	170	x 3 = 510
FACU species	45	x 4 = 180
UPL species	0	x 5 = 0
Column Totals:	222 (A)	704 (B)

Prevalence Index = B/A = 3.17

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: epilobium laifolium

SOIL

Sampling Point T3-13

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	organic	100		0				
2-20	10YR 3/2	100		0			Coarse Sandy Loam	10 percent gravels 1 inch diameter

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: no soil saturation

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/18/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T3-14
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Drainageway Local relief (concave, convex, none): convex Slope (%): 7
Subregion (LRR): Interior Alaska Lat: 67.09831320 Long: -156.91169720 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/EM1C, IIB1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**

Remarks: Sample point was taken on the south side of the transect within a drainage feature with alnus viridis and vaccinium ulg. Water flows south to north. Approximately 10 feet wide. Photos 3128-3134. PSS wetland.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Alnus viridis	55	Yes	FAC
2. Betula nana	25	No	FAC
3. Vaccinium uliginosum	45	Yes	FAC
4. Rhododendron groenlandicum	15	No	FAC
5. salix spp	24	No	
6.			
Total Cover: 164			
50% of total cover: 82 20% of total cover: 32			
Herb Stratum			
1. Calamagrostis canadensis	30	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 30			
50% of total cover: 15 20% of total cover: 6			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	170	x 3 = 510
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	170 (A)	510 (B)

Prevalence Index = B/A = 3.00

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 15 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: Drainage feature contained alnus viridis and vaccinium ulg. The water was moderately fast flowing south to north. A clear distinct alnus thickett bordered the channel on both sides.

SOIL

Sampling Point T3-14

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8		100		0				saturated organics
8-10	10YR 2/1	100		100			Loamy Fine Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 10

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 9
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Surface water present and inundation observed at sample location within the drainage feature.

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/18/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T3-15
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Stream terrace Local relief (concave, convex, none): concave Slope (%): 1
Subregion (LRR): Interior Alaska Lat: 67.10300430 Long: -156.91373550 Datum: WGS84
Soil Map Unit Name: _ NWI classification: R2UB3
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: stream to west of T3-13. 60 foot wide wetted width. Bankfull width 75 feet with sandy silt bottom. Riparian 10 to 12 feet with salix sp. And vaccinium uliginosum.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	0 (A)	0 (B)

Prevalence Index = B/A = 0.00

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 0 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks:

SOIL

Sampling Point T3-15

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/18/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T3-16
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 3
Subregion (LRR): Interior Alaska Lat: 67.09851810 Long: -156.91204780 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/EM1B, IIB1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**

Remarks: The depressed area was bordered by salix spp. on the west side of the transect within tussocks with pockets of saturation and inundation. Likley PEM. Photos 3135-3139.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. salix spp	38	Yes	FAC
2. Vaccinium uliginosum	50	Yes	FAC
3.			
4.			
5.			
6.			
Total Cover: 88			
50% of total cover: 44 20% of total cover: 17			
Herb Stratum			
1. Comarum palustre	50	Yes	OBL
2. Calamagrostis canadensis	25	Yes	FAC
3. Carex media	15	No	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 90			
50% of total cover: 45 20% of total cover: 18			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	50	x 1 = 50
FACW species	15	x 2 = 30
FAC species	113	x 3 = 339
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	178 (A)	419 (B)

Prevalence Index = B/A = 2.35

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 1
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 15
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: The drainage feature pools partically within a depressed area with salix bordering the west side of the sample locaton. Drainage depression follows general topography. The area was saturated and inundated.

SOIL

Sampling Point T3-16

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10		100		0				saturated organics
10-12	10YR 2/2	100		0			Clay Loam	saturated

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 12

Hydric Soil Present? Yes

Remarks: saturated organics above 10yr soils.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
X Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 6
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Pockets of inundation.

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/18/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T3-17
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 3
Subregion (LRR): Interior Alaska Lat: 67.10273940 Long: -156.91332550 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks:	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	25	Yes	FACU
2.			
3.			
4.			
Total Cover: 25			
50% of total cover: 12 20% of total cover: 5			
Sapling/Shrub Stratum			
1. salix sp	10	Yes	FAC
2. Rhododendron groenlandicum	3	No	FAC
3. Betula glandulosa	5	No	FAC
4. Spiraea stevenii	30	Yes	FACU
5.			
6.			
Total Cover: 48			
50% of total cover: 24 20% of total cover: 9			
Herb Stratum			
1. Aconitum delphiniifolium	10	No	FAC
2. Equisetum arvense	75	Yes	FAC
3. Calamagrostis canadensis	15	No	FAC
4. Galium boreale	10	No	FACU
5. Carex macrochaeta	20	No	FACW
6.			
7.			
8.			
9.			
10.			
Total Cover: 130			
50% of total cover: 65 20% of total cover: 26			

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 70
(Where applicable)

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	20	x 2 = 40
FAC species	118	x 3 = 354
FACU species	65	x 4 = 260
UPL species	0	x 5 = 0
Column Totals:	203 (A)	654 (B)

Prevalence Index = B/A = 3.22

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
__ Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? No

Remarks: sphagnum 70 percent

SOIL

Sampling Point T3-17

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	organic	100		0				
3-15	10YR 3/6	85	2.5Y 4/2	15	D	M	Coarse Sandy Loam	
15-17	2.5Y 5/2	100		0			Loamy Fine Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
X Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks: The Alaska Redox with 2.5 y hue is a problematic hydric soil indicator. However, both hydrophytic vegetation and hydrology are absent, therefore soils remain not hydric.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: no saturation

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/18/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T3-19
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): concave Slope (%): 5
Subregion (LRR): Interior Alaska Lat: 67.10118900 Long: -156.91363630 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PEM1B, IIIA3
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: drainage feature. photos 7023-7028.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. salix sp	10	Yes	FAC
2.			
3.			
4.			
5.			
6.			
Total Cover: 10			
50% of total cover: 5 20% of total cover: 2			
Herb Stratum			
1. Carex rostrata	30	Yes	OBL
2. Calamagrostis canadensis	70	Yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 100			
50% of total cover: 50 20% of total cover: 20			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	30	x 1 =	30
FACW species	0	x 2 =	0
FAC species	70	x 3 =	210
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		240 (B)

Prevalence Index = B/A = 2.40

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 20
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T3-19

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	organic	100		0				

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
X Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks: Restrictive digging layer of rock.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
X Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 0.5
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/18/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T4-18
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): convex Slope (%): 5
Subregion (LRR): Interior Alaska Lat: 67.09294180 Long: -156.82476310 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PFO4/PSS1B, IA2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**

Remarks: sample point was taken on the south side of the alignment within a spruce terrace extending 2000 off centerline. The sample location adjoins a salix spp thicket north towards centerline. Photos 3140-3144.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	50	Yes	FACW
2.			
3.			
4.			
Total Cover: 50			
50% of total cover: 25 20% of total cover: 10			
Sapling/Shrub Stratum			
1. Alnus viridis	28	No	FAC
2. Picea mariana	13	No	FACW
3. Rubus chamaemorus	55	Yes	FACW
4. Vaccinium uliginosum	35	Yes	FAC
5. Rhododendron groenlandicum	26	No	FAC
6. Populus tremuloides	2	No	FACU
Total Cover: 159			
50% of total cover: 79 20% of total cover: 31			
Herb Stratum			
1. Equisetum arvense	15	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 15			
50% of total cover: 7 20% of total cover: 3			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	118	x 2 = 236
FAC species	104	x 3 = 312
FACU species	2	x 4 = 8
UPL species	0	x 5 = 0
Column Totals:	224 (A)	556 (B)

Prevalence Index = B/A = 2.48

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 85
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: Sample point was taken on the south side of the transect within a spruce terrace. Sphagnum and shrubs dominate the scrub/herb layers.

SOIL

Sampling Point T4-18

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2		100		0				organics/peat mat saturated
2-11	10YR 2/2	90	7.5YR 3/4	10	RM	M	Coarse Sandy Loam	redox present

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
X Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 11

Hydric Soil Present? Yes

Remarks: redox present in soils. Saturated organics over permafrost.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
X Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 7
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: saturated 0-2, water table 7-11.

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/18/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T4-20
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Drainageway Local relief (concave, convex, none): concave Slope (%): 5
Subregion (LRR): Interior Alaska Lat: 67.09350530 Long: -156.82369830 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PEM1C, IIIA3
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: the sample location was taken within a drainage feature separating the spruce terrace on the south side and another spruce terrace on the north side. drainage feature about 10 feet wide. Photos 3145-3149.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. salix spp	8	Yes	FAC
2. Betula nana	10	Yes	FAC
3. Vaccinium uliginosum	6	Yes	FAC
4.			
5.			
6.			
Total Cover: 24			
50% of total cover: 12 20% of total cover: 4			
Herb Stratum			
1. Calamagrostis canadensis	55	Yes	FAC
2. Equisetum palustre	26	Yes	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 81			
50% of total cover: 40 20% of total cover: 16			

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 5 Total Cover of Bryophytes: 5
(Where applicable)

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	26	x 2 = 52
FAC species	79	x 3 = 237
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	105 (A)	289 (B)

Prevalence Index = B/A = 2.75

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes

Remarks: salix on the outskirts on n-s sides of the drainage feature.

SOIL

Sampling Point T4-20

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-15		100		0				saturated organics

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

X Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 15

Hydric Soil Present? Yes

Remarks: water gas reddish color. Saturated organics above permafrost.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
X Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
X Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 6
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: pockets of saturation and inundation observed at sample location.

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/18/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T4-21
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): concave Slope (%): 5
Subregion (LRR): Interior Alaska Lat: 67.09366810 Long: -156.81357670 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland, IIC1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? No**
Remarks: hillslope scrub/shrub north of center line. photos 7029-7033.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Betula nana	20	No	FAC
2. Vaccinium uliginosum	80	Yes	FAC
3. Empetrum nigrum	50	Yes	FAC
4. salix sp	5	No	FAC
5. Rubus chamaemorus	15	No	FACW
6.			
Total Cover: 170			
50% of total cover: 85 20% of total cover: 34			
Herb Stratum			
1. Carex rostrata	20	Yes	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 20			
50% of total cover: 10 20% of total cover: 4			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	20	x 1 = 20
FACW species	15	x 2 = 30
FAC species	155	x 3 = 465
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	190 (A)	515 (B)

Prevalence Index = B/A = 2.71

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 90
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 90

SOIL

Sampling Point T4-21

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	organic	100		0				
3-9	10YR 4/2	100		0			Loamy Fine Sand	
9-19	5Y 4/1	100		0			Sandy Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 15
Saturation Present? Yes Depth (inches): 9
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/18/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T4-22
Investigator(s): EG, AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Drainageway Local relief (concave, convex, none): concave Slope (%): 3
Subregion (LRR): Interior Alaska Lat: 67.09369610 Long: -156.82337970 Datum: WGS84
Soil Map Unit Name: _ NWI classification:
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**

Remarks: photo point only. Marked the north boundary ti the spruce terrrace to the south boundry of the willow thicket. Photos 3150-3156. Drainage feature contained same vegetation cover as point 20.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	0 (A)	0 (B)

Prevalence Index = B/A = 0.00

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 0 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks:

SOIL

Sampling Point T4-22

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes Depth (inches):
Water Table Present? Yes Depth (inches):
Saturation Present? Yes Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/18/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T4-23
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): concave Slope (%): 2
Subregion (LRR): Interior Alaska Lat: 67.09325070 Long: -156.81467790 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland, IA2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: photos 7034 to 7038. Spruce forested scrub/shrub. Downslope of t4-21	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	40	Yes	FACU
2.			
3.			
4.			
Total Cover: 40			
50% of total cover: 20 20% of total cover: 8			
Sapling/Shrub Stratum			
1. Empetrum nigrum	60	Yes	FAC
2. Betula nana	15	No	FAC
3. Rubus chamaemorus	25	No	FACW
4. Vaccinium uliginosum	40	Yes	FAC
5.			
6.			
Total Cover: 140			
50% of total cover: 70 20% of total cover: 28			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	25	x 2 = 50
FAC species	115	x 3 = 345
FACU species	40	x 4 = 160
UPL species	0	x 5 = 0
Column Totals:	180 (A)	555 (B)

Prevalence Index = B/A = 3.08

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 0 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 90
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 90 percent

SOIL

Sampling Point T4-23

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-11	organic	100		0				fibrous with reddish brown water when squeezed

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- X Histosol or Histel(A1)
- X Histic Epipedon (A2)
- __Hydrogen Sulfide (A4)
- __Thick Dark Surface (A12)
- __Alaska Gleyed (A13)
- __Alaska Redox (A14)
- __Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

- __Alaska Color Change (TA4)[4]
- __Alaska Alpine Swales (TA5)
- __Alaska Redox With 2.5Y Hue
- __Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- __Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 11

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- __Surface Water (A1)
- __High Water Table (A2)
- __Saturation (A3)
- __Water Marks (B1)
- __Sediment Deposits (B2)
- __Drift Deposits (B3)
- __Algal Mat or Crust (B4)
- __Iron Deposits (B5)
- __Surface Soil Cracks (B6)
- __Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __Marl Deposits (B15)
- __Hydrogen Sulfide Odor (C1)
- __Dry Season Water Table (C2)
- __Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- __Water-stained Leaves (B9)
- __Drainage Patterns (B10)
- __Oxidized Rhizospheres along Living Roots (C3)
- __Presence of Reduced Iron (C4)
- __Salt Deposits (C5)
- __Stunted or Stressed Plants (D1)
- __Geomorphic Position (D2)
- X Shallow Aquitard (D3)
- __Microtopographic Relief (D4)
- __FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: no saturation

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/18/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T4-24
Investigator(s): EG, AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Drainageway Local relief (concave, convex, none): concave Slope (%): 0
Subregion (LRR): Interior Alaska Lat: 67.09290980 Long: -156.82244460 Datum: WGS84
Soil Map Unit Name: _ NWI classification:
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: photo point only. 3157-3162. Transition from spruce terrace to willow thicket.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	0 (A)	0 (B)

Prevalence Index = B/A = 0.00

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 0 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks:

SOIL

Sampling Point T4-24

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/18/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T4-25
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): convex Slope (%): 2
Subregion (LRR): Interior Alaska Lat: 67.09308810 Long: -156.81583630 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: willow thicket along drinage located 20 feet to south	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. salix spp.	100	Yes	FAC
2. Rubus pubescens	10	No	FACW
3.			
4.			
5.			
6.			
Total Cover: 110			
50% of total cover: 55 20% of total cover: 22			
Herb Stratum			
1. Lycopodium clavatum	15	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 15			
50% of total cover: 7 20% of total cover: 3			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	10	x 2 = 20
FAC species	100	x 3 = 300
FACU species	15	x 4 = 60
UPL species	0	x 5 = 0
Column Totals:	125 (A)	380 (B)

Prevalence Index = B/A = 3.04

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
__ Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks:

SOIL

Sampling Point T4-25

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	organic	100		0				
2-8	10YR 2/2	100		0			Sandy Clay Loam	
8-12	2.5Y 3/3	100		0			Sandy Clay Loam	roots present

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 12

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: no saturation

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/18/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T4-26
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): none Slope (%): 2
Subregion (LRR): Interior Alaska Lat: 67.09316100 Long: -156.82163390 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1B, IIB1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: boundary between salix thicket and alder thicket. Salix spp on the northern boundary and alnus virdis in thre southern side.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Alnus viridis	92	Yes	FAC
2. Vaccinium uliginosum	10	No	FAC
3.			
4.			
5.			
6.			
Total Cover: 102			
50% of total cover: 51 20% of total cover: 20			
Herb Stratum			
1. Viola epipsila	5	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 5			
50% of total cover: 2 20% of total cover: 1			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	5	x 2 = 10
FAC species	102	x 3 = 306
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	107 (A)	316 (B)

Prevalence Index = B/A = 2.95

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: dense alder thicket with abundant leaf litter.

SOIL

Sampling Point T4-26

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-14	10YR 2/1	100		0			Sandy Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
X Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 14

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/18/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T4-27
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hill Local relief (concave, convex, none): convex Slope (%): 3
Subregion (LRR): Interior Alaska Lat: 67.09278370 Long: -156.81693670 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/4B, IIC2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks:	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Betula nana	25	No	FAC
2. Vaccinium uliginosum	35	Yes	FAC
3. Empetrum nigrum	30	Yes	FAC
4. Rhododendron groenlandicum	30	Yes	FAC
5. Vaccinium vitis-idaea	10	No	FAC
6. Rubus chamaemorus	20	No	FACW
Total Cover: 150			
50% of total cover: 75 20% of total cover: 30			
Herb Stratum			
1. Eriophorum vaginatum	50	Yes	FACW
2. Carex rostrata	5	No	OBL
3. Carex media	5	No	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 60			
50% of total cover: 30 20% of total cover: 12			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	5	x 1 = 5
FACW species	75	x 2 = 150
FAC species	130	x 3 = 390
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	210 (A)	545 (B)

Prevalence Index = B/A = 2.60

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: reindeer lichen 10 and lichen 60 and sphagnum 30

SOIL

Sampling Point T4-27

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	organic	100		0				permafrost

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

X Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 12

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 7
Saturation Present? Yes Depth (inches): 6
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/18/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T5-28
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 6
Subregion (LRR): Interior Alaska Lat: 67.07923980 Long: -156.77716000 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1B, IIC1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? No**

Remarks: The sample location was taken on the south side of the alignment within a hillslope with spruce and tussocks. Sphagnum intermixed throughout tussocks. Past the 2000 foot corridor. As topography increases the spruce abundance decreases. 3173-3177.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Picea mariana	9	No	FACW
2. Vaccinium uliginosum	40	Yes	FAC
3. Betula nana	10	No	FAC
4. Rubus chamaemorus	15	No	FACW
5. Rhododendron groenlandicum	16	Yes	FAC
6.			
Total Cover: 90			
50% of total cover: 45 20% of total cover: 18			
Herb Stratum			
1. Carex media	5	No	FACW
2. Eriophorum vaginatum	25	Yes	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 30			
50% of total cover: 15 20% of total cover: 6			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	54	x 2 = 108
FAC species	66	x 3 = 198
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	120 (A)	306 (B)

Prevalence Index = B/A = 2.55

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 25
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum intermixed throughout tussocks .

SOIL

Sampling Point T5-28

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5		100		0				saturated organics
5-10	10YR 2/2	100		0			Silty Clay Loam	soils saturated
10-17	10YR 3/1	100		0			Silty Clay Loam	partically saturated

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
X Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 17

Hydric Soil Present? Yes

Remarks: Based on hydrophytic vegetation and hydrology.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 4
Saturation Present? Yes Depth (inches): 4
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/18/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T5-29
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hill Local relief (concave, convex, none): convex Slope (%): 0
Subregion (LRR): Interior Alaska Lat: 67.08251830 Long: -156.76511000 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/EM1B, IIB1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: willow thicket drainage north side of center line. Photos 7049-4054.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. salix sp	50	Yes	FAC
2. Vaccinium uliginosum	60	Yes	FAC
3.			
4.			
5.			
6.			
Total Cover: 110			
50% of total cover: 55 20% of total cover: 22			
Herb Stratum			
1. Comarum palustre	15	Yes	OBL
2. Calamagrostis canadensis	40	Yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 55			
50% of total cover: 27 20% of total cover: 11			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	15	x 1 = 15
FACW species	0	x 2 = 0
FAC species	100	x 3 = 300
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	115 (A)	315 (B)

Prevalence Index = B/A = 2.74

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 90
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T5-29

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	organic	100		0				Saturated
2-8	2.5Y 4/3	100		0			Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
X Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks: Multiple small channels throughout drainage area. Restrictive digging layer.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
X Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 1
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/18/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T5-30
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Drainageway Local relief (concave, convex, none): concave Slope (%): 1
Subregion (LRR): Interior Alaska Lat: 67.07901570 Long: -156.77553760 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS4C, IIB1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**

Remarks: The drainage feature ran south-north within the spruce hummocked landscape and was dominated by vaccinum ulg. surface water present along with pockets of saturation. Taken on the south side of the transect extending to the centerline. Photos 3173-3177.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	10	Yes	FACW
2.			
3.			
4.			
Total Cover: 10			
50% of total cover: 5 20% of total cover: 2			
Sapling/Shrub Stratum			
1. Vaccinium uliginosum	45	Yes	FAC
2. Picea mariana	54	Yes	FACW
3.			
4.			
5.			
6.			
Total Cover: 99			
50% of total cover: 49 20% of total cover: 19			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	64	x 2 = 128
FAC species	45	x 3 = 135
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	109 (A)	263 (B)

Prevalence Index = B/A = 2.41

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 5 Total Cover of Bryophytes: 30
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: the drainage feature extended to the 2000 ft area and to centerline.

SOIL

Sampling Point T5-30

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-13		100		0				saturated organics

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- X Histosol or Histel(A1)
- X Histic Epipedon (A2)
- X Hydrogen Sulfide (A4)
- __Thick Dark Surface (A12)
- __Alaska Gleyed (A13)
- __Alaska Redox (A14)
- __Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

- __Alaska Color Change (TA4)[4]
- __Alaska Alpine Swales (TA5)
- __Alaska Redox With 2.5Y Hue
- __Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- __Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 13

Hydric Soil Present? Yes

Remarks: saturated organics above permafrost

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- __Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- __Water Marks (B1)
- __Sediment Deposits (B2)
- __Drift Deposits (B3)
- __Algal Mat or Crust (B4)
- __Iron Deposits (B5)
- __Surface Soil Cracks (B6)
- __Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __Marl Deposits (B15)
- __Hydrogen Sulfide Odor (C1)
- __Dry Season Water Table (C2)
- __Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- __Water-stained Leaves (B9)
- __Drainage Patterns (B10)
- __Oxidized Rhizospheres along Living Roots (C3)
- __Presence of Reduced Iron (C4)
- __Salt Deposits (C5)
- __Stunted or Stressed Plants (D1)
- __Geomorphic Position (D2)
- __Shallow Aquitard (D3)
- __Microtopographic Relief (D4)
- __FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 7
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/18/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T5-31
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Stream terrace Local relief (concave, convex, none): convex Slope (%): 2
Subregion (LRR): Interior Alaska Lat: 67.08243150 Long: -156.76584510 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1B, IIC1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: bear scat. Stream terrace slopes from picea to drainage with salix	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Vaccinium uliginosum	50	Yes	FAC
2. Rubus chamaemorus	50	Yes	FACW
3.			
4.			
5.			
6.			
Total Cover: 100			
50% of total cover: 50 20% of total cover: 20			
Herb Stratum			
1. Eriophorum vaginatum	15	Yes	FACW
2. Pedicularis labradorica	3	Yes	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 18			
50% of total cover: 9 20% of total cover: 3			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	68	x 2 = 136
FAC species	50	x 3 = 150
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	118 (A)	286 (B)

Prevalence Index = B/A = 2.42

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 90
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T5-31

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-11	organic	100		0				
11-13	2.5Y 4/1	100		0			Silty Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 13

Hydric Soil Present? Yes

Remarks: Permafrost at 13 inches

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: no saturation

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/18/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T5-32
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Drainageway Local relief (concave, convex, none): concave Slope (%): 2
Subregion (LRR): Interior Alaska Lat: 67.08037560 Long: -156.77122440 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/EM1C, IIB2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**

Remarks: The sample location was taken on the south side of the alignment within a drainage feature with calcan. Drainage feature extends to centerline south to project boundary

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. salix sp	20	Yes	FAC
2. Betula nana	5	No	FAC
3. Picea mariana	5	No	FACW
4.			
5.			
6.			
Total Cover: 30			
50% of total cover: 15 20% of total cover: 6			
Herb Stratum			
1. Calamagrostis canadensis	94	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 94			
50% of total cover: 47 20% of total cover: 18			

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	5	x 2 = 10
FAC species	119	x 3 = 357
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	124 (A)	367 (B)

Prevalence Index = B/A = 2.96

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes

Remarks: drainage feature contained calcan as the dominant vegetation cover.

SOIL

Sampling Point T5-32

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8		100		0				saturated organics

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

X Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 8

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 4.5
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: saturated and inundated at the surface.

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/18/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T5-33
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): Interior Alaska Lat: 67.08245750 Long: -156.76583590 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PFO4/SS1B, IA2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks:	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	30	Yes	FACW
2.			
3.			
4.			
Total Cover: 30			
50% of total cover: 15 20% of total cover: 6			
Sapling/Shrub Stratum			
1. Rhododendron groenlandicum	15	No	FAC
2. Rubus chamaemorus	50	Yes	FACW
3. Vaccinium uliginosum	40	Yes	FAC
4.			
5.			
6.			
Total Cover: 105			
50% of total cover: 52 20% of total cover: 21			
Herb Stratum			
1. Eriophorum vaginatum	15	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 15			
50% of total cover: 7 20% of total cover: 3			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	95	x 2 = 190
FAC species	55	x 3 = 165
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	150 (A)	355 (B)

Prevalence Index = B/A = 2.37

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 100
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 100 percent

SOIL

Sampling Point T5-33

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	organic	100		0				brown black color small pieces plant material reddish brown water when squeezed
4-12	organic	100		0				pieces of organic orange brown color water reddish brown squeezed

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

X Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 12

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 5
Saturation Present? Yes Depth (inches): 0.5
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/18/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T5-34
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): Interior Alaska Lat: 67.08026880 Long: -156.76939360 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/4B, IIC2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**

Remarks: The sample location was taken on the south side of the alignment at the northern boundary to the picea mariana and emergent tussocks. 3183-3187 photos.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Rubus chamaemorus	58	Yes	FACW
2. Picea mariana	10	No	FACW
3. Empetrum nigrum	41	Yes	FAC
4. Vaccinium uliginosum	48	Yes	FAC
5. Rhododendron groenlandicum	25	No	FAC
6.			
Total Cover: 182			
50% of total cover: 91 20% of total cover: 36			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	68	x 2 = 136
FAC species	114	x 3 = 342
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	182 (A)	478 (B)

Prevalence Index = B/A = 2.63

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 20
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum intermixed throughout tussocks

SOIL

Sampling Point T5-34

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	organic	0		0				moist but not saturated
3-17	10YR 3/2	100		0				

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
X Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 17

Hydric Soil Present? Yes

Remarks: not fully saturated, tussocks formed, met hydrophytic vegetation and hydrology.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 9
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/18/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T5-35
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Drainageway Local relief (concave, convex, none): concave Slope (%): 2
Subregion (LRR): Interior Alaska Lat: 67.08245750 Long: -156.76583590 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PEM1B, IIIA3
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: drainage feature between picea mariana patches. photo point only.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Vaccinium uliginosum	10	Yes	FAC
2.			
3.			
4.			
5.			
6.			
Total Cover: 10			
50% of total cover: 5 20% of total cover: 2			
Herb Stratum			
1. Calamagrostis canadensis	10	No	FAC
2. Eriophorum vaginatum	30	Yes	FACW
3. Carex rostrata	70	Yes	OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 110			
50% of total cover: 55 20% of total cover: 22			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	70	x 1 = 70
FACW species	30	x 2 = 60
FAC species	20	x 3 = 60
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	120 (A)	190 (B)

Prevalence Index = B/A = 1.58

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 100
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T5-35

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/19/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T6-36
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): Interior Alaska Lat: 67.05806570 Long: -156.70502780 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS4/EM1B, IID2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: photos 7070-7074. Flats are above drainage on west.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Betula nana	10	No	FAC
2. Vaccinium uliginosum	10	No	FAC
3. Rhododendron groenlandicum	25	Yes	FAC
4. Vaccinium vitis-idaea	20	Yes	FAC
5. Rubus chamaemorus	10	No	FACW
6.			
Total Cover: 75			
50% of total cover: 37 20% of total cover: 15			
Herb Stratum			
1. Eriophorum vaginatum	75	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 75			
50% of total cover: 37 20% of total cover: 15			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	85	x 2 = 170
FAC species	65	x 3 = 195
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	150 (A)	365 (B)

Prevalence Index = B/A = 2.43

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 80
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum and lichen intermixed throughout tussocks

SOIL

Sampling Point T6-36

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	organics	100		0				
5-8	gley1 10Y 3/1	95	7.5YR 3/2	0	C	RC	Loamy Fine Sand	prominent redox
8-14	gley1 10Y 3/1	75	10YR 4/6	25	C	RC	Loamy Fine Sand	prominent redox

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
X Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 14

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 11
Saturation Present? Yes Depth (inches): 9
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/19/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T6-37
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): convex Slope (%): 2
Subregion (LRR): Interior Alaska Lat: 67.05779840 Long: -156.70694150 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PFO4/SS1B, IA2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: sample point in picea forest west of T6-36 and north east of drainage. Photos 7075-7079.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	35	Yes	FACU
2.			
3.			
4.			
Total Cover: 35			
50% of total cover: 17 20% of total cover: 7			
Sapling/Shrub Stratum			
1. Rhododendron groenlandicum	50	Yes	FAC
2. Betula nana	25	Yes	FAC
3. Vaccinium uliginosum	15	No	FAC
4. Picea glauca	2	No	FACU
5. Vaccinium vitis-idaea	15	No	FAC
6. Rubus chamaemorus	2	No	FACW
Total Cover: 109			
50% of total cover: 54 20% of total cover: 21			
Herb Stratum			
1. Carex rostrata	10	Yes	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 10			
50% of total cover: 5 20% of total cover: 2			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	10	x 1 = 10
FACW species	2	x 2 = 4
FAC species	105	x 3 = 315
FACU species	37	x 4 = 148
UPL species	0	x 5 = 0
Column Totals:	154 (A)	477 (B)

Prevalence Index = B/A = 3.10

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
__ Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 5 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: picea tree 35 percent

SOIL

Sampling Point T6-37

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-11	organic	100		0				
11-11.25	2.5Y 2.5/1	100		0			Silt Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 12

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 8
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/19/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T6-38
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Stream terrace Local relief (concave, convex, none): concave Slope (%): 2
Subregion (LRR): Interior Alaska Lat: 67.05796030 Long: -156.70857200 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland, IA2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: sample location southwest of t6-37 near drainage feature . Photos 7080-7084	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	40	Yes	FACU
2.			
3.			
4.			
Total Cover: 40			
50% of total cover: 20 20% of total cover: 8			
Sapling/Shrub Stratum			
1. Alnus viridis	70	Yes	FAC
2. Picea glauca	15	No	FACU
3. Salix sp	10	No	FAC
4. Vaccinium uliginosum	40	Yes	FAC
5. Vaccinium vitis-idaea	30	No	FAC
6. Arctostaphylos uva-ursi	10	No	UPL
Total Cover: 175			
50% of total cover: 87 20% of total cover: 35			
Herb Stratum			
1. Equisetum arvense	20	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 20			
50% of total cover: 10 20% of total cover: 4			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	170	x 3 = 510
FACU species	55	x 4 = 220
UPL species	10	x 5 = 50
Column Totals:	235 (A)	780 (B)

Prevalence Index = B/A = 3.32

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 10 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: picea shrub 15 percent

SOIL

Sampling Point T6-38

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	organic	100		0				Organic
3-17	2.5Y 4/1	100		0			Sandy Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 17

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/19/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T6-39
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Stream terrace Local relief (concave, convex, none): concave Slope (%): 2
Subregion (LRR): Interior Alaska Lat: 67.05751720 Long: -156.70941880 Datum: WGS84
Soil Map Unit Name: _ NWI classification: R3UB1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: photos 7085-7088. 5 to 6 inch diameter. Wetted width 12 foot, 17 foot bankfull width. Riparian sphagnum, alnus, salix and flowing west to east.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	0 (A)	0 (B)

Prevalence Index = B/A = 0.00

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 0 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks:

SOIL

Sampling Point T6-39

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/19/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T6-40
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Stream terrace Local relief (concave, convex, none): convex Slope (%): 2
Subregion (LRR): Interior Alaska Lat: 67.05725870 Long: -156.71265250 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/EM1B, IIC1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: hillside above drainage. photos 7090-7094.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	30	Yes	FACW
2.			
3.			
4.			
Total Cover: 30			
50% of total cover: 15 20% of total cover: 6			
Sapling/Shrub Stratum			
1. Empetrum nigrum	25	Yes	FAC
2. Betula nana	15	No	FAC
3. Picea mariana	15	No	FACW
4. Vaccinium uliginosum	70	Yes	FAC
5. Vaccinium vitis-idaea	15	No	FAC
6. Rhododendron groenlandicum	25	No	FAC
Total Cover: 165			
50% of total cover: 82 20% of total cover: 33			
Herb Stratum			
1. Equisetum arvense	5	No	FAC
2. Carex rostrata	60	Yes	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 65			
50% of total cover: 32 20% of total cover: 13			

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 90
(Where applicable)

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	60	x 1 = 60
FACW species	45	x 2 = 90
FAC species	155	x 3 = 465
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	260 (A)	615 (B)

Prevalence Index = B/A = 2.37

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes

Remarks: reindeer lichen 70, 15 sphagnum, and lichen 5 percnt

SOIL

Sampling Point T6-40

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	organic	100		0				
5-14	2.5Y 3/2	100		0			Sandy Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
X Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 14

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 5
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/19/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T6-41
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Stream terrace Local relief (concave, convex, none): concave Slope (%): 3
Subregion (LRR): Interior Alaska Lat: 67.05755990 Long: -156.71625710 Datum: WGS84
Soil Map Unit Name: _ NWI classification: R3UB1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? Yes**

Remarks: stream 3 percent slope. 12 foot wetted width, 13 bankfull width near vertical banks. 5 to 6 inch diameter cobbles. Riparian alnus, salix sp., picea glauca, and equisetum arvense, sphagnum. Photos 7095-7098

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Plot size (radius, or length x width): 0 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	0 (A)	0 (B)

Prevalence Index = B/A = 0.00

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? No

Remarks:

SOIL

Sampling Point T6-41

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/19/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T6-42
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Stream terrace Local relief (concave, convex, none): convex Slope (%): 1
Subregion (LRR): Interior Alaska Lat: 67.05782060 Long: -156.71628770 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland, IB2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: stream terrace 4 feet above stream to east. Photos 7099-7104.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	20	Yes	FACU
2. Populus balsamifera	30	Yes	FACU
3.			
4.			
Total Cover: 50			
50% of total cover: 25 20% of total cover: 10			
Sapling/Shrub Stratum			
1. Arctostaphylos uva-ursi	35	Yes	UPL
2. Salix sp	20	No	FAC
3. Alnus viridis	30	Yes	FAC
4. Picea glauca	5	No	FACU
5. Vaccinium uliginosum	5	No	FAC
6. Rubus pubescens	30	Yes	FACW
Total Cover: 125			
50% of total cover: 62 20% of total cover: 25			
Herb Stratum			
1. Equisetum arvense	15	Yes	FAC
2. Cahmerion angustifolium	5	Yes	FACU
3. Arnica chamissonis	3	No	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 23			
50% of total cover: 11 20% of total cover: 4			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 42 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	33	x 2 = 66
FAC species	70	x 3 = 210
FACU species	60	x 4 = 240
UPL species	35	x 5 = 175
Column Totals:	198 (A)	691 (B)

Prevalence Index = B/A = 3.49

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
__ Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 10 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks:

SOIL

Sampling Point T6-42

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	organics	100		0				
3-20	10YR 2/2	100		0			Sandy Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 20

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/19/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T7-43
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Stream terrace Local relief (concave, convex, none): concave Slope (%): 1
Subregion (LRR): Interior Alaska Lat: 67.01611840 Long: -156.69387320 Datum: WGS84
Soil Map Unit Name: _ NWI classification: R2UB2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? Yes**

Remarks: river crossing at centerline. 120 feet wetted width 160 feet bankfull width sandy substrat with gravels. Riparian willow. Dwarf fireweed

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	0 (A)	0 (B)

Prevalence Index = B/A = 0.00

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 0 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks:

SOIL

Sampling Point T7-43

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
___Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/20/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T8-44
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): convex Slope (%): 3
Subregion (LRR): Interior Alaska Lat: 67.02175950 Long: -156.40718430 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS4/EM1B, IIC1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**

Remarks: sample point was taken on the south side of the alignment within tussocks on avg. 3 percent slope. The south side of the sample point was a picea mariana shrub\tree layer. To the north, more tussocks increasing in slope.pockets of saturation and inundation observed at sample location. Photos 3188-3192.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Rubus chamaemorus	46	Yes	FACW
2. Vaccinium uliginosum	40	Yes	FAC
3. Rhododendron groenlandicum	60	Yes	FAC
4. Vaccinium vitis-idaea	35	No	FAC
5. Empetrum nigrum	38	No	FAC
6. Picea mariana	8	No	FACW
Total Cover: 227			
50% of total cover: 113 20% of total cover: 45			
Herb Stratum			
1. Eriophorum vaginatum	58	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 58			
50% of total cover: 29 20% of total cover: 11			

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 60
(Where applicable)

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	112	x 2 = 224
FAC species	173	x 3 = 519
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	285 (A)	743 (B)

Prevalence Index = B/A = 2.61

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T8-44

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-11		100		0				saturated organics

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- X Histosol or Histel(A1)
- X Histic Epipedon (A2)
- __Hydrogen Sulfide (A4)
- __Thick Dark Surface (A12)
- __Alaska Gleyed (A13)
- __Alaska Redox (A14)
- __Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

- __Alaska Color Change (TA4)[4]
- __Alaska Alpine Swales (TA5)
- __Alaska Redox With 2.5Y Hue
- __Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- __Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 11

Hydric Soil Present? Yes

Remarks: saturated organics above permafrost

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- __Surface Water (A1)
- __High Water Table (A2)
- X Saturation (A3)
- __Water Marks (B1)
- __Sediment Deposits (B2)
- __Drift Deposits (B3)
- __Algal Mat or Crust (B4)
- __Iron Deposits (B5)
- __Surface Soil Cracks (B6)
- __Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __Marl Deposits (B15)
- __Hydrogen Sulfide Odor (C1)
- __Dry Season Water Table (C2)
- __Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- __Water-stained Leaves (B9)
- __Drainage Patterns (B10)
- __Oxidized Rhizospheres along Living Roots (C3)
- __Presence of Reduced Iron (C4)
- __Salt Deposits (C5)
- __Stunted or Stressed Plants (D1)
- __Geomorphic Position (D2)
- X Shallow Aquitard (D3)
- __Microtopographic Relief (D4)
- __FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/20/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T8-45
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hill Local relief (concave, convex, none): convex Slope (%): 2
Subregion (LRR): Interior Alaska Lat: 67.02048020 Long: -156.41211720 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: hilltop betula and picea upland.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Betula neoalaskana	20	Yes	FACU
2. Picea glauca	5	Yes	FACU
3.			
4.			
Total Cover: 25			
50% of total cover: 12 20% of total cover: 5			
Sapling/Shrub Stratum			
1. Vaccinium vitis-idaea	10	Yes	FAC
2. Empetrum nigrum	10	Yes	FAC
3. Picea glauca	5	No	FACU
4. Vaccinium uliginosum	15	Yes	FAC
5.			
6.			
Total Cover: 40			
50% of total cover: 20 20% of total cover: 8			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 60 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	35	x 3 = 105
FACU species	30	x 4 = 120
UPL species	0	x 5 = 0
Column Totals:	65 (A)	225 (B)

Prevalence Index = B/A = 3.46

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 10
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 90
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: lichen 70 percent sphagnum 20 percent.

SOIL

Sampling Point T8-45

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-0.5	organic	100		0				
0.5-10	10YR 5/6	100		0			Sandy Gravely Loam	15 percent gravel 0.25 inch diameter
10-19	10YR 4/3	100		0			Sandy Gravely Loam	30 percent gravel 0.125 inch diameter

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks: cobbles 3-5 inch diameter throughout profile 5 percent.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/20/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T8-46
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): convex Slope (%): 3
Subregion (LRR): Interior Alaska Lat: 67.02141170 Long: -156.40838820 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/EM1B, IIC1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**

Remarks: the sample location was taken on the south side of the alignment within tussocks in a shrub layer. The point marked the boundary between the flat tussocks and shrub tussocks. Photos 3193-3197

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Rubus chamaemorus	60	Yes	FACW
2. Betula nana	52	Yes	FAC
3. Rhododendron groenlandicum	35	No	FAC
4. Vaccinium uliginosum	23	No	FAC
5. Picea mariana	35	No	FACW
6. Alnus viridis	20	No	FAC
Total Cover: 225			
50% of total cover: 112 20% of total cover: 45			
Herb Stratum			
1. Eriophorum vaginatum	50	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 50			
50% of total cover: 25 20% of total cover: 10			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	145	x 2 = 290
FAC species	130	x 3 = 390
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	275 (A)	680 (B)

Prevalence Index = B/A = 2.47

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 60
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: pockets of saturation and inundation observed at sample location.

SOIL

Sampling Point T8-46

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-15		100		0				saturated organics

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

X Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 15

Hydric Soil Present? Yes

Remarks: saturation and inundation observed at sample location. saturated organics above permafrost

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 6.5
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Saturated 0-15.

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/20/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T8-47
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): none Slope (%): 1
Subregion (LRR): Interior Alaska Lat: 67.02081340 Long: -156.41339270 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/EM1B, IIC1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks:	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Picea glauca	10	No	FACU
2. Betula nana	25	No	FAC
3. Vaccinium uliginosum	40	Yes	FAC
4. Rhododendron groenlandicum	30	Yes	FAC
5. Rubus chamaemorus	15	No	FACW
6. Vaccinium vitis-idaea	10	No	FAC
Total Cover: 130			
50% of total cover: 65 20% of total cover: 26			
Herb Stratum			
1. Eriophorum vaginatum	70	Yes	FACW
2. Carex rostrata	5	No	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 75			
50% of total cover: 37 20% of total cover: 15			

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 60
(Where applicable)

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	5	x 1 = 5
FACW species	85	x 2 = 170
FAC species	105	x 3 = 315
FACU species	10	x 4 = 40
UPL species	0	x 5 = 0
Column Totals:	205 (A)	530 (B)

Prevalence Index = B/A = 2.59

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is <3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 50 and lichen 10 percent inbetween tussocks.

SOIL

Sampling Point T8-47

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-7	organic	100		0				Saturated
7-12	10YR 3/2	100		0			Silty Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
X Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 12

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 6
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/20/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T8-48
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 8
Subregion (LRR): Interior Alaska Lat: 67.02079630 Long: -156.41549660 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: sample location was taken on the south side of the alignment within a picea mariana shrub/tree layer on top of a 7-8 percent hillslope. Photos 3198-3202.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	20	Yes	FACW
2.			
3.			
4.			
Total Cover: 20			
50% of total cover: 10 20% of total cover: 4			
Sapling/Shrub Stratum			
1. Betula nana	30	Yes	FAC
2. Rhododendron groenlandicum	25	Yes	FAC
3. Populus tremuloides	8	No	FACU
4. Vaccinium uliginosum	20	No	FAC
5. Vaccinium vitis-idaea	25	Yes	FAC
6. salix spp	5	No	
Total Cover: 113			
50% of total cover: 56 20% of total cover: 22			
Herb Stratum			
1. Calamagrostis canadensis	10	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 10			
50% of total cover: 5 20% of total cover: 2			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	20	x 2 = 40
FAC species	110	x 3 = 330
FACU species	8	x 4 = 32
UPL species	0	x 5 = 0
Column Totals:	138 (A)	402 (B)

Prevalence Index = B/A = 2.91

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 7
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 15
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sample point was taken on the south side of the alignment within a picea mariana shrub tree layer atop a hillslop upland.

SOIL

Sampling Point T8-48

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1		100		0				organic
1-20	10YR 3/2	100		0			Sandy Loam	not saturated

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks: gravel mixed throughout profile.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: no wetland hydrology

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/20/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T8-49
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): Interior Alaska Lat: 67.02170200 Long: -156.41660020 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PEM1B, IIIA3
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: 7147-7151 photos. Emergent pond fringe.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Vaccinium uliginosum	20	Yes	FAC
2. salix sp.	10	Yes	FAC
3.			
4.			
5.			
6.			
Total Cover: 30			
50% of total cover: 15 20% of total cover: 6			
Herb Stratum			
1. Comarum palustre	60	Yes	OBL
2. Calamagrostis canadensis	15	No	FAC
3. Carex rostrata	60	Yes	OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 135			
50% of total cover: 67 20% of total cover: 27			

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 100
(Where applicable)

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	120	x 1 = 120
FACW species	0	x 2 = 0
FAC species	45	x 3 = 135
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	165 (A)	255 (B)

Prevalence Index = B/A = 1.55

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 100 percent

SOIL

Sampling Point T8-49

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	organic	100		0				
5-15	2.5Y 3/3	100		0			Silty Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
X Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 15

Hydric Soil Present? Yes

Remarks: Well established wetland, soils have not formed redox features.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
X Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 3
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/20/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T8-50
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): Interior Alaska Lat: 67.02076110 Long: -156.41691560 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/EM1B, IIB1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**

Remarks: the sample location was taken on the south side of the alignment within a tussocks flats. The location marks the boundary between the picea mariana hillslope and the tussocks flats. Photos 3203-3207.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Rhododendron groenlandicum	46	Yes	FAC
2. Betula nana	50	Yes	FAC
3. Rubus chamaemorus	20	No	FACW
4. Vaccinium vitis-idaea	20	No	FAC
5. Picea mariana	10	No	FACW
6.			
Total Cover: 146			
50% of total cover: 73 20% of total cover: 29			
Herb Stratum			
1. Eriophorum vaginatum	85	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 85			
50% of total cover: 42 20% of total cover: 17			

Plot size (radius, or length x width): 15 % Bare ground: 5
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 30
(Where applicable)

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	115	x 2 = 230
FAC species	116	x 3 = 348
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	231 (A)	578 (B)

Prevalence Index = B/A = 2.50

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes

Remarks: lichen spp. covers areas between tussocks

SOIL

Sampling Point T8-50

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-14		100		0				saturated organics

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

X Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 14

Hydric Soil Present? Yes

Remarks: saturated organics above permafrost

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: saturated organics above permafrost

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/20/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T8-51
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): Interior Alaska Lat: 67.02179680 Long: -156.41651130 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Pond
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: pond with silty substrate. Southeast side. Carex utric	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	0 (A)	0 (B)

Prevalence Index = B/A = 0.00

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 0 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks:

SOIL

Sampling Point T8-51

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/20/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T9-52
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 8
Subregion (LRR): Interior Alaska Lat: 67.05299020 Long: -156.34763750 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1B, IIB1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: sample point was taken on the east side of the transect within tussocks and flats.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Alnus viridis	20	No	FAC
2. Vaccinium uliginosum	50	Yes	FAC
3. Rubus chamaemorus	50	Yes	FACW
4. Betula nana	22	No	FAC
5. Vaccinium vitis-idaea	25	No	FAC
6.			
Total Cover: 167			
50% of total cover: 83 20% of total cover: 33			
Herb Stratum			
1. Eriophorum vaginatum	24	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 24			
50% of total cover: 12 20% of total cover: 4			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	74	x 2 = 148
FAC species	117	x 3 = 351
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	191 (A)	499 (B)

Prevalence Index = B/A = 2.61

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 30
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum intermixed throughout tussocks .

SOIL

Sampling Point T9-52

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10		100		0				saturated organics above permafrost
10-12	10YR 3/3	100		0			Clay Loam	saturated

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
X Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 12

Hydric Soil Present? Yes

Remarks: Conditions likely inhibit the development of redoximorphic features.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 5.5
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: saturated organics above permafrost. Saturation 0-12 water table 5.5 photos 3208-3212

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/20/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T9-53
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 3
Subregion (LRR): Interior Alaska Lat: 67.05279180 Long: -156.34074780 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland, IIB1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: hillside alnus thicket. North facing slope. Photos 7152-7156.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Alnus viridis	100	Yes	FAC
2. salix sp.	5	No	FAC
3.			
4.			
5.			
6.			
Total Cover: 105			
50% of total cover: 52 20% of total cover: 21			
Herb Stratum			
1. Calamagrostis canadensis	25	Yes	FAC
2. Equisetum arvense	15	No	FAC
3. Spinulum annotinum	80	Yes	FACU
4. Epilobium anagallidifolium	5	No	FAC
5. Petasites frigidus	2	No	FACW
6.			
7.			
8.			
9.			
10.			
Total Cover: 127			
50% of total cover: 63 20% of total cover: 25			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	2	x 2 = 4
FAC species	145	x 3 = 435
FACU species	80	x 4 = 320
UPL species	0	x 5 = 0
Column Totals:	227 (A)	759 (B)

Prevalence Index = B/A = 3.34

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
__ Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T9-53

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	organic	100		0				
2-17	10YR 4/1	75	2.5Y 5/6	25	C	RC	Sandy Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 17

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Soils saturated between 0 and 7 inches. Below 7 inches soils are moist to dry. Saturation observed is likely from precipitation and would not be of sufficient duration/frequency for wetland hydrology.

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/20/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T9-54
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 5
Subregion (LRR): Interior Alaska Lat: 67.05108520 Long: -156.34646120 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1B, IIC1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: 3213-3217. Transition between alder thicket and tussock hillslope. No hydrology observed at sample location but hydric soils.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Vaccinium uliginosum	50	Yes	FAC
2. Betula nana	61	Yes	FAC
3. Shepherdia canadensis	25	No	FACU
4. Vaccinium vitis-idaea	15	No	FAC
5. Rubus chamaemorus	36	No	FACW
6. Rhododendron groenlandicum	15	No	FAC
Total Cover: 202			
50% of total cover: 101 20% of total cover: 40			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	36	x 2 = 72
FAC species	141	x 3 = 423
FACU species	25	x 4 = 100
UPL species	0	x 5 = 0
Column Totals:	202 (A)	595 (B)

Prevalence Index = B/A = 2.95

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 5
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T9-54

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6		100		0				organics
6-10	Gley 1 10y 4/1	90	2.5Y 5/4	10			Clay Loam	Prominent Redox

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
X Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 10

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
X Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
X Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/20/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T9-55
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 3
Subregion (LRR): Interior Alaska Lat: 67.05346680 Long: -156.34113390 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS3/EM1B, IIC1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: hillsope north of alnus thicket. North facing slope. photos 7157-7161.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Alnus viridis	15	No	FAC
2. salix sp.	5	No	FAC
3. Vaccinium uliginosum	20	No	FAC
4. Betula nana	35	Yes	FAC
5. Vaccinium vitis-idaea	60	Yes	FAC
6. Rhododendron groenlandicum	20	No	FAC
Total Cover: 155			
50% of total cover: 77 20% of total cover: 31			
Herb Stratum			
1. Carex rostrata	35	Yes	OBL
2. Eriophorum vaginatum	45	Yes	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 80			
50% of total cover: 40 20% of total cover: 16			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	35	x 1 = 35
FACW species	45	x 2 = 90
FAC species	155	x 3 = 465
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	235 (A)	590 (B)

Prevalence Index = B/A = 2.51

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 60
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 30%, lichen 30%.

SOIL

Sampling Point T9-55

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	organics	100		0				somewhat decomposed grasses dark brown water when squeezed

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

X Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 12

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 11
Saturation Present? Yes Depth (inches): 6
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/20/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T9-56
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 0
Subregion (LRR): Interior Alaska Lat: 67.05028860 Long: -156.34668400 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1B, IIB1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: the sample point was taken on the south side of the alignment within an alder thicket on a hillslope. Photos 3218-3222.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Alnus viridis	75	Yes	FAC
2. salix spp	47	Yes	FAC
3. Betula nana	35	No	FAC
4. Shepherdia canadensis	10	No	FACU
5. Vaccinium uliginosum	20	No	FAC
6. Rubus chamaemorus	5	No	FACW
Total Cover: 192			
50% of total cover: 96 20% of total cover: 38			
Herb Stratum			
1. Calamagrostis deschampsioides	26	Yes	FACW
2. Lycopodiella inundata	20	Yes	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 46			
50% of total cover: 23 20% of total cover: 9			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	20	x 1 = 20
FACW species	31	x 2 = 62
FAC species	177	x 3 = 531
FACU species	10	x 4 = 40
UPL species	0	x 5 = 0
Column Totals:	238 (A)	653 (B)

Prevalence Index = B/A = 2.74

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 15
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T9-56

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2		100		0				saturated organics
2-16	10YR 3/1	80	2.5Y 5/3	10			Clay	
		0	Gley 1 10Y 2.5/1	10				

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
X Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 16

Hydric Soil Present? Yes

Remarks: Thixotropic soil.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
X Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/20/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T9-57
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 2
Subregion (LRR): Interior Alaska Lat: 67.05494950 Long: -156.34235660 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/EM1B, IIB1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: base of hillslope near drainage swale. At 2000 foot boundary. Photos 7158	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Vaccinium uliginosum	35	Yes	FAC
2. Rhododendron groenlandicum	25	Yes	FAC
3. Empetrum nigrum	20	No	FAC
4. Vaccinium vitis-idaea	15	No	FAC
5. Betula nana	10	No	FAC
6.			
Total Cover: 105			
50% of total cover: 52 20% of total cover: 21			
Herb Stratum			
1. Eriophorum vaginatum	65	Yes	FACW
2. Carex rostrata	45	Yes	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 110			
50% of total cover: 55 20% of total cover: 22			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	45	x 1 = 45
FACW species	65	x 2 = 130
FAC species	105	x 3 = 315
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	215 (A)	490 (B)

Prevalence Index = B/A = 2.28

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 65
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 50%, lichen 15%.

SOIL

Sampling Point T9-57

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	organic	100		0				

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- X Histosol or Histel(A1)
- X Histic Epipedon (A2)
- __Hydrogen Sulfide (A4)
- __Thick Dark Surface (A12)
- __Alaska Gleyed (A13)
- __Alaska Redox (A14)
- __Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

- __Alaska Color Change (TA4)[4]
- __Alaska Alpine Swales (TA5)
- __Alaska Redox With 2.5Y Hue
- __Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- __Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 12

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- __Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- __Water Marks (B1)
- __Sediment Deposits (B2)
- __Drift Deposits (B3)
- __Algal Mat or Crust (B4)
- __Iron Deposits (B5)
- __Surface Soil Cracks (B6)
- __Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __Marl Deposits (B15)
- __Hydrogen Sulfide Odor (C1)
- __Dry Season Water Table (C2)
- __Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- __Water-stained Leaves (B9)
- __Drainage Patterns (B10)
- __Oxidized Rhizospheres along Living Roots (C3)
- __Presence of Reduced Iron (C4)
- __Salt Deposits (C5)
- __Stunted or Stressed Plants (D1)
- __Geomorphic Position (D2)
- X Shallow Aquitard (D3)
- __Microtopographic Relief (D4)
- __FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 4
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/20/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T9-58
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): none Slope (%): 1
Subregion (LRR): Interior Alaska Lat: 67.05003650 Long: -156.34673950 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1B, IIC1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: the sample point was taken on the south side of the alignment within a flat area outside of the alder thicket. Photos 3223-3227.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. salix spp	41	Yes	FAC
2. Betula nana	15	No	FAC
3. Rhododendron groenlandicum	40	Yes	FAC
4. Vaccinium vitis-idaea	25	No	FAC
5. Vaccinium uliginosum	35	Yes	FAC
6. Alnus viridis	11	No	FAC
Total Cover: 167			
50% of total cover: 83 20% of total cover: 33			
Herb Stratum			
1. Carex media	15	Yes	FACW
2. Larix laricina	1	No	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 16			
50% of total cover: 8 20% of total cover: 3			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	16	x 2 = 32
FAC species	167	x 3 = 501
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	183 (A)	533 (B)

Prevalence Index = B/A = 2.91

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is <3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 15
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: betula nana at transition between alder thicket and open shrub atop hillslope. Lichen is visible from the transition area to the sample point.

SOIL

Sampling Point T9-58

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-0.5		100		0				saturated organics
0.5-13	Gley 1 10y 3/1	90	10YR 5/8	10			Clay Loam	Prominent Redox

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
X Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: Clay Loam
Depth (inches): 1

Hydric Soil Present? Yes

Remarks: Thixotropic soil

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
X Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: pockets of saturation and inundation observed at sample location atop of gleyed soild.

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/20/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T9-60
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): Interior Alaska Lat: 67.04897540 Long: -156.34649550 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1B, IIC2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**

Remarks: From the sample location to the end of the 2000 foot boundary the area was atop a hilliside. the south side of the alignment contained a mixture of upland/wetland plants. Photos 3228-3232.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Arctostaphylos alpina	15	Yes	FACU
2. Vaccinium uliginosum	5	No	FAC
3. Betula nana	15	Yes	FAC
4. salix spp	3	No	FAC
5. Vaccinium vitis-idaea	10	Yes	FAC
6. Dryas octopetala	5	No	UPL
Total Cover: 53			
50% of total cover: 26 20% of total cover: 10			
Herb Stratum			
1. Carex media	50	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 50			
50% of total cover: 25 20% of total cover: 10			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	50	x 2 =	100
FAC species	33	x 3 =	99
FACU species	15	x 4 =	60
UPL species	5	x 5 =	25
Column Totals:	103 (A)		284 (B)

Prevalence Index = B/A = 2.76

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 10
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 15
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T9-60

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1	organic	100		0				moist organics
1-16	Gley 1 10Y 3/1	100		0				

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
X Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks: Redox concentrations have not sufficiently formed, met vegetation and hydrology.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
X Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: pockets of saturation and inundation observed at sample location

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/20/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T9-61
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Drainageway Local relief (concave, convex, none): concave Slope (%): 2
Subregion (LRR): Interior Alaska Lat: 67.05525720 Long: -156.34240990 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/EM1B, IIB2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: drainage swale inbetween two hills. Skipped number 59. Pockets of inundation.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Betula nana	30	Yes	FAC
2. Vaccinium uliginosum	25	Yes	FAC
3. Rhododendron groenlandicum	10	No	FAC
4.			
5.			
6.			
Total Cover: 65			
50% of total cover: 32 20% of total cover: 13			
Herb Stratum			
1. Eriophorum vaginatum	15	No	FACW
2. Carex capillaris	40	Yes	FACW
3. Carex laeviculmis	40	Yes	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 95			
50% of total cover: 47 20% of total cover: 19			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	95	x 2 = 190
FAC species	65	x 3 = 195
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	160 (A)	385 (B)

Prevalence Index = B/A = 2.41

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T9-61

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-14	organic	100		0				

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- X Histosol or Histel(A1)
- X Histic Epipedon (A2)
- X Hydrogen Sulfide (A4)
- __Thick Dark Surface (A12)
- __Alaska Gleyed (A13)
- __Alaska Redox (A14)
- __Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

- __Alaska Color Change (TA4)[4]
- __Alaska Alpine Swales (TA5)
- __Alaska Redox With 2.5Y Hue
- __Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- __Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 14

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- __Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- __Water Marks (B1)
- __Sediment Deposits (B2)
- __Drift Deposits (B3)
- __Algal Mat or Crust (B4)
- __Iron Deposits (B5)
- __Surface Soil Cracks (B6)
- __Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __Marl Deposits (B15)
- X Hydrogen Sulfide Odor (C1)
- __Dry Season Water Table (C2)
- __Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- __Water-stained Leaves (B9)
- __Drainage Patterns (B10)
- __Oxidized Rhizospheres along Living Roots (C3)
- __Presence of Reduced Iron (C4)
- __Salt Deposits (C5)
- __Stunted or Stressed Plants (D1)
- __Geomorphic Position (D2)
- __Shallow Aquitard (D3)
- __Microtopographic Relief (D4)
- __FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 5
Saturation Present? Yes Depth (inches): 2
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/20/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T10-62
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 15
Subregion (LRR): Interior Alaska Lat: 67.06160220 Long: -156.28709430 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**

Remarks: The sample location was taken on the south side of the alignment on an upland hillslope with picea mariana and populus tremuliodes. The sample location was taken near centerline. Photos 3233-3237.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	30	Yes	FACW
2. Populus tremuloides	8	Yes	FACU
3. Populus balsamifera	5	No	FACU
4.			
Total Cover: 43			
50% of total cover: 21 20% of total cover: 8			
Sapling/Shrub Stratum			
1. Rosa acicularis	15	No	FACU
2. Empetrum nigrum	25	Yes	FAC
3. Vaccinium uliginosum	25	Yes	FAC
4. Vaccinium vitis-idaea	10	No	FAC
5. Picea mariana	5	No	FACW
6.			
Total Cover: 80			
50% of total cover: 40 20% of total cover: 16			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	35	x 2 = 70
FAC species	60	x 3 = 180
FACU species	28	x 4 = 112
UPL species	0	x 5 = 0
Column Totals:	123 (A)	362 (B)

Prevalence Index = B/A = 2.94

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 45
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: upland hillslope with no herbaceous.

SOIL

Sampling Point T10-62

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4		100		0				organic
4-9	10YR 4/4	100		0			Sandy Gravely Loam	boulders and cobbles up to 6 in
9-14	10YR 4/3	100		0			Gravel	diameter

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 14

Hydric Soil Present? No

Remarks: no evidence of hydric soils. Restrictive digging layer of gravel and rock.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/20/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T10-63
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 4
Subregion (LRR): Interior Alaska Lat: 67.06415380 Long: -156.28698300 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: hillside upland forest. photos 7172-7176.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	40	Yes	FACU
2. Populus balsamifera	40	Yes	FACU
3.			
4.			
Total Cover: 80			
50% of total cover: 40 20% of total cover: 16			
Sapling/Shrub Stratum			
1. Alnus viridis	45	Yes	FAC
2. Rosa acicularis	15	No	FACU
3. Spiraea stevenii	40	Yes	FACU
4. Ribes triste	40	Yes	FAC
5. Linnaea borealis	40	Yes	FACU
6.			
Total Cover: 180			
50% of total cover: 90 20% of total cover: 36			
Herb Stratum			
1. Calamagrostis canadensis	25	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 25			
50% of total cover: 12 20% of total cover: 5			

Plot size (radius, or length x width): 0 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 42 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	110	x 3 = 330
FACU species	175	x 4 = 700
UPL species	0	x 5 = 0
Column Totals:	285 (A)	1030 (B)

Prevalence Index = B/A = 3.61

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
__ Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? No

Remarks: unknown mat forming shrub 40 % linnea borealis identified. Sphagnum 30%.

SOIL

Sampling Point T10-63

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-0.5	organic	100		0				
0.5-12	7.5YR 4/6	100		0			Loam	restrictive layer for digging 4 inch diameter rocks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/20/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T10-64
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 0
Subregion (LRR): Interior Alaska Lat: 67.06107170 Long: -156.28725540 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**

Remarks: The sample location was taken on the south side of the alignment within an alnus virdis thicket at ~7 percent slope towards centerline photos 3238-3242.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	19	Yes	FACW
2.			
3.			
4.			
Total Cover: 19			
50% of total cover: 9 20% of total cover: 3			
Sapling/Shrub Stratum			
1. Alnus viridis	34	Yes	FAC
2. Betula nana	20	Yes	FAC
3. Vaccinium uliginosum	23	Yes	FAC
4. Rosa acicularis	21	Yes	FACU
5. salix spp	5	No	FAC
6.			
Total Cover: 103			
50% of total cover: 51 20% of total cover: 20			
Herb Stratum			
1. Equisetum arvense	26	Yes	FAC
2. Lycopodium clavatum	32	Yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 58			
50% of total cover: 29 20% of total cover: 11			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 71 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	19	x 2 = 38
FAC species	108	x 3 = 324
FACU species	53	x 4 = 212
UPL species	0	x 5 = 0
Column Totals:	180 (A)	574 (B)

Prevalence Index = B/A = 3.19

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: leaf litter and detritus on forest floor.

SOIL

Sampling Point T10-64

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-15	10YR 2/2	100		0			Silty Clay Loam	not saturated

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 15

Hydric Soil Present? No

Remarks: gravel and rocks. Restrictive digging layer of rocks.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: no evidence of wetland hydrology observed at sample location

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/20/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T10-66
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 0
Subregion (LRR): Interior Alaska Lat: 67.06055760 Long: -156.28671270 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: the sample location was taken on the south side of the alignment atop an uoland knoll further south of the previous sample point. Photos 3243-3247.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	5	Yes	FACW
2.			
3.			
4.			
Total Cover: 5			
50% of total cover: 2 20% of total cover: 1			
Sapling/Shrub Stratum			
1. Betula nana	15	Yes	FAC
2. Vaccinium uliginosum	15	Yes	FAC
3. Rhododendron groenlandicum	15	Yes	FAC
4. Vaccinium vitis-idaea	10	No	FAC
5. Picea mariana	6	No	FACW
6.			
Total Cover: 61			
50% of total cover: 30 20% of total cover: 12			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	11	x 2 = 22
FAC species	55	x 3 = 165
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	66 (A)	187 (B)

Prevalence Index = B/A = 2.83

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 5 Total Cover of Bryophytes: 30
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: reindeer lichen and bryophytes atop hillside

SOIL

Sampling Point T10-66

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-0.5		100		0				organic
0.5-20	10YR 4/6	100		0			Loamy Fine Sand	not saturated

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 20

Hydric Soil Present? No

Remarks: no evidence of hydrology observed at sample location. Restrictive layer of gravel.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/20/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T10-68
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): none Slope (%): 2
Subregion (LRR): Interior Alaska Lat: 67.05995880 Long: -156.28616400 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: the sample location was taken on the south side of the alignment on the transitiin between scrub/shrub previously described to the flats. Photos 3248-3252.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Vaccinium uliginosum	45	Yes	FAC
2. Betula nana	25	Yes	FAC
3. Empetrum nigrum	36	Yes	FAC
4. Vaccinium vitis-idaea	25	No	FAC
5. Rhododendron groenlandicum	25	No	FAC
6. Picea mariana	10	No	FACW
Total Cover: 166			
50% of total cover: 83 20% of total cover: 33			
Herb Stratum			
1. Carex rostrata	5	Yes	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 5			
50% of total cover: 2 20% of total cover: 1			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	5	x 1 = 5
FACW species	10	x 2 = 20
FAC species	156	x 3 = 468
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	171 (A)	493 (B)

Prevalence Index = B/A = 2.88

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 30
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T10-68

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-0.5		100		0				organics
0.5-12	10YR 2/2	100		0			Sandy Loam	
12-16	10YR 4/6	100		0			Sandy Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/20/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T11-65
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 3
Subregion (LRR): Interior Alaska Lat: 67.04937650 Long: -156.14358220 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland, IA3
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: hillside. photos 7176-7181. North side of centerline.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	25	Yes	FACU
2.			
3.			
4.			
Total Cover: 25			
50% of total cover: 12 20% of total cover: 5			
Sapling/Shrub Stratum			
1. Betula nana	70	Yes	FAC
2. salix sp.	3	No	FAC
3. Empetrum nigrum	25	No	FAC
4. Rhododendron groenlandicum	15	No	FAC
5. Vaccinium uliginosum	35	Yes	FAC
6. Alnus viridis	30	No	FAC
Total Cover: 178			
50% of total cover: 89 20% of total cover: 35			
Herb Stratum			
1. Equisetum arvense	35	Yes	FAC
2. Calamagrostis canadensis	15	Yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 50			
50% of total cover: 25 20% of total cover: 10			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	228	x 3 = 684
FACU species	25	x 4 = 100
UPL species	0	x 5 = 0
Column Totals:	253 (A)	784 (B)

Prevalence Index = B/A = 3.10

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 60
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 60%.

SOIL

Sampling Point T11-65

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	organic	100		0				
4-14	2.5Y 3/1	100		0			Silty Clay	
14-23	gley1 10Y 4/1	100		0			Sandy Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 15
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/20/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T11-67
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Stream terrace Local relief (concave, convex, none): convex Slope (%): 2
Subregion (LRR): Interior Alaska Lat: 67.04939030 Long: -156.14357050 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland, IB2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? No**
Remarks: drainage terrace approximately 30 feet from stream. photos 7182-7186. Floodplain.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	5	No	FACU
2. Populus balsamifera	25	Yes	FACU
3.			
4.			
Total Cover: 30			
50% of total cover: 15 20% of total cover: 6			
Sapling/Shrub Stratum			
1. salix spp.	30	Yes	FAC
2. Alnus viridis	20	Yes	FAC
3. Rubus pubescens	5	No	FACW
4. Spiraea stevenii	5	No	FACU
5. Adoxa moschatellina	10	No	FAC
6.			
Total Cover: 70			
50% of total cover: 35 20% of total cover: 14			
Herb Stratum			
1. Calamagrostis canadensis	10	No	FAC
2. Equisetum arvense	35	Yes	FAC
3. Galium boreale	5	No	FACU
4. Polemonium acutiflorum	5	No	FAC
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 55			
50% of total cover: 27 20% of total cover: 11			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	5	x 2 = 10
FAC species	80	x 3 = 240
FACU species	40	x 4 = 160
UPL species	0	x 5 = 0
Column Totals:	125 (A)	410 (B)

Prevalence Index = B/A = 3.28

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
__ Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 25
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 40
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 40%

SOIL

Sampling Point T11-67

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	2.5Y 3/2	100		0			Sandy Gravely Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks: hit 2-3 inch diameter rocks

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
X Sediment Deposits (B2)
X Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/20/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T11-69
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Stream terrace Local relief (concave, convex, none): concave Slope (%): 2
Subregion (LRR): Interior Alaska Lat: 67.04939030 Long: -156.14357050 Datum: WGS84
Soil Map Unit Name: _ NWI classification: R3UB1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: stream flows north to south. 18 feet wetted width, 54 feet bankfull width. Sandy gravel substrate with boulders approximately 24 inch diameter. Riparian see T11-67.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	0 (A)	0 (B)

Prevalence Index = B/A = 0.00

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 0 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks:

SOIL

Sampling Point T11-69

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/20/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T11-70
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 15
Subregion (LRR): Interior Alaska Lat: 67.04738710 Long: -156.14427180 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**

Remarks: The sample location was taken on the south side of the alignment atop a hillside on a 10 percent slope. Picea marina trees were sparce at the open hilltop. Photos 3253-3257.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	11	Yes	FACW
2. Populus tremuloides	19	Yes	FACU
3.			
4.			
Total Cover: 30			
50% of total cover: 15 20% of total cover: 6			
Sapling/Shrub Stratum			
1. Picea mariana	5	No	FACW
2. Empetrum nigrum	50	Yes	FAC
3. Vaccinium uliginosum	20	Yes	FAC
4.			
5.			
6.			
Total Cover: 75			
50% of total cover: 37 20% of total cover: 15			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	16	x 2 = 32
FAC species	70	x 3 = 210
FACU species	19	x 4 = 76
UPL species	0	x 5 = 0
Column Totals:	105 (A)	318 (B)

Prevalence Index = B/A = 3.03

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 60
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T11-70

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3		100		0				lichen
3-10	10YR 3/6	100		0			Gravel	no hydrology

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/20/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T11-72
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 7
Subregion (LRR): Interior Alaska Lat: 67.04663330 Long: -156.14417280 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PFO4/SS1B
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**

Remarks: The sample location was taken on the south side of the alignment within a transition area between the open hillslope previously descibed and terrace cover. Peat mat over permafrost. 3258-3262.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	35	Yes	FACW
2.			
3.			
4.			
Total Cover: 35			
50% of total cover: 17 20% of total cover: 7			
Sapling/Shrub Stratum			
1. salix spp.	17	Yes	FAC
2. Betula nana	20	Yes	FAC
3. Vaccinium uliginosum	20	Yes	FAC
4. Picea mariana	6	No	FACW
5. Rhododendron groenlandicum	16	No	FAC
6. Empetrum nigrum	15	No	FAC
Total Cover: 94			
50% of total cover: 47 20% of total cover: 18			
Herb Stratum			
1. Calamagrostis canadensis	5	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 5			
50% of total cover: 2 20% of total cover: 1			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	41	x 2 = 82
FAC species	93	x 3 = 279
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	134 (A)	361 (B)

Prevalence Index = B/A = 2.69

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 45
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T11-72

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10		100		0				saturated peat mat

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 10

Hydric Soil Present? Yes

Remarks: saturated peat mat over permafrost

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
X Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/20/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T11-74
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): concave Slope (%): 2
Subregion (LRR): Interior Alaska Lat: 67.04598940 Long: -156.14381700 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS4/EM1B, IIC1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**

Remarks: The sample location was taken on the south side of the alignment within tussocks between the transition between the scrub layer and the flats. Photos 3263-3267.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Picea mariana	3	No	FACW
2. Rubus chamaemorus	21	No	FACW
3. Empetrum nigrum	35	Yes	FAC
4. Vaccinium vitis-idaea	25	Yes	FAC
5. Betula nana	26	Yes	FAC
6. Vaccinium uliginosum	11	No	FAC
Total Cover: 121			
50% of total cover: 60 20% of total cover: 24			
Herb Stratum			
1. Eriophorum vaginatum	75	Yes	FACW
2. Carex rostrata	9	No	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 84			
50% of total cover: 42 20% of total cover: 16			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	9	x 1 = 9
FACW species	99	x 2 = 198
FAC species	97	x 3 = 291
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	205 (A)	498 (B)

Prevalence Index = B/A = 2.43

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 55
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: open emergent

SOIL

Sampling Point T11-74

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3		100		0				saturated peat mat
3-10		100		0				saturated organics

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

X Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 10

Hydric Soil Present? Yes

Remarks: saturated organics above permafrost

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 10
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/21/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T12-71
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Stream terrace Local relief (concave, convex, none): concave Slope (%): 3
Subregion (LRR): Interior Alaska Lat: 67.05411120 Long: -156.07289450 Datum: WGS84
Soil Map Unit Name: _ NWI classification: R3UB1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: Stream upper perrenial 6 feet wetted width bankfull width 32 feet. Silty sand with boulders 2 feet diameter. Riparian see T12-73. Photos 7192-7194.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	0 (A)	0 (B)

Prevalence Index = B/A = 0.00

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 0 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks:

SOIL

Sampling Point T12-71

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/21/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T12-73
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Stream terrace Local relief (concave, convex, none): concave Slope (%): 3
Subregion (LRR): Interior Alaska Lat: 67.05405880 Long: -156.07290560 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1B
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: point approximately 15 feet west of stream. Willow thicket at base of 5 percent slope. photos 7195-7200.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. salix sp.	85	Yes	FAC
2. Dasiphora fruticosa	20	No	FAC
3. Spiraea stevenii	20	No	FACU
4. Vaccinium caespitosum	40	Yes	FACW
5.			
6.			
Total Cover: 165			
50% of total cover: 82 20% of total cover: 33			
Herb Stratum			
1. Calamagrostis canadensis	10	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 10			
50% of total cover: 5 20% of total cover: 2			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	40	x 2 = 80
FAC species	115	x 3 = 345
FACU species	20	x 4 = 80
UPL species	0	x 5 = 0
Column Totals:	175 (A)	505 (B)

Prevalence Index = B/A = 2.89

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T12-73

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1	organic	100		0				
1-6	2.5Y 3/1	100		0			Sandy Loam	
6-13	10YR 2/2	100		0			Silt Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
X Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 13

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
X Sediment Deposits (B2)
X Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 6
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/21/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T12-75
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hill Local relief (concave, convex, none): convex Slope (%): 2
Subregion (LRR): Interior Alaska Lat: 67.05369130 Long: -156.07316510 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland, IIC1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? No**
Remarks: hill above stream picea, betula nana cover. Photos 7204-7209.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Picea mariana	25	No	FACW
2. Betula nana	40	Yes	FAC
3. Vaccinium uliginosum	30	Yes	FAC
4. Rhododendron groenlandicum	30	Yes	FAC
5. Rubus chamaemorus	15	No	FACW
6. Vaccinium vitis-idaea	20	No	FAC
Total Cover: 160			
50% of total cover: 80 20% of total cover: 32			
Herb Stratum			
1. Carex rostrata	25	Yes	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 25			
50% of total cover: 12 20% of total cover: 5			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	25	x 1 = 25
FACW species	40	x 2 = 80
FAC species	120	x 3 = 360
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	185 (A)	465 (B)

Prevalence Index = B/A = 2.51

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 80
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: lichen 65%, sphagnum 15%.

SOIL

Sampling Point T12-75

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	organic	100		0				Saturated
2-17	10YR 2/2	100		0			Loamy Fine Sand	Saturated

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 17

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 10
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/21/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T12-76
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): concave Slope (%): 0
Subregion (LRR): Interior Alaska Lat: 67.05123720 Long: -156.07598470 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PFO4/PSS1B, IA2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: The sample point was taken on the north side of the alignment atop a hillslope with picea mariana near a drainage feature. Photos 3268-3272.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	38	Yes	FACW
2.			
3.			
4.			
Total Cover: 38			
50% of total cover: 19 20% of total cover: 7			
Sapling/Shrub Stratum			
1. Picea mariana	20	No	FACW
2. Rubus chamaemorus	30	Yes	FACW
3. Vaccinium uliginosum	25	Yes	FAC
4. Rhododendron groenlandicum	34	Yes	FAC
5. Empetrum nigrum	15	No	FAC
6. Vaccinium vitis-idaea	10	No	FAC
Total Cover: 134			
50% of total cover: 67 20% of total cover: 26			
Herb Stratum			
1. Calamagrostis canadensis	25	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 25			
50% of total cover: 12 20% of total cover: 5			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	88	x 2 = 176
FAC species	109	x 3 = 327
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	197 (A)	503 (B)

Prevalence Index = B/A = 2.55

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 5
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 20
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T12-76

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-14		100		0				saturated peat over permafrost

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

X Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 14

Hydric Soil Present? Yes

Remarks: saturated organics above permafrost

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/21/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T12-77
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hill Local relief (concave, convex, none): convex Slope (%): 2
Subregion (LRR): Interior Alaska Lat: 67.05261050 Long: -156.07075570 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PFO4/SS1B, IA2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: hill south of T12-75. Picea and vac uli cover. photos 7210-7214.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	30	Yes	FACU
2. Populus balsamifera	5	No	FACU
3.			
4.			
Total Cover: 35			
50% of total cover: 17 20% of total cover: 7			
Sapling/Shrub Stratum			
1. Picea glauca	15	No	FACU
2. Betula nana	25	Yes	FAC
3. Vaccinium uliginosum	55	Yes	FAC
4. Rhododendron groenlandicum	25	No	FAC
5. Vaccinium vitis-idaea	20	No	FAC
6. salix sp.	5	No	FAC
Total Cover: 145			
50% of total cover: 72 20% of total cover: 29			
Herb Stratum			
1. Equisetum arvense	40	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 40			
50% of total cover: 20 20% of total cover: 8			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	170	x 3 = 510
FACU species	50	x 4 = 200
UPL species	0	x 5 = 0
Column Totals:	220 (A)	710 (B)

Prevalence Index = B/A = 3.23

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
__ Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 70
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 65 % lichen 5%

SOIL

Sampling Point T12-77

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	organic	100		0				
2-10	10YR 2/2	100		0			Loam	
10-17	gley1 10Y 4/1	100		0			Silty Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
X Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 17

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 12
Saturation Present? Yes Depth (inches): 5
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/21/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T12-78
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Drainageway Local relief (concave, convex, none): convex Slope (%): 3
Subregion (LRR): Interior Alaska Lat: 67.05107030 Long: -156.07412240 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**

Remarks: the sample location was taken on the south side of the alignment at the transition zone between the picea hillslope and an alder thicket with some populus tremuliodes. Photos 3273-3277.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Populus tremuloides	11	Yes	FACU
2.			
3.			
4.			
Total Cover: 11			
50% of total cover: 5 20% of total cover: 2			
Sapling/Shrub Stratum			
1. Alnus viridis	60	Yes	FAC
2. Vaccinium uliginosum	35	Yes	FAC
3. Rubus chamaemorus	34	Yes	FACW
4. salix spp	18	No	FAC
5.			
6.			
Total Cover: 147			
50% of total cover: 73 20% of total cover: 29			
Herb Stratum			
1. Lycopodiella inundata	56	Yes	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 56			
50% of total cover: 28 20% of total cover: 11			

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	56	x 1 = 56
FACW species	34	x 2 = 68
FAC species	113	x 3 = 339
FACU species	11	x 4 = 44
UPL species	0	x 5 = 0
Column Totals:	214 (A)	507 (B)

Prevalence Index = B/A = 2.37

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T12-78

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3		100		0				moist organics
3-16	10YR 2/2	100		0			Loamy Fine Sand	not saturated

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 16

Hydric Soil Present? No

Remarks: not hydric no evidence of hydrology or hydric soils.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: no evidence of hydrology observed at sample location.

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/21/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T12-80
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Stream terrace Local relief (concave, convex, none): concave Slope (%): 2
Subregion (LRR): Interior Alaska Lat: 67.05108120 Long: -156.07321680 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland, IB2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**

Remarks: The sample location was taken on the south side of the alignment adjacent to an unidentified stream. The stream was fast movng with riffle pool morphology ~ 4ft wide with sandy mucky substrate. The riparian area was surrounded by salix spp and populus tremuloides lining the drainage/stream bank. Photos 3278-3282.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Populus tremuloides	28	Yes	FACU
2.			
3.			
4.			
Total Cover: 28			
50% of total cover: 14 20% of total cover: 5			
Sapling/Shrub Stratum			
1. salix spp	24	Yes	FAC
2. Shepherdia canadensis	39	Yes	FACU
3.			
4.			
5.			
6.			
Total Cover: 63			
50% of total cover: 31 20% of total cover: 12			
Herb Stratum			
1. Calamagrostis canadensis	45	Yes	FAC
2. Poa palustris	20	Yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 65			
50% of total cover: 32 20% of total cover: 13			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 60 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	89	x 3 = 267
FACU species	67	x 4 = 268
UPL species	0	x 5 = 0
Column Totals:	156 (A)	535 (B)

Prevalence Index = B/A = 3.43

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 5
% Cover of Wetland Bryophytes: 5 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T12-80

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-14	10YR 2/2	100		0			Loamy Fine Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 14

Hydric Soil Present? No

Remarks: no evidence of hydrology observed at sample location

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 13.5
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/21/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T12-82
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 9
Subregion (LRR): Interior Alaska Lat: 67.05045520 Long: -156.07268210 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**

Remarks: the sample location was taken on the south side of the alignment on a hillslope upland between an upland and ripiarian transition zone. Photos 3283-3287.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	21	Yes	FACW
2. Populus tremuloides	11	Yes	FACU
3.			
4.			
Total Cover: 32			
50% of total cover: 16 20% of total cover: 6			
Sapling/Shrub Stratum			
1. Picea mariana	16	Yes	FACW
2. Populus tremuloides	11	No	FACU
3. salix spp.	7	No	FAC
4. Rhododendron groenlandicum	21	Yes	FAC
5. Vaccinium uliginosum	10	No	FAC
6. Vaccinium vitis-idaea	10	No	FAC
Total Cover: 75			
50% of total cover: 37 20% of total cover: 15			
Herb Stratum			
1. Equisetum arvense	10	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 10			
50% of total cover: 5 20% of total cover: 2			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	37	x 2 = 74
FAC species	58	x 3 = 174
FACU species	22	x 4 = 88
UPL species	0	x 5 = 0
Column Totals:	117 (A)	336 (B)

Prevalence Index = B/A = 2.87

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 50
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks:

SOIL

Sampling Point T12-82

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1		100		0				lichen mat
1-16	10YR 3/3	90	7.5YR 3/2	10	RM	M	Sandy Loam	soils 7.5yr 2.5/3
16-18	10YR 3/1	100		0			Sandy Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: none
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: no evidence of hydrology observed at sample location

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/21/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T12-84
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): concave Slope (%): 3
Subregion (LRR): Interior Alaska Lat: 67.04926730 Long: -156.07203530 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS4/EM1B, IIB1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**

Remarks: The sample location was taken on the south side of the alignment within tussocks between the picea mariana and open tussocks transition zone. The transition went from picea hummocks to tussocks. Photos 3287-3291, 3293.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	5	Yes	FACW
2.			
3.			
4.			
Total Cover: 5			
50% of total cover: 2 20% of total cover: 1			
Sapling/Shrub Stratum			
1. Picea mariana	7	No	FACW
2. Betula nana	25	Yes	FAC
3. Rhododendron groenlandicum	37	Yes	FAC
4. Vaccinium uliginosum	20	No	FAC
5. Vaccinium vitis-idaea	26	Yes	FAC
6.			
Total Cover: 115			
50% of total cover: 57 20% of total cover: 23			
Herb Stratum			
1. Carex rostrata	20	Yes	OBL
2. Eriophorum vaginatum	30	Yes	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 50			
50% of total cover: 25 20% of total cover: 10			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	20	x 1 = 20
FACW species	42	x 2 = 84
FAC species	108	x 3 = 324
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	170 (A)	428 (B)

Prevalence Index = B/A = 2.52

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 35
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum intermixed throughout tussocks

SOIL

Sampling Point T12-84

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3		100		0				saturated peat mat
3-11		100		0				saturated organics above permafrost

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

X Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 11

Hydric Soil Present? Yes

Remarks: saturated organics above permafrost saturated throught entire profile.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 8
Saturation Present? Yes Depth (inches): 1
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: saturated throughout profile

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/21/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T12-86
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Drainageway Local relief (concave, convex, none): concave Slope (%): 5
Subregion (LRR): Interior Alaska Lat: 67.04905510 Long: -156.07367810 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1C, IA3
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**

Remarks: photo point only on the south side of the alignment within a drainage feature 1 foot wide with betula nana outlining on both sides. Water flows southeast with no clearly defined channel. Photos 3294-3299.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	13	Yes	FACW
2.			
3.			
4.			
Total Cover: 13			
50% of total cover: 6 20% of total cover: 2			
Sapling/Shrub Stratum			
1. Betula nana	67	Yes	FAC
2. salix sp	21	Yes	FAC
3.			
4.			
5.			
6.			
Total Cover: 88			
50% of total cover: 44 20% of total cover: 17			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	13	x 2 = 26
FAC species	88	x 3 = 264
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	101 (A)	290 (B)

Prevalence Index = B/A = 2.87

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T12-86

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

X Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/21/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T13-79
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): none Slope (%): 1
Subregion (LRR): Interior Alaska Lat: 67.05521290 Long: -156.03218100 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: forest picea glauca east of stream channel. photos 7215-7219	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	55	Yes	FACU
2.			
3.			
4.			
Total Cover: 55			
50% of total cover: 27 20% of total cover: 11			
Sapling/Shrub Stratum			
1. Alnus viridis	5	No	FAC
2. salix sp.	40	Yes	FAC
3. Vaccinium uliginosum	40	Yes	FAC
4. Vaccinium vitis-idaea	15	No	FAC
5. Rosa acicularis	10	No	FACU
6. Empetrum nigrum	5	No	FAC
Total Cover: 115			
50% of total cover: 57 20% of total cover: 23			
Herb Stratum			
1. Equisetum arvense	40	Yes	FAC
2. Calamagrostis canadensis	10	Yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 50			
50% of total cover: 25 20% of total cover: 10			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	155	x 3 = 465
FACU species	65	x 4 = 260
UPL species	0	x 5 = 0
Column Totals:	220 (A)	725 (B)

Prevalence Index = B/A = 3.30

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 100
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T13-79

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	organic	100		0				
2-17	10YR 5/1	65	10YR 4/6	35			Sandy Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 17

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/21/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T13-81
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): Interior Alaska Lat: 67.05649500 Long: -156.02874810 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: picea forest with betula nana and ledum. photos 7220-7224.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	55	Yes	FACU
2.			
3.			
4.			
Total Cover: 55			
50% of total cover: 27 20% of total cover: 11			
Sapling/Shrub Stratum			
1. Betula nana	25	No	FAC
2. salix sp	10	No	FAC
3. Vaccinium uliginosum	60	Yes	FAC
4. Rhododendron groenlandicum	35	Yes	FAC
5. Vaccinium vitis-idaea	25	No	FAC
6.			
Total Cover: 155			
50% of total cover: 77 20% of total cover: 31			
Herb Stratum			
1. Equisetum arvense	5	Yes	FAC
2. Calamagrostis canadensis	5	Yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 10			
50% of total cover: 5 20% of total cover: 2			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	165	x 3 = 495
FACU species	55	x 4 = 220
UPL species	0	x 5 = 0
Column Totals:	220 (A)	715 (B)

Prevalence Index = B/A = 3.25

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 100
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 25 percent, club lichen 20%, reindeer lichen 55%.

SOIL

Sampling Point T13-81

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	organic	100		0				
2-9	10YR 4/6	70	2.5Y 4/1	30			Loamy Fine Sand	
9-11	10YR 4/6	100		0			Loamy Fine Sand	
11-11.5	organic	100		0				
11.5-13	2.5Y 4/1	100		0			Sandy Loam	
13-17	10YR 4/6	100		0			Sandy Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
X Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks: hit rock. No wetland hydrology. Soils not hydric.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/21/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T13-88
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): Interior Alaska Lat: 67.05995350 Long: -156.02658420 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**

Remarks: The sample location was taken on north side alignment within a picea terrace with alders. The location contained numerous downed trees and evidence of black bear tracks and squirrell dens. Photos 3300-3304.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	31	Yes	FACW
2. Populus tremuloides	10	Yes	FACU
3.			
4.			
Total Cover: 41			
50% of total cover: 20 20% of total cover: 8			
Sapling/Shrub Stratum			
1. Alnus viridis	10	No	FAC
2. Ribes triste	39	Yes	FAC
3. Rosa acicularis	46	Yes	FACU
4. Vaccinium uliginosum	13	No	FAC
5.			
6.			
Total Cover: 108			
50% of total cover: 54 20% of total cover: 21			
Herb Stratum			
1. Calamagrostis canadensis	40	Yes	FAC
2. Equisetum arvense	10	Yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 50			
50% of total cover: 25 20% of total cover: 10			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	31	x 2 = 62
FAC species	112	x 3 = 336
FACU species	56	x 4 = 224
UPL species	0	x 5 = 0
Column Totals:	199 (A)	622 (B)

Prevalence Index = B/A = 3.13

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 10
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T13-88

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 3/3	100		100			Sandy Loam	not saturated some cobbles mixed in.

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 18

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/21/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T13-90
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): Interior Alaska Lat: 67.05972660 Long: -156.02694090 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: the sample location was taken on the north side of the alignment within an open canopy within the picea. Photos 3305-3309.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	26	Yes	FACW
2.			
3.			
4.			
Total Cover: 26			
50% of total cover: 13 20% of total cover: 5			
Sapling/Shrub Stratum			
1. Alnus viridis	25	Yes	FAC
2. salix spp	22	Yes	FAC
3. Vaccinium uliginosum	28	Yes	FAC
4. Rubus pubescens	17	No	FACU
5.			
6.			
Total Cover: 92			
50% of total cover: 46 20% of total cover: 18			
Herb Stratum			
1. Calamagrostis canadensis	16	Yes	FAC
2. Viola epipsila	13	Yes	FACW
3. Equisetum arvense	11	Yes	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 40			
50% of total cover: 20 20% of total cover: 8			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	39	x 2 = 78
FAC species	102	x 3 = 306
FACU species	17	x 4 = 68
UPL species	0	x 5 = 0
Column Totals:	158 (A)	452 (B)

Prevalence Index = B/A = 2.86

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 10
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 15
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T13-90

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3		100		0				moist organics
3-21	10YR 3/3	100		0			Sandy Loam	volcanic ash present

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permsfrost
Depth (inches): 21

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
X Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/21/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T13-92
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): Interior Alaska Lat: 67.06011510 Long: -156.02715600 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**

Remarks: the sample location was taken on north side of the alignment within a salix spp dominated thicket. On the northern boundary was the picea forest and the southern boundary to the riparian area visible from the aerial. Photos 3310-3314.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	6	Yes	FACW
2.			
3.			
4.			
Total Cover: 6			
50% of total cover: 3 20% of total cover: 1			
Sapling/Shrub Stratum			
1. Alnus viridis	64	Yes	FAC
2. salix spp	23	No	FAC
3. Rosa acicularis	20	No	FACU
4. Rubus pedatus	24	Yes	FAC
5. Vaccinium uliginosum	10	No	FAC
6. Shepherdia canadensis	8	No	FACU
Total Cover: 149			
50% of total cover: 74 20% of total cover: 29			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	6	x 2 = 12
FAC species	121	x 3 = 363
FACU species	28	x 4 = 112
UPL species	0	x 5 = 0
Column Totals:	155 (A)	487 (B)

Prevalence Index = B/A = 3.14

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 15 Total Cover of Bryophytes: 10
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T13-92

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3		100		0				organic
3-13	10YR 3/2	100		0			Loamy Fine Sand	some tree roots

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 13

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/21/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T14-100
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): convex Slope (%): 2
Subregion (LRR): Interior Alaska Lat: 67.05284560 Long: -155.94719080 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**

Remarks: the sample location was taken on the south side of the alignment within a transition zone of alnus virdis and salix spp atop of the upland within a terrace. Photos 3330-3334. upland

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	5	No	FACW
2. Populus tremuloides	35	Yes	FACU
3.			
4.			
Total Cover: 40			
50% of total cover: 20 20% of total cover: 8			
Sapling/Shrub Stratum			
1. Alnus viridis	41	Yes	FAC
2. salix spp	32	Yes	FAC
3. Vaccinium uliginosum	31	Yes	FAC
4. Rubus chamaemorus	26	No	FACW
5. Vaccinium vitis-idaea	15	No	FAC
6. Spiraea stevenii	16	No	FACU
Total Cover: 161			
50% of total cover: 80 20% of total cover: 32			
Herb Stratum			
1. Lycopodium clavatum	10	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 10			
50% of total cover: 5 20% of total cover: 2			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 60 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	31	x 2 = 62
FAC species	119	x 3 = 357
FACU species	61	x 4 = 244
UPL species	0	x 5 = 0
Column Totals:	211 (A)	663 (B)

Prevalence Index = B/A = 3.14

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 15
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T14-100

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1		100		0				organics
1-10	10YR 2/1	100		0			Loamy Fine Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 10

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/21/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T14-83
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 8
Subregion (LRR): Interior Alaska Lat: 67.05641150 Long: -155.94660930 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: upland forest with dry soil. photos 7225-7229.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	25	Yes	FACU
2. Populus tremuloides	20	Yes	FACU
3. Populus balsamifera	5	No	FACU
4.			
Total Cover: 50			
50% of total cover: 25 20% of total cover: 10			
Sapling/Shrub Stratum			
1. Populus tremuloides	3	No	FACU
2. Vaccinium vitis-idaea	15	Yes	FAC
3. Vaccinium uliginosum	10	Yes	FAC
4. Empetrum nigrum	15	Yes	FAC
5. Picea glauca	2	No	FACU
6.			
Total Cover: 45			
50% of total cover: 22 20% of total cover: 9			
Herb Stratum			
1. Geocaulon lividum	25	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 25			
50% of total cover: 12 20% of total cover: 5			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	40	x 3 = 120
FACU species	80	x 4 = 320
UPL species	0	x 5 = 0
Column Totals:	120 (A)	440 (B)

Prevalence Index = B/A = 3.67

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
__ Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 100
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks: sphagnum 10%, 90% lichen

SOIL

Sampling Point T14-83

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1	organic	100		0				
1-11	10YR 5/6	100		0			Sandy Gravely Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks: restrictive digging with 0.75 inch diameter gravels.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/21/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T14-85
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 3
Subregion (LRR): Interior Alaska Lat: 67.05568480 Long: -155.94581420 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: hillslope south of T14-83. Picea vac uli dominated . photos 7230-7234.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	30	Yes	FACU
2.			
3.			
4.			
Total Cover: 30			
50% of total cover: 15 20% of total cover: 6			
Sapling/Shrub Stratum			
1. Alnus viridis	5	No	FAC
2. salix sp.	15	No	FAC
3. Picea glauca	15	No	FACU
4. Vaccinium uliginosum	40	Yes	FAC
5. Rhododendron groenlandicum	30	Yes	FAC
6. Vaccinium vitis-idaea	25	No	FAC
Total Cover: 130			
50% of total cover: 65 20% of total cover: 26			
Herb Stratum			
1. Equisetum sylvaticum	25	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 25			
50% of total cover: 12 20% of total cover: 5			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	140	x 3 =	420
FACU species	45	x 4 =	180
UPL species	0	x 5 =	0
Column Totals:	185 (A)		600 (B)

Prevalence Index = B/A = 3.24

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 100
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 35%, lichen 65%.

SOIL

Sampling Point T14-85

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	organic	100		0				
18-20	2.5Y 5/4	100		0			Sandy Gravely Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/21/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T14-87
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): none Slope (%): 1
Subregion (LRR): Interior Alaska Lat: 67.05400880 Long: -155.94790270 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/EM1B, IIC1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: pem/pss wetland surrounded by picea forest. photos 7235-7240	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Betula nana	30	Yes	FAC
2. Vaccinium uliginosum	20	Yes	FAC
3. Rhododendron groenlandicum	15	No	FAC
4. Vaccinium vitis-idaea	15	No	FAC
5. Empetrum nigrum	25	Yes	FAC
6. Rubus chamaemorus	10	No	FACW
Total Cover: 115			
50% of total cover: 57 20% of total cover: 23			
Herb Stratum			
1. Eriophorum vaginatum	75	Yes	FACW
2. Carex media	15	No	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 90			
50% of total cover: 45 20% of total cover: 18			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	100	x 2 = 200
FAC species	105	x 3 = 315
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	205 (A)	515 (B)

Prevalence Index = B/A = 2.51

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 60
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 45%, lichen 15% inbetwen tussocks.

SOIL

Sampling Point T14-87

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	organics	100		0				somewhat identifiable dark brown
6-10	organic	100		0				water
10-12	gley1 10Y 4/1	100		0			Silty Clay	more decomposed somewhat identifiable orange brown water

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 12

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 10
Saturation Present? Yes Depth (inches): 6
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/21/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T14-94
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Drainageway Local relief (concave, convex, none): concave Slope (%): 5
Subregion (LRR): Interior Alaska Lat: 67.05164830 Long: -155.94634330 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/EM1C, IIB1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**

Remarks: The sample location was taken on the south side of the alignment within a drainage feature within sphagnum and willows at the 2000 foot boundary. To the north a picea terrace to the south picea

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. salix spp	67	Yes	FAC
2. Dasiphora fruticosa	23	Yes	FAC
3. Rubus pedatus	25	Yes	FAC
4.			
5.			
6.			
Total Cover: 115			
50% of total cover: 57 20% of total cover: 23			
Herb Stratum			
1. Calamagrostis canadensis	37	Yes	FAC
2. Equisetum pratense	50	Yes	FACW
3. Comarum palustre	20	No	OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 107			
50% of total cover: 53 20% of total cover: 21			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	20	x 1 = 20
FACW species	50	x 2 = 100
FAC species	152	x 3 = 456
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	222 (A)	576 (B)

Prevalence Index = B/A = 2.59

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 40
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: scrub/shrub pss/em wetland with sphagnum covering floor.

SOIL

Sampling Point T14-94

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12		100		0				saturated organics
12-13	10YR 2/2	100		0			Silty Clay Loam	saturated to surface

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 13

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 1
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: water table at 1 inch, saturated throughout

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/21/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T14-96
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): convex Slope (%): 3
Subregion (LRR): Interior Alaska Lat: 67.05183290 Long: -155.94643020 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1B, IIC1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**

Remarks: The sample location was taken on the south side of the alignment within a transition zone with the pss/em wetland on the south heading into the picea hillslope to the north. The slope increases to the upland on the northern boundary.photos 3320-3324

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	10	Yes	FACW
2.			
3.			
4.			
Total Cover: 10			
50% of total cover: 5 20% of total cover: 2			
Sapling/Shrub Stratum			
1. Picea mariana	6	No	FACW
2. Vaccinium uliginosum	36	Yes	FAC
3. salix spp	21	Yes	FAC
4. Betula nana	24	Yes	FAC
5. Rhododendron groenlandicum	6	No	FAC
6.			
Total Cover: 93			
50% of total cover: 46 20% of total cover: 18			
Herb Stratum			
1. Eriophorum vaginatum	20	Yes	FACW
2. Equisetum arvense	13	Yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 33			
50% of total cover: 16 20% of total cover: 6			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	36	x 2 = 72
FAC species	100	x 3 = 300
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	136 (A)	372 (B)

Prevalence Index = B/A = 2.74

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 5
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: lone tussocks appeared st the transition area between the pss/em wetkand to the bottom of the hillslooe upland to the north.

SOIL

Sampling Point T14-96

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6		100		0				saturated organic
6-18	10YR 2/2	100		0			Sandy Loam	hydrogen sulfide odor

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
X Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 18

Hydric Soil Present? Yes

Remarks: no indicators of hydric soils at trsnsition zone.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
X Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
X Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: no hydrology observed due to geomorphic position at the transition to a pss/em wetland.

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/21/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T14-98
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hill Local relief (concave, convex, none): convex Slope (%): 16
Subregion (LRR): Interior Alaska Lat: 67.05259080 Long: -155.94724670 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**

Remarks: the sample location was taken on the south side of the alignment within an upland knoll. To the south lower lever upland to the north a picea terrace. Bare ground visible from aerial. Photos 3325-3329. upland

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	27	Yes	FACU
2.			
3.			
4.			
Total Cover: 27			
50% of total cover: 13 20% of total cover: 5			
Sapling/Shrub Stratum			
1. Picea glauca	5	No	FACU
2. Populus tremuloides	6	No	FACU
3. Vaccinium uliginosum	24	Yes	FAC
4. Rhododendron groenlandicum	25	Yes	FAC
5. Vaccinium vitis-idaea	26	Yes	FAC
6.			
Total Cover: 86			
50% of total cover: 43 20% of total cover: 17			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	75	x 3 = 225
FACU species	38	x 4 = 152
UPL species	0	x 5 = 0
Column Totals:	113 (A)	377 (B)

Prevalence Index = B/A = 3.34

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 45
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: reindeer lichen over hilltop.

SOIL

Sampling Point T14-98

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3		100		0				organic
3-7	10YR 2/2	100		0			Loamy Fine Sand	
7-23	10YR 3/2	100		0			Sandy Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: none
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/21/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T15-102
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Stream terrace Local relief (concave, convex, none): convex Slope (%): 1
Subregion (LRR): Interior Alaska Lat: 67.06274530 Long: -155.80900910 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**

Remarks: The sample location was taken on north side of the alignment within a picea glauca stream terrace. Photos 3335-3339.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	40	Yes	FACU
2. Populus balsamifera	5	No	FACU
3.			
4.			
Total Cover: 45			
50% of total cover: 22 20% of total cover: 9			
Sapling/Shrub Stratum			
1. salix spp	30	Yes	FAC
2. Vaccinium vitis-idaea	50	Yes	FAC
3. Empetrum nigrum	15	No	FAC
4. Rosa acicularis	10	No	FACU
5. Picea glauca	5	No	FACU
6.			
Total Cover: 110			
50% of total cover: 55 20% of total cover: 22			
Herb Stratum			
1. Mertensia paniculata	3	Yes	FACU
2. Streptopus amplexifolius	5	Yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 8			
50% of total cover: 4 20% of total cover: 1			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 40 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	95	x 3 = 285
FACU species	68	x 4 = 272
UPL species	0	x 5 = 0
Column Totals:	163 (A)	557 (B)

Prevalence Index = B/A = 3.42

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
__ Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 45
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks: reindeer lichen and lichen spp. All dry.

SOIL

Sampling Point T15-102

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1		100		0				lichen - organic
1-11	10YR 3/1	100		0			Sandy Gravely Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 11

Hydric Soil Present? No

Remarks: Restrictive digging layer of gravel.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/21/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T15-104
Investigator(s): EG, AM, CF, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hill Local relief (concave, convex, none): convex Slope (%): 1
Subregion (LRR): Interior Alaska Lat: 67.06127260 Long: -155.81040270 Datum: WGS84
Soil Map Unit Name: _ NWI classification:
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: ridge hill 1% slope dry lichen picea glauca north side of transect. photos 3340-3343	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	0 (A)	0 (B)

Prevalence Index = B/A = 0.00

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 0 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks:

SOIL

Sampling Point T15-104

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/21/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T15-106
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Stream terrace Local relief (concave, convex, none): convex Slope (%): 1
Subregion (LRR): Interior Alaska Lat: 67.06068820 Long: -155.80883690 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: stream terrace north of center line. Salix riparian. 7 feet above stream bed	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. salix spp.	25	Yes	FAC
2. Picea glauca	3	No	FACU
3. Populus balsamifera	3	No	FACU
4.			
5.			
6.			
Total Cover: 31			
50% of total cover: 15 20% of total cover: 6			
Herb Stratum			
1. Equisetum arvense	80	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 80			
50% of total cover: 40 20% of total cover: 16			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	105	x 3 = 315
FACU species	6	x 4 = 24
UPL species	0	x 5 = 0
Column Totals:	111 (A)	339 (B)

Prevalence Index = B/A = 3.05

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 10
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T15-106

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-22	2.5Y 4/2	100		0			Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/21/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T15-108
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Stream terrace Local relief (concave, convex, none): none Slope (%): 2
Subregion (LRR): Interior Alaska Lat: 67.06067480 Long: -155.80867080 Datum: WGS84
Soil Map Unit Name: _ NWI classification: R3UB1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**

Remarks: The sample loction was taken on the north side of the alignment at an upper perrenial stream adjacent to point 106. The stream was fast flowing south with riffle glide morphology. Numerous downed trees and large rocks/cobble for substrate. ~ 25 feet wide and 4 feet deep photos 3344-3351.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	0 (A)	0 (B)

Prevalence Index = B/A = 0.00

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 0 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks:

SOIL

Sampling Point T15-108

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/21/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T15-110
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Stream terrace Local relief (concave, convex, none): convex Slope (%): 5
Subregion (LRR): Interior Alaska Lat: 67.05848150 Long: -155.80801050 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: stream terrace	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	40	Yes	FACU
2. Populus balsamifera	5	No	FACU
3. Populus tremuloides	15	Yes	FACU
4.			
Total Cover: 60			
50% of total cover: 30 20% of total cover: 12			
Sapling/Shrub Stratum			
1. Rosa acicularis	20	Yes	FACU
2. Picea glauca	5	No	FACU
3. Alnus viridis	35	Yes	FAC
4. Ribes triste	5	No	FAC
5.			
6.			
Total Cover: 65			
50% of total cover: 32 20% of total cover: 13			
Herb Stratum			
1. Viola epipsila	3	No	FACW
2. Equisetum arvense	55	Yes	FAC
3. Calamagrostis canadensis	3	No	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 61			
50% of total cover: 30 20% of total cover: 12			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 40 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	3	x 2 = 6
FAC species	98	x 3 = 294
FACU species	85	x 4 = 340
UPL species	0	x 5 = 0
Column Totals:	186 (A)	640 (B)

Prevalence Index = B/A = 3.44

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
__ Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 3
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks: alnus on outskirts. Lichen 3%

SOIL

Sampling Point T15-110

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-13	10YR 3/2	100		0			Sandy Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
___Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/22/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T16-89
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Stream terrace Local relief (concave, convex, none): convex Slope (%): 1
Subregion (LRR): Interior Alaska Lat: 67.05073840 Long: -155.78797490 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: stream terrace picea vac uli cover. Slow low gradient slough. photos 7241-7245.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	25	Yes	FACU
2.			
3.			
4.			
Total Cover: 25			
50% of total cover: 12 20% of total cover: 5			
Sapling/Shrub Stratum			
1. salix spp.	30	Yes	FAC
2. Betula nana	15	No	FAC
3. Vaccinium uliginosum	80	Yes	FAC
4. Arctostaphylos alpina	20	No	FACU
5.			
6.			
Total Cover: 145			
50% of total cover: 72 20% of total cover: 29			
Herb Stratum			
1. Equisetum arvense	10	Yes	FAC
2. aster borealis	10	Yes	OBL
3. Polemonium acutiflorum	5	Yes	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 25			
50% of total cover: 12 20% of total cover: 5			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 83 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	10	x 1 = 10
FACW species	0	x 2 = 0
FAC species	140	x 3 = 420
FACU species	45	x 4 = 180
UPL species	0	x 5 = 0
Column Totals:	195 (A)	610 (B)

Prevalence Index = B/A = 3.13

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 85
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 85%.

SOIL

Sampling Point T16-89

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2.5	organic	100		0				
2.5-6.5	2.5Y 4/2	100		0			Loam	organic/loam, stratified alternating
6.5-14	2.5Y 4/2	100		0			Silt Loam	organic and loam every 0.5 inch.

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 14

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: moist not saturated.

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/22/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T16-91
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 0
Subregion (LRR): Interior Alaska Lat: 67.05154560 Long: -155.78738650 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PEM1C, IIIA3
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: depression no outlet. Pem. photos 7246-7250	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Herb Stratum			
1. Eriophorum vaginatum	30	Yes	FACW
2. Carex rostrata	25	Yes	OBL
3. Comarum palustre	15	No	OBL
4. Equisetum arvense	8	No	FAC
5. Carex media	5	No	FACW
6. Eriophorum angustifolium	10	No	OBL
7. Potamogeton gramineus	10	No	OBL
8.			
9.			
10.			
Total Cover: 103			
50% of total cover: 51 20% of total cover: 20			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	60	x 1 = 60
FACW species	35	x 2 = 70
FAC species	8	x 3 = 24
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	103 (A)	154 (B)

Prevalence Index = B/A = 1.50

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 100
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 100%

SOIL

Sampling Point T16-91

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	organic	100		0				

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks: concave depression

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 3
Saturation Present? Yes Depth (inches): 0.5
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: center of depression is inundated

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/22/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T16-93
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): Interior Alaska Lat: 67.05217090 Long: -155.79497680 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/EM1B, IIC1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: flatscrub/shrub wetland. 7251-7255	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Picea mariana	10	No	FACW
2. Betula nana	10	No	FAC
3. salix spp.	10	No	FAC
4. Vaccinium uliginosum	35	Yes	FAC
5. Rhododendron groenlandicum	30	Yes	FAC
6. Vaccinium vitis-idaea	20	No	FAC
Total Cover: 115			
50% of total cover: 57 20% of total cover: 23			
Herb Stratum			
1. Carex rostrata	25	Yes	OBL
2. Eriophorum vaginatum	50	Yes	FACW
3. Calamagrostis canadensis	10	No	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 85			
50% of total cover: 42 20% of total cover: 17			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	25	x 1 = 25
FACW species	60	x 2 = 120
FAC species	115	x 3 = 345
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	200 (A)	490 (B)

Prevalence Index = B/A = 2.45

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 75
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: 75% sphagnum, 5% lichin inbetween tussocks

SOIL

Sampling Point T16-93

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-13	organic	100		0				
13-14	gley1 10Y 2.5/1	100		0			Silt Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 14

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 11
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: pockets of inundation

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/22/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T16-97
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Stream terrace Local relief (concave, convex, none): convex Slope (%): 2
Subregion (LRR): Interior Alaska Lat: 67.05544430 Long: -155.78355270 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/EM1C, IIB2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: stream terrace floodplain active. photos 7261-7265	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. salix spp.	60	Yes	FAC
2. Shepherdia canadensis	5	No	FACU
3.			
4.			
5.			
6.			
Total Cover: 65			
50% of total cover: 32 20% of total cover: 13			
Herb Stratum			
1. Equisetum arvense	60	Yes	FAC
2. Elymus lanceolatus	15	No	UPL
3. Poa palustris	10	No	FAC
4. Polemonium acutiflorum	5	No	FAC
5. Parnassia palustris	3	No	FACW
6.			
7.			
8.			
9.			
10.			
Total Cover: 93			
50% of total cover: 46 20% of total cover: 18			

Plot size (radius, or length x width): 15 % Bare ground: 15
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	3	x 2 = 6
FAC species	75	x 3 = 225
FACU species	5	x 4 = 20
UPL species	15	x 5 = 75
Column Totals:	98 (A)	326 (B)

Prevalence Index = B/A = 3.33

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
__ Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T16-97

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-20	2.5Y 5/1	100		0			Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
X Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks: in active floodplain

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
X Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
X Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/22/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T16-112
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 1
Subregion (LRR): Interior Alaska Lat: 67.05028690 Long: -155.78299820 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: The sample location was taken on the south side of the alignment within a picea mariana flat area adjacent to the stream visible from the aerial. Not a wetland. Photos 3366-3370.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	20	Yes	FACW
2.			
3.			
4.			
Total Cover: 20			
50% of total cover: 10 20% of total cover: 4			
Sapling/Shrub Stratum			
1. Alnus viridis	5	No	FAC
2. salix spp	10	No	FAC
3. Betula nana	35	Yes	FAC
4. Vaccinium uliginosum	35	Yes	FAC
5. Arctostaphylos rubra	10	No	FAC
6. Vaccinium vitis-idaea	10	No	FAC
Total Cover: 105			
50% of total cover: 52 20% of total cover: 21			
Herb Stratum			
1. Equisetum pratense	10	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 10			
50% of total cover: 5 20% of total cover: 2			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	30	x 2 = 60
FAC species	105	x 3 = 315
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	135 (A)	375 (B)

Prevalence Index = B/A = 2.78

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 40
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T16-112

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5		100		0				organic
5-14	10YR 4/1	100		0			Sandy Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 14

Hydric Soil Present? No

Remarks: organics aren't saturated

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
X Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/22/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T16-114
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Drainageway Local relief (concave, convex, none): concave Slope (%): 3
Subregion (LRR): Interior Alaska Lat: 67.05137300 Long: -155.78181400 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PEM1B, IIIA3
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**

Remarks: the sample location was taken on the south side of the alignment near centerline within a pem wetland. North of centerline the picea terrace continues. The drainage feature is ~ 10 feet wide with pockets of saturation and inundation. Photos 3371-3375.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	10	Yes	FACW
2.			
3.			
4.			
Total Cover: 10			
50% of total cover: 5 20% of total cover: 2			
Sapling/Shrub Stratum			
1. salix spp	11	Yes	FAC
2. Vaccinium uliginosum	5	Yes	FAC
3.			
4.			
5.			
6.			
Total Cover: 16			
50% of total cover: 8 20% of total cover: 3			
Herb Stratum			
1. Carex rostrata	60	Yes	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 60			
50% of total cover: 30 20% of total cover: 12			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	60	x 1 = 60
FACW species	10	x 2 = 20
FAC species	16	x 3 = 48
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	86 (A)	128 (B)

Prevalence Index = B/A = 1.49

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 20
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T16-114

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1		100		0				organic
1-19	10YR 3/1	75	7.5YR 4/6	15	RM	M	Loamy Fine Sand	Prominent Redox

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
X Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: none
Depth (inches): 0

Hydric Soil Present? Yes

Remarks: within drainageway

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
X Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 1
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: pockets of saturation and inundation observed at sample location. Water table to surface.

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/22/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T16-116
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 5
Subregion (LRR): Interior Alaska Lat: 67.05123740 Long: -155.78247530 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PEM1, IIIA3
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**

Remarks: The sample location was taken on the south side of the alignment within an emergent wetland surrounded by picea terrace bordered by salix spp photos 3376-3380. Pem wetland is saturated with pockets of inundation observed at sample location.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	5	Yes	FACW
2.			
3.			
4.			
Total Cover: 5			
50% of total cover: 2 20% of total cover: 1			
Sapling/Shrub Stratum			
1. Vaccinium uliginosum	3	Yes	FAC
2.			
3.			
4.			
5.			
6.			
Total Cover: 3			
50% of total cover: 1 20% of total cover: 0			
Herb Stratum			
1. Eriophorum vaginatum	75	Yes	FACW
2. Equisetum fluviatile	50	Yes	OBL
3. Carex rostrata	40	Yes	OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 165			
50% of total cover: 82 20% of total cover: 33			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	90	x 1 = 90
FACW species	80	x 2 = 160
FAC species	3	x 3 = 9
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	173 (A)	259 (B)

Prevalence Index = B/A = 1.50

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 60
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T16-116

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6.5		100		0				saturated organics
6.5-14	gley 1 10y 3/1	100		0			Clay Loam	root

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
X Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 14

Hydric Soil Present? Yes

Remarks: Hydric soil indicators have not formed. Sample location is not near a wetland/upland boundary.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
X Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 0
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/22/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T16-118
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): Interior Alaska Lat: 67.05501980 Long: -155.78519720 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**

Remarks: The sample location was taken on north side of the transect within a alnus viridis and early cotton wood forest. The soils were dry with no wetland indicators. Photos 3381-3385. Upland.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	10	Yes	FACU
2.			
3.			
4.			
Total Cover: 10			
50% of total cover: 5 20% of total cover: 2			
Sapling/Shrub Stratum			
1. Alnus viridis	50	Yes	FAC
2. salix spp	15	No	FAC
3. Picea glauca	10	No	FACU
4. Populus balsamifera	5	No	FACU
5. Arctostaphylos alpina	15	No	FACU
6.			
Total Cover: 95			
50% of total cover: 47 20% of total cover: 19			
Herb Stratum			
1. Viola spp	9	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 9			
50% of total cover: 4 20% of total cover: 1			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	74	x 3 = 222
FACU species	40	x 4 = 160
UPL species	0	x 5 = 0
Column Totals:	114 (A)	382 (B)

Prevalence Index = B/A = 3.35

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T16-118

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4		100		0				organics
4-19	10YR 5/2	100		0			Sandy Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: none
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/22/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T16-120
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): Interior Alaska Lat: 67.05562970 Long: -155.78649510 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: The sample location was taken on north side of the alignment within a picea/salix tickett north of centerline by the mannelick river. Photos 3386-3390. Upland.	

VEGETATION – Use scientific names of plants. List all species in the plot.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum			
1. Picea glauca	5	Yes	FACU
2.			
3.			
4.			
Total Cover: 5			
50% of total cover: 2 20% of total cover: 1			
Sapling/Shrub Stratum			
1. Salix pp	60	Yes	FAC
2. Rubus pedatus	5	No	FAC
3. Arctostaphylos rubra	10	No	FAC
4.			
5.			
6.			
Total Cover: 75			
50% of total cover: 37 20% of total cover: 15			
Herb Stratum			
1. Equisetum arvense	60	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 60			
50% of total cover: 30 20% of total cover: 12			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	135	x 3 = 405
FACU species	5	x 4 = 20
UPL species	0	x 5 = 0
Column Totals:	140 (A)	425 (B)

Prevalence Index = B/A = 3.04

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 0 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T16-120

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1		100		0				organic
1-16	10YR 4/1	80	10YR 3/6	20	RM	M	Loamy Fine Sand	redox and oxidiozed rhibo.

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: none
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
X Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/22/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T17-99
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Stream terrace Local relief (concave, convex, none): convex Slope (%): 2
Subregion (LRR): Interior Alaska Lat: 67.04710130 Long: -155.75289260 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1C, IIC1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: Stream terrace next to low gradient stream. Photos 7270-7274.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. salix spp.	20	No	FAC
2. Dasiphora fruticosa	25	No	FAC
3. Vaccinium uliginosum	70	Yes	FAC
4. Betula nana	5	No	FAC
5. Myrica gale	15	No	OBL
6.			
Total Cover: 135			
50% of total cover: 67 20% of total cover: 27			
Herb Stratum			
1. Carex rostrata	20	Yes	OBL
2. Calamagrostis canadensis	10	Yes	FAC
3. Equisetum arvense	10	Yes	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 40			
50% of total cover: 20 20% of total cover: 8			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	35	x 1 = 35
FACW species	0	x 2 = 0
FAC species	140	x 3 = 420
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	175 (A)	455 (B)

Prevalence Index = B/A = 2.60

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 20
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: potentilla drummondi is fruticosa. Sphagnum 20%. Unknown shrub 15% similar to vac uli with spikey berry myrica gale.

SOIL

Sampling Point T17-99

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1.5	organic	100		0				
1.5-14	10YR 4/2	100		0			Loamy Fine Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
X Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 14

Hydric Soil Present? Yes

Remarks: moist soil. Active floodplain.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
X Sediment Deposits (B2)
X Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/22/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T17-101
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Stream terrace Local relief (concave, convex, none): concave Slope (%): 1
Subregion (LRR): Interior Alaska Lat: 67.04708420 Long: -155.75288730 Datum: WGS84
Soil Map Unit Name: _ NWI classification: R2UB3
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: stream 1% slope. Silty substrate. 12 feet wetted width and 36 feet bankfull width. 7266-7269.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	0 (A)	0 (B)

Prevalence Index = B/A = 0.00

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 0 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks:

SOIL

Sampling Point T17-101

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/22/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T17-103
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Valley floor Local relief (concave, convex, none): convex Slope (%): 2
Subregion (LRR): Interior Alaska Lat: 67.04803710 Long: -155.75527360 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1B, IIC1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: valley floor/flat near stream. PSS. 7275-7280.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Betula nana	60	Yes	FAC
2. Rhododendron groenlandicum	45	Yes	FAC
3. Vaccinium uliginosum	25	No	FAC
4. Vaccinium vitis-idaea	20	No	FAC
5.			
6.			
Total Cover: 150			
50% of total cover: 75 20% of total cover: 30			
Herb Stratum			
1. Carex rostrata	20	Yes	OBL
2. Eriophorum vaginatum	35	Yes	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 55			
50% of total cover: 27 20% of total cover: 11			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	20	x 1 = 20
FACW species	35	x 2 = 70
FAC species	150	x 3 = 450
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	205 (A)	540 (B)

Prevalence Index = B/A = 2.63

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 50
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: lichen 5%, reindeer lichen 15%, sphagnum 30%

SOIL

Sampling Point T17-103

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	organic	100		0				
4-14	gley1 10Y 5/1	100		0			Silty Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

X Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 14

Hydric Soil Present? Yes

Remarks: 4-14 color change to 10YR 5/1 ~20 minutes

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 7
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/22/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T17-122
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): Interior Alaska Lat: 67.05058810 Long: -155.75669890 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Pond
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? Yes**

Remarks: The sample location was taken on north side of the alignment within a pond visible from the aerial. Ducks were present, evidence of moose and tracks. The substrate was not visible due to the deep water. Photos 3391-3394.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	0 (A)	0 (B)

Prevalence Index = B/A = 0.00

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 0 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks:

SOIL

Sampling Point T17-122

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/22/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T17-124
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 3
Subregion (LRR): Interior Alaska Lat: 67.05059050 Long: -155.75670320 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS4/EM1H, IID2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**

Remarks: the sample location was taken on the north side of the alignment within a transition area between the pond decscribed in point 122 and the emergent wetland. The pond was located to the north and tussocks to the south. Photos 3395-3399.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Andromeda polifolia	40	Yes	OBL
2.			
3.			
4.			
5.			
6.			
Total Cover: 40			
50% of total cover: 20 20% of total cover: 8			
Herb Stratum			
1. Carex rostrata	52	Yes	OBL
2. Carex utriculata	95	Yes	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 147			
50% of total cover: 73 20% of total cover: 29			

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 98
(Where applicable)

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	187	x 1 = 187
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	187 (A)	187 (B)

Prevalence Index = B/A = 1.00

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes

Remarks: emergent wetland

SOIL

Sampling Point T17-124

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-17		100		0				saturated organics

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

X Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 17

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 0
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: saturated to the surface and inundation observed at sample location

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/22/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T17-126
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): Interior Alaska Lat: 67.04958260 Long: -155.75430980 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS4/EM1C, IID2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: The sample location was taken on north side of the alignment within a transition area between a scrub/shrub wetland and the emergent wetland visible from the aerial. Pss/em wetland, photos 3400-3404.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Betula nana	30	Yes	FAC
2. Rhododendron groenlandicum	10	No	FAC
3. Andromeda polifolia	60	Yes	OBL
4.			
5.			
6.			
Total Cover: 100			
50% of total cover: 50 20% of total cover: 20			
Herb Stratum			
1. Eriophorum vaginatum	65	Yes	FACW
2. Carex rostrata	35	Yes	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 100			
50% of total cover: 50 20% of total cover: 20			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	95	x 1 = 95
FACW species	65	x 2 = 130
FAC species	40	x 3 = 120
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	200 (A)	345 (B)

Prevalence Index = B/A = 1.73

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 50
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T17-126

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-11		100		0				saturated organics

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- X Histosol or Histel(A1)
- X Histic Epipedon (A2)
- __Hydrogen Sulfide (A4)
- __Thick Dark Surface (A12)
- __Alaska Gleyed (A13)
- __Alaska Redox (A14)
- __Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

- __Alaska Color Change (TA4)[4]
- __Alaska Alpine Swales (TA5)
- __Alaska Redox With 2.5Y Hue
- __Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- __Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 11

Hydric Soil Present? Yes

Remarks: 11 inches saturated organics above permafrost

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- __Surface Water (A1)
- __High Water Table (A2)
- X Saturation (A3)
- __Water Marks (B1)
- __Sediment Deposits (B2)
- __Drift Deposits (B3)
- __Algal Mat or Crust (B4)
- __Iron Deposits (B5)
- __Surface Soil Cracks (B6)
- __Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __Marl Deposits (B15)
- __Hydrogen Sulfide Odor (C1)
- __Dry Season Water Table (C2)
- __Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- __Water-stained Leaves (B9)
- __Drainage Patterns (B10)
- __Oxidized Rhizospheres along Living Roots (C3)
- __Presence of Reduced Iron (C4)
- __Salt Deposits (C5)
- __Stunted or Stressed Plants (D1)
- __Geomorphic Position (D2)
- X Shallow Aquitard (D3)
- __Microtopographic Relief (D4)
- __FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/22/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T18-105
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 0
Subregion (LRR): Interior Alaska Lat: 67.04418020 Long: -155.67998210 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PEM1B, IIIA3
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: depression pond fringe approximately 20 feet from waters edge. Photo 7281-7287. PEM surrounded by salix spp. and myrica gale with upland picea to south.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. salix spp.	10	Yes	FAC
2. Betula nana	5	Yes	FAC
3. Myrica gale	5	Yes	OBL
4.			
5.			
6.			
Total Cover: 20			
50% of total cover: 10 20% of total cover: 4			
Herb Stratum			
1. Carex rostrata	20	Yes	OBL
2. Eriophorum vaginatum	25	Yes	FACW
3. Carex limosa	35	Yes	OBL
4. Potentilla gracilis	5	No	FAC
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 85			
50% of total cover: 42 20% of total cover: 17			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	60	x 1 = 60
FACW species	25	x 2 = 50
FAC species	20	x 3 = 60
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	105 (A)	170 (B)

Prevalence Index = B/A = 1.62

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 30
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 30%

SOIL

Sampling Point T18-105

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-11	organic	100		0				
11-17	organic w/ gravel	100		0				50% gravel

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

X Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks: gravel 0.5 inches to 2 inch diameter. Gravel restriction at 17.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 8
Saturation Present? Yes Depth (inches): 1
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/22/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T18-107
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hill Local relief (concave, convex, none): convex Slope (%): 3
Subregion (LRR): Interior Alaska Lat: 67.04377050 Long: -155.68213810 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland, IB2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: hill upland pop tre,vac uli cover. 7288-7291. Photo Point Only.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	5	No	FACU
2. Populus balsamifera	10	Yes	FACU
3. Populus tremuloides	30	Yes	FACU
4.			
Total Cover: 45			
50% of total cover: 22 20% of total cover: 9			
Sapling/Shrub Stratum			
1. Picea glauca	5	No	FACU
2. Vaccinium uliginosum	30	Yes	FAC
3. Vaccinium vitis-idaea	35	Yes	FAC
4. Alnus viridis	3	No	FAC
5. Rhododendron groenlandicum	10	No	FAC
6.			
Total Cover: 83			
50% of total cover: 41 20% of total cover: 16			
Herb Stratum			
1. Geocaulon lividum	15	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 15			
50% of total cover: 7 20% of total cover: 3			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 40 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	78	x 3 = 234
FACU species	65	x 4 = 260
UPL species	0	x 5 = 0
Column Totals:	143 (A)	494 (B)

Prevalence Index = B/A = 3.45

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
__ Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 0 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 100
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks: sphagnum 25%, 75% lichen

SOIL

Sampling Point T18-107

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/22/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T18-109
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 4
Subregion (LRR): Interior Alaska Lat: 67.04230760 Long: -155.68194580 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: hillslope below ridge. photo 7292-7296.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	55	Yes	FACU
2. Populus tremuloides	15	Yes	FACU
3.			
4.			
Total Cover: 70			
50% of total cover: 35 20% of total cover: 14			
Sapling/Shrub Stratum			
1. Alnus viridis	15	No	FAC
2. Betula nana	35	Yes	FAC
3. Vaccinium uliginosum	35	Yes	FAC
4. salix sp.	5	No	FAC
5. Vaccinium vitis-idaea	30	Yes	FAC
6. Rhododendron groenlandicum	20	No	FAC
Total Cover: 140			
50% of total cover: 70 20% of total cover: 28			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 60 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	140	x 3 = 420
FACU species	70	x 4 = 280
UPL species	0	x 5 = 0
Column Totals:	210 (A)	700 (B)

Prevalence Index = B/A = 3.33

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 100
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 90%, lichen 10%.

SOIL

Sampling Point T18-109

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-13	organic	100		0				

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 13

Hydric Soil Present? No

Remarks: moist

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/22/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T18-128
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hill Local relief (concave, convex, none): convex Slope (%): 20
Subregion (LRR): Interior Alaska Lat: 67.04509540 Long: -155.67521380 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**

Remarks: The sample location was taken on the north side of the alignment within a populus tremuliodes hillside with littlr picea glauca. Northward the forest continues. No bare ground a lot of leaf litter. Photos 3405-3409.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Populus tremuloides	50	Yes	FACU
2. Picea glauca	25	Yes	FACU
3.			
4.			
Total Cover: 75			
50% of total cover: 37 20% of total cover: 15			
Sapling/Shrub Stratum			
1. Populus tremuloides	20	Yes	FACU
2. Rosa acicularis	20	No	FACU
3. Vaccinium uliginosum	26	Yes	FAC
4. Rhododendron groenlandicum	25	Yes	FAC
5. Vaccinium vitis-idaea	15	No	FAC
6.			
Total Cover: 106			
50% of total cover: 53 20% of total cover: 21			
Herb Stratum			
1. Shepherdia canadensis	40	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 40			
50% of total cover: 20 20% of total cover: 8			

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	66	x 3 = 198
FACU species	155	x 4 = 620
UPL species	0	x 5 = 0
Column Totals:	221 (A)	818 (B)

Prevalence Index = B/A = 3.70

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
__ Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? No

Remarks:

SOIL

Sampling Point T18-128

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-15		100		0				organics with rocks and cobbles

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: none
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/22/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T18-130
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hill Local relief (concave, convex, none): convex Slope (%): 30
Subregion (LRR): Interior Alaska Lat: 67.04523630 Long: -155.67644990 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**

Remarks: The sample location was taken on the north side of the alignment atop an upland knoll. Unable to dig past 0.5 inches due to a rock restrictive layer. Past the apex of the upland, tne upland forest continues. To the south and north are both upland. Photos 3410-3414.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Populus tremuloides	60	Yes	FACU
2. Picea glauca	20	Yes	FACU
3.			
4.			
Total Cover: 80			
50% of total cover: 40 20% of total cover: 16			
Sapling/Shrub Stratum			
1. Vaccinium vitis-idaea	35	Yes	FAC
2. Vaccinium alaskaense	15	No	FAC
3. Vaccinium uliginosum	20	Yes	FAC
4. Picea glauca	16	No	FACU
5.			
6.			
Total Cover: 86			
50% of total cover: 43 20% of total cover: 17			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	70	x 3 = 210
FACU species	96	x 4 = 384
UPL species	0	x 5 = 0
Column Totals:	166 (A)	594 (B)

Prevalence Index = B/A = 3.58

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
__ Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 30
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks:

SOIL

Sampling Point T18-130

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-0.5		100		0				organics but rock restrictive layer 0.5 inches

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks: Restrictive digging layer of rock.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: no evidence of hydrology observed at sample location

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/22/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T19-111
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 2
Subregion (LRR): Interior Alaska Lat: 67.01266460 Long: -156.05642390 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/EM1B, IIC1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: hillside alnus, and eri vag cover. PSS/EM	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Alnus viridis	20	Yes	FAC
2. Betula nana	25	Yes	FAC
3. Vaccinium uliginosum	15	No	FAC
4. Vaccinium vitis-idaea	15	No	FAC
5. Rhododendron groenlandicum	25	Yes	FAC
6. Empetrum nigrum	10	No	FAC
Total Cover: 110			
50% of total cover: 55 20% of total cover: 22			
Herb Stratum			
1. Eriophorum vaginatum	60	Yes	FACW
2. Carex rostrata	15	Yes	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 75			
50% of total cover: 37 20% of total cover: 15			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	15	x 1 = 15
FACW species	60	x 2 = 120
FAC species	110	x 3 = 330
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	185 (A)	465 (B)

Prevalence Index = B/A = 2.51

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 60
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: 55% sphagnum, 5% lichen

SOIL

Sampling Point T19-111

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-11	organic	100		0				

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- X Histosol or Histel(A1)
- X Histic Epipedon (A2)
- __Hydrogen Sulfide (A4)
- __Thick Dark Surface (A12)
- __Alaska Gleyed (A13)
- __Alaska Redox (A14)
- __Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

- __Alaska Color Change (TA4)[4]
- __Alaska Alpine Swales (TA5)
- __Alaska Redox With 2.5Y Hue
- __Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- __Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 11

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- __Surface Water (A1)
- __High Water Table (A2)
- X Saturation (A3)
- __Water Marks (B1)
- __Sediment Deposits (B2)
- __Drift Deposits (B3)
- __Algal Mat or Crust (B4)
- __Iron Deposits (B5)
- __Surface Soil Cracks (B6)
- __Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __Marl Deposits (B15)
- __Hydrogen Sulfide Odor (C1)
- __Dry Season Water Table (C2)
- __Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- __Water-stained Leaves (B9)
- __Drainage Patterns (B10)
- __Oxidized Rhizospheres along Living Roots (C3)
- __Presence of Reduced Iron (C4)
- __Salt Deposits (C5)
- __Stunted or Stressed Plants (D1)
- __Geomorphic Position (D2)
- X Shallow Aquitard (D3)
- __Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 6
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/22/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T19-113
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): Interior Alaska Lat: 67.01211380 Long: -156.06056750 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: flat at toe of slope. Picea dominate. Photos. 7303-7308	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	25	Yes	FACU
2. Populus balsamifera	10	Yes	FACU
3.			
4.			
Total Cover: 35			
50% of total cover: 17 20% of total cover: 7			
Sapling/Shrub Stratum			
1. Rosa acicularis	20	Yes	FACU
2. Dasiphora fruticosa	30	Yes	FAC
3. Betula nana	20	Yes	FAC
4. salix sp.	15	No	FAC
5. Viburnum edule	0	No	FACU
6. Rubus pubescens	10	No	FACW
Total Cover: 95			
50% of total cover: 47 20% of total cover: 19			
Herb Stratum			
1. Equisetum arvense	10	Yes	FAC
2. Moneses uniflora	10	Yes	FACU
3. Mertensia paniculata	5	No	FACU
4. Calamagrostis canadensis	5	No	FAC
5. Galium boreale	10	Yes	FACU
6.			
7.			
8.			
9.			
10.			
Total Cover: 40			
50% of total cover: 20 20% of total cover: 8			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 37 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	10	x 2 = 20
FAC species	80	x 3 = 240
FACU species	80	x 4 = 320
UPL species	0	x 5 = 0
Column Totals:	170 (A)	580 (B)

Prevalence Index = B/A = 3.41

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
__ Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 80
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks: sphagnum 80%

SOIL

Sampling Point T19-113

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	organic	100		0				
3-15	10YR 3/2	100		0			Loam	
15-20	2.5Y 5/1	100		0			Silt Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks: rocks restricte digging

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/22/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T19-132
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 35
Subregion (LRR): Interior Alaska Lat: 67.01172120 Long: -156.05309610 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/EM1C, IIB1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**

Remarks: The sample location was taken on east side of the alignment atop a 35-45 percent hillslope with tussock extending to the base of the hill. The top of the ridgeline is outside the 2000 foot corridor. To the north an upland knoll, to the south more tussocks on the hillside. For the sample location eastward up the hillslope the terrain remains consistent with the sample location. Photos 3420-3424.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	40	Yes	FACW
2.			
3.			
4.			
Total Cover: 40			
50% of total cover: 20 20% of total cover: 8			
Sapling/Shrub Stratum			
1. Betula nana	40	Yes	FAC
2. salix spp	20	Yes	FAC
3. Alnus viridis	10	No	FAC
4. Vaccinium uliginosum	15	No	FAC
5. Rhododendron groenlandicum	15	No	FAC
6. Picea mariana	10	No	FACW
Total Cover: 110			
50% of total cover: 55 20% of total cover: 22			
Herb Stratum			
1. Eriophorum vaginatum	60	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 60			
50% of total cover: 30 20% of total cover: 12			

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 35
(Where applicable)

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	110	x 2 = 220
FAC species	100	x 3 = 300
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	210 (A)	520 (B)

Prevalence Index = B/A = 2.48

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum intermixed throughout tussocks

SOIL

Sampling Point T19-132

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12		100		0				saturated organic

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- X Histosol or Histel(A1)
- X Histic Epipedon (A2)
- __Hydrogen Sulfide (A4)
- __Thick Dark Surface (A12)
- __Alaska Gleyed (A13)
- __Alaska Redox (A14)
- __Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

- __Alaska Color Change (TA4)[4]
- __Alaska Alpine Swales (TA5)
- __Alaska Redox With 2.5Y Hue
- __Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- __Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 12

Hydric Soil Present? Yes

Remarks: saturated organics above permafrost

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- __Surface Water (A1)
- __High Water Table (A2)
- X Saturation (A3)
- __Water Marks (B1)
- __Sediment Deposits (B2)
- __Drift Deposits (B3)
- __Algal Mat or Crust (B4)
- __Iron Deposits (B5)
- __Surface Soil Cracks (B6)
- __Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __Marl Deposits (B15)
- __Hydrogen Sulfide Odor (C1)
- __Dry Season Water Table (C2)
- __Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- __Water-stained Leaves (B9)
- __Drainage Patterns (B10)
- __Oxidized Rhizospheres along Living Roots (C3)
- __Presence of Reduced Iron (C4)
- __Salt Deposits (C5)
- __Stunted or Stressed Plants (D1)
- __Geomorphic Position (D2)
- X Shallow Aquitard (D3)
- __Microtopographic Relief (D4)
- __FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: saturation and inundation observed at sample location.

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/22/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T19-134
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 0
Subregion (LRR): Interior Alaska Lat: 67.01254180 Long: -156.05174040 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland, IB3
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks:	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	5	Yes	FACU
2. Populus tremuloides	20	Yes	FACU
3.			
4.			
Total Cover: 25			
50% of total cover: 12 20% of total cover: 5			
Sapling/Shrub Stratum			
1. Vaccinium uliginosum	10	No	FAC
2. Vaccinium vitis-idaea	30	Yes	FAC
3. Empetrum nigrum	30	Yes	FAC
4. Rhododendron groenlandicum	8	No	FAC
5.			
6.			
Total Cover: 78			
50% of total cover: 39 20% of total cover: 15			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	78	x 3 = 234
FACU species	25	x 4 = 100
UPL species	0	x 5 = 0
Column Totals:	103 (A)	334 (B)

Prevalence Index = B/A = 3.24

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
__ Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks:

SOIL

Sampling Point T19-134

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks: Rock outcrop

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches): 0
Water Table Present? No Depth (inches): 0
Saturation Present? No Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/23/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T20-117
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): Interior Alaska Lat: 67.01881590 Long: -156.01215470 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/EMB, IIB1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: flat pss located between two picea areas. photos 7309-7313.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Betula nana	50	Yes	FAC
2. Salix sp.	10	No	FAC
3. Vaccinium uliginosum	15	No	FAC
4. Rhododendron groenlandicum	20	Yes	FAC
5. Picea mariana	3	No	FACW
6. Rubus chamaemorus	10	No	FACW
Total Cover: 108			
50% of total cover: 54 20% of total cover: 21			
Herb Stratum			
1. Eriophorum vaginatum	65	Yes	FACW
2. Carex rostrata	20	Yes	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 85			
50% of total cover: 42 20% of total cover: 17			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	20	x 1 = 20
FACW species	78	x 2 = 156
FAC species	95	x 3 = 285
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	193 (A)	461 (B)

Prevalence Index = B/A = 2.39

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 40
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 30%, lichen 10% inbetween tussocks.

SOIL

Sampling Point T20-117

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-11	organic	100		0				

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

X Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 11

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 1
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/23/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T20-119
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): none Slope (%): 1
Subregion (LRR): Interior Alaska Lat: 67.01815250 Long: -156.01292850 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks:	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	40	Yes	FACU
2. Populus balsamifera	15	Yes	FACU
3.			
4.			
Total Cover: 55			
50% of total cover: 27 20% of total cover: 11			
Sapling/Shrub Stratum			
1. Alnus viridis	30	Yes	FAC
2. Salix spp.	15	No	FAC
3. Vaccinium uliginosum	25	Yes	FAC
4. Dasiphora fruticosa	10	No	FAC
5. Betula nana	5	No	FAC
6. Rubus pubescens	10	No	UPL
Total Cover: 95			
50% of total cover: 47 20% of total cover: 19			
Herb Stratum			
1. Equisetum arvense	5	Yes	FAC
2. Calamagrostis canadensis	5	Yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 10			
50% of total cover: 5 20% of total cover: 2			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	95	x 3 = 285
FACU species	55	x 4 = 220
UPL species	10	x 5 = 50
Column Totals:	160 (A)	555 (B)

Prevalence Index = B/A = 3.47

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 90
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 90%.

SOIL

Sampling Point T20-119

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	organic	100		0				
10-11	organic/gravel	100		0				1 inch diameter gravel

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
___Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks: gravel restrictive layer.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/23/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T20-136
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 10
Subregion (LRR): Interior Alaska Lat: 67.01611100 Long: -156.00856580 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**

Remarks: The sample location was taken on the south side of the alignment within picea an populus tremuliodes hillslope. Further south the hill increases in slope and the concentration of picea increases. To the north, tussocks. Photos 3429-3433.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	25	Yes	FACW
2. Populus tremuloides	15	Yes	FACU
3.			
4.			
Total Cover: 40			
50% of total cover: 20 20% of total cover: 8			
Sapling/Shrub Stratum			
1. Picea mariana	15	No	FACW
2. Populus tremuloides	5	No	FACU
3. Betula nana	35	Yes	FAC
4. Rhododendron groenlandicum	10	No	FAC
5. Vaccinium vitis-idaea	30	Yes	FAC
6. Vaccinium uliginosum	5	No	FAC
Total Cover: 100			
50% of total cover: 50 20% of total cover: 20			
Herb Stratum			
1. Carex media	15	Yes	FACW
2. Eriophorum vaginatum	15	Yes	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 30			
50% of total cover: 15 20% of total cover: 6			

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 20
(Where applicable)

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 83 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	70	x 2 = 140
FAC species	80	x 3 = 240
FACU species	20	x 4 = 80
UPL species	0	x 5 = 0
Column Totals:	170 (A)	460 (B)

Prevalence Index = B/A = 2.71

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes

Remarks: lichen mat on floor

SOIL

Sampling Point T20-136

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4		100		0				organics
4-18		100	10YR 3/4	0			Loamy Fine Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 18

Hydric Soil Present? No

Remarks: no evidence of hydric soils were present

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: no evidence of hydrology observed at sample location

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/23/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T20-138
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hill Local relief (concave, convex, none): convex Slope (%): 3
Subregion (LRR): Interior Alaska Lat: 67.01659250 Long: -156.00951450 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/EM1B, IIC1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**

Remarks: The sample location was taken on the south side of the alignment within tussocks at the bottom of the picea hillslope. To the centerline, the tussocks continue to the shrub layer to the north.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Betula nana	35	Yes	FAC
2. Vaccinium uliginosum	20	No	FAC
3. Rubus chamaemorus	25	Yes	FACW
4. Vaccinium vitis-idaea	25	Yes	FAC
5. Rhododendron groenlandicum	15	No	FAC
6.			
Total Cover: 120			
50% of total cover: 60 20% of total cover: 24			
Herb Stratum			
1. Carex media	40	Yes	FACW
2. Eriophorum vaginatum	65	Yes	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 105			
50% of total cover: 52 20% of total cover: 21			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	130	x 2 = 260
FAC species	95	x 3 = 285
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	225 (A)	545 (B)

Prevalence Index = B/A = 2.42

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 50
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum intermixed throughout tussocks and lichen

SOIL

Sampling Point T20-138

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	organic	100		0				saturated organics

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

X Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 10

Hydric Soil Present? Yes

Remarks: saturated organics above permafrost

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
X Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/23/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T21-121
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 1
Subregion (LRR): Interior Alaska Lat: 67.01971590 Long: -155.88768190 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PEM1C, IIIA3
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: depression surrounded by upland forest with picea forest. PEM. photos 7319-7323. vegetation. Located on top of tussocks	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Herb Stratum			
1. Carex rostrata	80	Yes	OBL
2. Carex limosa	20	No	OBL
3. Equisetum arvense	5	No	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 105			
50% of total cover: 52 20% of total cover: 21			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	100	x 1 = 100
FACW species	0	x 2 = 0
FAC species	5	x 3 = 15
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	105 (A)	115 (B)

Prevalence Index = B/A = 1.10

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 10
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 10
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 10%.

SOIL

Sampling Point T21-121

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-0.5	organic	100		0				
0.5-20	2.5Y 4/2	50	2.5Y 4/3	50	RM	M	Sandy Loam	Faint Redox

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
X Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks: likely problematic hydric soil. Faint redox features hydric indicators have not sufficiently formed-sample location in middle of wetland.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
X Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

X Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/23/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T21-123
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 3
Subregion (LRR): Interior Alaska Lat: 67.02008680 Long: -155.88773490 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? Yes Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: upland forest hillslope. Photos 7324-7328	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	35	Yes	FACU
2.			
3.			
4.			
Total Cover: 35			
50% of total cover: 17 20% of total cover: 7			
Sapling/Shrub Stratum			
1. Picea glauca	10	Yes	FACU
2. Vaccinium uliginosum	5	No	FAC
3. Rhododendron groenlandicum	15	Yes	FAC
4.			
5.			
6.			
Total Cover: 30			
50% of total cover: 15 20% of total cover: 6			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	20	x 3 = 60
FACU species	45	x 4 = 180
UPL species	0	x 5 = 0
Column Totals:	65 (A)	240 (B)

Prevalence Index = B/A = 3.69

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
__ Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 90
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks: 80% reindeer lichen, 7% lichen, 3% sphagnum.

SOIL

Sampling Point T21-123

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-0.5	organic	100		0				
0.5-5	gley1 10Y 4/1	80	10YR 5/8	20	D	M	Very Fine Sandy Loam	
5-17	10YR 5/8	100		0			Very Fine Sandy Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
X Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/23/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T21-125
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 2
Subregion (LRR): Interior Alaska Lat: 67.01867300 Long: -155.88702060 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/EM1B, IIB2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: photos 7329-7333. PSS/EM Pond fringe surrounding depression of PEM.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Salix sp.	55	Yes	FAC
2. Betula nana	15	Yes	FAC
3. Vaccinium uliginosum	5	No	FAC
4.			
5.			
6.			
Total Cover: 75			
50% of total cover: 37 20% of total cover: 15			
Herb Stratum			
1. Calamagrostis canadensis	70	Yes	FAC
2. Rubus pubescens	25	Yes	FACW
3. Equisetum arvense	10	No	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 105			
50% of total cover: 52 20% of total cover: 21			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	25	x 2 = 50
FAC species	155	x 3 = 465
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	180 (A)	515 (B)

Prevalence Index = B/A = 2.86

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 50
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 50%.

SOIL

Sampling Point T21-125

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-0.25	organic	100		0				
0.25-3	2.5Y 3/2	100		0			Loam	
3-11	2.5Y 3/2	100		0			Loam	75% organic and 25% mineral
11-14	2.5Y 3/2	100		0			Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 14

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 0.5
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/23/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T21-140
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 7
Subregion (LRR): Interior Alaska Lat: 67.01596860 Long: -155.88972470 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**

Remarks: The sample location was taken on the south side of the alignment within an upland forest visible from the aerial. Further to the south the knoll continues outside the 2000 foot corridor. To the north likley a PSS wetland. Photos 3439-3442, 3444. Upland point.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	35	Yes	FACU
2. Populus tremuloides	20	Yes	FACU
3.			
4.			
Total Cover: 55			
50% of total cover: 27 20% of total cover: 11			
Sapling/Shrub Stratum			
1. Picea glauca	15	No	FACU
2. Populus tremuloides	10	No	FACU
3. Rhododendron groenlandicum	35	Yes	FAC
4. Vaccinium uliginosum	20	No	FAC
5. Vaccinium vitis-idaea	40	Yes	FAC
6.			
Total Cover: 120			
50% of total cover: 60 20% of total cover: 24			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	95	x 3 =	285
FACU species	80	x 4 =	320
UPL species	0	x 5 =	0
Column Totals:	175 (A)		605 (B)

Prevalence Index = B/A = 3.46

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
__ Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 5
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 60
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks: lichen spp.

SOIL

Sampling Point T21-140

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 2

Hydric Soil Present? No

Remarks: Restrictive digging layer of rocks at 2 inches.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/23/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T21-142
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Drainageway Local relief (concave, convex, none): concave Slope (%): 4
Subregion (LRR): Interior Alaska Lat: 67.01573210 Long: -155.89042420 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/EM1C, IIB2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**

Remarks: The sample location was taken on the south side of the alignment within a drainage feature running south-north. This feature was ~ 4 feet wide covered in saturated sphagnum. The drainage feature is parallel to the upland knoll in point 140. Photos 3445-3449.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	10	Yes	FACW
2.			
3.			
4.			
Total Cover: 10			
50% of total cover: 5 20% of total cover: 2			
Sapling/Shrub Stratum			
1. salix spp	21	Yes	FAC
2. Picea mariana	20	Yes	FACW
3. Vaccinium uliginosum	15	Yes	FAC
4. Alnus viridis	5	No	FAC
5.			
6.			
Total Cover: 61			
50% of total cover: 30 20% of total cover: 12			
Herb Stratum			
1. Eriophorum vaginatum	35	Yes	FACW
2. Equisetum pratense	15	Yes	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 50			
50% of total cover: 25 20% of total cover: 10			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	80	x 2 = 160
FAC species	41	x 3 = 123
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	121 (A)	283 (B)

Prevalence Index = B/A = 2.34

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 60
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: the drainage feature extended south-north down the hill

SOIL

Sampling Point T21-142

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-9		100		0				saturated organics
9-15	10YR 2/2	100		0			Sandy Loam	gravel mixed in

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 15

Hydric Soil Present? Yes

Remarks: saturated organics above permafrost

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
X Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 7
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: saturation and inundation at surface.

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/23/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T21-144
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 0
Subregion (LRR): Interior Alaska Lat: 67.01665090 Long: -155.89094310 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/EM1C, IIC1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**

Remarks: The sample location was taken within a tussocks depression following the drainage feature running south -north. The drainage feature at the depression shifts w-e to the nortern upland. Photos 3450-3454. The PSS wetland extends into the drainage feature, both a PSS wetland extending to the base of the upland knoll.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Picea mariana	24	No	FACW
2. salix spp	32	Yes	FAC
3. Vaccinium uliginosum	50	Yes	FAC
4. Rubus chamaemorus	35	Yes	FACW
5. Rhododendron groenlandicum	20	No	FAC
6.			
Total Cover: 161			
50% of total cover: 80 20% of total cover: 32			
Herb Stratum			
1. Eriophorum vaginatum	70	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 70			
50% of total cover: 35 20% of total cover: 14			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	129	x 2 = 258
FAC species	102	x 3 = 306
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	231 (A)	564 (B)

Prevalence Index = B/A = 2.44

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 60
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum intermixed throughout tussocks

SOIL

Sampling Point T21-144

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-11		100		0				saturated organics

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- X Histosol or Histel(A1)
- X Histic Epipedon (A2)
- __Hydrogen Sulfide (A4)
- __Thick Dark Surface (A12)
- __Alaska Gleyed (A13)
- __Alaska Redox (A14)
- __Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

- __Alaska Color Change (TA4)[4]
- __Alaska Alpine Swales (TA5)
- __Alaska Redox With 2.5Y Hue
- __Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- __Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 11

Hydric Soil Present? Yes

Remarks: saturated organics above permafrost

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- __Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- __Water Marks (B1)
- __Sediment Deposits (B2)
- __Drift Deposits (B3)
- __Algal Mat or Crust (B4)
- __Iron Deposits (B5)
- __Surface Soil Cracks (B6)
- __Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __Marl Deposits (B15)
- __Hydrogen Sulfide Odor (C1)
- __Dry Season Water Table (C2)
- __Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- __Water-stained Leaves (B9)
- __Drainage Patterns (B10)
- __Oxidized Rhizospheres along Living Roots (C3)
- __Presence of Reduced Iron (C4)
- __Salt Deposits (C5)
- __Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- X Shallow Aquitard (D3)
- __Microtopographic Relief (D4)
- __FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 7
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: saturated organics above permafrost

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/23/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T21-146
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hill Local relief (concave, convex, none): convex Slope (%): 15
Subregion (LRR): Interior Alaska Lat: 67.01708070 Long: -155.88973170 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**

Remarks: The sample location was taken on the south side of the alignment atop a upland knoll visible from the aerial. To the south the drainage feature merges with the PSS wetland and to the north, more tussocks and likley another PSS wetland at the base of the knoll. Photos 3454-3459. Upland.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	15	Yes	FACU
2. Populus tremuloides	25	Yes	FACU
3.			
4.			
Total Cover: 40			
50% of total cover: 20 20% of total cover: 8			
Sapling/Shrub Stratum			
1. Picea glauca	10	Yes	FACU
2. Populus tremuloides	10	Yes	FACU
3.			
4.			
5.			
6.			
Total Cover: 20			
50% of total cover: 10 20% of total cover: 4			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	60	x 4 = 240
UPL species	0	x 5 = 0
Column Totals:	60 (A)	240 (B)

Prevalence Index = B/A = 4.00

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
__ Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 10
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 65
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks: all lichen

SOIL

Sampling Point T21-146

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 4

Hydric Soil Present? No

Remarks: Restrictive digging layer of rocks at 4 inches.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/23/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T21-148
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 0
Subregion (LRR): Interior Alaska Lat: 67.01754630 Long: -155.88801340 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1C, IIB1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**

Remarks: The sample location was taken on the south side of the alignment within a PSS wetland at the base of upland knoll in sample point 146. To the north of centerline, the PSS wetland continues, to the south the upland knoll. photos 3465-3469.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Salix sp	29	Yes	FAC
2. Betula nana	31	Yes	FAC
3. Vaccinium uliginosum	31	Yes	FAC
4. Arctostaphylos rubra	5	No	FAC
5. Andromeda polifolia	21	No	OBL
6.			
Total Cover: 117			
50% of total cover: 58 20% of total cover: 23			
Herb Stratum			
1. Equisetum pratense	15	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 15			
50% of total cover: 7 20% of total cover: 3			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	21	x 1 = 21
FACW species	15	x 2 = 30
FAC species	96	x 3 = 288
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	132 (A)	339 (B)

Prevalence Index = B/A = 2.57

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 30
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum intermixed throughout tussocks

SOIL

Sampling Point T21-148

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-7		100		0				saturated organics
7-15	gley 1 10y 3/1	100		0			Clay Loam	gravel mixed in

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 15

Hydric Soil Present? Yes

Remarks: saturated organics above permafrost with gleyed soils

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
X Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
X Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 9
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: saturated at surface with pockets of inundation observed at sample location.

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/23/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T22-127
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 2
Subregion (LRR): Interior Alaska Lat: 67.01719310 Long: -155.85005580 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**

Remarks: old floodplain stream appears to have migrated to west of this point. Several shallow abandoned channels between point and existing stream. Photos 7334-7338

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	20	Yes	FACU
2. Populus balsamifera	15	Yes	FACU
3.			
4.			
Total Cover: 35			
50% of total cover: 17 20% of total cover: 7			
Sapling/Shrub Stratum			
1. Vaccinium uliginosum	70	Yes	FAC
2. Alnus viridis	5	No	FAC
3. Vaccinium vitis-idaea	20	Yes	FAC
4. Salix sp.	5	No	FAC
5.			
6.			
Total Cover: 100			
50% of total cover: 50 20% of total cover: 20			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	100	x 3 = 300
FACU species	35	x 4 = 140
UPL species	0	x 5 = 0
Column Totals:	135 (A)	440 (B)

Prevalence Index = B/A = 3.26

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
__ Prevalence Index is $\leq$3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 100
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks: sphagnum 90%, lichen 10%

SOIL

Sampling Point T22-127

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-7	organic	100		0				
7-11	10YR 4/6	100		0			Sandy Gravely Loam	gravel 30% about 0.5 inches diameter

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks: Restrictive digging layer of gravel at 11 inches.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/23/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T22-129
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): none Slope (%): 1
Subregion (LRR): Interior Alaska Lat: 67.01687140 Long: -155.85209470 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: old floodplain. Gravel . photos 7339-7343.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	20	Yes	FACU
2. Populus balsamifera	10	Yes	FACU
3.			
4.			
Total Cover: 30			
50% of total cover: 15 20% of total cover: 6			
Sapling/Shrub Stratum			
1. Alnus viridis	10	Yes	FAC
2. Picea glauca	15	Yes	FACU
3.			
4.			
5.			
6.			
Total Cover: 25			
50% of total cover: 12 20% of total cover: 5			
Herb Stratum			
1. Calamagrostis canadensis	10	Yes	FAC
2. Galium boreale	2	Yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 12			
50% of total cover: 6 20% of total cover: 2			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	20	x 3 = 60
FACU species	47	x 4 = 188
UPL species	0	x 5 = 0
Column Totals:	67 (A)	248 (B)

Prevalence Index = B/A = 3.70

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
__ Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 100
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks: sphagnum 95%, lichen 5 percent.

SOIL

Sampling Point T22-129

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1	organic	100		0				
1-11	2.5Y 3/1	100		0			Gravel	sandy gravel (85% gravel)

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/23/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T22-131
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): Interior Alaska Lat: 67.01747220 Long: -155.85064710 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: photos 7344-7348.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	40	Yes	FACU
2. Populus balsamifera	40	Yes	FACU
3.			
4.			
Total Cover: 80			
50% of total cover: 40 20% of total cover: 16			
Sapling/Shrub Stratum			
1. Alnus viridis	20	No	FAC
2. Rosa acicularis	35	Yes	FACU
3. Ribes triste	20	No	FAC
4. Vaccinium vitis-idaea	15	No	FAC
5. Linnaea borealis	60	Yes	FACU
6. Rubus pubescens	5	No	UPL
Total Cover: 155			
50% of total cover: 77 20% of total cover: 31			
Herb Stratum			
1. Calamagrostis canadensis	10	Yes	FAC
2. Galium boreale	5	No	FACU
3. Viola epipsila	25	Yes	FACW
4. Moneses uniflora	2	No	FACU
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 42			
50% of total cover: 21 20% of total cover: 8			

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 100
(Where applicable)

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	25	x 2 = 50
FAC species	65	x 3 = 195
FACU species	182	x 4 = 728
UPL species	5	x 5 = 25
Column Totals:	277 (A)	998 (B)

Prevalence Index = B/A = 3.60

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
__ Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? No

Remarks: sphagnum 100%

SOIL

Sampling Point T22-131

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-7	organic	100		0				
7-13	2.5Y 3/2	100		0			Loam	
13-19	10YR 3/2	100		0			Sandy Gravely Loam	sandy gravel (50% gravel 0.5 inch diameter)

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/23/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T22-133
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): concave Slope (%): 2
Subregion (LRR): Interior Alaska Lat: 67.01736110 Long: -155.85306930 Datum: WGS84
Soil Map Unit Name: _ NWI classification: R3UB1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**

Remarks: stream riffle glide. Point at riffle. Riffles and glides approximately 150 feet long. 27 feet wetted width and 90 feet bankfull width. Photos 7349-7353. Cobble boulder substrate. 12 inches thalweg, overall approximately 6 inches deep

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	0 (A)	0 (B)

Prevalence Index = B/A = 0.00

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 0 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks:

SOIL

Sampling Point T22-133

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/23/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T22-150
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): convex Slope (%): 5
Subregion (LRR): Interior Alaska Lat: 67.01751290 Long: -155.85967620 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**

Remarks: The sample location was taken on centerline within an upland forest approaching the south side of the alignment. Traversing centerline from the stream to the sample location contained mixture of upland and wetland drainage ways. Photos 3470-3474. Upland area

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	30	Yes	FACU
2.			
3.			
4.			
Total Cover: 30			
50% of total cover: 15 20% of total cover: 6			
Sapling/Shrub Stratum			
1. Vaccinium uliginosum	35	Yes	FAC
2. Rhododendron groenlandicum	25	No	FAC
3. Vaccinium vitis-idaea	40	Yes	FAC
4. salix spp	39	Yes	FAC
5. Empetrum nigrum	10	No	FAC
6.			
Total Cover: 149			
50% of total cover: 74 20% of total cover: 29			
Herb Stratum			
1. Alnus viridis	15	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 15			
50% of total cover: 7 20% of total cover: 3			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	164	x 3 = 492
FACU species	30	x 4 = 120
UPL species	0	x 5 = 0
Column Totals:	194 (A)	612 (B)

Prevalence Index = B/A = 3.15

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 40
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: lichen on floor

SOIL

Sampling Point T22-150

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-7		100		0				organics

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 7

Hydric Soil Present? No

Remarks: Restrictive digging layer of gravel.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/23/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T22-152
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 5
Subregion (LRR): Interior Alaska Lat: 67.01634750 Long: -155.86245640 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PEM1C, IIIA3
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**

Remarks: The sample location was taken on the south side of the alignment within a depressed area willow drainages snd picea forests. The willow drainage feature surrounds the emergent wetland. Photos 3475-3479. PEM wetland

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. salix spp	18	Yes	FAC
2. Betula nana	5	Yes	FAC
3.			
4.			
5.			
6.			
Total Cover: 23			
50% of total cover: 11 20% of total cover: 4			
Herb Stratum			
1. Equisetum pratense	80	Yes	FACW
2. Parnassia palustris	20	Yes	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 100			
50% of total cover: 50 20% of total cover: 20			

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 95
(Where applicable)

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	100	x 2 = 200
FAC species	23	x 3 = 69
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	123 (A)	269 (B)

Prevalence Index = B/A = 2.19

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum and moss

SOIL

Sampling Point T22-152

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-11		100		0				saturated organics

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks: Restrictive digging layer of rock at 11 inches.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches): 0
Water Table Present? Yes Depth (inches): 5
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: saturated and inundation observed at sample location

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/23/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T22-158
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): Interior Alaska Lat: 67.01642400 Long: -155.85473320 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**

Remarks: The sample location was taken on the south side of the alignment within a picea upland ~ 100feet from the unmarked stream. The southern qrea contained the same picea terrace upland. Sample points 154-156 marked the boundaries to thick willow drainages. Photos 3480-3484. Upland.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	52	Yes	FACU
2.			
3.			
4.			
Total Cover: 52			
50% of total cover: 26 20% of total cover: 10			
Sapling/Shrub Stratum			
1. Rosa acicularis	40	Yes	FACU
2. Vaccinium vitis-idaea	20	Yes	FAC
3.			
4.			
5.			
6.			
Total Cover: 60			
50% of total cover: 30 20% of total cover: 12			
Herb Stratum			
1. Streptopus amplexifolius	25	Yes	FACU
2. Equisetum arvense	45	Yes	FAC
3. Mertensia paniculata	10	No	FACU
4. Coptis trifolia	10	No	FAC
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 90			
50% of total cover: 45 20% of total cover: 18			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 40 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	75	x 3 = 225
FACU species	127	x 4 = 508
UPL species	0	x 5 = 0
Column Totals:	202 (A)	733 (B)

Prevalence Index = B/A = 3.63

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
__ Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks:

SOIL

Sampling Point T22-158

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3		100		0				organic
3-8	10YR 2/1	100		0			Sandy Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 8

Hydric Soil Present? No

Remarks: Restrictive digging layer of roots.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/23/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T23-135
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 2
Subregion (LRR): Interior Alaska Lat: 67.02167210 Long: -155.76308430 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/EM1B, IIC2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: hillslope north facing PEM. photos 7354-7359.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Betula nana	20	Yes	FAC
2. Vaccinium uliginosum	25	Yes	FAC
3. Rhododendron groenlandicum	10	No	FAC
4. Vaccinium vitis-idaea	5	No	FAC
5.			
6.			
Total Cover: 60			
50% of total cover: 30 20% of total cover: 12			
Herb Stratum			
1. Carex rostrata	70	Yes	OBL
2. Eriophorum vaginatum	20	Yes	FACW
3. Pedicularis labradorica	2	No	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 92			
50% of total cover: 46 20% of total cover: 18			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	70	x 1 = 70
FACW species	22	x 2 = 44
FAC species	60	x 3 = 180
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	152 (A)	294 (B)

Prevalence Index = B/A = 1.93

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 55
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 50%, lichen 5 % inbetween tussocks .

SOIL Sampling Point T23-135

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	organic	100		0				dark brown water when squeeze, somewhat identifiable plant fragments

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

X Histosol or Histel(A1)
X Histic Epipedon (A2)
X Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 10

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
X Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 1
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/23/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T23-137
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 4
Subregion (LRR): Interior Alaska Lat: 67.02066660 Long: -155.76358850 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1B/EM1B, IIC1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: hillslope betula and alnus,with carex cover. photos 7360-7365	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Alnus viridis	15	No	FAC
2. Picea glauca	5	No	FACU
3. Betula nana	40	Yes	FAC
4. Vaccinium uliginosum	20	Yes	FAC
5. Rhododendron groenlandicum	15	No	FAC
6. Vaccinium vitis-idaea	5	No	FAC
Total Cover: 100			
50% of total cover: 50 20% of total cover: 20			
Herb Stratum			
1. Carex rostrata	50	Yes	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 50			
50% of total cover: 25 20% of total cover: 10			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	50	x 1 = 50
FACW species	0	x 2 = 0
FAC species	95	x 3 = 285
FACU species	5	x 4 = 20
UPL species	0	x 5 = 0
Column Totals:	150 (A)	355 (B)

Prevalence Index = B/A = 2.37

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 80
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 70%, lichen 10%.

SOIL

Sampling Point T23-137

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-9	organic	100		0				
9-10	gley1 N 3/1	100		0			Silty Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 10

Hydric Soil Present? Yes

Remarks: dark brown water when squeezed, somewhat identifiable plant material

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 3
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/23/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T23-139
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hill Local relief (concave, convex, none): convex Slope (%): 2
Subregion (LRR): Interior Alaska Lat: 67.01960500 Long: -155.76412830 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: upland hilltop. Slopes to PSS/EM which transitions to a PEM/SS. photos 7366-7371	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	3	Yes	FACU
2. Populus balsamifera	5	Yes	FACU
3.			
4.			
Total Cover: 8			
50% of total cover: 4 20% of total cover: 1			
Sapling/Shrub Stratum			
1. Populus balsamifera	25	Yes	FACU
2. Picea glauca	5	No	FACU
3. Vaccinium uliginosum	35	Yes	FAC
4. Rhododendron groenlandicum	30	Yes	FAC
5. Vaccinium vitis-idaea	15	No	FAC
6. Empetrum nigrum	5	No	FAC
Total Cover: 115			
50% of total cover: 57 20% of total cover: 23			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 40 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	85	x 3 = 255
FACU species	38	x 4 = 152
UPL species	0	x 5 = 0
Column Totals:	123 (A)	407 (B)

Prevalence Index = B/A = 3.31

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
__ Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 60
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks: lichen 60%

SOIL

Sampling Point T23-139

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1	organic	100		0				
2-10	10YR 4/4	100		0			Sandy Gravely Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks: restrictive layer for digging gravel 0.5 o 1 inch diameter gravels

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/23/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T23-160
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): Interior Alaska Lat: 67.01629760 Long: -155.76329050 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/EM1B, IIC1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: The sample location was taken on the south side of the alignment within the tussocks on the outskirts, and picea. Photos 3485-3489. PSS	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	15	Yes	FACW
2.			
3.			
4.			
Total Cover: 15			
50% of total cover: 7 20% of total cover: 3			
Sapling/Shrub Stratum			
1. Picea mariana	5	No	FACW
2. Alnus viridis	15	Yes	FAC
3. Rhododendron groenlandicum	15	Yes	FAC
4. Vaccinium uliginosum	10	No	FAC
5. Vaccinium vitis-idaea	21	Yes	FAC
6. Empetrum nigrum	15	No	FAC
Total Cover: 81			
50% of total cover: 40 20% of total cover: 16			
Herb Stratum			
1. Eriophorum vaginatum	75	Yes	FACW
2. Carex media	15	No	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 90			
50% of total cover: 45 20% of total cover: 18			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	110	x 2 = 220
FAC species	76	x 3 = 228
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	186 (A)	448 (B)

Prevalence Index = B/A = 2.41

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 15
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 30
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T23-160

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5		100		0				organic
5-11	gley 1 10y 3/1	100		0			Silty Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
X Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 11

Hydric Soil Present? Yes

Remarks: Hydric soil indicators have not had sufficient time to form.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: pockets of inundation observed at sample location

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/23/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T23-162
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 4
Subregion (LRR): Interior Alaska Lat: 67.01745740 Long: -155.76400530 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PEM1H, IIIA3
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: The sample location was taken on the south side of the alignment within a PEM wetland visible from the aerial. Photos 3490-3494.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. salix spp	7	Yes	FAC
2.			
3.			
4.			
5.			
6.			
Total Cover: 7			
50% of total cover: 3 20% of total cover: 1			
Herb Stratum			
1. Carex utriculata	90	Yes	OBL
2. Comarum palustre	25	No	OBL
3. Carex media	20	No	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 135			
50% of total cover: 67 20% of total cover: 27			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	115	x 1 = 115
FACW species	20	x 2 = 40
FAC species	7	x 3 = 21
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	142 (A)	176 (B)

Prevalence Index = B/A = 1.24

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T23-162

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-11		100		0				saturated organics

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- X Histosol or Histel(A1)
- X Histic Epipedon (A2)
- __Hydrogen Sulfide (A4)
- __Thick Dark Surface (A12)
- __Alaska Gleyed (A13)
- __Alaska Redox (A14)
- __Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

- __Alaska Color Change (TA4)[4]
- __Alaska Alpine Swales (TA5)
- __Alaska Redox With 2.5Y Hue
- __Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- __Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 11

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- __Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- __Water Marks (B1)
- __Sediment Deposits (B2)
- __Drift Deposits (B3)
- __Algal Mat or Crust (B4)
- __Iron Deposits (B5)
- __Surface Soil Cracks (B6)
- __Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __Marl Deposits (B15)
- X Hydrogen Sulfide Odor (C1)
- __Dry Season Water Table (C2)
- __Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- __Water-stained Leaves (B9)
- __Drainage Patterns (B10)
- __Oxidized Rhizospheres along Living Roots (C3)
- __Presence of Reduced Iron (C4)
- __Salt Deposits (C5)
- __Stunted or Stressed Plants (D1)
- __Geomorphic Position (D2)
- X Shallow Aquitard (D3)
- __Microtopographic Relief (D4)
- __FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 0
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: saturated to the surface

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/23/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T24-141
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 3
Subregion (LRR): Interior Alaska Lat: 67.03358370 Long: -155.68516720 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1B/EM1B, IIB1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: photos 7372-7377. Hillslope north facing alnus betula cover.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Alnus viridis	20	No	FAC
2. Picea mariana	3	No	FACW
3. Salix sp.	20	No	FAC
4. Betula nana	25	Yes	FAC
5. Vaccinium uliginosum	15	No	FAC
6. Vaccinium vitis-idaea	35	Yes	FAC
Total Cover: 118			
50% of total cover: 59 20% of total cover: 23			
Herb Stratum			
1. Carex rostrata	55	Yes	OBL
2. Eriophorum vaginatum	20	Yes	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 75			
50% of total cover: 37 20% of total cover: 15			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	55	x 1 = 55
FACW species	23	x 2 = 46
FAC species	115	x 3 = 345
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	193 (A)	446 (B)

Prevalence Index = B/A = 2.31

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 70
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 60% lichen 10% inbetween tussocks

SOIL

Sampling Point T24-141

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	organic	100		0				

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- X Histosol or Histel(A1)
- X Histic Epipedon (A2)
- __Hydrogen Sulfide (A4)
- __Thick Dark Surface (A12)
- __Alaska Gleyed (A13)
- __Alaska Redox (A14)
- __Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

- __Alaska Color Change (TA4)[4]
- __Alaska Alpine Swales (TA5)
- __Alaska Redox With 2.5Y Hue
- __Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- __Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 12

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- __Surface Water (A1)
- __High Water Table (A2)
- X Saturation (A3)
- __Water Marks (B1)
- __Sediment Deposits (B2)
- __Drift Deposits (B3)
- __Algal Mat or Crust (B4)
- __Iron Deposits (B5)
- __Surface Soil Cracks (B6)
- __Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __Marl Deposits (B15)
- __Hydrogen Sulfide Odor (C1)
- __Dry Season Water Table (C2)
- __Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- __Water-stained Leaves (B9)
- __Drainage Patterns (B10)
- __Oxidized Rhizospheres along Living Roots (C3)
- __Presence of Reduced Iron (C4)
- __Salt Deposits (C5)
- __Stunted or Stressed Plants (D1)
- __Geomorphic Position (D2)
- X Shallow Aquitard (D3)
- __Microtopographic Relief (D4)
- __FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 4
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/23/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T24-143
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): concave Slope (%): 1
Subregion (LRR): Interior Alaska Lat: 67.03193340 Long: -155.68711330 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/EM1B, IIB2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: swale downslope of upland to north and tussocks to south. Photos 7378-7382.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Salix sp.	30	Yes	FAC
2. Betula nana	20	Yes	FAC
3. Vaccinium uliginosum	10	No	FAC
4. Picea mariana	1	No	FACW
5. Rhododendron groenlandicum	3	No	FAC
6.			
Total Cover: 64			
50% of total cover: 32 20% of total cover: 12			
Herb Stratum			
1. Eriophorum angustifolium	95	Yes	OBL
2. Equisetum arvense	3	No	FAC
3. Petasites frigidus	2	No	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 100			
50% of total cover: 50 20% of total cover: 20			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	95	x 1 = 95
FACW species	3	x 2 = 6
FAC species	66	x 3 = 198
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	164 (A)	299 (B)

Prevalence Index = B/A = 1.82

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 100
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 100%

SOIL

Sampling Point T24-143

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	organic	0		0				
12-14	gley1 N 3/1	0		0			Silty Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 0.5
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: pockets of inundation

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/23/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T24-168
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): Interior Alaska Lat: 67.03125100 Long: -155.68582640 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1C/EM1C, IIB1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**

Remarks: The sample location was taken on centerline within a PSS wetland. To the north of the alignment is a drainage feature followed by PFO wetland. Photos 3500-3504.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Alnus viridis	25	Yes	FAC
2. Betula nana	20	No	FAC
3. Vaccinium uliginosum	35	Yes	FAC
4. Rhododendron lapponicum	20	No	FAC
5. Vaccinium vitis-idaea	26	Yes	FAC
6. Rubus chamaemorus	20	No	FACW
Total Cover: 146			
50% of total cover: 73 20% of total cover: 29			
Herb Stratum			
1. Eriophorum vaginatum	90	Yes	FACW
2. Carex media	85	Yes	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 175			
50% of total cover: 87 20% of total cover: 35			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	195	x 2 = 390
FAC species	126	x 3 = 378
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	321 (A)	768 (B)

Prevalence Index = B/A = 2.39

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 70
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum intermixed throughout tussocks and lichen

SOIL

Sampling Point T24-168

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10		100		0				saturated organics

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

X Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 10

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 5
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: saturation and inundation observed at sample location

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/23/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T24-170
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): convex Slope (%): 5
Subregion (LRR): Interior Alaska Lat: 67.03279160 Long: -155.68639850 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PFO4/SS1B, IA2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: The sample location was taken on the north side of the alignment within a picea wetland. PFO/PSS	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	50	Yes	FACW
2.			
3.			
4.			
Total Cover: 50			
50% of total cover: 25 20% of total cover: 10			
Sapling/Shrub Stratum			
1. Picea mariana	25	No	FACW
2. salix spp	33	Yes	FAC
3. Betula nana	40	Yes	FAC
4. Vaccinium uliginosum	31	Yes	FAC
5. Rhododendron groenlandicum	10	No	FAC
6. Vaccinium vitis-idaea	15	No	FAC
Total Cover: 154			
50% of total cover: 77 20% of total cover: 30			
Herb Stratum			
1. Petasites frigidus	30	Yes	FACW
2. Equisetum pratense	10	Yes	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 40			
50% of total cover: 20 20% of total cover: 8			

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 70
(Where applicable)

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	115	x 2 = 230
FAC species	129	x 3 = 387
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	244 (A)	617 (B)

Prevalence Index = B/A = 2.53

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum

SOIL

Sampling Point T24-170

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3		100		0				saturated organics
3-15	gley 1 10y3/1	100		0			Silty Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
X Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks: likely permafrost under cobble. Restrictive digging layer of rock at 15 inches.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
X Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: saturation to surface

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/24/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T25-145
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hill Local relief (concave, convex, none): convex Slope (%): 2
Subregion (LRR): Interior Alaska Lat: 67.03325950 Long: -155.63484000 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: hill top north of center line. Picea and rhodgroe cover. Photos 7383-7387.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	30	Yes	FACU
2. Populus balsamifera	2	No	FACU
3.			
4.			
Total Cover: 32			
50% of total cover: 16 20% of total cover: 6			
Sapling/Shrub Stratum			
1. Picea glauca	5	No	FACU
2. Populus balsamifera	10	No	FACU
3. Vaccinium uliginosum	15	No	FAC
4. Vaccinium vitis-idaea	30	Yes	FAC
5. Rhododendron groenlandicum	35	Yes	FAC
6. Empetrum nigrum	5	No	FAC
Total Cover: 100			
50% of total cover: 50 20% of total cover: 20			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	85	x 3 = 255
FACU species	47	x 4 = 188
UPL species	0	x 5 = 0
Column Totals:	132 (A)	443 (B)

Prevalence Index = B/A = 3.36

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 90
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: lichen 90%.

SOIL

Sampling Point T25-145

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2.5	organic	100		0				
2.5-3.5	2.5Y 4/1	100		0			Sandy Loam	
3.5-14	10YR 4/6	100		0			Sandy Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks: restrictive layer for digging gravel 0.5 inch diameter

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/24/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T25-147
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 3
Subregion (LRR): Interior Alaska Lat: 67.03522920 Long: -155.63412660 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/EM1B, IA2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: photos 7388-7392.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	25	Yes	FACW
2.			
3.			
4.			
Total Cover: 25			
50% of total cover: 12 20% of total cover: 5			
Sapling/Shrub Stratum			
1. Picea mariana	20	Yes	FACW
2. Salix sp.	15	No	FAC
3. Alnus viridis	3	No	FAC
4. Betula nana	5	No	FAC
5. Vaccinium uliginosum	20	Yes	FAC
6. Vaccinium vitis-idaea	40	Yes	FAC
Total Cover: 103			
50% of total cover: 51 20% of total cover: 20			
Herb Stratum			
1. Carex rostrata	65	Yes	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 65			
50% of total cover: 32 20% of total cover: 13			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	65	x 1 = 65
FACW species	45	x 2 = 90
FAC species	83	x 3 = 249
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	193 (A)	404 (B)

Prevalence Index = B/A = 2.09

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 100
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: 90% sphagnum, 10% lichen.

SOIL

Sampling Point T25-147

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	organic	100		0				sphagnum identified material light orange brown water when squeezed
8-10	organic	100		0				rooted more decomposed material

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

X Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 10

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 2
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/24/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T25-149
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): concave Slope (%): 2
Subregion (LRR): Interior Alaska Lat: 67.03401190 Long: -155.63607340 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: alder thicket inbetween two hillslope swale. Photos 7393-7397.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	15	Yes	FACU
2. Populus balsamifera	25	Yes	FACU
3.			
4.			
Total Cover: 40			
50% of total cover: 20 20% of total cover: 8			
Sapling/Shrub Stratum			
1. Alnus viridis	80	Yes	FAC
2. Picea glauca	4	No	FACU
3. Vaccinium uliginosum	15	No	FAC
4. Vaccinium vitis-idaea	30	Yes	FAC
5. Ribes triste	3	No	FAC
6. Rhododendron groenlandicum	5	No	FAC
Total Cover: 137			
50% of total cover: 68 20% of total cover: 27			
Herb Stratum			
1. Calamagrostis canadensis	10	Yes	FAC
2. Boschniakia rossica	2	Yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 12			
50% of total cover: 6 20% of total cover: 2			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	143	x 3 = 429
FACU species	46	x 4 = 184
UPL species	0	x 5 = 0
Column Totals:	189 (A)	613 (B)

Prevalence Index = B/A = 3.24

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
__ Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 41
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks: sphagnum 40%, false pixie cup 1%, with abundant leaf litter.

SOIL

Sampling Point T25-149

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	organic	100		0				
10-11	2.5Y 4/1	100		0			Loamy Sand	
11-17	10YR 4/4	100		0			Sandy Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks: restrictive layer for digging roots

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/24/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T25-172
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 20
Subregion (LRR): Interior Alaska Lat: 67.03297970 Long: -155.64188010 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland, IC2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**

Remarks: The sample location was taken on the south side of the alignment atop a upland knoll with picea glauca and populus tremuloides. To the south towards centerline are tussocks. Photos 3505-3509. Upland.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	15	Yes	FACU
2. Populus tremuloides	40	Yes	FACU
3.			
4.			
Total Cover: 55			
50% of total cover: 27 20% of total cover: 11			
Sapling/Shrub Stratum			
1. Picea glauca	10	No	FACU
2. Populus tremuloides	20	Yes	FACU
3. Vaccinium uliginosum	10	No	FAC
4. Vaccinium vitis-idaea	15	No	FAC
5. Empetrum nigrum	35	Yes	FAC
6.			
Total Cover: 90			
50% of total cover: 45 20% of total cover: 18			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 25 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	60	x 3 = 180
FACU species	85	x 4 = 340
UPL species	0	x 5 = 0
Column Totals:	145 (A)	520 (B)

Prevalence Index = B/A = 3.59

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
__ Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 45
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks: lichen spp.

SOIL

Sampling Point T25-172

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1		100		0				lichen
1-18	10YR 5/6	100		0			Sandy Gravely Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: none
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/24/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T25-174
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Stream terrace Local relief (concave, convex, none): convex Slope (%): 10
Subregion (LRR): Interior Alaska Lat: 67.03211230 Long: -155.63940810 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**

Remarks: The sample location was taken on the south side of the alignment within a stream terrace. The stream was ~ 3ft wide, 1ft deep, with rocks and muck for substrate. The stream was about 10 feet from the sample pit down a 10 percent hillslope. The strem flowed n-s under thick canopy cover. The water was moderatley flowing water. Likley intermitten stream. Photos 3510-3514. Upland.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Alnus viridis	70	Yes	FAC
2. Vaccinium uliginosum	25	Yes	FAC
3. Betula nana	20	No	FAC
4. salix spp	8	No	FAC
5. Vaccinium vitis-idaea	5	No	FAC
6.			
Total Cover: 128			
50% of total cover: 64 20% of total cover: 25			
Herb Stratum			
1. Viola epipsila	10	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 10			
50% of total cover: 5 20% of total cover: 2			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	10	x 2 = 20
FAC species	128	x 3 = 384
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	138 (A)	404 (B)

Prevalence Index = B/A = 2.93

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: leaf litter on the forest floor.

SOIL

Sampling Point T25-174

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4		100		0				organics
4-13	10YR 2/1	100		0			Sandy Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 13

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/24/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T25-176
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): concave Slope (%): 5
Subregion (LRR): Interior Alaska Lat: 67.03202210 Long: -155.64538570 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS4/EM1B, IIC1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: The sample location was taken on the south side of the alignment within a PSS wetland at the base of an upland knoll. Photos 3515-3519.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	20	Yes	FACW
2.			
3.			
4.			
Total Cover: 20			
50% of total cover: 10 20% of total cover: 4			
Sapling/Shrub Stratum			
1. Betula nana	20	No	FAC
2. Vaccinium uliginosum	25	Yes	FAC
3. Empetrum nigrum	25	Yes	FAC
4. Rhododendron groenlandicum	25	Yes	FAC
5. Vaccinium vitis-idaea	16	No	FAC
6. Rubus chamaemorus	10	No	FACW
Total Cover: 121			
50% of total cover: 60 20% of total cover: 24			
Herb Stratum			
1. Eriophorum vaginatum	80	Yes	FACW
2. Carex media	60	Yes	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 140			
50% of total cover: 70 20% of total cover: 28			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	170	x 2 = 340
FAC species	111	x 3 = 333
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	281 (A)	673 (B)

Prevalence Index = B/A = 2.40

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 65
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum intermixed throughout tussocks

SOIL

Sampling Point T25-176

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12		100		0				saturated organics

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

X Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 12

Hydric Soil Present? Yes

Remarks: saturated organics above permafrost

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 3
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/24/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T26-151
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 4
Subregion (LRR): Interior Alaska Lat: 67.00516560 Long: -155.43482920 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation X , Soil X , or Hydrology X significantly disturbed? Are "Normal Circumstances" present? No
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: hillslope was covered with picea glauca--fire has burnt sphagnum and picea. Succession with betula nana, vac uli. Photos 7398-7402	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	35	Yes	FACU
2.			
3.			
4.			
Total Cover: 35			
50% of total cover: 17 20% of total cover: 7			
Sapling/Shrub Stratum			
1. Betula nana	50	Yes	FAC
2. Vaccinium uliginosum	70	Yes	FAC
3. Rhododendron groenlandicum	30	Yes	FAC
4.			
5.			
6.			
Total Cover: 150			
50% of total cover: 75 20% of total cover: 30			
Herb Stratum			
1. Carex utriculata	15	Yes	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 15			
50% of total cover: 7 20% of total cover: 3			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	15	x 1 = 15
FACW species	0	x 2 = 0
FAC species	150	x 3 = 450
FACU species	35	x 4 = 140
UPL species	0	x 5 = 0
Column Totals:	200 (A)	605 (B)

Prevalence Index = B/A = 3.03

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 15
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 5
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: picea glauca burnt, 5% sphagnum new growth.

SOIL

Sampling Point T26-151

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	organic	100		0				
5-10	10YR 4/3	80	10YR 4/6	20	RM	M	Sandy Loam	
10-19	gley1 10Y 6/1	100		0			Sandy Loam	sandy/silty loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
X Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/24/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T26-153
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hill Local relief (concave, convex, none): convex Slope (%): 2
Subregion (LRR): Interior Alaska Lat: 67.00324750 Long: -155.43819650 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: photos 7403-7407.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	30	Yes	FACU
2.			
3.			
4.			
Total Cover: 30			
50% of total cover: 15 20% of total cover: 6			
Sapling/Shrub Stratum			
1. Betula nana	50	Yes	FAC
2. Vaccinium uliginosum	25	No	FAC
3. Rhododendron groenlandicum	45	Yes	FAC
4. Vaccinium vitis-idaea	10	No	FAC
5. Picea glauca	2	No	FACU
6. Empetrum nigrum	10	No	FAC
Total Cover: 142			
50% of total cover: 71 20% of total cover: 28			
Herb Stratum			
1. Carex interior	15	Yes	OBL
2. Calamagrostis canadensis	5	Yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 20			
50% of total cover: 10 20% of total cover: 4			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	15	x 1 = 15
FACW species	0	x 2 = 0
FAC species	145	x 3 = 435
FACU species	32	x 4 = 128
UPL species	0	x 5 = 0
Column Totals:	192 (A)	578 (B)

Prevalence Index = B/A = 3.01

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 60
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 60%. Burnt picea stand. Regrowth of bet nan and rho gro.

SOIL

Sampling Point T26-153

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1.5	organic	100		0				
1.5-21	2.5Y 5/4	100		0			Silty Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/24/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T26-178
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Stream terrace Local relief (concave, convex, none): convex Slope (%): 5
Subregion (LRR): Interior Alaska Lat: 67.00635240 Long: -155.43774950 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**

Remarks: The sample location was taken on north side of the alignment at an upper perennial stream just south of the 2000ft boundary. To the north a picea forest, to the south a burned picea forest. bankfull with ~ 75ft, Wetted width ~50ft, about 1ft deep, with cobbles and boulders for the substrate. Water was fast flowing, east-west. The sample location was taken on within a semi-burned picea forest about 10 feet from stream. Photos 3520-3524.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	35	Yes	FACW
2.			
3.			
4.			
Total Cover: 35			
50% of total cover: 17 20% of total cover: 7			
Sapling/Shrub Stratum			
1. Alnus viridis	2	No	FAC
2. salix spp	20	No	FAC
3. Picea mariana	21	Yes	FACW
4. Vaccinium uliginosum	50	Yes	FAC
5. Vaccinium vitis-idaea	10	No	FAC
6. Empetrum nigrum	10	No	FAC
Total Cover: 113			
50% of total cover: 56 20% of total cover: 22			
Herb Stratum			
1. Cornus suecica	45	Yes	FAC
2. Equisetum arvense	5	No	FAC
3. Chamaenerion angustifolium	20	Yes	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 70			
50% of total cover: 35 20% of total cover: 14			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	56	x 2 = 112
FAC species	142	x 3 = 426
FACU species	20	x 4 = 80
UPL species	0	x 5 = 0
Column Totals:	218 (A)	618 (B)

Prevalence Index = B/A = 2.83

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 30
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T26-178

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3		100		0				organic
3-13	10YR 4/4	100		0			Sandy Loam	gravel mixed in

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 13

Hydric Soil Present? No

Remarks: Restrictive digging layer of gravel.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/24/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T27-155
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 5
Subregion (LRR): Interior Alaska Lat: 67.01550350 Long: -155.24737160 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: hillslope on south side of corridor.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	30	Yes	FACW
2.			
3.			
4.			
Total Cover: 30			
50% of total cover: 15 20% of total cover: 6			
Sapling/Shrub Stratum			
1. Picea mariana	30	Yes	FACW
2. Salix sp.	5	No	FAC
3. Vaccinium uliginosum	15	No	FAC
4. Rhododendron groenlandicum	20	No	FAC
5. Vaccinium vitis-idaea	30	Yes	FAC
6. Empetrum nigrum	30	Yes	FAC
Total Cover: 130			
50% of total cover: 65 20% of total cover: 26			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	60	x 2 = 120
FAC species	100	x 3 = 300
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	160 (A)	420 (B)

Prevalence Index = B/A = 2.63

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 80
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: 80% lichen reindeer.

SOIL

Sampling Point T27-155

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	organic	100		0				
4-10	2.5Y 4/3	100		0			Silty Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks: restrictive layer for digging with gravel

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/24/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T27-157
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hill Local relief (concave, convex, none): convex Slope (%): 1
Subregion (LRR): Interior Alaska Lat: 67.01550350 Long: -155.24737160 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland, IA2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: hilltop picea and rho gro dominate. Photos 7413-7417	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	25	Yes	FACW
2.			
3.			
4.			
Total Cover: 25			
50% of total cover: 12 20% of total cover: 5			
Sapling/Shrub Stratum			
1. Picea mariana	35	Yes	FACW
2. Betula nana	30	Yes	FAC
3. Vaccinium uliginosum	15	No	FAC
4. Vaccinium vitis-idaea	10	No	FAC
5. Empetrum nigrum	5	No	FAC
6. Rhododendron groenlandicum	40	Yes	FAC
Total Cover: 135			
50% of total cover: 67 20% of total cover: 27			
Herb Stratum			
1. Carex rostrata	15	Yes	OBL
2. Equisetum sylvaticum	5	Yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 20			
50% of total cover: 10 20% of total cover: 4			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	15	x 1 = 15
FACW species	60	x 2 = 120
FAC species	105	x 3 = 315
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	180 (A)	450 (B)

Prevalence Index = B/A = 2.50

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 100
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: reindeer lichen 90%, sphagnum 10%.

SOIL

Sampling Point T27-157

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-0.5	organic	100		0				
0.5-3.5	gley1 10Y 5/1	100		0			Gravel	gravelly loam
3.5-8	2.5Y 5/3	60	2.5Y 5/1	40	RM	M	Clay Loam	
8-15	2.5Y 5/4	100		0			Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
X Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks: restrictive layer for digging gravel. Gravel indicates low carbon content within the soil.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/24/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T27-159
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): Interior Alaska Lat: 67.01550350 Long: -155.24737160 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1B, IA3
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: flat in hilltop near centerline. Photos 7418-7422.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	20	Yes	FACW
2.			
3.			
4.			
Total Cover: 20			
50% of total cover: 10 20% of total cover: 4			
Sapling/Shrub Stratum			
1. Picea mariana	35	Yes	FACW
2. Betula nana	45	Yes	FAC
3. Vaccinium uliginosum	55	Yes	FAC
4. Rubus chamaemorus	20	No	FACW
5. Rhododendron groenlandicum	10	No	FAC
6.			
Total Cover: 165			
50% of total cover: 82 20% of total cover: 33			
Herb Stratum			
1. Carex rostrata	10	Yes	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 10			
50% of total cover: 5 20% of total cover: 2			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	10	x 1 = 10
FACW species	75	x 2 = 150
FAC species	110	x 3 = 330
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	195 (A)	490 (B)

Prevalence Index = B/A = 2.51

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 100
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 95%, lichen 5%

SOIL

Sampling Point T27-159

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-14	organic	100		0				

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- X Histosol or Histel(A1)
- X Histic Epipedon (A2)
- X Hydrogen Sulfide (A4)
- __Thick Dark Surface (A12)
- __Alaska Gleyed (A13)
- __Alaska Redox (A14)
- __Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

- __Alaska Color Change (TA4)[4]
- __Alaska Alpine Swales (TA5)
- __Alaska Redox With 2.5Y Hue
- __Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- __Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 14

Hydric Soil Present? Yes

Remarks: brown water when squeezed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- __Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- __Water Marks (B1)
- __Sediment Deposits (B2)
- __Drift Deposits (B3)
- __Algal Mat or Crust (B4)
- __Iron Deposits (B5)
- __Surface Soil Cracks (B6)
- __Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __Marl Deposits (B15)
- X Hydrogen Sulfide Odor (C1)
- __Dry Season Water Table (C2)
- __Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- __Water-stained Leaves (B9)
- __Drainage Patterns (B10)
- __Oxidized Rhizospheres along Living Roots (C3)
- __Presence of Reduced Iron (C4)
- __Salt Deposits (C5)
- __Stunted or Stressed Plants (D1)
- __Geomorphic Position (D2)
- X Shallow Aquitard (D3)
- __Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 7
Saturation Present? Yes Depth (inches): 1
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/24/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T27-180
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hill Local relief (concave, convex, none): convex Slope (%): 5
Subregion (LRR): Interior Alaska Lat: 67.01694130 Long: -155.24766640 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**

Remarks: The sample location was taken on the north side of the alignment within an upland knoll. To the east a willow drainage, to the west upland. Photos 3525-3529. upland

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	30	Yes	FACU
2.			
3.			
4.			
Total Cover: 30			
50% of total cover: 15 20% of total cover: 6			
Sapling/Shrub Stratum			
1. Betula nana	40	Yes	FAC
2. Picea glauca	30	Yes	FACU
3. Rhododendron groenlandicum	30	Yes	FAC
4. Vaccinium uliginosum	30	No	FAC
5. Vaccinium vitis-idaea	25	No	FAC
6.			
Total Cover: 155			
50% of total cover: 77 20% of total cover: 31			
Herb Stratum			
1. Calamagrostis canadensis	10	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 10			
50% of total cover: 5 20% of total cover: 2			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 60 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	135	x 3 =	405
FACU species	60	x 4 =	240
UPL species	0	x 5 =	0
Column Totals:	195 (A)		645 (B)

Prevalence Index = B/A = 3.31

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 45
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: lichen spp

SOIL

Sampling Point T27-180

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4		100		0				organic
4-19	10YR 4/4	100		0			Sandy Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: none
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/24/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T27-182
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 3
Subregion (LRR): Interior Alaska Lat: 67.01555150 Long: -155.24372750 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/EM1B, IIB2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**

Remarks: The sample location was taken on north side of the alignment within an emergent depression. In all directions a picea forest, likley a wetland. Photos 3530-3534. PEM

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. salix spp	21	Yes	FAC
2. Betula nana	14	Yes	FAC
3. Vaccinium uliginosum	10	Yes	FAC
4.			
5.			
6.			
Total Cover: 45			
50% of total cover: 22 20% of total cover: 9			
Herb Stratum			
1. Eriophorum vaginatum	80	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 80			
50% of total cover: 40 20% of total cover: 16			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	80	x 2 = 160
FAC species	45	x 3 = 135
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	125 (A)	295 (B)

Prevalence Index = B/A = 2.36

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 60
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T27-182

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-11		100		0				saturated organics

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- X Histosol or Histel(A1)
- X Histic Epipedon (A2)
- __Hydrogen Sulfide (A4)
- __Thick Dark Surface (A12)
- __Alaska Gleyed (A13)
- __Alaska Redox (A14)
- __Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

- __Alaska Color Change (TA4)[4]
- __Alaska Alpine Swales (TA5)
- __Alaska Redox With 2.5Y Hue
- __Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- __Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 11

Hydric Soil Present? Yes

Remarks: saturated organics above permafrost

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- __Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- __Water Marks (B1)
- __Sediment Deposits (B2)
- __Drift Deposits (B3)
- __Algal Mat or Crust (B4)
- __Iron Deposits (B5)
- __Surface Soil Cracks (B6)
- __Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __Marl Deposits (B15)
- __Hydrogen Sulfide Odor (C1)
- __Dry Season Water Table (C2)
- __Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- __Water-stained Leaves (B9)
- __Drainage Patterns (B10)
- __Oxidized Rhizospheres along Living Roots (C3)
- __Presence of Reduced Iron (C4)
- __Salt Deposits (C5)
- __Stunted or Stressed Plants (D1)
- __Geomorphic Position (D2)
- __Shallow Aquitard (D3)
- __Microtopographic Relief (D4)
- __FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 3
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/24/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T27-184
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): Interior Alaska Lat: 67.01670260 Long: -155.24684210 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PFO4/SS1B, IA2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: The sample location was taken on north side of the alignment within a picea wetland. intermixed are PEM and willow drainages. photos 3535-3539. PFO	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	35	Yes	FACW
2.			
3.			
4.			
Total Cover: 35			
50% of total cover: 17 20% of total cover: 7			
Sapling/Shrub Stratum			
1. Picea mariana	20	No	FACW
2. Betula nana	40	No	FAC
3. Vaccinium uliginosum	43	Yes	FAC
4. Rubus chamaemorus	45	Yes	FACW
5. Vaccinium vitis-idaea	41	Yes	FAC
6. Rhododendron groenlandicum	37	No	FAC
Total Cover: 226			
50% of total cover: 113 20% of total cover: 45			
Herb Stratum			
1. Calamagrostis canadensis	15	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 15			
50% of total cover: 7 20% of total cover: 3			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	100	x 2 = 200
FAC species	176	x 3 = 528
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	276 (A)	728 (B)

Prevalence Index = B/A = 2.64

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 40
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum and lichen

SOIL

Sampling Point T27-184

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3		100		0				saturated organics
3-5	10YR 3/3	100		0			Silt Loam	
5-16	gley 1 10y 6/1	100		0			Silty Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
X Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 16

Hydric Soil Present? Yes

Remarks: gravel and rocks throughout profile

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: saturated 0-5

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/24/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T28-161
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Stream terrace Local relief (concave, convex, none): convex Slope (%): 1
Subregion (LRR): Interior Alaska Lat: 67.00403590 Long: -154.98440860 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PFO4/SS1B, IA1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: picea forest mixed with willow drainages. photos 7423-7427.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	75	Yes	FACW
2.			
3.			
4.			
Total Cover: 75			
50% of total cover: 37 20% of total cover: 15			
Sapling/Shrub Stratum			
1. Picea mariana	10	No	FACW
2. Alnus viridis	5	No	FAC
3. Betula nana	10	No	FAC
4. Salix spp.	15	No	FAC
5. Vaccinium uliginosum	40	Yes	FAC
6. Rubus chamaemorus	25	Yes	FACW
Total Cover: 105			
50% of total cover: 52 20% of total cover: 21			
Herb Stratum			
1. Equisetum arvense	3	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 3			
50% of total cover: 1 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	110	x 2 = 220
FAC species	73	x 3 = 219
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	183 (A)	439 (B)

Prevalence Index = B/A = 2.40

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 90
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagum 80% lichen 10%.

SOIL

Sampling Point T28-161

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	organic	100		0				
10-12	10YR 3/1	100		0			Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 12

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/24/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T28-163
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): none Slope (%): 1
Subregion (LRR): Interior Alaska Lat: 67.00349680 Long: -154.98779280 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks:	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	20	Yes	FACW
2.			
3.			
4.			
Total Cover: 20			
50% of total cover: 10 20% of total cover: 4			
Sapling/Shrub Stratum			
1. Picea mariana	35	Yes	FACW
2. Betula nana	35	Yes	FAC
3. Salix sp.	5	No	FAC
4. Alnus viridis	2	No	FAC
5. Vaccinium uliginosum	55	Yes	FAC
6. Rhododendron groenlandicum	20	No	FAC
Total Cover: 152			
50% of total cover: 76 20% of total cover: 30			
Herb Stratum			
1. Equisetum arvense	35	Yes	FAC
2. Chamaenerion angustifolium	5	No	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 40			
50% of total cover: 20 20% of total cover: 8			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	55	x 2 = 110
FAC species	152	x 3 = 456
FACU species	5	x 4 = 20
UPL species	0	x 5 = 0
Column Totals:	212 (A)	586 (B)

Prevalence Index = B/A = 2.76

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 65
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: 65% sphagnum

SOIL

Sampling Point T28-163

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	organic	100		0				
8-13	10YR 3/4	100		0			Loam	
13-18	2.5Y 4/3	100		0			Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 18

Hydric Soil Present? No

Remarks: very moist soils.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/24/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T28-186
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hill Local relief (concave, convex, none): convex Slope (%): 20
Subregion (LRR): Interior Alaska Lat: 67.00364950 Long: -154.99680410 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**

Remarks: photos 3540-3544. The sample location was taken on south side of the alignment atop a knoll within a picea glauca forest. Further north west is willow thicket. Upland.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	75	Yes	FACU
2.			
3.			
4.			
Total Cover: 75			
50% of total cover: 37 20% of total cover: 15			
Sapling/Shrub Stratum			
1. Picea glauca	44	Yes	FACU
2. Vaccinium uliginosum	57	Yes	FAC
3. Rhododendron groenlandicum	46	Yes	FAC
4. Empetrum nigrum	22	No	FAC
5. Betula nana	39	No	FAC
6.			
Total Cover: 208			
50% of total cover: 104 20% of total cover: 41			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	164	x 3 = 492
FACU species	119	x 4 = 476
UPL species	0	x 5 = 0
Column Totals:	283 (A)	968 (B)

Prevalence Index = B/A = 3.42

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
__ Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 45
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks: all lichen

SOIL

Sampling Point T28-186

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1		100		0				organic
1-16	10YR 5/6	100		0			Sandy Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: none
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/25/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T29-165
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 3
Subregion (LRR): Interior Alaska Lat: 67.02666410 Long: -155.11007350 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: hillslope picea glauca upland.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	65	Yes	FACU
2. Populus balsamifera	15	No	FACU
3.			
4.			
Total Cover: 80			
50% of total cover: 40 20% of total cover: 16			
Sapling/Shrub Stratum			
1. Alnus viridis	30	Yes	FAC
2. Ribes triste	5	No	FAC
3. Linnaea borealis	5	No	FACU
4. Rubus pubescens	5	No	FACW
5. Rosa acicularis	3	No	FACU
6.			
Total Cover: 48			
50% of total cover: 24 20% of total cover: 9			
Herb Stratum			
1. Equisetum pratense	65	Yes	FACW
2. Aconitum delphiniifolium	20	No	FAC
3. Mertensia paniculata	15	No	FACU
4. Viola epipsila	15	No	FACW
5. Lycopodium clavatum	30	Yes	FACU
6. Calamagrostis canadensis	10	No	FAC
7.			
8.			
9.			
10.			
Total Cover: 155			
50% of total cover: 77 20% of total cover: 31			

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	85	x 2 = 170
FAC species	65	x 3 = 195
FACU species	133	x 4 = 532
UPL species	0	x 5 = 0
Column Totals:	283 (A)	897 (B)

Prevalence Index = B/A = 3.17

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
__ Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? No

Remarks:

SOIL

Sampling Point T29-165

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	organic	100		0				
3-10	10YR 4/3	100		0			Loam	
10-18	2.5Y 4/2	100		0			Silty Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks: restrictive layer for digging gravel.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/25/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T29-167
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Drainageway Local relief (concave, convex, none): concave Slope (%): 3
Subregion (LRR): Interior Alaska Lat: 67.02693470 Long: -155.10702990 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PFO4/SS1B, IA2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: drainage way upper. 9 inches wide, 3 inches deep. Multiple channels. Photos 7438-7442.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	30	Yes	FACU
2. Populus balsamifera	10	Yes	FACU
3.			
4.			
Total Cover: 40			
50% of total cover: 20 20% of total cover: 8			
Sapling/Shrub Stratum			
1. Alnus viridis	70	Yes	FAC
2. Picea glauca	10	No	FACU
3. Spiraea stevenii	15	No	FACU
4. Ribes triste	15	No	FAC
5.			
6.			
Total Cover: 110			
50% of total cover: 55 20% of total cover: 22			
Herb Stratum			
1. Comarum palustre	35	Yes	OBL
2. Equisetum palustre	20	Yes	FACW
3. Viola epipsila	10	No	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 65			
50% of total cover: 32 20% of total cover: 13			

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 50
(Where applicable)

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 60 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	35	x 1 = 35
FACW species	30	x 2 = 60
FAC species	85	x 3 = 255
FACU species	65	x 4 = 260
UPL species	0	x 5 = 0
Column Totals:	215 (A)	610 (B)

Prevalence Index = B/A = 2.84

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 50% on banks of drainageway.

SOIL

Sampling Point T29-167

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 3/4	100		0			Sandy Gravely Loam	no loam
8-17	2.5Y 4/2	100		0			Sandy Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
X Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
X Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
X Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 13
Saturation Present? Yes Depth (inches): 8
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/25/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T30-169
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Drainageway Local relief (concave, convex, none): concave Slope (%): 2
Subregion (LRR): Interior Alaska Lat: 66.97146290 Long: -154.95777480 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/EM1C
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: drainageway-inbetween two picea fingers see T30-171. photos 7443-7448.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Salix sp.	100	Yes	FAC
2. Alnus viridis	3	No	FAC
3. Vaccinium uliginosum	10	No	FAC
4.			
5.			
6.			
Total Cover: 113			
50% of total cover: 56 20% of total cover: 22			
Herb Stratum			
1. Equisetum arvense	70	Yes	FAC
2. Calamagrostis canadensis	20	No	FAC
3. Comarum palustre	25	Yes	OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 115			
50% of total cover: 57 20% of total cover: 23			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	25	x 1 = 25
FACW species	0	x 2 = 0
FAC species	203	x 3 = 609
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	228 (A)	634 (B)

Prevalence Index = B/A = 2.78

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 100
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 100%

SOIL

Sampling Point T30-169

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	organic	100		0				
4-17	10YR 4/3	70	2.5Y 4/3	30	RM	M	Silt Loam	Faint Redox

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
X Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 17

Hydric Soil Present? Yes

Remarks: Active Drainageway.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
X Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 16.5
Saturation Present? Yes Depth (inches): 10
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/25/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T30-171
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 2
Subregion (LRR): Interior Alaska Lat: 66.97116600 Long: -154.95758890 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland, IA3
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: picea and betula nana surrounding drainageway . photos 7449-7453.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	20	Yes	FACW
2.			
3.			
4.			
Total Cover: 20			
50% of total cover: 10 20% of total cover: 4			
Sapling/Shrub Stratum			
1. Picea mariana	30	No	FACW
2. Betula nana	50	Yes	FAC
3. Salix sp.	5	No	FAC
4. Rhododendron groenlandicum	25	No	FAC
5. Vaccinium uliginosum	40	Yes	FAC
6. Vaccinium vitis-idaea	10	No	FAC
Total Cover: 160			
50% of total cover: 80 20% of total cover: 32			
Herb Stratum			
1. Equisetum arvense	25	Yes	FAC
2. Carex rostrata	10	Yes	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 35			
50% of total cover: 17 20% of total cover: 7			

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 100
(Where applicable)

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	10	x 1 = 10
FACW species	50	x 2 = 100
FAC species	155	x 3 = 465
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	215 (A)	575 (B)

Prevalence Index = B/A = 2.67

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 90% lichen 10 %.

SOIL

Sampling Point T30-171

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	organic	100		0				
5-20	gley1 10Y 5 /1	75	10YR 4/6	25	C	RC	Silty Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
X Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/25/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T30-173
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 2
Subregion (LRR): Interior Alaska Lat: 66.97085450 Long: -154.95837340 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: 7454-7458.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	20	Yes	FACW
2. Populus tremuloides	10	Yes	FACU
3.			
4.			
Total Cover: 30			
50% of total cover: 15 20% of total cover: 6			
Sapling/Shrub Stratum			
1. Picea mariana	3	No	FACW
2. salix sp.	5	No	FAC
3. Betula nana	5	No	FAC
4. Rhododendron groenlandicum	20	Yes	FAC
5. Vaccinium uliginosum	15	Yes	FAC
6. Vaccinium vitis-idaea	25	Yes	FAC
Total Cover: 73			
50% of total cover: 36 20% of total cover: 14			
Herb Stratum			
1. Lycopodium clavatum	20	Yes	FACU
2. Calamagrostis canadensis	3	No	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 23			
50% of total cover: 11 20% of total cover: 4			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	23	x 2 = 46
FAC species	73	x 3 = 219
FACU species	30	x 4 = 120
UPL species	0	x 5 = 0
Column Totals:	126 (A)	385 (B)

Prevalence Index = B/A = 3.06

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 45
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: lichen 35, sphagnum 10%.

SOIL

Sampling Point T30-173

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1	organic	100		0				
1-5	10YR 4/6	100		0			Sandy Gravely Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks: restrictive layer for digging gravel

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/25/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T30-175
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): none Slope (%): 1
Subregion (LRR): Interior Alaska Lat: 66.97014840 Long: -154.96045170 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PEM1B, IIIA3
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: photos 7459-7463	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Betula nana	5	Yes	FAC
2. Salix sp.	5	Yes	FAC
3. Vaccinium uliginosum	5	Yes	FAC
4. Spiraea stevenii	3	Yes	FACU
5.			
6.			
Total Cover: 18			
50% of total cover: 9 20% of total cover: 3			
Herb Stratum			
1. Calamagrostis canadensis	70	Yes	FAC
2. Comarum palustre	25	Yes	OBL
3. Eriophorum angustifolium	10	No	OBL
4. Parnassia palustris	2	No	FACW
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 107			
50% of total cover: 53 20% of total cover: 21			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 83 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	35	x 1 = 35
FACW species	2	x 2 = 4
FAC species	85	x 3 = 255
FACU species	3	x 4 = 12
UPL species	0	x 5 = 0
Column Totals:	125 (A)	306 (B)

Prevalence Index = B/A = 2.45

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 30
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: 30% sphagnum

SOIL

Sampling Point T30-175

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-9	organic	100		0				
9-18	gley1 10Y 5/1	85	10YR 4/6	15	C	RC	Silty Clay Loam	prominent redox

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
X Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 18

Hydric Soil Present? Yes

Remarks: organic has brown water when squeezed

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 9
Saturation Present? Yes Depth (inches): 1
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/25/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T30-188
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hill Local relief (concave, convex, none): convex Slope (%): 3
Subregion (LRR): Interior Alaska Lat: 67.02418590 Long: -155.11300520 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**

Remarks: The sample location was taken on the south side of the alignment within a slight forested/shrub hill. Further north-west a willow drainage feature. To the south, the same landscape continues. Photos 3545-3549. Upland.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	15	Yes	FACU
2.			
3.			
4.			
Total Cover: 15			
50% of total cover: 7 20% of total cover: 3			
Sapling/Shrub Stratum			
1. Picea glauca	10	No	FACU
2. Vaccinium uliginosum	55	Yes	FAC
3. Rhododendron groenlandicum	55	Yes	FAC
4. Rubus chamaemorus	45	Yes	FACW
5. Empetrum nigrum	30	No	FAC
6.			
Total Cover: 195			
50% of total cover: 97 20% of total cover: 39			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	45	x 2 = 90
FAC species	140	x 3 = 420
FACU species	25	x 4 = 100
UPL species	0	x 5 = 0
Column Totals:	210 (A)	610 (B)

Prevalence Index = B/A = 2.90

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 50
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: lichen and sphagnum

SOIL

Sampling Point T30-188

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-13		100		0				organics

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 13

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/25/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T30-190
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Drainageway Local relief (concave, convex, none): concave Slope (%): 5
Subregion (LRR): Interior Alaska Lat: 67.02440500 Long: -155.11282070 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/EM1C, IIB1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**

Remarks: The sample location was taken on the south side of the alignment within a a drainage feature covered with salix spp. The drainsge feature runs n-s. Hydrogen sulfide smell and the sample hole fills as soon as shovel is put in ground. To the northwesr a picea forest. Photos 3550-3554. PSS wetland.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. salix spp	75	Yes	FAC
2. Vaccinium uliginosum	15	No	FAC
3.			
4.			
5.			
6.			
Total Cover: 90			
50% of total cover: 45 20% of total cover: 18			
Herb Stratum			
1. Comarum palustre	50	Yes	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 50			
50% of total cover: 25 20% of total cover: 10			

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 45 Total Cover of Bryophytes: 45
(Where applicable)

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	50	x 1 = 50
FACW species	0	x 2 = 0
FAC species	90	x 3 = 270
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	140 (A)	320 (B)

Prevalence Index = B/A = 2.29

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum

SOIL

Sampling Point T30-190

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-17	10YR 2/1	100		0			Sandy Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
X Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 17

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
X Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 0
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: saturated muck over permafrost. Flow wster visible but slow. Muck substrate.

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/25/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T30-194
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hill Local relief (concave, convex, none): convex Slope (%): 3
Subregion (LRR): Interior Alaska Lat: 67.02489510 Long: -155.11026620 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**

Remarks: The sample location was taken on the south side of the alignment within a picea forest/shrub layer. Photos 3555-3559. Upland.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	25	Yes	FACU
2.			
3.			
4.			
Total Cover: 25			
50% of total cover: 12 20% of total cover: 5			
Sapling/Shrub Stratum			
1. Picea glauca	40	Yes	FACU
2. Populus tremuloides	15	No	FACU
3. Rhododendron groenlandicum	30	Yes	FAC
4. Vaccinium uliginosum	30	Yes	FAC
5. Vaccinium vitis-idaea	20	No	FAC
6. Rubus chamaemorus	15	No	FACW
Total Cover: 150			
50% of total cover: 75 20% of total cover: 30			
Herb Stratum			
1. Equisetum arvense	41	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 41			
50% of total cover: 20 20% of total cover: 8			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 60 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	15	x 2 = 30
FAC species	121	x 3 = 363
FACU species	80	x 4 = 320
UPL species	0	x 5 = 0
Column Totals:	216 (A)	713 (B)

Prevalence Index = B/A = 3.30

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 50
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T30-194

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3		100		0				organics
3-16	10YR 3/1	100		0			Sandy Gravely Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks: Restrctive digging layer of gravel at 16 inches.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/25/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T30-196
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hill Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): Interior Alaska Lat: 67.01916720 Long: -155.11357300 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1B, IIB1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**

Remarks: the sample location was taken on the south side of the alignment within a picea wetland atop a flat area. To the south the area slopes down about 15 percent. To the north the picea upland. Photos 3560-3564. PSS wetland.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	25	Yes	FACW
2.			
3.			
4.			
Total Cover: 25			
50% of total cover: 12 20% of total cover: 5			
Sapling/Shrub Stratum			
1. Picea mariana	25	No	FACW
2. Betula nana	70	Yes	FAC
3. Vaccinium uliginosum	35	No	FAC
4. Rubus chamaemorus	44	Yes	FACW
5. Vaccinium vitis-idaea	15	No	FAC
6. Rhododendron groenlandicum	20	No	FAC
Total Cover: 209			
50% of total cover: 104 20% of total cover: 41			
Herb Stratum			
1. Equisetum pratense	20	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 20			
50% of total cover: 10 20% of total cover: 4			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	114	x 2 = 228
FAC species	140	x 3 = 420
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	254 (A)	648 (B)

Prevalence Index = B/A = 2.55

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 65
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T30-196

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8		100		0				saturated organics
8-20	gley 1 10y 3/1	100		0			Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
X Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 20

Hydric Soil Present? Yes

Remarks: saturated organics above permafrost

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 6
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: saturated to surface.

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/25/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T31-177
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 3
Subregion (LRR): Interior Alaska Lat: 66.95064060 Long: -154.92927820 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: hillslope at base of rocky knoll. Photos 7464-7468.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	15	Yes	FACW
2.			
3.			
4.			
Total Cover: 15			
50% of total cover: 7 20% of total cover: 3			
Sapling/Shrub Stratum			
1. Picea mariana	10	No	FACW
2. Betula nana	65	Yes	FAC
3. Alnus viridis	30	Yes	FAC
4. Vaccinium uliginosum	35	Yes	FAC
5. Rhododendron groenlandicum	8	No	FAC
6. Vaccinium vitis-idaea	3	No	FAC
Total Cover: 151			
50% of total cover: 75 20% of total cover: 30			
Herb Stratum			
1. Equisetum sylvaticum	35	Yes	FAC
2. Chamaenerion angustifolium	3	No	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 38			
50% of total cover: 19 20% of total cover: 7			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	25	x 2 = 50
FAC species	176	x 3 = 528
FACU species	3	x 4 = 12
UPL species	0	x 5 = 0
Column Totals:	204 (A)	590 (B)

Prevalence Index = B/A = 2.89

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 25
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 15% lichen 10%

SOIL

Sampling Point T31-177

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-11.5	organic	100		0				
11.5-12	2.5Y 4/3	100		0			Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks: restrictive layer for digging of gravel

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/25/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T31-179
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 2
Subregion (LRR): Interior Alaska Lat: 66.95151810 Long: -154.92869080 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: photos 7469-7473	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	35	Yes	FACW
2. Populus tremuloides	10	Yes	FACU
3. Populus balsamifera	2	No	FACU
4.			
Total Cover: 47			
50% of total cover: 23 20% of total cover: 9			
Sapling/Shrub Stratum			
1. Picea mariana	4	No	FACW
2. Populus tremuloides	3	No	FACU
3. Betula nana	15	Yes	FAC
4. Vaccinium uliginosum	20	Yes	FAC
5. Rhododendron groenlandicum	35	Yes	FAC
6.			
Total Cover: 77			
50% of total cover: 38 20% of total cover: 15			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	39	x 2 = 78
FAC species	70	x 3 = 210
FACU species	15	x 4 = 60
UPL species	0	x 5 = 0
Column Totals:	124 (A)	348 (B)

Prevalence Index = B/A = 2.81

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 90
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: reindeer lichen 55%, sphagnum 10%, 25% false pixie cup

SOIL

Sampling Point T31-179

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1	organic	100		0				
1-13	10YR 5/6	100		0			Sandy Gravely Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks: restrictive layer for digging gravel

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/25/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T31-181
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 3
Subregion (LRR): Interior Alaska Lat: 66.95290540 Long: -154.92726680 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: photos 7474-7478	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	15	Yes	FACW
2.			
3.			
4.			
Total Cover: 15			
50% of total cover: 7 20% of total cover: 3			
Sapling/Shrub Stratum			
1. Picea mariana	5	No	FACW
2. Alnus viridis	75	Yes	FAC
3. Betula nana	25	No	FAC
4. Vaccinium uliginosum	55	Yes	FAC
5. Rosa acicularis	3	No	FACU
6. Vaccinium vitis-idaea	5	No	FAC
Total Cover: 168			
50% of total cover: 84 20% of total cover: 33			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	20	x 2 = 40
FAC species	160	x 3 = 480
FACU species	3	x 4 = 12
UPL species	0	x 5 = 0
Column Totals:	183 (A)	532 (B)

Prevalence Index = B/A = 2.91

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 25
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: 25% lichen

SOIL

Sampling Point T31-181

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-11.5	organic	100		0				
11.5-12	10YR 4/2	100		0			Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 12

Hydric Soil Present? No

Remarks: permafrost

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/25/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T31-198
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): concave Slope (%): 3
Subregion (LRR): Interior Alaska Lat: 66.97242870 Long: -154.95523000 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**

Remarks: The sample location was taken on the north side of the alignment within a dense willow thicket. The willows were over 6feet tall. All surrounding areas are willows. Photos 3565-3569. Upland.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	5	Yes	FACU
2.			
3.			
4.			
Total Cover: 5			
50% of total cover: 2 20% of total cover: 1			
Sapling/Shrub Stratum			
1. salix spp	95	Yes	FAC
2. Betula nana	50	Yes	FAC
3. Vaccinium uliginosum	45	Yes	FAC
4. Rubus pubescens	39	No	FACW
5.			
6.			
Total Cover: 229			
50% of total cover: 114 20% of total cover: 45			
Herb Stratum			
1. Equisetum arvense	50	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 50			
50% of total cover: 25 20% of total cover: 10			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	39	x 2 = 78
FAC species	240	x 3 = 720
FACU species	5	x 4 = 20
UPL species	0	x 5 = 0
Column Totals:	284 (A)	818 (B)

Prevalence Index = B/A = 2.88

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 35
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T31-198

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5		100		0				moist organics
5-17	10YR 3/2	100		0			Loamy Fine Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: none
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/25/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T31-200
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): convex Slope (%): 3
Subregion (LRR): Interior Alaska Lat: 66.97315710 Long: -154.95542870 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: the sample location was taken on the north side of the alignment within a willow/picea upland north of the willow thicket. Photos 3570-3574.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	50	Yes	FACU
2.			
3.			
4.			
Total Cover: 50			
50% of total cover: 25 20% of total cover: 10			
Sapling/Shrub Stratum			
1. salix spp	39	Yes	FAC
2. Vaccinium vitis-idaea	35	Yes	FAC
3. Vaccinium uliginosum	40	Yes	FAC
4. Rosa acicularis	5	No	FACU
5. Arctostaphylos rubra	25	No	FAC
6.			
Total Cover: 144			
50% of total cover: 72 20% of total cover: 28			
Herb Stratum			
1. Equisetum arvense	55	Yes	FAC
2. Chamaenerion angustifolium	20	Yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 75			
50% of total cover: 37 20% of total cover: 15			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	194	x 3 = 582
FACU species	75	x 4 = 300
UPL species	0	x 5 = 0
Column Totals:	269 (A)	882 (B)

Prevalence Index = B/A = 3.28

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 10
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T31-200

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5		100		0				organics
5-12	10YR 3/4	100		0			Sandy Gravely Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 12

Hydric Soil Present? No

Remarks: Restrictive digging layer of gravel.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/25/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T31-202
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 5
Subregion (LRR): Interior Alaska Lat: 66.97407750 Long: -154.95355680 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/EM1B, IIC2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**

Remarks: The sample location was taken on the north side of the alignment within a depression with wilows. To the west upland picea. Photos 3575-3579. PEM

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. salix spp	16	Yes	FAC
2. Rubus pubescens	21	Yes	
3.			
4.			
5.			
6.			
Total Cover: 37			
50% of total cover: 18 20% of total cover: 7			
Herb Stratum			
1. Calamagrostis canadensis	80	Yes	FAC
2. Parnassia palustris	35	Yes	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 115			
50% of total cover: 57 20% of total cover: 23			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	35	x 2 = 70
FAC species	96	x 3 = 288
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	131 (A)	358 (B)

Prevalence Index = B/A = 2.73

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T31-202

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-14		100		0				saturated organics

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

X Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: none
Depth (inches): 0

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 1
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: saturated to the surface

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/25/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T32-183
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Drainageway Local relief (concave, convex, none): concave Slope (%): 1
Subregion (LRR): Interior Alaska Lat: 66.88567640 Long: -154.83074090 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/EM1C, IIB1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: drainage channel parallel to River. Photos 7479-7483.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Populus balsamifera	5	Yes	FACU
2.			
3.			
4.			
Total Cover: 5			
50% of total cover: 2 20% of total cover: 1			
Sapling/Shrub Stratum			
1. Alnus viridis	55	Yes	FAC
2. Salix spp.	40	Yes	FAC
3. Myrica gale	20	No	OBL
4. Rubus pubescens	10	No	FACW
5.			
6.			
Total Cover: 125			
50% of total cover: 62 20% of total cover: 25			
Herb Stratum			
1. Calamagrostis canadensis	65	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 65			
50% of total cover: 32 20% of total cover: 13			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	20	x 1 =	20
FACW species	10	x 2 =	20
FAC species	160	x 3 =	480
FACU species	5	x 4 =	20
UPL species	0	x 5 =	0
Column Totals:	195 (A)		540 (B)

Prevalence Index = B/A = 2.77

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 55
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 55% located in channel bottom

SOIL

Sampling Point T32-183

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-0.5	organic	100		0				
0.5-11	2.5Y 4/3	100		0			Sandy Loam	active channel

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
X Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks: restrictive layer for digging 2 inch diameter gravels. Soil moist. Active channel, organics removed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
X Water Marks (B1)
__Sediment Deposits (B2)
X Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
X Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/25/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T32-185
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Stream terrace Local relief (concave, convex, none): convex Slope (%): 1
Subregion (LRR): Interior Alaska Lat: 66.88556070 Long: -154.83065860 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: upland picea between slough and hill side. Photos 7484-7488	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	35	Yes	FACU
2. Populus balsamifera	5	No	FACU
3.			
4.			
Total Cover: 40			
50% of total cover: 20 20% of total cover: 8			
Sapling/Shrub Stratum			
1. Salix spp.	40	Yes	FAC
2. Alnus viridis	15	No	FAC
3. Myrica gale	15	No	OBL
4. Vaccinium uliginosum	40	Yes	FAC
5. Dasiphora fruticosa	30	No	FAC
6. Spiraea stevenii	20	No	FACU
Total Cover: 160			
50% of total cover: 80 20% of total cover: 32			
Herb Stratum			
1. Calamagrostis canadensis	10	Yes	FAC
2. Equisetum arvense	3	Yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 13			
50% of total cover: 6 20% of total cover: 2			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	15	x 1 = 15
FACW species	0	x 2 = 0
FAC species	138	x 3 = 414
FACU species	60	x 4 = 240
UPL species	0	x 5 = 0
Column Totals:	213 (A)	669 (B)

Prevalence Index = B/A = 3.14

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
__ Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 15
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 15%.

SOIL

Sampling Point T32-185

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	organic	100		0				
2-13	10YR 4/4	100		0			Very Fine Sandy Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 13

Hydric Soil Present? No

Remarks: very moist soil.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/25/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T32-206
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hill Local relief (concave, convex, none): convex Slope (%): 5
Subregion (LRR): Interior Alaska Lat: 66.95489280 Long: -154.92536620 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland, IA2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: photos 3580-3584. the sample location was taken on the north side of the alignment within a picea glauca upland.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	45	Yes	FACU
2.			
3.			
4.			
Total Cover: 45			
50% of total cover: 22 20% of total cover: 9			
Sapling/Shrub Stratum			
1. salix spp	35	Yes	FAC
2. Betula nana	25	Yes	FAC
3. Rubus pubescens	6	No	FACW
4.			
5.			
6.			
Total Cover: 66			
50% of total cover: 33 20% of total cover: 13			
Herb Stratum			
1. Equisetum arvense	65	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 65			
50% of total cover: 32 20% of total cover: 13			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	6	x 2 = 12
FAC species	125	x 3 = 375
FACU species	45	x 4 = 180
UPL species	0	x 5 = 0
Column Totals:	176 (A)	567 (B)

Prevalence Index = B/A = 3.22

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T32-206

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	organic	100		0				
5-15	10YR 3/2	100		0			Sandy Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
___Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 15

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/25/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T32-208
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 5
Subregion (LRR): Interior Alaska Lat: 66.95471150 Long: -154.92610910 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1B, IIC1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: The sample location was taken on north side of the alignment within a wet area down slope of sample point 206. Edge of a PSS wetland. Photos 3585-3589	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	20	Yes	FACW
2.			
3.			
4.			
Total Cover: 20			
50% of total cover: 10 20% of total cover: 4			
Sapling/Shrub Stratum			
1. Betula nana	45	Yes	FAC
2. Vaccinium uliginosum	35	Yes	FAC
3. Rhododendron groenlandicum	40	Yes	FAC
4. Picea mariana	10	No	FACW
5.			
6.			
Total Cover: 130			
50% of total cover: 65 20% of total cover: 26			
Herb Stratum			
1. Rumex occidentalis	2	Yes	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 2			
50% of total cover: 1 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	2	x 1 = 2
FACW species	30	x 2 = 60
FAC species	120	x 3 = 360
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	152 (A)	422 (B)

Prevalence Index = B/A = 2.78

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 65
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T32-208

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16		100		0				saturated organics

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

X Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 16

Hydric Soil Present? Yes

Remarks: saturated organics above permafrost

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: saturatef to surface

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/25/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T32-210
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 5
Subregion (LRR): Interior Alaska Lat: 66.95474570 Long: -154.92718100 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PEM1C, IIIA3
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: The sample location was taken on north side of the alignment within a depressed PEM wetland. Further south a PSS wetland. Photos 3590-3594. Photos 3590-3594.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Herb Stratum			
1. Carex utriculata	95	Yes	OBL
2. Parnassia palustris	30	No	FACW
3. Comarum palustre	65	Yes	OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 190			
50% of total cover: 95 20% of total cover: 38			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	160	x 1 = 160
FACW species	30	x 2 = 60
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	190 (A)	220 (B)

Prevalence Index = B/A = 1.16

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T32-210

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	gley 1 2.5N	100		0			Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
X Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: clay
Depth (inches): 0

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 1
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: saturation and inundation observed at sample

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/26/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T33-185
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Stream terrace Local relief (concave, convex, none): concave Slope (%): 1
Subregion (LRR): Interior Alaska Lat: 66.88829230 Long: -154.81219420 Datum: WGS84
Soil Map Unit Name: _ NWI classification: R2UB1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**

Remarks: River 110 feet wetted width and 170 feet bankfull width. 2-3 inch gravels with 4-5 inch cobbles common with up to 7 inch cobbles. Depth 12 inches plus. Riparian Salix sp., erio vag, cal can.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	0 (A)	0 (B)

Prevalence Index = B/A = 0.00

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 0 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks:

SOIL

Sampling Point T33-185

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/26/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T33-212
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 40
Subregion (LRR): Interior Alaska Lat: 66.88993070 Long: -154.80805660 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**

Remarks: The sample location was taken on the south side of the alignment atop a upland knoll with picea glauca and populus tremuliodes. Photos 3597-3601

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	50	Yes	FACU
2. Populus tremuloides	65	Yes	FACU
3.			
4.			
Total Cover: 115			
50% of total cover: 57 20% of total cover: 23			
Sapling/Shrub Stratum			
1. Picea glauca	25	Yes	FACU
2. Populus tremuloides	35	Yes	FACU
3. Rosa acicularis	40	Yes	FACU
4. Vaccinium alaskaense	15	No	FAC
5. Ribes triste	5	No	FAC
6.			
Total Cover: 120			
50% of total cover: 60 20% of total cover: 24			
Herb Stratum			
1. Chamaenerion angustifolium	15	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 15			
50% of total cover: 7 20% of total cover: 3			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	20	x 3 = 60
FACU species	230	x 4 = 920
UPL species	0	x 5 = 0
Column Totals:	250 (A)	980 (B)

Prevalence Index = B/A = 3.92

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
__ Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks: detritus and leaf liter on forest floor

SOIL

Sampling Point T33-212

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 3/4	100		0			Sandy Gravely Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
___Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 10

Hydric Soil Present? No

Remarks: Restrictive digging layer of gravel.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/26/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T34-187
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): Interior Alaska Lat: 66.89225720 Long: -154.63325040 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: photos 7494-7498.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	20	Yes	FACU
2. Picea mariana	10	Yes	FACW
3.			
4.			
Total Cover: 30			
50% of total cover: 15 20% of total cover: 6			
Sapling/Shrub Stratum			
1. Salix spp.	15	No	FAC
2. Betula nana	40	Yes	FAC
3. Vaccinium uliginosum	40	Yes	FAC
4. Spiraea stevenii	10	No	FACU
5. Vaccinium vitis-idaea	35	Yes	FAC
6. Picea glauca	5	No	FACU
Total Cover: 145			
50% of total cover: 72 20% of total cover: 29			
Herb Stratum			
1. Lycopodium clavatum	10	Yes	FACU
2. Equisetum arvense	5	Yes	FAC
3. Calamagrostis canadensis	10	Yes	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 25			
50% of total cover: 12 20% of total cover: 5			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	10	x 2 = 20
FAC species	145	x 3 = 435
FACU species	45	x 4 = 180
UPL species	0	x 5 = 0
Column Totals:	200 (A)	635 (B)

Prevalence Index = B/A = 3.18

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 65
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 40%, lichen 25%

SOIL

Sampling Point T34-187

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	organic	100		0				
2-21	10YR 4/6	60	2.5Y 4/1	40	RM	M	Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
X Alaska Redox With 2.5Y Hue
___Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks: Soils are problematic but lack hydrology; therefore, soils remain un-hydric.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/26/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T34-189
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): concave Slope (%): 1
Subregion (LRR): Interior Alaska Lat: 66.89226540 Long: -154.63525780 Datum: WGS84
Soil Map Unit Name: _ NWI classification: R2UB3
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**

Remarks: River wetted width 130 feet, bankfull width 250. Sands and gravel - gravels 2 inch diameter. 90% is 12 inches deep, 10% is 5 inches deep. riparian Salix spp. Carex rostrata, and equisetum arvense. Photos 7499-7504.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	0 (A)	0 (B)

Prevalence Index = B/A = 0.00

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 0 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks:

SOIL

Sampling Point T34-189

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/26/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T34-214
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 2
Subregion (LRR): Interior Alaska Lat: 66.89161620 Long: -154.63057300 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PEM1B, IIIA3
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: The sample location was taken on centerline within a depressed PEM wetland. To the north likley a picea forest with high willows. Photos 3602-3606.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Dasiphora fruticosa	20	Yes	FAC
2. salix spp	6	Yes	FAC
3.			
4.			
5.			
6.			
Total Cover: 26			
50% of total cover: 13 20% of total cover: 5			
Herb Stratum			
1. Calamagrostis canadensis	25	No	FAC
2. Eriophorum angustifolium	85	Yes	OBL
3. Carex media	30	Yes	FACW
4. Parnassia palustris	10	No	FACW
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 150			
50% of total cover: 75 20% of total cover: 30			

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	85	x 1 = 85
FACW species	40	x 2 = 80
FAC species	51	x 3 = 153
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	176 (A)	318 (B)

Prevalence Index = B/A = 1.81

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T34-214

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2		100		0				saturated organics
3-17	gley 1 10y 2.5/1	100		0			Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
X Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: none
Depth (inches): 0

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/26/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T34-216
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 2
Subregion (LRR): Interior Alaska Lat: 66.89222000 Long: -154.63161090 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**

Remarks: The sample location was taken on the centerline within a picea tree/ shrub layer. Just north is the PEM wetland, then the kobuk river. Further south, the picea continues. Photos 3607-3611. Upland.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	30	Yes	FACU
2.			
3.			
4.			
Total Cover: 30			
50% of total cover: 15 20% of total cover: 6			
Sapling/Shrub Stratum			
1. Picea glauca	20	No	FACU
2. Betula nana	55	Yes	FAC
3. salix spp	17	No	FAC
4. Vaccinium alaskaense	30	Yes	FAC
5. Vaccinium uliginosum	15	No	FAC
6.			
Total Cover: 137			
50% of total cover: 68 20% of total cover: 27			
Herb Stratum			
1. Equisetum arvense	35	Yes	FAC
2. Chamaenerion angustifolium	25	Yes	FACU
3. Carex media	3	No	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 63			
50% of total cover: 31 20% of total cover: 12			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 60 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	3	x 2 = 6
FAC species	152	x 3 = 456
FACU species	75	x 4 = 300
UPL species	0	x 5 = 0
Column Totals:	230 (A)	762 (B)

Prevalence Index = B/A = 3.31

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 30
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: lichen spp

SOIL

Sampling Point T34-216

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5		100		0				organic
5-13	10YR 2/1	100		0			Loamy Fine Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: none
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
X Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/26/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T34-218
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): convex Slope (%): 3
Subregion (LRR): Interior Alaska Lat: 66.89168840 Long: -154.63181670 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: the sample location was taken on the south side of the alignment within a picea forest with willow spp. photos 3612-3616. Upland.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	45	Yes	FACU
2.			
3.			
4.			
Total Cover: 45			
50% of total cover: 22 20% of total cover: 9			
Sapling/Shrub Stratum			
1. salix spp	43	Yes	FAC
2. Shepherdia canadensis	40	Yes	FACU
3. Vaccinium uliginosum	45	Yes	FAC
4. Betula nana	35	No	FAC
5. rubus pubescens	12	No	FACW
6. Dasiphora fruticosa	35	No	FAC
Total Cover: 210			
50% of total cover: 105 20% of total cover: 42			
Herb Stratum			
1. Equisetum arvense	30	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 30			
50% of total cover: 15 20% of total cover: 6			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 60 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	12	x 2 = 24
FAC species	188	x 3 = 564
FACU species	85	x 4 = 340
UPL species	0	x 5 = 0
Column Totals:	285 (A)	928 (B)

Prevalence Index = B/A = 3.26

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T34-218

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 2/1	100		0			Sandy Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: none
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/26/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T35-191
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hill Local relief (concave, convex, none): convex Slope (%): 1
Subregion (LRR): Interior Alaska Lat: 66.89921750 Long: -154.50565900 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: upland knoll. photos 7505-7510	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	15	Yes	FACW
2.			
3.			
4.			
Total Cover: 15			
50% of total cover: 7 20% of total cover: 3			
Sapling/Shrub Stratum			
1. Picea mariana	20	Yes	FACW
2. Vaccinium vitis-idaea	30	Yes	FAC
3. Rhododendron groenlandicum	25	Yes	FAC
4.			
5.			
6.			
Total Cover: 75			
50% of total cover: 37 20% of total cover: 15			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	35	x 2 = 70
FAC species	55	x 3 = 165
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	90 (A)	235 (B)

Prevalence Index = B/A = 2.61

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 80
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: 75% lichen, 5% sphagnum.

SOIL

Sampling Point T35-191

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-0.5	organic	100		0				
0.5-11	10YR 4/6	100		0			Fine Sand	
11-21	2.5Y 5/6	100		0			Fine Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/26/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T35-193
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): none Slope (%): 1
Subregion (LRR): Interior Alaska Lat: 66.90287420 Long: -154.50712240 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS4B, IA3
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: photos 7511-7516.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	20	Yes	FACW
2.			
3.			
4.			
Total Cover: 20			
50% of total cover: 10 20% of total cover: 4			
Sapling/Shrub Stratum			
1. Picea mariana	25	Yes	FACW
2. Rubus chamaemorus	30	Yes	FACW
3. Betula nana	5	No	FAC
4. Vaccinium uliginosum	5	No	FAC
5. Rhododendron groenlandicum	45	Yes	FAC
6. Vaccinium vitis-idaea	10	No	FAC
Total Cover: 120			
50% of total cover: 60 20% of total cover: 24			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	75	x 2 = 150
FAC species	65	x 3 = 195
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	140 (A)	345 (B)

Prevalence Index = B/A = 2.46

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 90
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: reindeer lichen 80%, sphagnum 10%

SOIL

Sampling Point T35-193

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	organic	100		0				saturated organics

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- X Histosol or Histel(A1)
- X Histic Epipedon (A2)
- __Hydrogen Sulfide (A4)
- __Thick Dark Surface (A12)
- __Alaska Gleyed (A13)
- __Alaska Redox (A14)
- __Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

- __Alaska Color Change (TA4)[4]
- __Alaska Alpine Swales (TA5)
- __Alaska Redox With 2.5Y Hue
- __Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- __Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 12

Hydric Soil Present? Yes

Remarks: moist throughout profile. Clear when squeezed to 6inches with some identifiable sphagnum parts. 6-12 inches light brown water when squeezed more decomposed less identifieable.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- __Surface Water (A1)
- __High Water Table (A2)
- X Saturation (A3)
- __Water Marks (B1)
- __Sediment Deposits (B2)
- __Drift Deposits (B3)
- __Algal Mat or Crust (B4)
- __Iron Deposits (B5)
- __Surface Soil Cracks (B6)
- __Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __Marl Deposits (B15)
- __Hydrogen Sulfide Odor (C1)
- __Dry Season Water Table (C2)
- __Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- __Water-stained Leaves (B9)
- __Drainage Patterns (B10)
- __Oxidized Rhizospheres along Living Roots (C3)
- __Presence of Reduced Iron (C4)
- __Salt Deposits (C5)
- __Stunted or Stressed Plants (D1)
- __Geomorphic Position (D2)
- X Shallow Aquitard (D3)
- __Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 6
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/26/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T35-195
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 0
Subregion (LRR): Interior Alaska Lat: 66.90288710 Long: -154.50754690 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PEM1B, IIIA3
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: photos 7517-7521	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Andromeda polifolia	20	Yes	OBL
2. Vaccinium uliginosum	5	Yes	FAC
3.			
4.			
5.			
6.			
Total Cover: 25			
50% of total cover: 12 20% of total cover: 5			
Herb Stratum			
1. Eriophorum vaginatum	45	Yes	FACW
2. Carex limosa	15	Yes	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 60			
50% of total cover: 30 20% of total cover: 12			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	35	x 1 = 35
FACW species	45	x 2 = 90
FAC species	5	x 3 = 15
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	85 (A)	140 (B)

Prevalence Index = B/A = 1.65

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 100
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 100%

SOIL

Sampling Point T35-195

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-15	organic	100		0				

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- X Histosol or Histel(A1)
- X Histic Epipedon (A2)
- __Hydrogen Sulfide (A4)
- __Thick Dark Surface (A12)
- __Alaska Gleyed (A13)
- __Alaska Redox (A14)
- __Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

- __Alaska Color Change (TA4)[4]
- __Alaska Alpine Swales (TA5)
- __Alaska Redox With 2.5Y Hue
- __Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- __Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: Permafrost
Depth (inches): 15

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- __Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- __Water Marks (B1)
- __Sediment Deposits (B2)
- __Drift Deposits (B3)
- __Algal Mat or Crust (B4)
- __Iron Deposits (B5)
- __Surface Soil Cracks (B6)
- __Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __Marl Deposits (B15)
- __Hydrogen Sulfide Odor (C1)
- __Dry Season Water Table (C2)
- __Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- __Water-stained Leaves (B9)
- __Drainage Patterns (B10)
- __Oxidized Rhizospheres along Living Roots (C3)
- __Presence of Reduced Iron (C4)
- __Salt Deposits (C5)
- __Stunted or Stressed Plants (D1)
- __Geomorphic Position (D2)
- X Shallow Aquitard (D3)
- __Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 2.5
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/26/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T35-220
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Drainageway Local relief (concave, convex, none): concave Slope (%): 5
Subregion (LRR): Interior Alaska Lat: 66.90417970 Long: -154.51475850 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PEM1C, IIIA3
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**

Remarks: The sample location was taken on the north side of the alignment within a PEM wetland. The drainageway is ~ 25ft wide and the length is visible from the aerial. Surroundng the pem is a picea forest. Photos 3511-3517.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. salix spp	15	Yes	FAC
2.			
3.			
4.			
5.			
6.			
Total Cover: 15			
50% of total cover: 7 20% of total cover: 3			
Herb Stratum			
1. Calamagrostis canadensis	70	Yes	FAC
2. Comarum palustre	70	Yes	OBL
3. Carex media	25	No	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 165			
50% of total cover: 82 20% of total cover: 33			

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 60
(Where applicable)

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	70	x 1 = 70
FACW species	25	x 2 = 50
FAC species	85	x 3 = 255
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	180 (A)	375 (B)

Prevalence Index = B/A = 2.08

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum

SOIL

Sampling Point T35-220

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-15		100		0				saturated organics

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

X Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 15

Hydric Soil Present? Yes

Remarks: saturated organics above permafrost

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 8
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: saturation at the surface and pockets of inundation.

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/26/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T35-222
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 5
Subregion (LRR): Interior Alaska Lat: 66.90391160 Long: -154.51501080 Datum: WGS84
Soil Map Unit Name: _ NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**

Remarks: the sample location was taken on the north side of the alignment within a picea forest/shrub layer adjacent to the PEM wetland. Photos 3622-3626.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	45	Yes	FACW
2.			
3.			
4.			
Total Cover: 45			
50% of total cover: 22 20% of total cover: 9			
Sapling/Shrub Stratum			
1. Picea mariana	20	No	FACW
2. Betula nana	65	Yes	FAC
3. Rhododendron groenlandicum	45	Yes	FAC
4. Vaccinium uliginosum	45	Yes	FAC
5. Rubus chamaemorus	30	No	FACW
6. Vaccinium vitis-idaea	45	No	FAC
Total Cover: 250			
50% of total cover: 125 20% of total cover: 50			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	95	x 2 = 190
FAC species	200	x 3 = 600
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	295 (A)	790 (B)

Prevalence Index = B/A = 2.68

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 65
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum and lichen

SOIL

Sampling Point T35-222

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6		100		0				moist organics
6-12	10YR 2/2	90	10YR 4/6	10	RM	M	Sandy Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
X Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 12

Hydric Soil Present? Yes

Remarks: Shallow mineral soil layer over permafrost with hydrophytic vegetation, and wetland hydrology.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/26/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T35-224
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Drainageway Local relief (concave, convex, none): concave Slope (%): 5
Subregion (LRR): Interior Alaska Lat: 66.90368830 Long: -154.51518570 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/PEM1C, IIC2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: The sample location was taken on the north side of the alignment within a depressed drainage feature PEM wetland. Towards centerline. Photos 3627-3631	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. 2. 3. 4. Total Cover: 0 50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. salix spp	50	Yes	FAC
2. 3. 4. 5. 6. Total Cover: 50 50% of total cover: 25 20% of total cover: 10			
Herb Stratum			
1. Equisetum fluviatile	80	Yes	OBL
2. 3. 4. 5. 6. 7. 8. 9. 10. Total Cover: 80 50% of total cover: 40 20% of total cover: 16			

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 80
(Where applicable)

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	80	x 1 = 80
FACW species	0	x 2 = 0
FAC species	50	x 3 = 150
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	130 (A)	230 (B)

Prevalence Index = B/A = 1.77

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T35-224

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18		100		0				saturated organics

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

X Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 18

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 5
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Saturated organics above permafrost. Pockets of inundation.

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/26/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T35-226
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 3
Subregion (LRR): Interior Alaska Lat: 66.90356450 Long: -154.51646020 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PFO4/SS1B, IA2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**

Remarks: The sample location was taken on the north side of the alignment at a transition area between the picea forest/shrub upland to the north and a PEM wetland towards centerlne. Photos 3632-3636. Upland/PEM boundary.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	30	Yes	FACW
2.			
3.			
4.			
Total Cover: 30			
50% of total cover: 15 20% of total cover: 6			
Sapling/Shrub Stratum			
1. Betula nana	50	Yes	FAC
2. Vaccinium uliginosum	50	Yes	FAC
3. Picea mariana	20	No	FACW
4. Rubus chamaemorus	10	No	FACW
5.			
6.			
Total Cover: 130			
50% of total cover: 65 20% of total cover: 26			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	60	x 2 = 120
FAC species	100	x 3 = 300
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	160 (A)	420 (B)

Prevalence Index = B/A = 2.63

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 45
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T35-226

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-9		100		0				moist organics

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 9

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/26/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T35-228
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Drainageway Local relief (concave, convex, none): convex Slope (%): 5
Subregion (LRR): Interior Alaska Lat: 66.90330490 Long: -154.51930300 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/EM1C, IIB1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**

Remarks: The sample location was taken on the north side of the alignment heading towards centerline. From this point to centerline the vegetation is consistent. Photos 3637-3641. PSS wetland.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	15	Yes	FACW
2.			
3.			
4.			
Total Cover: 15			
50% of total cover: 7 20% of total cover: 3			
Sapling/Shrub Stratum			
1. Picea mariana	10	No	FACW
2. Vaccinium uliginosum	40	Yes	FAC
3. Vaccinium vitis-idaea	20	No	FAC
4. salix spp	18	No	FAC
5. Betula nana	25	Yes	FAC
6. Rhododendron lapponicum	30	Yes	FAC
Total Cover: 143			
50% of total cover: 71 20% of total cover: 28			
Herb Stratum			
1. Calamagrostis canadensis	55	Yes	FAC
2. Eriophorum vaginatum	10	No	FACW
3. Carex media	20	Yes	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 85			
50% of total cover: 42 20% of total cover: 17			

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 45
(Where applicable)

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	55	x 2 = 110
FAC species	188	x 3 = 564
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	243 (A)	674 (B)

Prevalence Index = B/A = 2.77

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum and lichen

SOIL

Sampling Point T35-228

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-11		100		0				saturated organics

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

X Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 11

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: saturation and inundation observed at sample location.

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/26/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T36-197
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): convex Slope (%): 1
Subregion (LRR): Interior Alaska Lat: 66.83902160 Long: -154.35045810 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PFO4/SS1B, IA2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: photos 7522-7526.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	30	Yes	FACW
2.			
3.			
4.			
Total Cover: 30			
50% of total cover: 15 20% of total cover: 6			
Sapling/Shrub Stratum			
1. Picea mariana	30	Yes	FACW
2. Rubus chamaemorus	45	Yes	FACW
3. Rhododendron groenlandicum	30	Yes	FAC
4. Vaccinium vitis-idaea	20	No	FAC
5. Vaccinium uliginosum	5	No	FAC
6.			
Total Cover: 130			
50% of total cover: 65 20% of total cover: 26			
Herb Stratum			
1. Pedicularis labradorica	3	Yes	FACW
2. Carex rostrata	5	Yes	OBL
3. Geocaulon lividum	2	Yes	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 10			
50% of total cover: 5 20% of total cover: 2			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 85 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	5	x 1 = 5
FACW species	108	x 2 = 216
FAC species	55	x 3 = 165
FACU species	2	x 4 = 8
UPL species	0	x 5 = 0
Column Totals:	170 (A)	394 (B)

Prevalence Index = B/A = 2.32

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is <3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 100
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 100 %

SOIL

Sampling Point T36-197

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	organic	100		0				

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- X Histosol or Histel(A1)
- X Histic Epipedon (A2)
- __Hydrogen Sulfide (A4)
- __Thick Dark Surface (A12)
- __Alaska Gleyed (A13)
- __Alaska Redox (A14)
- __Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

- __Alaska Color Change (TA4)[4]
- __Alaska Alpine Swales (TA5)
- __Alaska Redox With 2.5Y Hue
- __Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- __Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 10

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- __Surface Water (A1)
- __High Water Table (A2)
- X Saturation (A3)
- __Water Marks (B1)
- __Sediment Deposits (B2)
- __Drift Deposits (B3)
- __Algal Mat or Crust (B4)
- __Iron Deposits (B5)
- __Surface Soil Cracks (B6)
- __Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __Marl Deposits (B15)
- __Hydrogen Sulfide Odor (C1)
- __Dry Season Water Table (C2)
- __Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- __Water-stained Leaves (B9)
- __Drainage Patterns (B10)
- __Oxidized Rhizospheres along Living Roots (C3)
- __Presence of Reduced Iron (C4)
- __Salt Deposits (C5)
- __Stunted or Stressed Plants (D1)
- __Geomorphic Position (D2)
- X Shallow Aquitard (D3)
- __Microtopographic Relief (D4)
- __FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 5
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/26/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T36-199
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Drainageway Local relief (concave, convex, none): concave Slope (%): 1
Subregion (LRR): Interior Alaska Lat: 66.83910900 Long: -154.34999940 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1C, IIB1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: drainageway inbetween two picea wetlands. photos 7527-7531	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Salix sp.	80	Yes	FAC
2. Vaccinium uliginosum	45	Yes	FAC
3. Alnus viridis	5	No	FAC
4. Rubus pubescens	3	No	FACW
5. Betula nana	5	No	FAC
6. Picea mariana	3	No	FACW
Total Cover: 141			
50% of total cover: 70 20% of total cover: 28			
Herb Stratum			
1. Equisetum arvense	4	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 4			
50% of total cover: 2 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	6	x 2 = 12
FAC species	139	x 3 = 417
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	145 (A)	429 (B)

Prevalence Index = B/A = 2.96

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 90
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: 90% sphagnum

SOIL

Sampling Point T36-199

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	organic	100		0				
2-15	10YR 3/3	100		0			Silt Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
X Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 15

Hydric Soil Present? Yes

Remarks: Soils have not developed hydric characteristics in an active drainage way.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
X Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 14
Saturation Present? Yes Depth (inches): 10
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/26/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T36-203
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 3
Subregion (LRR): Interior Alaska Lat: 66.84215420 Long: -154.35390990 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: hillside upland photos 7532-7536	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	55	Yes	FACU
2. Populus balsamifera	3	No	FACU
3.			
4.			
Total Cover: 58			
50% of total cover: 29 20% of total cover: 11			
Sapling/Shrub Stratum			
1. Alnus viridis	45	Yes	FAC
2. Rosa acicularis	15	No	FACU
3. Salix sp.	5	No	FAC
4. Vaccinium uliginosum	5	No	FAC
5. Rubus pubescens	5	No	FACW
6. Picea glauca	5	No	FACU
Total Cover: 80			
50% of total cover: 40 20% of total cover: 16			
Herb Stratum			
1. Equisetum arvense	60	Yes	FAC
2. Calamagrostis canadensis	5	No	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 65			
50% of total cover: 32 20% of total cover: 13			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	5	x 2 = 10
FAC species	120	x 3 = 360
FACU species	78	x 4 = 312
UPL species	0	x 5 = 0
Column Totals:	203 (A)	682 (B)

Prevalence Index = B/A = 3.36

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 80
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 80%

SOIL

Sampling Point T36-203

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-0.25	organic	100		0				
0.25-15	10YR 3/4	100		0			Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks: restrictive digging layer of gravel

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/26/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T36-230
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Drainageway Local relief (concave, convex, none): convex Slope (%): 2
Subregion (LRR): Interior Alaska Lat: 66.83786720 Long: -154.35269860 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PFO4/SS1B, IA2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**

Remarks: the sample location was taken on the south side of the alignment within a scrub/shrub wetland. To the south a PEM wetland visible from the aerial. Photos 3642-3646. PSS wetland

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	30	Yes	FACW
2.			
3.			
4.			
Total Cover: 30			
50% of total cover: 15 20% of total cover: 6			
Sapling/Shrub Stratum			
1. Picea mariana	15	No	FACW
2. Rubus chamaemorus	20	No	FACW
3. Rhododendron groenlandicum	30	Yes	FAC
4. Vaccinium vitis-idaea	35	Yes	FAC
5. Vaccinium uliginosum	20	No	FAC
6.			
Total Cover: 120			
50% of total cover: 60 20% of total cover: 24			
Herb Stratum			
1. Eriophorum vaginatum	35	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 35			
50% of total cover: 17 20% of total cover: 7			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	100	x 2 = 200
FAC species	85	x 3 = 255
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	185 (A)	455 (B)

Prevalence Index = B/A = 2.46

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 70
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T36-230

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-11		100		0				saturated organics

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

X Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 11

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: saturated to the surface.

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/26/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T36-232
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hill Local relief (concave, convex, none): convex Slope (%): 3
Subregion (LRR): Interior Alaska Lat: 66.83729600 Long: -154.35199110 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: The sample location was taken on the south side of the alignment within an upland knoll with picea glauca forest. Photos 3647-3651. Upland.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	30	Yes	FACU
2.			
3.			
4.			
Total Cover: 30			
50% of total cover: 15 20% of total cover: 6			
Sapling/Shrub Stratum			
1. Vaccinium uliginosum	60	Yes	FAC
2. salix spp	10	No	FACA
3. Vaccinium vitis-idaea	40	Yes	FAC
4. Rhododendron groenlandicum	20	No	FAC
5.			
6.			
Total Cover: 130			
50% of total cover: 65 20% of total cover: 26			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	120	x 3 =	360
FACU species	30	x 4 =	120
UPL species	0	x 5 =	0
Column Totals:	150 (A)		480 (B)

Prevalence Index = B/A = 3.20

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 70
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: lichen spp. only

SOIL

Sampling Point T36-232

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5		100		0				organics
5-7	10YR 3/4	100		0			Sandy Gravely Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks: Restrictive digging layer of gravel at 7 inches.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/26/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T36-234
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hill Local relief (concave, convex, none): convex Slope (%): 2
Subregion (LRR): Interior Alaska Lat: 66.83820600 Long: -154.35628610 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PFO4/SS1B, IA2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**

Remarks: The sample location was taken on the south side of the alignment at the transition zone between the upland in point 232 and the PFO/PSS wetland. Photos 3652-3656.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	50	Yes	FACW
2.			
3.			
4.			
Total Cover: 50			
50% of total cover: 25 20% of total cover: 10			
Sapling/Shrub Stratum			
1. Picea mariana	30	No	FACW
2. Betula nana	45	Yes	FAC
3. Vaccinium uliginosum	45	Yes	FAC
4. Vaccinium vitis-idaea	40	No	FAC
5. Rubus chamaemorus	35	No	FACW
6. Rhododendron groenlandicum	45	Yes	FAC
Total Cover: 240			
50% of total cover: 120 20% of total cover: 48			
Herb Stratum			
1. Carex media	40	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 40			
50% of total cover: 20 20% of total cover: 8			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	155	x 2 = 310
FAC species	175	x 3 = 525
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	330 (A)	835 (B)

Prevalence Index = B/A = 2.53

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 60
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: mostly sphagnum

SOIL

Sampling Point T36-234

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10		100		0				saturated organics

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- X Histosol or Histel(A1)
- X Histic Epipedon (A2)
- __Hydrogen Sulfide (A4)
- __Thick Dark Surface (A12)
- __Alaska Gleyed (A13)
- __Alaska Redox (A14)
- __Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

- __Alaska Color Change (TA4)[4]
- __Alaska Alpine Swales (TA5)
- __Alaska Redox With 2.5Y Hue
- __Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- __Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 10

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- __Surface Water (A1)
- __High Water Table (A2)
- X Saturation (A3)
- __Water Marks (B1)
- __Sediment Deposits (B2)
- __Drift Deposits (B3)
- __Algal Mat or Crust (B4)
- __Iron Deposits (B5)
- __Surface Soil Cracks (B6)
- __Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __Marl Deposits (B15)
- __Hydrogen Sulfide Odor (C1)
- __Dry Season Water Table (C2)
- __Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- __Water-stained Leaves (B9)
- __Drainage Patterns (B10)
- __Oxidized Rhizospheres along Living Roots (C3)
- __Presence of Reduced Iron (C4)
- __Salt Deposits (C5)
- __Stunted or Stressed Plants (D1)
- __Geomorphic Position (D2)
- __Shallow Aquitard (D3)
- __Microtopographic Relief (D4)
- __FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: saturated to the surface

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/26/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T36-236
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 6
Subregion (LRR): Interior Alaska Lat: 66.83900350 Long: -154.35728810 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**

Remarks: The sample location was taken on the south side of the alignment within a picea upland and is the boundary between the PFO/PSS wetland in point 234. Photos 3657-3661. Upland

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	45	Yes	FACU
2.			
3.			
4.			
Total Cover: 45			
50% of total cover: 22 20% of total cover: 9			
Sapling/Shrub Stratum			
1. Picea glauca	5	No	FACU
2. Vaccinium uliginosum	30	Yes	FAC
3. Rhododendron groenlandicum	15	Yes	FAC
4. Betula nana	5	No	FAC
5.			
6.			
Total Cover: 55			
50% of total cover: 27 20% of total cover: 11			
Herb Stratum			
1. Equisetum arvense	35	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 35			
50% of total cover: 17 20% of total cover: 7			

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 40
(Where applicable)

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	85	x 3 = 255
FACU species	50	x 4 = 200
UPL species	0	x 5 = 0
Column Totals:	135 (A)	455 (B)

Prevalence Index = B/A = 3.37

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes

Remarks: all lichen spp

SOIL

Sampling Point T36-236

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3		100		0				organics
3-11	10YR 5/8	100		0			Sandy Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks: Restrictive digging layer of gravel at 11 inches.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/26/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T36-238
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 5
Subregion (LRR): Interior Alaska Lat: 66.84003790 Long: -154.35511350 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PEM1B, IIIA3
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: photos 3662-3666. PEM	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Picea mariana	1	Yes	FACW
2. salix spp	4	Yes	FAC
3.			
4.			
5.			
6.			
Total Cover: 5			
50% of total cover: 2 20% of total cover: 1			
Herb Stratum			
1. Eriophorum vaginatum	90	Yes	FACW
2. Carex limosa	5	No	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 95			
50% of total cover: 47 20% of total cover: 19			

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 90
(Where applicable)

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	5	x 1 = 5
FACW species	91	x 2 = 182
FAC species	4	x 3 = 12
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	100 (A)	199 (B)

Prevalence Index = B/A = 1.99

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is <3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T36-238

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-14	organic	100		0				peat mat

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- X Histosol or Histel(A1)
- X Histic Epipedon (A2)
- __Hydrogen Sulfide (A4)
- __Thick Dark Surface (A12)
- __Alaska Gleyed (A13)
- __Alaska Redox (A14)
- __Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

- __Alaska Color Change (TA4)[4]
- __Alaska Alpine Swales (TA5)
- __Alaska Redox With 2.5Y Hue
- __Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- __Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 14

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- __Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- __Water Marks (B1)
- __Sediment Deposits (B2)
- __Drift Deposits (B3)
- __Algal Mat or Crust (B4)
- __Iron Deposits (B5)
- __Surface Soil Cracks (B6)
- __Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __Marl Deposits (B15)
- __Hydrogen Sulfide Odor (C1)
- __Dry Season Water Table (C2)
- __Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- __Water-stained Leaves (B9)
- __Drainage Patterns (B10)
- __Oxidized Rhizospheres along Living Roots (C3)
- __Presence of Reduced Iron (C4)
- __Salt Deposits (C5)
- __Stunted or Stressed Plants (D1)
- __Geomorphic Position (D2)
- X Shallow Aquitard (D3)
- __Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 3
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 07/26/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T37-205
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): Interior Alaska Lat: 66.82210170 Long: -153.99426530 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/4B, IA3
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: photos 7537-7541. Flat forested wetland.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	25	Yes	FACW
2.			
3.			
4.			
Total Cover: 25			
50% of total cover: 12 20% of total cover: 5			
Sapling/Shrub Stratum			
1. Picea mariana	40	Yes	FACW
2. Vaccinium uliginosum	40	Yes	FAC
3. Betula nana	15	No	FAC
4. Rubus chamaemorus	30	No	FACW
5. Rhododendron groenlandicum	20	No	FAC
6. Empetrum nigrum	40	Yes	FAC
Total Cover: 185			
50% of total cover: 92 20% of total cover: 37			
Herb Stratum			
1. Carex rostrata	30	Yes	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 30			
50% of total cover: 15 20% of total cover: 6			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	30	x 1 = 30
FACW species	95	x 2 = 190
FAC species	115	x 3 = 345
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	240 (A)	565 (B)

Prevalence Index = B/A = 2.35

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 100
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 100 %

SOIL

Sampling Point T37-205

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-14	organic	100		0				peat mat

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- X Histosol or Histel(A1)
- X Histic Epipedon (A2)
- __Hydrogen Sulfide (A4)
- __Thick Dark Surface (A12)
- __Alaska Gleyed (A13)
- __Alaska Redox (A14)
- __Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

- __Alaska Color Change (TA4)[4]
- __Alaska Alpine Swales (TA5)
- __Alaska Redox With 2.5Y Hue
- __Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- __Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 14

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- __Surface Water (A1)
- __High Water Table (A2)
- X Saturation (A3)
- __Water Marks (B1)
- __Sediment Deposits (B2)
- __Drift Deposits (B3)
- __Algal Mat or Crust (B4)
- __Iron Deposits (B5)
- __Surface Soil Cracks (B6)
- __Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __Marl Deposits (B15)
- __Hydrogen Sulfide Odor (C1)
- __Dry Season Water Table (C2)
- __Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- __Water-stained Leaves (B9)
- __Drainage Patterns (B10)
- __Oxidized Rhizospheres along Living Roots (C3)
- __Presence of Reduced Iron (C4)
- __Salt Deposits (C5)
- __Stunted or Stressed Plants (D1)
- __Geomorphic Position (D2)
- X Shallow Aquitard (D3)
- __Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 7
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 07/26/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T37-207
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 0
Subregion (LRR): Interior Alaska Lat: 66.82210660 Long: -153.99426130 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/EM1B, IIC1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: depression surrounded by picea wetland. Pockets of PEM. Fringes have taller Salix sp. Photos 7542-7547.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Vaccinium uliginosum	5	No	FAC
2. Salix sp.	85	Yes	FAC
3. Betula nana	10	No	FAC
4.			
5.			
6.			
Total Cover: 100			
50% of total cover: 50 20% of total cover: 20			
Herb Stratum			
1. Calamagrostis canadensis	25	Yes	FAC
2. Comarum palustre	5	No	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 30			
50% of total cover: 15 20% of total cover: 6			

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 100
(Where applicable)

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	5	x 1 = 5
FACW species	0	x 2 = 0
FAC species	125	x 3 = 375
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	130 (A)	380 (B)

Prevalence Index = B/A = 2.92

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 100%

SOIL

Sampling Point T37-207

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-11	organic	100		0				

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- X Histosol or Histel(A1)
- X Histic Epipedon (A2)
- __Hydrogen Sulfide (A4)
- __Thick Dark Surface (A12)
- __Alaska Gleyed (A13)
- __Alaska Redox (A14)
- __Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

- __Alaska Color Change (TA4)[4]
- __Alaska Alpine Swales (TA5)
- __Alaska Redox With 2.5Y Hue
- __Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- __Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 11

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- __Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- __Water Marks (B1)
- __Sediment Deposits (B2)
- __Drift Deposits (B3)
- __Algal Mat or Crust (B4)
- __Iron Deposits (B5)
- __Surface Soil Cracks (B6)
- __Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __Marl Deposits (B15)
- __Hydrogen Sulfide Odor (C1)
- __Dry Season Water Table (C2)
- __Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- __Water-stained Leaves (B9)
- __Drainage Patterns (B10)
- __Oxidized Rhizospheres along Living Roots (C3)
- __Presence of Reduced Iron (C4)
- __Salt Deposits (C5)
- __Stunted or Stressed Plants (D1)
- __Geomorphic Position (D2)
- X Shallow Aquitard (D3)
- __Microtopographic Relief (D4)
- __FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 1.5
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 07/26/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T37-240
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): Interior Alaska Lat: 66.82200640 Long: -153.98484580 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**

Remarks: the sample location was taken on the south side of the alignment within a picea forest upland. Photos 3667-3671.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	65	Yes	FACU
2.			
3.			
4.			
Total Cover: 65			
50% of total cover: 32 20% of total cover: 13			
Sapling/Shrub Stratum			
1. Alnus viridis	70	Yes	FAC
2. Rosa acicularis	50	Yes	FACU
3. Vaccinium uliginosum	45	Yes	FAC
4. Shepherdia canadensis	40	No	FACU
5.			
6.			
Total Cover: 205			
50% of total cover: 102 20% of total cover: 41			
Herb Stratum			
1. Cornus canadensis	35	Yes	FACU
2. Equisetum arvense	30	Yes	FAC
3. Ranunculus abortivus	15	No	FAC
4. Coptis trifolia	10	No	FAC
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 90			
50% of total cover: 45 20% of total cover: 18			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	170	x 3 = 510
FACU species	190	x 4 = 760
UPL species	0	x 5 = 0
Column Totals:	360 (A)	1270 (B)

Prevalence Index = B/A = 3.53

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
__ Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks:

SOIL

Sampling Point T37-240

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2		100		0				organics
2-13	10YR 2/2	100		0			Sandy Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks: Restrictive digging layer of roots.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 07/26/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T37-242
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): Interior Alaska Lat: 66.82265650 Long: -153.98915630 Datum: WGS84
Soil Map Unit Name: _ NWI classification: R2UB3
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: photos 3672-3673 the stream cr	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	0 (A)	0 (B)

Prevalence Index = B/A = 0.00

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 0 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks:

SOIL

Sampling Point T37-242

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 07/27/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T38-209
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Stream terrace Local relief (concave, convex, none): convex Slope (%): 1
Subregion (LRR): Interior Alaska Lat: 67.03981700 Long: -153.59162420 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland, IA2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? No**
Remarks: photos 7652-7656. Flood prone area.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	50	Yes	FACU
2. Populus balsamifera	10	No	FACU
3.			
4.			
Total Cover: 60			
50% of total cover: 30 20% of total cover: 12			
Sapling/Shrub Stratum			
1. Alnus viridis	30	Yes	FAC
2. Salix sp.	10	No	FAC
3. Rubus pubescens	10	No	FACW
4. Dasiphora fruticosa	20	Yes	FAC
5.			
6.			
Total Cover: 70			
50% of total cover: 35 20% of total cover: 14			
Herb Stratum			
1. Galium boreale	5	No	FACU
2. Calamagrostis canadensis	25	Yes	FAC
3. Viola epipsila	20	Yes	FACW
4. Pyrola minor	3	No	FAC
5. Ranunculus occidentalis	15	No	FACW
6. Polemonium acutiflorum	15	No	FAC
7. Valeriana sitchensis	5	No	FAC
8.			
9.			
10.			
Total Cover: 88			
50% of total cover: 44 20% of total cover: 17			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	45	x 2 = 90
FAC species	108	x 3 = 324
FACU species	65	x 4 = 260
UPL species	0	x 5 = 0
Column Totals:	218 (A)	674 (B)

Prevalence Index = B/A = 3.09

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
__ Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 80
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 80%. Lots of leaf litter

SOIL

Sampling Point T38-209

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	organic	100		0				
2-4	10YR 4/3	100		0			Sandy Loam	
4-21	10YR 5/6	100		0			Sandy Gravel	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
X Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: water marks 18 inches above surface.

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 07/27/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T38-211
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 4
Subregion (LRR): Interior Alaska Lat: 67.04010050 Long: -153.59361650 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: photos 7659-7663. Hillslope above stream terrace.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	15	Yes	FACU
2. Populus tremuloides	5	Yes	FACU
3.			
4.			
Total Cover: 20			
50% of total cover: 10 20% of total cover: 4			
Sapling/Shrub Stratum			
1. Picea glauca	25	Yes	FACU
2. Salix spp.	15	No	FAC
3. Dasiphora fruticosa	15	No	FAC
4. Vaccinium uliginosum	15	No	FAC
5. Rhododendron groenlandicum	20	Yes	FAC
6. Arctostaphylos uva-ursi	30	Yes	UPL
Total Cover: 120			
50% of total cover: 60 20% of total cover: 24			
Herb Stratum			
1. Solidago multiradiata	5	Yes	FACU
2. Dryas integrifolia	20	Yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 25			
50% of total cover: 12 20% of total cover: 5			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 14 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	65	x 3 = 195
FACU species	70	x 4 = 280
UPL species	30	x 5 = 150
Column Totals:	165 (A)	625 (B)

Prevalence Index = B/A = 3.79

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
__ Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 80
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks: unknown forb 20% basal leaves, and long mouse ail like seeds (dryas). 60% sphagnum lichen20%.

SOIL

Sampling Point T38-211

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	organic	100		0				
5-20	2.5Y 4/4	100		0			Fine Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 07/27/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T38-213
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 20
Subregion (LRR): Interior Alaska Lat: 67.04001440 Long: -153.59339110 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: photos 7664-7668.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	20	Yes	FACU
2. Populus balsamifera	5	No	FACU
3. Populus tremuloides	10	Yes	FACU
4.			
Total Cover: 35			
50% of total cover: 17 20% of total cover: 7			
Sapling/Shrub Stratum			
1. Picea glauca	35	Yes	FACU
2. Populus tremuloides	10	No	FACU
3. Populus balsamifera	5	No	FACU
4. Vaccinium uliginosum	35	Yes	FAC
5. Betula nana	25	No	FAC
6. Vaccinium vitis-idaea	35	Yes	FAC
Total Cover: 145			
50% of total cover: 72 20% of total cover: 29			
Herb Stratum			
1. Lycopodium clavatum	20	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 20			
50% of total cover: 10 20% of total cover: 4			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	95	x 3 = 285
FACU species	105	x 4 = 420
UPL species	0	x 5 = 0
Column Totals:	200 (A)	705 (B)

Prevalence Index = B/A = 3.53

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
__ Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 40
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks: lichen 25%, sphagnum 15%. Lots of leaf litter.

SOIL

Sampling Point T38-213

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2.5	organic	100		0				
0.25-12	2.5Y 5/3	100		0			Sandy Gravely Loam	no loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks: restrictive layer for digging gravel

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 07/27/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T38-244
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): Interior Alaska Lat: 67.03924110 Long: -153.59069190 Datum: WGS84
Soil Map Unit Name: _ NWI classification: R2UB1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**

Remarks: the sample location was taken at theproposed bridge crossing. Bankfull width, is approximately 100 feet, wetted width 65 feet. Fish present water flowing with riffle glide morphology. substrate is cobble and sand. photos 3798-3803

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	0 (A)	0 (B)

Prevalence Index = B/A = 0.00

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 0 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks:

SOIL

Sampling Point T38-244

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 07/28/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T39-215
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hill Local relief (concave, convex, none): convex Slope (%): 2
Subregion (LRR): Interior Alaska Lat: 66.83253910 Long: -153.93267740 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: ridge top upland. Photos 7669-7673	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	30	Yes	FACW
2. Populus tremuloides	12	Yes	FACU
3.			
4.			
Total Cover: 42			
50% of total cover: 21 20% of total cover: 8			
Sapling/Shrub Stratum			
1. Picea mariana	15	No	FACW
2. Rhododendron groenlandicum	25	Yes	FAC
3. Vaccinium vitis-idaea	45	Yes	FAC
4. Populus tremuloides	10	No	FACU
5. Vaccinium uliginosum	3	No	FAC
6.			
Total Cover: 98			
50% of total cover: 49 20% of total cover: 19			
Herb Stratum			
1. Betula nana	5	No	FAC
2. Lycopodium clavatum	25	Yes	FACU
3. Geocaulon lividum	5	No	FACU
4. Festuca altaica	10	Yes	FAC
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 45			
50% of total cover: 22 20% of total cover: 9			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	45	x 2 = 90
FAC species	88	x 3 = 264
FACU species	52	x 4 = 208
UPL species	0	x 5 = 0
Column Totals:	185 (A)	562 (B)

Prevalence Index = B/A = 3.04

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
__ Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 70
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum. 15%, lichen 55%.

SOIL

Sampling Point T39-215

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1.5	organic	100		0				
1.5-18	2.5Y 5/6	100		0			Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 07/28/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T39-217
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 25
Subregion (LRR): Interior Alaska Lat: 66.83211800 Long: -153.94090920 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: hillslope west facing slope. photos 7674-7678.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	25	Yes	FACW
2. Populus tremuloides	5	No	FACU
3.			
4.			
Total Cover: 30			
50% of total cover: 15 20% of total cover: 6			
Sapling/Shrub Stratum			
1. Betula nana	75	Yes	FAC
2. Rhododendron groenlandicum	55	Yes	FAC
3. Empetrum nigrum	25	No	FAC
4. Vaccinium uliginosum	5	No	FAC
5. Vaccinium vitis-idaea	20	No	FAC
6. Picea sitchensis	10	No	FACU
Total Cover: 190			
50% of total cover: 95 20% of total cover: 38			
Herb Stratum			
1. Cornus canadensis	10	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 10			
50% of total cover: 5 20% of total cover: 2			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	25	x 2 = 50
FAC species	180	x 3 = 540
FACU species	25	x 4 = 100
UPL species	0	x 5 = 0
Column Totals:	230 (A)	690 (B)

Prevalence Index = B/A = 3.00

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 100
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 55%, lichen 45%

SOIL

Sampling Point T39-217

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	organic	100		0				
2-22	10YR 5/6	100		0			Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 07/28/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T39-219
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 30
Subregion (LRR): Interior Alaska Lat: 66.82669330 Long: -153.95028940 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: hillslope 30% slope northwest facing. Photos 7679-7683.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	40	Yes	FACW
2.			
3.			
4.			
Total Cover: 40			
50% of total cover: 20 20% of total cover: 8			
Sapling/Shrub Stratum			
1. Picea mariana	20	No	FACW
2. Betula nana	45	Yes	FAC
3. Vaccinium uliginosum	45	Yes	FAC
4. Rhododendron groenlandicum	30	No	FAC
5. Empetrum nigrum	35	Yes	FAC
6. Vaccinium vitis-idaea	10	No	FAC
Total Cover: 185			
50% of total cover: 92 20% of total cover: 37			
Herb Stratum			
1. Carex rostrata	10	Yes	OBL
2. Equisetum arvense	10	Yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 20			
50% of total cover: 10 20% of total cover: 4			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	10	x 1 = 10
FACW species	60	x 2 = 120
FAC species	175	x 3 = 525
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	245 (A)	655 (B)

Prevalence Index = B/A = 2.67

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 100
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 55%, reindeer lichen 30%, pelt lichen 15%

SOIL

Sampling Point T39-219

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	organic	100		0				
2-10	10YR 5/4	100		0			Sandy Gravely Loam	no sand.

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks: restrictive layer for digging gravel at 10 inches.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 07/28/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T39-246
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): Interior Alaska Lat: 66.82889200 Long: -153.93312420 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: The sample location was taken on eastern side of the alignment withina picea forest upland. Photos 3804-3808. upland	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	35	Yes	FACU
2.			
3.			
4.			
Total Cover: 35			
50% of total cover: 17 20% of total cover: 7			
Sapling/Shrub Stratum			
1. Picea glauca	20	No	FACU
2. Vaccinium uliginosum	50	Yes	FAC
3. Vaccinium vitis-idaea	50	Yes	FAC
4. Empetrum nigrum	45	Yes	FAC
5. Rhododendron groenlandicum	45	Yes	FAC
6.			
Total Cover: 210			
50% of total cover: 105 20% of total cover: 42			
Herb Stratum			
1. Calamagrostis canadensis	25	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 25			
50% of total cover: 12 20% of total cover: 5			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 83 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	215	x 3 = 645
FACU species	55	x 4 = 220
UPL species	0	x 5 = 0
Column Totals:	270 (A)	865 (B)

Prevalence Index = B/A = 3.20

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 45
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum and lichen spp.

SOIL

Sampling Point T39-246

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6		100		0				organics
6-8	10YR 3/3	100		0			Sandy Loam	
8-13	10YR 4/6	100		0			Sandy Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: clay
Depth (inches): 13

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 07/28/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T39-250
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): convex Slope (%): 2
Subregion (LRR): Interior Alaska Lat: 66.82648130 Long: -153.93452490 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: the sample location was taken on eastern side of the alignment within a picea forest upland. Photos 3809-3813. upland	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	40	Yes	FACU
2.			
3.			
4.			
Total Cover: 40			
50% of total cover: 20 20% of total cover: 8			
Sapling/Shrub Stratum			
1. Picea glauca	30	No	FACU
2. Betula nana	45	Yes	FAC
3. Vaccinium uliginosum	20	No	FAC
4. Vaccinium vitis-idaea	35	No	FAC
5. Empetrum nigrum	60	Yes	FAC
6. salix spp	15	No	FAC
Total Cover: 205			
50% of total cover: 102 20% of total cover: 41			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	175	x 3 = 525
FACU species	70	x 4 = 280
UPL species	0	x 5 = 0
Column Totals:	245 (A)	805 (B)

Prevalence Index = B/A = 3.29

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 40
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum and lichen spp

SOIL

Sampling Point T39-250

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3		100		0				organics
3-16	10YR 5/6	100		0			Sandy Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks: Restrictive digging layer of rock.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 07/28/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T40-221
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 5
Subregion (LRR): Interior Alaska Lat: 66.86012910 Long: -153.88174470 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: upland. Photos 7684-7688.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	45	Yes	FACW
2.			
3.			
4.			
Total Cover: 45			
50% of total cover: 22 20% of total cover: 9			
Sapling/Shrub Stratum			
1. Picea mariana	30	Yes	FACW
2. Betula nana	20	Yes	FAC
3. Vaccinium uliginosum	10	No	FAC
4. Vaccinium vitis-idaea	25	Yes	FAC
5. Empetrum nigrum	20	No	FAC
6. Rhododendron groenlandicum	15	No	FAC
Total Cover: 120			
50% of total cover: 60 20% of total cover: 24			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	75	x 2 = 150
FAC species	90	x 3 = 270
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	165 (A)	420 (B)

Prevalence Index = B/A = 2.55

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 85
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: spagnum 35%, reindeer lichen 15%, pelt lichen 25%, false pixie cups 10%.

SOIL

Sampling Point T40-221

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	organic	100		0				
3-18	2.5Y 5/6	100		0			Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 07/28/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T40-223
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 3
Subregion (LRR): Interior Alaska Lat: 66.85829110 Long: -153.88299930 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PFO4/SS1B
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: hillslope gentlelope more sphagnum. photos 7689-7693	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	50	Yes	FACW
2.			
3.			
4.			
Total Cover: 50			
50% of total cover: 25 20% of total cover: 10			
Sapling/Shrub Stratum			
1. Picea mariana	10	No	FACW
2. Alnus viridis	60	Yes	FAC
3. Betula nana	20	No	FAC
4. Vaccinium uliginosum	25	Yes	FAC
5. Empetrum nigrum	15	No	FAC
6. Vaccinium vitis-idaea	10	No	FAC
Total Cover: 140			
50% of total cover: 70 20% of total cover: 28			
Herb Stratum			
1. Equisetum sylvaticum	20	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 20			
50% of total cover: 10 20% of total cover: 4			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	60	x 2 = 120
FAC species	150	x 3 = 450
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	210 (A)	570 (B)

Prevalence Index = B/A = 2.71

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 90
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: Sphagnum 90%

SOIL

Sampling Point T40-223

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	organic	100		0				
8-14	10YR 3/3	50	organic	50			Loam	even mixture

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

X Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 14

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 07/28/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T40-225
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 2
Subregion (LRR): Interior Alaska Lat: 66.85656260 Long: -153.88185030 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: hillsope leveling out near base. Alder and willow thickets. photos 7694-7698.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	65	Yes	FACW
2.			
3.			
4.			
Total Cover: 65			
50% of total cover: 32 20% of total cover: 13			
Sapling/Shrub Stratum			
1. Picea mariana	5	No	FACW
2. Alnus viridis	25	Yes	FAC
3. Salix sp.	15	No	FAC
4. Vaccinium uliginosum	5	No	FAC
5. Spiraea stevenii	30	Yes	FACU
6. Betula nana	20	Yes	FAC
Total Cover: 100			
50% of total cover: 50 20% of total cover: 20			
Herb Stratum			
1. Equisetum sylvaticum	55	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 55			
50% of total cover: 27 20% of total cover: 11			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	70	x 2 = 140
FAC species	120	x 3 = 360
FACU species	30	x 4 = 120
UPL species	0	x 5 = 0
Column Totals:	220 (A)	620 (B)

Prevalence Index = B/A = 2.82

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 95
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 95%.

SOIL

Sampling Point T40-225

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	organic	100		0				
2-6	10YR 3/2	100		0			Loam	
6-13	2.5Y 5/4	100		0			Silty Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 07/28/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T40-252
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 15
Subregion (LRR): Interior Alaska Lat: 66.86113720 Long: -153.87939130 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: The sample location was taken on southwest section of the alignment within the 2000 ft boundary in a picea upland. Photos 3814-3818.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	45	Yes	FACU
2.			
3.			
4.			
Total Cover: 45			
50% of total cover: 22 20% of total cover: 9			
Sapling/Shrub Stratum			
1. Vaccinium uliginosum	55	Yes	FAC
2. Vaccinium vitis-idaea	45	Yes	FAC
3. Rhododendron groenlandicum	25	No	FAC
4. Empetrum nigrum	60	Yes	FAC
5.			
6.			
Total Cover: 185			
50% of total cover: 92 20% of total cover: 37			
Herb Stratum			
1. Calamagrostis canadensis	15	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 15			
50% of total cover: 7 20% of total cover: 3			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	200	x 3 = 600
FACU species	45	x 4 = 180
UPL species	0	x 5 = 0
Column Totals:	245 (A)	780 (B)

Prevalence Index = B/A = 3.18

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 40
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: lichen spp

SOIL

Sampling Point T40-252

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3		100		0				organics
3-19	10YR 4/4	100		0			Sandy Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 19

Hydric Soil Present? No

Remarks: Restrictive digging layer of rock.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 07/28/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T40-254
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hill Local relief (concave, convex, none): convex Slope (%): 10
Subregion (LRR): Interior Alaska Lat: 66.85859890 Long: -153.88047880 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: The sample location was taken on southwest section of the alignment within a picea upland forest. The forest continues past the 2000ft boundary. Photos	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	55	Yes	FACU
2.			
3.			
4.			
Total Cover: 55			
50% of total cover: 27 20% of total cover: 11			
Sapling/Shrub Stratum			
1. Vaccinium alaskaense	55	Yes	FAC
2. Betula nana	35	Yes	FAC
3. Rhododendron groenlandicum	30	Yes	FAC
4. Vaccinium vitis-idaea	30	Yes	FAC
5.			
6.			
Total Cover: 150			
50% of total cover: 75 20% of total cover: 30			
Herb Stratum			
1. Calamagrostis canadensis	10	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 10			
50% of total cover: 5 20% of total cover: 2			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 83 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	160	x 3 = 480
FACU species	55	x 4 = 220
UPL species	0	x 5 = 0
Column Totals:	215 (A)	700 (B)

Prevalence Index = B/A = 3.26

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 15
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: lichen spp

SOIL

Sampling Point T40-254

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1		100		0				organics
1-5	10YR 2/2	100		0			Sandy Loam	
5-15	10YR 4/6	100		0			Sandy Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 15

Hydric Soil Present? No

Remarks: Restrictive digging layer of rock.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 07/28/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T41-227
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 2
Subregion (LRR): Interior Alaska Lat: 66.91041560 Long: -153.76660760 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland, IA2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? No**
Remarks: photos 7699-7703.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	40	Yes	FACW
2.			
3.			
4.			
Total Cover: 40			
50% of total cover: 20 20% of total cover: 8			
Sapling/Shrub Stratum			
1. Picea mariana	20	Yes	FACW
2. Alnus viridis	10	No	FAC
3. Salix sp.	5	No	FAC
4. Vaccinium uliginosum	35	Yes	FAC
5. Spiraea stevenii	20	Yes	FACU
6. Rubus chamaemorus	8	No	FACW
Total Cover: 98			
50% of total cover: 49 20% of total cover: 19			
Herb Stratum			
1. Equisetum sylvaticum	55	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 55			
50% of total cover: 27 20% of total cover: 11			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	68	x 2 = 136
FAC species	105	x 3 = 315
FACU species	20	x 4 = 80
UPL species	0	x 5 = 0
Column Totals:	193 (A)	531 (B)

Prevalence Index = B/A = 2.75

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 90
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 75%, reindeer lichen 5%, pelt lichen 10%.

SOIL

Sampling Point T41-227

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	organic	100		0				
6-16	10YR 5/6	60	gley1 10Y 6/1	40	RM	M	Sandy Gravely Loam	Gravely clay loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 16

Hydric Soil Present? No

Remarks: permafrost

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 07/28/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T41-229
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 2
Subregion (LRR): Interior Alaska Lat: 66.91064250 Long: -153.76651250 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland, IA2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: photos 7704-7708	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	15	Yes	FACW
2. Picea glauca	25	Yes	FACU
3.			
4.			
Total Cover: 40			
50% of total cover: 20 20% of total cover: 8			
Sapling/Shrub Stratum			
1. Alnus viridis	70	Yes	FAC
2. Rubus chamaemorus	8	No	FACW
3. Spiraea stevenii	10	No	FACU
4. Vaccinium vitis-idaea	8	No	FAC
5. Picea glauca	5	No	FACU
6.			
Total Cover: 101			
50% of total cover: 50 20% of total cover: 20			
Herb Stratum			
1. Equisetum sylvaticum	70	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 70			
50% of total cover: 35 20% of total cover: 14			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	23	x 2 = 46
FAC species	148	x 3 = 444
FACU species	40	x 4 = 160
UPL species	0	x 5 = 0
Column Totals:	211 (A)	650 (B)

Prevalence Index = B/A = 3.08

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 60
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 50%, lichen 10%. Leaf litter.

SOIL

Sampling Point T41-229

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	organic	100		0				
2-6	10YR 3/2	50	organic	50			Loam	
6-13	10YR 5/6	75	gley1 10Y 6/1	25	RM	M	Sandy Gravely Loam	gravely clay loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks: restrictive layer for digging gravel

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 07/28/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T41-231
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Drainageway Local relief (concave, convex, none): concave Slope (%): 2
Subregion (LRR): Interior Alaska Lat: 66.91063290 Long: -153.77542000 Datum: WGS84
Soil Map Unit Name: _ NWI classification: R3UB1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**

Remarks: spring. Drainageway 3 foot wide, 2 inches flow, 6 inches deep. 4-8 inch diameter cobbles. Picea glauca, alnus viridis, vac uli. North of Salix thicket. photos 7709-7714

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	0 (A)	0 (B)

Prevalence Index = B/A = 0.00

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 0 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks:

SOIL

Sampling Point T41-231

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 07/28/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T41-256
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hill Local relief (concave, convex, none): convex Slope (%): 6
Subregion (LRR): Interior Alaska Lat: 66.90691840 Long: -153.76361580 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: the sample location was taken on the south side of the alignment within a picea forest upland. Photos 3824-3828.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	55	Yes	FACU
2.			
3.			
4.			
Total Cover: 55			
50% of total cover: 27 20% of total cover: 11			
Sapling/Shrub Stratum			
1. Picea glauca	20	No	FACU
2. Betula nana	20	No	FAC
3. Rhododendron groenlandicum	35	Yes	FAC
4. Vaccinium uliginosum	30	Yes	FAC
5. Vaccinium vitis-idaea	30	No	FAC
6. Empetrum nigrum	60	Yes	FAC
Total Cover: 195			
50% of total cover: 97 20% of total cover: 39			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	175	x 3 = 525
FACU species	75	x 4 = 300
UPL species	0	x 5 = 0
Column Totals:	250 (A)	825 (B)

Prevalence Index = B/A = 3.30

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 65
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: lichen spp

SOIL

Sampling Point T41-256

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2		100		0				organics
2-15	10YR 4/6	100		0			Loamy Fine Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 15

Hydric Soil Present? No

Remarks: Restrictive digging layer of rock.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 07/28/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T41-258
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): concave Slope (%): 3
Subregion (LRR): Interior Alaska Lat: 66.90829490 Long: -153.76391570 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PFO4/SS1B, IA2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**

Remarks: The sample location was taken on the south side of the alignment within a picea forest wetland. The point serves as the boundary to the upland to the PFO/PSS wetland. Photos 3829-3833.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	45	Yes	FACW
2.			
3.			
4.			
Total Cover: 45			
50% of total cover: 22 20% of total cover: 9			
Sapling/Shrub Stratum			
1. Picea mariana	15	No	FACW
2. Betula nana	35	No	FAC
3. Rubus chamaemorus	40	Yes	FACW
4. Vaccinium uliginosum	30	No	FAC
5. Rhododendron groenlandicum	55	Yes	FAC
6. Vaccinium vitis-idaea	40	Yes	FAC
Total Cover: 215			
50% of total cover: 107 20% of total cover: 43			
Herb Stratum			
1. Calamagrostis canadensis	35	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 35			
50% of total cover: 17 20% of total cover: 7			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	100	x 2 = 200
FAC species	195	x 3 = 585
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	295 (A)	785 (B)

Prevalence Index = B/A = 2.66

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 60
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum spp

SOIL

Sampling Point T41-258

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-11		100		0				saturated organics

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

X Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 11

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 12
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: saturated to the surface

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 07/28/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T41-260
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 8
Subregion (LRR): Interior Alaska Lat: 66.90847790 Long: -153.76618520 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PEM1C
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: The sample location was taken on the south side of the alignment within a emergent PEM wetland. Photos 3834-3838	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Betula nana	5	No	FAC
2. Rhododendron groenlandicum	3	No	FAC
3. Picea mariana	2	No	FACW
4. Andromeda polifolia	75	Yes	OBL
5.			
6.			
Total Cover: 85			
50% of total cover: 42 20% of total cover: 17			
Herb Stratum			
1. Carex media	90	Yes	FACW
2. Eriophorum angustifolium	80	Yes	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 170			
50% of total cover: 85 20% of total cover: 34			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	155	x 1 = 155
FACW species	92	x 2 = 184
FAC species	8	x 3 = 24
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	255 (A)	363 (B)

Prevalence Index = B/A = 1.42

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 95
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T41-260

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16		100		0				saturated organics

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

X Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes Depth (inches):
Water Table Present? Yes Depth (inches): 9
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/28/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T42-233
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Drainageway Local relief (concave, convex, none): concave Slope (%): 1
Subregion (LRR): Interior Alaska Lat: 66.90686390 Long: -153.75232460 Datum: WGS84
Soil Map Unit Name: _ NWI classification: R2UB2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**

Remarks: Reed River. 160 wetted, 235 bankfull. Sandy substrate. Willow one species, carex rostrata, eriop vag riparian. 90% over 12 inches deep, 10% 6 inches deep.photos 7715-7718.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	0 (A)	0 (B)

Prevalence Index = B/A = 0.00

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 0 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks:

SOIL

Sampling Point T42-233

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 07/28/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T42-262
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Lake terrace Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): Interior Alaska Lat: 67.03632740 Long: -154.83320500 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: The sample location was taken on the east side of the Reed River within a willow thicket. Upland. Photos 3839-3843.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	25	Yes	FACU
2.			
3.			
4.			
Total Cover: 25			
50% of total cover: 12 20% of total cover: 5			
Sapling/Shrub Stratum			
1. salix spp	55	Yes	FAC
2. Vaccinium uliginosum	70	Yes	FAC
3. Shepherdia canadensis	35	No	FACU
4. Rosa acicularis	10	No	FACU
5. rubpub	15	No	
6. Vaccinium alaskaense	10	No	FAC
Total Cover: 195			
50% of total cover: 97 20% of total cover: 39			
Herb Stratum			
1. Calamagrostis canadensis	15	Yes	FAC
2. Equisetum arvense	10	Yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 25			
50% of total cover: 12 20% of total cover: 5			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	160	x 3 = 480
FACU species	70	x 4 = 280
UPL species	0	x 5 = 0
Column Totals:	230 (A)	760 (B)

Prevalence Index = B/A = 3.30

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 20
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T42-262

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2		100		0				organics
2-16	10YR 3/3	100		0			Sandy Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: none
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 07/30/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T43-235
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 5
Subregion (LRR): Interior Alaska Lat: 66.95972500 Long: -153.73581350 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: hillslope east of drainage. photos 7719-7723.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	25	Yes	FACW
2.			
3.			
4.			
Total Cover: 25			
50% of total cover: 12 20% of total cover: 5			
Sapling/Shrub Stratum			
1. Picea mariana	35	Yes	FACW
2. Alnus viridis	12	No	FAC
3. Vaccinium uliginosum	15	No	FAC
4. Rubus chamaemorus	8	No	FACW
5. Vaccinium vitis-idaea	20	Yes	FAC
6. Rhododendron groenlandicum	8	No	FAC
Total Cover: 98			
50% of total cover: 49 20% of total cover: 19			
Herb Stratum			
1. Carex rostrata	10	No	OBL
2. Carex limosa	20	Yes	OBL
3. Calamagrostis canadensis	30	Yes	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 60			
50% of total cover: 30 20% of total cover: 12			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	30	x 1 = 30
FACW species	68	x 2 = 136
FAC species	85	x 3 = 255
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	183 (A)	421 (B)

Prevalence Index = B/A = 2.30

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 100
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 50%, lichen 50%.

SOIL

Sampling Point T43-235

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	organic	100		0				
4-14	2.5Y 4/2	75	7.5YR 5/8	25	D	M	Silty Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 14

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 07/30/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T43-237
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hill Local relief (concave, convex, none): convex Slope (%): 3
Subregion (LRR): Interior Alaska Lat: 66.95981810 Long: -153.73379720 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: photos 7724-7728. Upland hill.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	20	Yes	FACW
2.			
3.			
4.			
Total Cover: 20			
50% of total cover: 10 20% of total cover: 4			
Sapling/Shrub Stratum			
1. Picea mariana	40	Yes	FACW
2. Rhododendron groenlandicum	20	Yes	FAC
3. Vaccinium vitis-idaea	15	No	FAC
4. Empetrum nigrum	12	No	FAC
5.			
6.			
Total Cover: 87			
50% of total cover: 43 20% of total cover: 17			
Herb Stratum			
1. Vaccinium uliginosum	30	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 30			
50% of total cover: 15 20% of total cover: 6			

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 95
(Where applicable)

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	60	x 2 = 120
FAC species	77	x 3 = 231
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	137 (A)	351 (B)

Prevalence Index = B/A = 2.56

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes

Remarks: reindeer lichen 95%.

SOIL

Sampling Point T43-237

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1.5	organic	100		0				
1.5-14	10YR 5/6	100		0			Sandy Gravely Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks: restrictive layer for digging gravel at 14 inches.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 07/30/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T43-264
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Stream terrace Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): Interior Alaska Lat: 66.96038560 Long: -153.74565310 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PEM1C, IIIA3
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**

Remarks: The sample location was taken on western side of the alignment within a stream terrace at the base of an upland hill to the east. The stream was ~ 4ft wide with rock and cobble substrate with sand. Water was clear and fast flowing with riffle glide morphology. The riparian area extended to the hillside. upper perrenial stream. Photos 3844-2848.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. salix spp	10	Yes	FAC
2.			
3.			
4.			
5.			
6.			
Total Cover: 10			
50% of total cover: 5 20% of total cover: 2			
Herb Stratum			
1. Comarum palustre	15	No	OBL
2. Parnassia palustris	25	No	FACW
3. Calamagrostis canadensis	75	Yes	FAC
4. Viola palustris	15	No	FAC
5. Equisetum palustre	20	No	FACW
6.			
7.			
8.			
9.			
10.			
Total Cover: 150			
50% of total cover: 75 20% of total cover: 30			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	15	x 1 = 15
FACW species	45	x 2 = 90
FAC species	100	x 3 = 300
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	160 (A)	405 (B)

Prevalence Index = B/A = 2.53

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T43-264

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-17	gley 1 10y 2.5/1	100		0			Silty Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
X Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: none
Depth (inches): 0

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 5
Saturation Present? Yes Depth (inches): 5
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 07/30/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T43-266
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): concave Slope (%): 5
Subregion (LRR): Interior Alaska Lat: 66.96015280 Long: -153.74471910 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/EM1B, IIC1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**

Remarks: The sample location was taken on western side of the alignment within a shrub wetlsnd transition zone from the PEM stresm terrace. Further east a picea upland. Photos 3849-3853. PSS wetland

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	20	Yes	FACW
2.			
3.			
4.			
Total Cover: 20			
50% of total cover: 10 20% of total cover: 4			
Sapling/Shrub Stratum			
1. Picea mariana	15	No	FACW
2. Vaccinium uliginosum	40	Yes	FAC
3. Vaccinium vitis-idaea	30	No	FAC
4. salix spp	45	Yes	FAC
5. Empetrum nigrum	50	Yes	FAC
6. Rhododendron groenlandicum	25	No	FAC
Total Cover: 205			
50% of total cover: 102 20% of total cover: 41			
Herb Stratum			
1. Carex media	30	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 30			
50% of total cover: 15 20% of total cover: 6			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	65	x 2 = 130
FAC species	190	x 3 = 570
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	255 (A)	700 (B)

Prevalence Index = B/A = 2.75

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 65
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum and lichen spp

SOIL

Sampling Point T43-266

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-13		100		0				saturated organics

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

X Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 13

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 5
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: saturated organics above permafrost

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 07/30/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T43-268
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 15
Subregion (LRR): Interior Alaska Lat: 66.96013080 Long: -153.74322160 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**

Remarks: the sample location was taken on western side of the alignment within a picea upland. Downslope the PSS wetland. The picea upland continues to centerline. Photos 3854-3858. Upland.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	30	Yes	FACU
2.			
3.			
4.			
Total Cover: 30			
50% of total cover: 15 20% of total cover: 6			
Sapling/Shrub Stratum			
1. Picea glauca	10	No	FACU
2. Vaccinium uliginosum	15	No	FAC
3. Betula nana	20	Yes	FAC
4. Rhododendron groenlandicum	30	Yes	FAC
5. Vaccinium vitis-idaea	5	No	FAC
6.			
Total Cover: 80			
50% of total cover: 40 20% of total cover: 16			
Herb Stratum			
1. Calamagrostis canadensis	10	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 10			
50% of total cover: 5 20% of total cover: 2			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	80	x 3 =	240
FACU species	40	x 4 =	160
UPL species	0	x 5 =	0
Column Totals:	120 (A)		400 (B)

Prevalence Index = B/A = 3.33

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 60
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: lichen spp

SOIL

Sampling Point T43-268

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3		100		0				organics
3-17	10YR 4/2	80	10YR 5/6	18			Sandy Loam	
3-17	2.5YR 3/4	2		0			Sandy Loam	2 percent of the 10yr 5/6

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
X Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: none
Depth (inches): 0

Hydric Soil Present? No

Remarks: review problematic

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 07/30/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T44-239
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Stream terrace Local relief (concave, convex, none): convex Slope (%): 2
Subregion (LRR): Interior Alaska Lat: 67.01968560 Long: -153.63984700 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PFO4/SS1B
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: photos 7729-7733.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	35	Yes	FACW
2.			
3.			
4.			
Total Cover: 35			
50% of total cover: 17 20% of total cover: 7			
Sapling/Shrub Stratum			
1. Picea mariana	35	Yes	FACW
2. salix spp.	20	No	FAC
3. Vaccinium uliginosum	40	Yes	FAC
4. Rubus chamaemorus	30	Yes	FACW
5. Vaccinium vitis-idaea	20	No	FAC
6. Rhododendron groenlandicum	20	No	FAC
Total Cover: 165			
50% of total cover: 82 20% of total cover: 33			
Herb Stratum			
1. Petasites frigidus	10	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 10			
50% of total cover: 5 20% of total cover: 2			

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 100
(Where applicable)

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	110	x 2 = 220
FAC species	100	x 3 = 300
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	210 (A)	520 (B)

Prevalence Index = B/A = 2.48

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 60%, reindeer lichen 40%

SOIL

Sampling Point T44-239

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	organic	100		0				
10-12	10YR 2/2	100		0			Silt Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

X Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 12

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 07/30/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T44-241
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Drainageway Local relief (concave, convex, none): concave Slope (%): 2
Subregion (LRR): Interior Alaska Lat: 67.01943350 Long: -153.63986700 Datum: WGS84
Soil Map Unit Name: _ NWI classification: R3UB3
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? Yes**
Remarks: drainageway with salix spp., comarum palustre, equisetum arvense. 1.5 feet wide, pockets of inundation, 9 inches deep. Photos 7734-7737. Substrate silt.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	0 (A)	0 (B)

Prevalence Index = B/A = 0.00

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 0 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks:

SOIL

Sampling Point T44-241

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 07/30/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T44-243
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 6
Subregion (LRR): Interior Alaska Lat: 67.01616370 Long: -153.63889860 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: upland hillslope. Photos 7738-7742.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	40	Yes	FACW
2.			
3.			
4.			
Total Cover: 40			
50% of total cover: 20 20% of total cover: 8			
Sapling/Shrub Stratum			
1. Picea mariana	15	No	FACW
2. Rhododendron groenlandicum	25	Yes	FAC
3. Vaccinium uliginosum	15	No	FAC
4. Vaccinium vitis-idaea	20	Yes	FAC
5. Betula nana	20	Yes	FAC
6.			
Total Cover: 95			
50% of total cover: 47 20% of total cover: 19			
Herb Stratum			
1. Carex rostrata	5	Yes	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 5			
50% of total cover: 2 20% of total cover: 1			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	5	x 1 = 5
FACW species	55	x 2 = 110
FAC species	80	x 3 = 240
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	140 (A)	355 (B)

Prevalence Index = B/A = 2.54

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 90
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: reindeer lichen 90%.

SOIL

Sampling Point T44-243

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-0.5	organic	100		0				
0.5-1.5	5Y 6/1	100		0			Loam	
1.5-11	10YR 4/6	100		0			Sandy Gravely Loam	no loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks: restrictive layer for digging gravel

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 07/30/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T44-270
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): concave Slope (%): 5
Subregion (LRR): Interior Alaska Lat: 67.01979970 Long: -153.64212830 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PFO4/SS1, IA2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**

Remarks: the sample location was taken on western side of the alignment within a picea forest wetland. Pockets of saturation and inundation observed at sample location. Pockets of PEM wetlands intermixed throughout forest. PFO/PSS wetland Photos 3859-3863

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	45	Yes	FACW
2.			
3.			
4.			
Total Cover: 45			
50% of total cover: 22 20% of total cover: 9			
Sapling/Shrub Stratum			
1. Picea mariana	35	Yes	FACW
2. Vaccinium uliginosum	50	Yes	FAC
3. Rhododendron groenlandicum	30	No	FAC
4. Rubus chamaemorus	30	No	FACW
5. Vaccinium vitis-idaea	10	No	FAC
6. Empetrum nigrum	40	Yes	FAC
Total Cover: 195			
50% of total cover: 97 20% of total cover: 39			
Herb Stratum			
1. Ranunculus abortivus	30	Yes	FAC
2. Calamagrostis canadensis	40	Yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 70			
50% of total cover: 35 20% of total cover: 14			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	110	x 2 = 220
FAC species	200	x 3 = 600
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	310 (A)	820 (B)

Prevalence Index = B/A = 2.65

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 65
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: lichen spp and sphagnum spp

SOIL

Sampling Point T44-270

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3		100		0				saturated organics
3-22	2.5Y 4/2	100		0			Sandy Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
X Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 22

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
X Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 15
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: saturated to the surface

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 07/30/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T44-272
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Drainageway Local relief (concave, convex, none): concave Slope (%): 5
Subregion (LRR): Interior Alaska Lat: 67.01972720 Long: -153.64278740 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PFO4/SS1, IA2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: the sample location was taken on western side of the alignment within a willow thicket, east of the PFO/PSS wetland. The drainage feature ~ 300ft wide with sphagnum muck substrate and water. Photos 3864-3868	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	40	Yes	FACW
2.			
3.			
4.			
Total Cover: 40			
50% of total cover: 20 20% of total cover: 8			
Sapling/Shrub Stratum			
1. salix spp	80	Yes	FAC
2. Picea mariana	10	No	FACW
3. Vaccinium uliginosum	10	No	FAC
4. Vaccinium vitis-idaea	5	No	FAC
5. Ribes triste	10	No	FAC
6.			
Total Cover: 115			
50% of total cover: 57 20% of total cover: 23			
Herb Stratum			
1. Petasites frigidus	20	Yes	FACW
2. Comarum palustre	40	Yes	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 60			
50% of total cover: 30 20% of total cover: 12			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	40	x 1 = 40
FACW species	70	x 2 = 140
FAC species	105	x 3 = 315
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	215 (A)	495 (B)

Prevalence Index = B/A = 2.30

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 70
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum spp

SOIL

Sampling Point T44-272

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	organic	100		0				saturated organics
5-7	10YR 3/1	100		0			Loamy Fine Sand	
7-13	2.5Y 3/1	100		0			Loamy Fine Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
X Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 13

Hydric Soil Present? Yes

Remarks: Redox features have not had sufficient time to develop with in drainage feature.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
X Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: saturated to the surface with pockets of inundation.

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 07/30/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T44-274
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Drainageway Local relief (concave, convex, none): concave Slope (%): 5
Subregion (LRR): Interior Alaska Lat: 67.01825660 Long: -153.64041480 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**

Remarks: the sample location was taken on past centerline towards the 2000ft boundary. The vegetation is consistent to the end of the sample area. Photos 3869-3873. Upland.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	45	Yes	FACW
2.			
3.			
4.			
Total Cover: 45			
50% of total cover: 22 20% of total cover: 9			
Sapling/Shrub Stratum			
1. Picea mariana	35	No	FACW
2. Betula nana	35	Yes	FAC
3. Vaccinium alaskaense	55	Yes	FAC
4. Rhododendron groenlandicum	55	Yes	FAC
5. Vaccinium vitis-idaea	25	No	FAC
6. Rubus chamaemorus	35	No	FACW
Total Cover: 240			
50% of total cover: 120 20% of total cover: 48			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	115	x 2 = 230
FAC species	170	x 3 = 510
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	285 (A)	740 (B)

Prevalence Index = B/A = 2.60

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 65
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum spp

SOIL

Sampling Point T44-274

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12		100		0				organic

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 12

Hydric Soil Present? Yes

Remarks: Restrictive digging layer of gravel. Low carbon content likely due to newly formed soils.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 07/30/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T45-245
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hill Local relief (concave, convex, none): convex Slope (%): 1
Subregion (LRR): Interior Alaska Lat: 67.04954620 Long: -153.54856460 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: photos 7743-7748	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	45	Yes	FACW
2.			
3.			
4.			
Total Cover: 45			
50% of total cover: 22 20% of total cover: 9			
Sapling/Shrub Stratum			
1. Picea mariana	5	No	FACW
2. Betula nana	20	Yes	FAC
3. Alnus viridis	10	No	FAC
4. Vaccinium uliginosum	5	No	FAC
5. Vaccinium vitis-idaea	15	Yes	FAC
6.			
Total Cover: 55			
50% of total cover: 27 20% of total cover: 11			
Herb Stratum			
1. Calamagrostis canadensis	8	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 8			
50% of total cover: 4 20% of total cover: 1			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	50	x 2 = 100
FAC species	58	x 3 = 174
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	108 (A)	274 (B)

Prevalence Index = B/A = 2.54

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 55
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 10%, reindeer lichen 20%, pelt lichen 20%, false pixie cup 5%

SOIL

Sampling Point T45-245

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	organic	100		0				
2-4	2.5YR 4/8	100		0			Loam	
4-7	2.5Y 6/8	100		0			Sandy Loam	
7-15	10YR 5/6	100		0			Sandy Gravely Loam	no loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks: restrictive layer for digging gravel

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 07/30/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T45-247
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): Interior Alaska Lat: 67.04973400 Long: -153.54860410 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: flat/depression. photos 7749-7753	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Betula nana	35	Yes	FAC
2. Spiraea stevenii	8	No	FACU
3. rubus pubescens	10	Yes	FACW
4.			
5.			
6.			
Total Cover: 53			
50% of total cover: 26 20% of total cover: 10			
Herb Stratum			
1. Calamagrostis canadensis	70	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 70			
50% of total cover: 35 20% of total cover: 14			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	10	x 2 = 20
FAC species	105	x 3 = 315
FACU species	8	x 4 = 32
UPL species	0	x 5 = 0
Column Totals:	123 (A)	367 (B)

Prevalence Index = B/A = 2.98

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 100
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 100%.

SOIL

Sampling Point T45-247

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	organic	100		0				
8-18	2.5Y 5/4	65	10YR 4/2	35	RM	M	Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 07/30/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T45-276
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 10
Subregion (LRR): Interior Alaska Lat: 67.05214580 Long: -153.54112420 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1B, IIB2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: the sample location was taken on northeast side of the alignment within a PSS wetland with problematic hydric soils likely caused by a shallow aquitard. Photos 3874-3878.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	5	Yes	FACW
2.			
3.			
4.			
Total Cover: 5			
50% of total cover: 2 20% of total cover: 1			
Sapling/Shrub Stratum			
1. Betula nana	40	Yes	FAC
2. salix spp	40	Yes	FAC
3. Rubus pubescens	30	Yes	FAC
4.			
5.			
6.			
Total Cover: 110			
50% of total cover: 55 20% of total cover: 22			
Herb Stratum			
1. Calamagrostis canadensis	98	Yes	FAC
2. Petasites frigidus	40	Yes	FACW
3. Equisetum palustre	50	Yes	FACW
4. Chamaenerion angustifolium	10	No	FACU
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 198			
50% of total cover: 99 20% of total cover: 39			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	95	x 2 = 190
FAC species	208	x 3 = 624
FACU species	10	x 4 = 40
UPL species	0	x 5 = 0
Column Totals:	313 (A)	854 (B)

Prevalence Index = B/A = 2.73

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T45-276

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	organic	100		0				saturated organics
3-17	2.5Y 3/1	90	10YR 3/3	10	RM	M	Loamy Fine Sand	Distinct Redox

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
X Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 17

Hydric Soil Present? Yes

Remarks: Depleted Matrix 3-17

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
X Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: saturated to the surface

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 07/30/2013
Applicant/Owner: State of Alaska - AIDEA Sampling Point: T45-278
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 10
Subregion (LRR): Interior Alaska Lat: 67.05151710 Long: -153.53706810 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PEM1C, IIIA3
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: the sample location was taken on the south side of the alignment within an emergent PEM wetland. Photos 3879-3883.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Rubus pubescens	3	Yes	FACW
2.			
3.			
4.			
5.			
6.			
Total Cover: 3			
50% of total cover: 1 20% of total cover: 0			
Herb Stratum			
1. Comarum palustre	10	Yes	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 10			
50% of total cover: 5 20% of total cover: 2			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	10	x 1 = 10
FACW species	3	x 2 = 6
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	13 (A)	16 (B)

Prevalence Index = B/A = 1.23

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 2
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T45-278

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-15		100		0				saturated organics

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

X Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: muck
Depth (inches): 15

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 15
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: saturated to the surface

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 08/25/2013
Applicant/Owner: AIDEA Sampling Point: T100-500
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): concave Slope (%): 5
Subregion (LRR): Northern Alaska Lat: 67.02996250 Long: -154.77741830 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/EM1H, IIC2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: The sample location was taken on the south side of the alignment within a floating PSS wetland. surrounding vegetation on both the west and east is upland. PSS/PEM Photos 4067-4071	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Vaccinium alaskaense	20	Yes	FAC
2. salix spp	10	Yes	FAC
3.			
4.			
5.			
6.			
Total Cover: 30			
50% of total cover: 15 20% of total cover: 6			
Herb Stratum			
1. Carex rostrata	40	Yes	OBL
2. Eriophorum angustifolium	50	Yes	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 90			
50% of total cover: 45 20% of total cover: 18			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	90	x 1 = 90
FACW species	0	x 2 = 0
FAC species	30	x 3 = 90
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	120 (A)	180 (B)

Prevalence Index = B/A = 1.50

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 30 Total Cover of Bryophytes: 30
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T100-500

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16		100		0				saturated organics

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

X Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 16

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 8
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: saturated to the surface with ponding visible from the aerial.

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 08/25/2013
Applicant/Owner: AIDEA Sampling Point: T100-501
Investigator(s): EG, AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 1
Subregion (LRR): Northern Alaska Lat: 67.03373360 Long: -154.77995590 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/EM1B
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: depression pem/ss. Surrounded by upland ridges. Photos 1-5.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. salix sp	15	Yes	FAC
2. Vaccinium uliginosum	15	Yes	FAC
3. Andromeda polifolia	25	Yes	OBL
4. Vaccinium vitis-idaea	10	No	FAC
5.			
6.			
Total Cover: 65			
50% of total cover: 32 20% of total cover: 13			
Herb Stratum			
1. Carex rostrata	50	Yes	OBL
2. Parnassia palustris	2	No	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 52			
50% of total cover: 26 20% of total cover: 10			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	75	x 1 = 75
FACW species	2	x 2 = 4
FAC species	40	x 3 = 120
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	117 (A)	199 (B)

Prevalence Index = B/A = 1.70

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 70
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 70% inbetween tussucks

SOIL

Sampling Point T100-501

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-19	organic	100		0				saturated

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

X Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 19

Hydric Soil Present? Yes

Remarks: saturated

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 11
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 08/25/2013
Applicant/Owner: AIDEA Sampling Point: T100-504
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hill Local relief (concave, convex, none): convex Slope (%): 5
Subregion (LRR): Northern Alaska Lat: 67.03017140 Long: -154.77713240 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: The sample location was taken on the south side of the alignment within the transition area between the PSS wetland and an upland. Photos 4077-4081. UPLAND.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	15	Yes	FACU
2.			
3.			
4.			
Total Cover: 15			
50% of total cover: 7 20% of total cover: 3			
Sapling/Shrub Stratum			
1. Betula nana	30	Yes	FAC
2. Vaccinium vitis-idaea	35	Yes	FAC
3. salix spp	11	No	FAC
4. Picea glauca	16	No	FACU
5. Rhododendron groenlandicum	20	No	FAC
6.			
Total Cover: 112			
50% of total cover: 56 20% of total cover: 22			
Herb Stratum			
1. Calamagrostis canadensis	15	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 15			
50% of total cover: 7 20% of total cover: 3			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	111	x 3 = 333
FACU species	31	x 4 = 124
UPL species	0	x 5 = 0
Column Totals:	142 (A)	457 (B)

Prevalence Index = B/A = 3.22

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 30
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: lichen spp.

SOIL

Sampling Point T100-504

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 4/6	100		0			Sandy Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
___Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 16

Hydric Soil Present? No

Remarks: Restrictive digging layer of gravel.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 08/25/2013
Applicant/Owner: AIDEA Sampling Point: T100-503
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hill Local relief (concave, convex, none): convex Slope (%): 2
Subregion (LRR): Northern Alaska Lat: 67.03458230 Long: -154.78075700 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/4B, IA3
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: pss ridge. photos 6-11	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	15	Yes	FACW
2.			
3.			
4.			
Total Cover: 15			
50% of total cover: 7 20% of total cover: 3			
Sapling/Shrub Stratum			
1. Picea mariana	10	No	FACW
2. Vaccinium uliginosum	30	Yes	FAC
3. Rhododendron groenlandicum	35	Yes	FAC
4. Betula nana	20	No	FAC
5. Vaccinium vitis-idaea	10	No	FAC
6. Rubus chamaemorus	10	No	FACW
Total Cover: 115			
50% of total cover: 57 20% of total cover: 23			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	35	x 2 = 70
FAC species	95	x 3 = 285
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	130 (A)	355 (B)

Prevalence Index = B/A = 2.73

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 100
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 40%, reindeer lichen 45%, false pixie cup 15%.

SOIL

Sampling Point T100-503

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-21	organic	100		0				saturated peat

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

X Histosol or Histel(A1)
__Histic Epipedon (A2)
X Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 21

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
X Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 1
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: North Slope Borough Sampling Date: 08/25/2013
Applicant/Owner: AIDEA Sampling Point: T100-504
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hill Local relief (concave, convex, none): convex Slope (%): 5
Subregion (LRR): Northern Alaska Lat: 67.03017140 Long: -154.77713240 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: The sample location was taken on the south side of the alignment within the transition area between the PSS wetland and an upland. Photos 4077-4081. UPLAND.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	15	Yes	FACU
2.			
3.			
4.			
Total Cover: 15			
50% of total cover: 7 20% of total cover: 3			
Sapling/Shrub Stratum			
1. Betula nana	30	Yes	FAC
2. Vaccinium vitis-idaea	35	Yes	FAC
3. salix spp	11	No	FAC
4. Picea glauca	16	No	FACU
5. Rhododendron groenlandicum	20	No	FAC
6.			
Total Cover: 112			
50% of total cover: 56 20% of total cover: 22			
Herb Stratum			
1. Calamagrostis canadensis	15	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 15			
50% of total cover: 7 20% of total cover: 3			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	111	x 3 =	333
FACU species	31	x 4 =	124
UPL species	0	x 5 =	0
Column Totals:	142 (A)		457 (B)

Prevalence Index = B/A = 3.22

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 30
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: lichen spp.

SOIL

Sampling Point T100-504

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 4/6	100		0			Sandy Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
___Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 16

Hydric Soil Present? No

Remarks: Restrictive digging layer of gravel.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 08/25/2013
Applicant/Owner: AIDEA Sampling Point: T100-505
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hill Local relief (concave, convex, none): convex Slope (%): 4
Subregion (LRR): Northern Alaska Lat: 67.03299330 Long: -154.77921680 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: upland ridge. Photos 12-16.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	20	Yes	FACW
2.			
3.			
4.			
Total Cover: 20			
50% of total cover: 10 20% of total cover: 4			
Sapling/Shrub Stratum			
1. Picea mariana	10	Yes	FACW
2. Vaccinium vitis-idaea	35	Yes	FAC
3. Empetrum nigrum	10	No	FAC
4. Vaccinium uliginosum	5	No	FAC
5. Betula nana	10	No	FAC
6. Rhododendron groenlandicum	10	No	FAC
Total Cover: 80			
50% of total cover: 40 20% of total cover: 16			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	30	x 2 = 60
FAC species	70	x 3 = 210
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	100 (A)	270 (B)

Prevalence Index = B/A = 2.70

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 100
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: reindeer lichen 90%, sphagnum 10%.

SOIL

Sampling Point T100-505

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1	10YR 5/1	100		0			Sand	
1-12.5	10YR 5/6	100		0			Sandy Gravely Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks: restrictive layer for digging gravel 12.5.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 08/25/2013
Applicant/Owner: AIDEA Sampling Point: T100-506
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): concave Slope (%): 5
Subregion (LRR): Northern Alaska Lat: 67.03119470 Long: -154.77830300 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PEM1B, IIIA3
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: photos 4082-4086. The sample location was taken on the south side of the alignment within PEM wetland	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Myrica gale	15	Yes	OBL
2.			
3.			
4.			
5.			
6.			
Total Cover: 15			
50% of total cover: 7 20% of total cover: 3			
Herb Stratum			
1. Carex rostrata	60	Yes	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 60			
50% of total cover: 30 20% of total cover: 12			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	75	x 1 = 75
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	75 (A)	75 (B)

Prevalence Index = B/A = 1.00

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 40
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T100-506

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-26		100		0				saturated organics

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

X Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 26

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 15
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 08/25/2013
Applicant/Owner: AIDEA Sampling Point: T101-507
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 4
Subregion (LRR): Northern Alaska Lat: 67.02160730 Long: -154.66876070 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: hillside photos 17-21	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	40	Yes	FACU
2. Populus balsamifera	15	Yes	FACU
3.			
4.			
Total Cover: 55			
50% of total cover: 27 20% of total cover: 11			
Sapling/Shrub Stratum			
1. Alnus viridis	35	Yes	FAC
2. Picea glauca	5	No	FACU
3. salix sp	5	No	FAC
4. Spiraea stevenii	10	No	FACU
5. Rosa acicularis	10	No	FACU
6. Rubus pubescens	30	Yes	FACW
Total Cover: 95			
50% of total cover: 47 20% of total cover: 19			
Herb Stratum			
1. Calamagrostis canadensis	15	Yes	FAC
2. Equisetum arvense	60	Yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 75			
50% of total cover: 37 20% of total cover: 15			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	30	x 2 = 60
FAC species	115	x 3 = 345
FACU species	80	x 4 = 320
UPL species	0	x 5 = 0
Column Totals:	225 (A)	725 (B)

Prevalence Index = B/A = 3.22

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
__ Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: leaf litter

SOIL

Sampling Point T101-507

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-24	10YR 2/1	85	organics	15			Loamy Fine Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks: restrictive layer for digging boulder.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
X Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 08/25/2013
Applicant/Owner: AIDEA Sampling Point: T101-508
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Drainageway Local relief (concave, convex, none): concave Slope (%): 5
Subregion (LRR): Northern Alaska Lat: 67.01755580 Long: -154.66621460 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1B, IA3
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**

Remarks: The sample location was taken on the south side of the alignment within a salix spp drainage feature ~300ft wide. Photos 4087-4901. Problematic wetland.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	20	Yes	FACW
2.			
3.			
4.			
Total Cover: 20			
50% of total cover: 10 20% of total cover: 4			
Sapling/Shrub Stratum			
1. salix spp	55	Yes	FAC
2. Alnus viridis	10	No	FAC
3. Vaccinium uliginosum	55	Yes	FAC
4. Betula nana	20	No	FAC
5. Rubus pubescens	15	No	FACW
6.			
Total Cover: 155			
50% of total cover: 77 20% of total cover: 31			
Herb Stratum			
1. Calamagrostis canadensis	10	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 10			
50% of total cover: 5 20% of total cover: 2			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	35	x 2 = 70
FAC species	150	x 3 = 450
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	185 (A)	520 (B)

Prevalence Index = B/A = 2.81

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 45
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T101-508

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 2/1	100		0			Loamy Fine Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
X Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks: PROBLEMATIC hydric soils with low carbon content. Wetland hydrology and hydrophytic vegetation present. Concave local relief, drainageway and located within a floodplain. The soils are likely hydric but lack indicators as they are newly formed soils. Restrivtive digging layer of gravel at 18 inches.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Pockets of inundation

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 08/25/2013
Applicant/Owner: AIDEA Sampling Point: T101-509
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Drainageway Local relief (concave, convex, none): concave Slope (%): 4
Subregion (LRR): Northern Alaska Lat: 67.02168280 Long: -154.66956720 Datum: WGS84
Soil Map Unit Name: _ NWI classification: R3UB2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: 12 inches wide, 2 inches deep, fine sand with gravels less than 0.5 inch diameter. Veg T101-507 with com pal. Photos 22-24	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	0 (A)	0 (B)

Prevalence Index = B/A = 0.00

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 0 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks:

SOIL

Sampling Point T101-509

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 08/25/2013
Applicant/Owner: AIDEA Sampling Point: T101-511
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 3
Subregion (LRR): Northern Alaska Lat: 67.02117140 Long: -154.67227420 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: photos 25-29. Pfo/ss	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	35	Yes	FACW
2.			
3.			
4.			
Total Cover: 35			
50% of total cover: 17 20% of total cover: 7			
Sapling/Shrub Stratum			
1. Picea mariana	10	No	FACW
2. Rhododendron groenlandicum	45	Yes	FAC
3. Vaccinium uliginosum	45	Yes	FAC
4. Rubus chamaemorus	15	No	FACW
5. Empetrum nigrum	25	No	FAC
6.			
Total Cover: 140			
50% of total cover: 70 20% of total cover: 28			
Herb Stratum			
1. Equisetum arvense	5	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 5			
50% of total cover: 2 20% of total cover: 1			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	60	x 2 = 120
FAC species	120	x 3 = 360
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	180 (A)	480 (B)

Prevalence Index = B/A = 2.67

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 90
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: spagnum 85%, reindeer lichen 5%.

SOIL

Sampling Point T101-511

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-13	organic	100		0				
13-19	10YR 2/1	100		0			Loamy Fine Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 19

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 08/25/2013
Applicant/Owner: AIDEA Sampling Point: T101-512
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Flood plain Local relief (concave, convex, none): concave Slope (%): 3
Subregion (LRR): Northern Alaska Lat: 67.01801930 Long: -154.66696840 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/EM1C, IIC1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: photos 4092-4096. The sample location was taken on the south side of the alignment within an old flood plain with cobbles. PSS wetland.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	20	Yes	FACW
2.			
3.			
4.			
Total Cover: 20			
50% of total cover: 10 20% of total cover: 4			
Sapling/Shrub Stratum			
1. salix spp	40	Yes	FAC
2. Vaccinium uliginosum	20	Yes	FAC
3. Rubus pubescens	10	No	FAC
4. Betula nana	20	Yes	FAC
5. Picea mariana	10	No	FACW
6.			
Total Cover: 100			
50% of total cover: 50 20% of total cover: 20			
Herb Stratum			
1. Carex media	30	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 30			
50% of total cover: 15 20% of total cover: 6			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	60	x 2 = 120
FAC species	90	x 3 = 270
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	150 (A)	390 (B)

Prevalence Index = B/A = 2.60

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 20
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T101-512

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8		100		0				saturated organics

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
X Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks: Problematic hydric soils. Restrictive digging layer of cobbles at 8 inches.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: saturated to the surface

Remarks: Pockets of inundation.

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 08/25/2013
Applicant/Owner: AIDEA Sampling Point: T101-513
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 3
Subregion (LRR): Northern Alaska Lat: 67.01935250 Long: -154.67497650 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: hillslope upland forest. Photos 30-34	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	35	Yes	FACW
2.			
3.			
4.			
Total Cover: 35			
50% of total cover: 17 20% of total cover: 7			
Sapling/Shrub Stratum			
1. Picea mariana	15	No	FACW
2. Betula nana	8	No	FAC
3. Vaccinium uliginosum	35	Yes	FAC
4. Rhododendron groenlandicum	25	Yes	FAC
5. Vaccinium vitis-idaea	30	Yes	FAC
6.			
Total Cover: 113			
50% of total cover: 56 20% of total cover: 22			
Herb Stratum			
1. Carex rostrata	15	Yes	OBL
2. Equisetum arvense	5	Yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 20			
50% of total cover: 10 20% of total cover: 4			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	15	x 1 = 15
FACW species	50	x 2 = 100
FAC species	103	x 3 = 309
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	168 (A)	424 (B)

Prevalence Index = B/A = 2.52

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 100
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: reindeer lichen 100%.

SOIL

Sampling Point T101-513

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-7	organic	100		0				
7-21	10YR 3/1	100		0			Loamy Fine Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 08/25/2013
Applicant/Owner: AIDEA Sampling Point: T101-514
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): concave Slope (%): 5
Subregion (LRR): Northern Alaska Lat: 67.01849870 Long: -154.66774880 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PFO4/SS1B, IA2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**

Remarks: The sample location was taken on the south side of the alignment within a forested wetland. Directly east of the floodplain (512). Photos 4097-4101. PFO WETLAND

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	35	Yes	FACW
2.			
3.			
4.			
Total Cover: 35			
50% of total cover: 17 20% of total cover: 7			
Sapling/Shrub Stratum			
1. Picea mariana	15	No	FACW
2. Betula nana	20	No	FAC
3. Rubus chamaemorus	30	Yes	FACW
4. Rhododendron groenlandicum	22	No	FAC
5. Vaccinium vitis-idaea	40	Yes	FAC
6. Vaccinium uliginosum	35	Yes	FAC
Total Cover: 162			
50% of total cover: 81 20% of total cover: 32			
Herb Stratum			
1. Carex media	55	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 55			
50% of total cover: 27 20% of total cover: 11			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	135	x 2 = 270
FAC species	117	x 3 = 351
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	252 (A)	621 (B)

Prevalence Index = B/A = 2.46

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 55
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T101-514

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-17		100		0				saturated organics

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

X Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 17

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 7
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: saturated to the surface

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 08/25/2013
Applicant/Owner: AIDEA Sampling Point: T101-516
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hill Local relief (concave, convex, none): convex Slope (%): 10
Subregion (LRR): Northern Alaska Lat: 67.01918170 Long: -154.66994070 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**

Remarks: The sample location was taken on the south side of the alignment within an upland. The upland boundry begins at 514(end). photos 4102-4106. UPLAND

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	20	Yes	FACU
2.			
3.			
4.			
Total Cover: 20			
50% of total cover: 10 20% of total cover: 4			
Sapling/Shrub Stratum			
1. Picea glauca	10	No	FACU
2. Rhododendron groenlandicum	20	Yes	FAC
3. Vaccinium vitis-idaea	20	Yes	FAC
4. Vaccinium uliginosum	10	No	FAC
5. Betula nana	30	Yes	FAC
6.			
Total Cover: 90			
50% of total cover: 45 20% of total cover: 18			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	80	x 3 = 240
FACU species	30	x 4 = 120
UPL species	0	x 5 = 0
Column Totals:	110 (A)	360 (B)

Prevalence Index = B/A = 3.27

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 45
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: lichen spp only

SOIL

Sampling Point T101-516

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3		100		0				organics
3-10	10YR 4/6	90	10YR 4/1	10	C	M	Sandy Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 10

Hydric Soil Present? No

Remarks: Restrictive digging layer of gravel.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 08/25/2013
Applicant/Owner: AIDEA Sampling Point: T102-515
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Stream terrace Local relief (concave, convex, none): convex Slope (%): 1
Subregion (LRR): Northern Alaska Lat: 67.01610940 Long: -154.57208050 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? No
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: stream terrace upland. photos 35-39.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	5	No	FACU
2. Picea mariana	25	Yes	FACW
3.			
4.			
Total Cover: 30			
50% of total cover: 15 20% of total cover: 6			
Sapling/Shrub Stratum			
1. Picea mariana	5	No	FACW
2. Picea glauca	20	No	FACU
3. salix sp	25	Yes	FAC
4. Vaccinium uliginosum	55	Yes	FAC
5. Rhododendron groenlandicum	25	No	FAC
6. Betula nana	15	No	FAC
Total Cover: 145			
50% of total cover: 72 20% of total cover: 29			
Herb Stratum			
1. Petasites frigidus	8	Yes	FACW
2. Equisetum arvense	5	Yes	FAC
3. Calamagrostis canadensis	5	Yes	FAC
4. Chamaenerion angustifolium	5	Yes	FACU
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 23			
50% of total cover: 11 20% of total cover: 4			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 85 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	38	x 2 = 76
FAC species	130	x 3 = 390
FACU species	30	x 4 = 120
UPL species	0	x 5 = 0
Column Totals:	198 (A)	586 (B)

Prevalence Index = B/A = 2.96

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 80
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 75%, pelt lichen 5%

SOIL

Sampling Point T102-515

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	organic	100		0				
8-23	10YR 4/3	100		0			Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches): 0
Water Table Present? No Depth (inches): 0
Saturation Present? No Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 08/25/2013
Applicant/Owner: AIDEA Sampling Point: T102-517
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hill Local relief (concave, convex, none): convex Slope (%): 2
Subregion (LRR): Northern Alaska Lat: 67.01670510 Long: -154.57206800 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation X , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: hill fire has removed tree layer. Photos 40-44	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Populus balsamifera	5	Yes	FACU
2.			
3.			
4.			
Total Cover: 5			
50% of total cover: 2 20% of total cover: 1			
Sapling/Shrub Stratum			
1. Picea glauca	10	No	FACU
2. Picea mariana	20	No	FACW
3. Betula nana	45	Yes	FAC
4. Rhododendron groenlandicum	55	Yes	FAC
5. Vaccinium uliginosum	20	No	FAC
6. Vaccinium vitis-idaea	10	No	FAC
Total Cover: 160			
50% of total cover: 80 20% of total cover: 32			
Herb Stratum			
1. Carex rostrata	8	Yes	OBL
2. Equisetum arvense	3	Yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 11			
50% of total cover: 5 20% of total cover: 2			

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 55
(Where applicable)

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	8	x 1 = 8
FACW species	20	x 2 = 40
FAC species	133	x 3 = 399
FACU species	15	x 4 = 60
UPL species	0	x 5 = 0
Column Totals:	176 (A)	507 (B)

Prevalence Index = B/A = 2.88

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 50%, false pixie cup 5%.

SOIL

Sampling Point T102-517

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	organic	100		0				
5-23	10YR 4/3	100		0			Loamy Fine Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 08/25/2013
Applicant/Owner: AIDEA Sampling Point: T102-519
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hill Local relief (concave, convex, none): convex Slope (%): 2
Subregion (LRR): Northern Alaska Lat: 67.01952020 Long: -154.57496380 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: hill top tree layer burnt. photos 45-49.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Betula nana	25	Yes	FAC
2. Picea mariana	25	Yes	FACW
3. Picea glauca	10	No	FACU
4. Vaccinium vitis-idaea	35	Yes	FAC
5. Vaccinium uliginosum	10	No	FAC
6. Rhododendron groenlandicum	5	No	FAC
Total Cover: 110			
50% of total cover: 55 20% of total cover: 22			
Herb Stratum			
1. Geocaulon lividum	10	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 10			
50% of total cover: 5 20% of total cover: 2			

Plot size (radius, or length x width): 15 % Bare ground: 5
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 30
(Where applicable)

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	25	x 2 = 50
FAC species	75	x 3 = 225
FACU species	20	x 4 = 80
UPL species	0	x 5 = 0
Column Totals:	120 (A)	355 (B)

Prevalence Index = B/A = 2.96

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes

Remarks: reindeer lichen 25%, false pixie cup 5%.

SOIL

Sampling Point T102-519

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	organic	100		0				
2-20	10YR 4/3	100		0			Loamy Fine Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 08/25/2013
Applicant/Owner: AIDEA Sampling Point: T103-223
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): convex Slope (%): 1
Subregion (LRR): Northern Alaska Lat: 67.01414010 Long: -154.45170140 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: photos 55-59	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	35	Yes	FACW
2.			
3.			
4.			
Total Cover: 35			
50% of total cover: 17 20% of total cover: 7			
Sapling/Shrub Stratum			
1. Betula nana	30	Yes	FAC
2. Vaccinium vitis-idaea	55	Yes	FAC
3. Rubus chamaemorus	15	No	FACW
4. Empetrum nigrum	10	No	FAC
5. Picea mariana	15	No	FACW
6. salix sp	10	No	FAC
Total Cover: 135			
50% of total cover: 67 20% of total cover: 27			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	65	x 2 = 130
FAC species	105	x 3 = 315
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	170 (A)	445 (B)

Prevalence Index = B/A = 2.62

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 40
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 30%, reindeer lichen 10%

SOIL

Sampling Point T103-223

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	organic	100		0				
6-20	2.5Y 3/1	100		0			Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 20

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: very moist soils

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 08/25/2013
Applicant/Owner: AIDEA Sampling Point: T103-518
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): concave Slope (%): 5
Subregion (LRR): Northern Alaska Lat: 67.01446400 Long: -154.58015540 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland, IA2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**

Remarks: The sample location was taken on the south side of the alignment within a scrub/shrub layer. To the east is a small epherial stream flowing into the larger stream. Photos 4107-4111. Upland, lacks hydric soils

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	30	Yes	FACW
2.			
3.			
4.			
Total Cover: 30			
50% of total cover: 15 20% of total cover: 6			
Sapling/Shrub Stratum			
1. Vaccinium uliginosum	45	Yes	FAC
2. Picea mariana	21	No	FACW
3. salix spp	35	Yes	FAC
4. Betula nana	25	No	FAC
5. Rubus chamaemorus	10	No	FACW
6.			
Total Cover: 136			
50% of total cover: 68 20% of total cover: 27			
Herb Stratum			
1. Calamagrostis canadensis	5	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 5			
50% of total cover: 2 20% of total cover: 1			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	61	x 2 = 122
FAC species	110	x 3 = 330
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	171 (A)	452 (B)

Prevalence Index = B/A = 2.64

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 15
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T103-518

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1	organic	100		0				organics
1-18	10YR 3/1	100		0			Sandy Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: none
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: stream directly east

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 08/25/2013
Applicant/Owner: AIDEA Sampling Point: T103-520
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): concave Slope (%): 5
Subregion (LRR): Northern Alaska Lat: 67.01511370 Long: -154.57802010 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PFO4/SS1B, IA2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**

Remarks: The sample location was taken on the south side of the alignment within a picea forest wetland adjacent to the previous upland boundary. Photos 4112-4116. PFO WETLAND

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	35	Yes	FACW
2.			
3.			
4.			
Total Cover: 35			
50% of total cover: 17 20% of total cover: 7			
Sapling/Shrub Stratum			
1. Picea mariana	15	No	FACW
2. Betula nana	25	Yes	FAC
3. Vaccinium uliginosum	20	No	FAC
4. Rubus chamaemorus	30	Yes	FACW
5. Rhododendron groenlandicum	15	No	FAC
6.			
Total Cover: 105			
50% of total cover: 52 20% of total cover: 21			
Herb Stratum			
1. Carex media	30	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 30			
50% of total cover: 15 20% of total cover: 6			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	110	x 2 = 220
FAC species	60	x 3 = 180
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	170 (A)	400 (B)

Prevalence Index = B/A = 2.35

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 40
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T103-520

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4		100		0				saturated organics
4-17	10YR 3/2	100		0			Very Fine Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
X Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 17

Hydric Soil Present? Yes

Remarks: Hydric soil indicators have not formed, but hydrophytic vegetation and wetland hydrology is present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 4
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 08/25/2013
Applicant/Owner: AIDEA Sampling Point: T103-521
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 1
Subregion (LRR): Northern Alaska Lat: 67.01330020 Long: -154.45151700 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PEM1/SS1Bb
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: depression with pockets of inundation likely from beaver. Observed gnawed sticks in scrub area. photos 50-54. pem	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. salix sp	15	Yes	FAC
2. Betula nana	5	No	FAC
3. Spiraea stevenii	5	No	FACU
4. Rubus pubescens	8	Yes	FACW
5.			
6.			
Total Cover: 33			
50% of total cover: 16 20% of total cover: 6			
Herb Stratum			
1. Comarum palustre	15	No	OBL
2. Chamaenerion angustifolium	5	No	FACU
3. Calamagrostis canadensis	80	Yes	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 100			
50% of total cover: 50 20% of total cover: 20			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	15	x 1 = 15
FACW species	8	x 2 = 16
FAC species	100	x 3 = 300
FACU species	10	x 4 = 40
UPL species	0	x 5 = 0
Column Totals:	133 (A)	371 (B)

Prevalence Index = B/A = 2.79

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T103-521

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	organic	50	2.5Y 3/2	50			Silty Clay Loam	organics saturated

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
X Histic Epipedon (A2)
X Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
X Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 6
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: pockets of inundation

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 08/25/2013
Applicant/Owner: AIDEA Sampling Point: T103-522
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hill Local relief (concave, convex, none): convex Slope (%): 10
Subregion (LRR): Northern Alaska Lat: 67.01628650 Long: -154.58160770 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland, IA2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? No**
Remarks: The sample location was taken on the north side of the alignment within a forested upland. Photos 4117-4121. UPLAND	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	35	Yes	FACU
2.			
3.			
4.			
Total Cover: 35			
50% of total cover: 17 20% of total cover: 7			
Sapling/Shrub Stratum			
1. Picea glauca	15	No	FACU
2. Vaccinium uliginosum	50	Yes	FAC
3. Rhododendron groenlandicum	25	Yes	FAC
4. Vaccinium vitis-idaea	20	No	FAC
5. Rubus chamaemorus	15	No	FACW
6.			
Total Cover: 125			
50% of total cover: 62 20% of total cover: 25			
Herb Stratum			
1. Equisetum arvense	10	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 10			
50% of total cover: 5 20% of total cover: 2			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	15	x 2 = 30
FAC species	105	x 3 = 315
FACU species	50	x 4 = 200
UPL species	0	x 5 = 0
Column Totals:	170 (A)	545 (B)

Prevalence Index = B/A = 3.21

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 40
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T103-522

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-9		100		0				saturated organics

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks: Restrictive digging layer of rock at 9 inches.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 9
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 08/25/2013
Applicant/Owner: AIDEA Sampling Point: T103-524
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Stream terrace Local relief (concave, convex, none): convex Slope (%): 0
Subregion (LRR): Northern Alaska Lat: 67.01565970 Long: -154.57405490 Datum: WGS84
Soil Map Unit Name: _ NWI classification: R3UB1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**

Remarks: The sample location was taken on a upper perennial stream flowing north-south, then eventually turning to flow east-west. Rocks and cobble substrate with sand. riffle glide morphology with a beaver dam. Bankfull width 300ft, wetted perimeter 25ft. Photos. 4122-4125

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	0 (A)	0 (B)

Prevalence Index = B/A = 0.00

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 0 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks:

SOIL

Sampling Point T103-524

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 08/25/2013
Applicant/Owner: AIDEA Sampling Point: T103-525
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Drainageway Local relief (concave, convex, none): concave Slope (%): 1
Subregion (LRR): Northern Alaska Lat: 67.01414010 Long: -154.45170140 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/EM1B, IIB1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: pss. Photos 60-64.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. salix sp	80	Yes	FAC
2. Vaccinium uliginosum	10	No	FAC
3. Betula nana	5	No	FAC
4.			
5.			
6.			
Total Cover: 95			
50% of total cover: 47 20% of total cover: 19			
Herb Stratum			
1. Calamagrostis canadensis	60	Yes	FAC
2. Comarum palustre	5	No	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 65			
50% of total cover: 32 20% of total cover: 13			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	5	x 1 = 5
FACW species	0	x 2 = 0
FAC species	155	x 3 = 465
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	160 (A)	470 (B)

Prevalence Index = B/A = 2.94

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T103-525

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1	organic	100		0				
1-15	2.5Y 3/1	75	organic	25			Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
X Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
X Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 8
Saturation Present? Yes Depth (inches): 1
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: pockets of inundation

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 08/25/2013
Applicant/Owner: AIDEA Sampling Point: T104-526
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Stream terrace Local relief (concave, convex, none): convex Slope (%): 0
Subregion (LRR): Northern Alaska Lat: 67.01169870 Long: -154.45658800 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Pond
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? Yes**

Remarks: The sample location was taken on the south side of the alignment at a POW with mucky substrate and cal pur. The pond was surrounded by PSS wetland. Photos 4126-4129.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	0 (A)	0 (B)

Prevalence Index = B/A = 0.00

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 0 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks:

SOIL

Sampling Point T104-526

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 08/26/2013
Applicant/Owner: AIDEA Sampling Point: T104-527
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hill Local relief (concave, convex, none): convex Slope (%): 1
Subregion (LRR): Northern Alaska Lat: 67.01907970 Long: -154.30423660 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: hill south of river. Photos 65-69. Tree layer removed by fire.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Betula nana	45	Yes	FAC
2. Vaccinium uliginosum	40	Yes	FAC
3. Rhododendron groenlandicum	20	No	FAC
4. salix sp	10	No	FAC
5. Picea mariana	25	No	FACW
6.			
Total Cover: 140			
50% of total cover: 70 20% of total cover: 28			
Herb Stratum			
1. Carex rostrata	30	Yes	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 30			
50% of total cover: 15 20% of total cover: 6			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	30	x 1 = 30
FACW species	25	x 2 = 50
FAC species	115	x 3 = 345
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	170 (A)	425 (B)

Prevalence Index = B/A = 2.50

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 35
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: false pixie cup 10%, sphagnum 15%, pelt lichen 10%.

SOIL

Sampling Point T104-527

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-7	organic	100		0				
7-9	10YR 3/2	100		0			silty sand	silty sand
9-22	10YR 3/3	100		0			Sandy Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 08/25/2013
Applicant/Owner: AIDEA Sampling Point: T104-528
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Stream terrace Local relief (concave, convex, none): convex Slope (%): 0
Subregion (LRR): Northern Alaska Lat: 67.01091550 Long: -154.45557870 Datum: WGS84
Soil Map Unit Name: _ NWI classification: R2UB3
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? Yes**

Remarks: The sample location was taken on the south side of the alignment at the confluence of two lower perennial streams. One flowing north-south, the other east-west. Sand and muck substrate with slow moving water. Photos 4130-4133.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	0 (A)	0 (B)

Prevalence Index = B/A = 0.00

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 0 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks:

SOIL

Sampling Point T104-528

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 08/26/2013
Applicant/Owner: AIDEA Sampling Point: T104-529
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 0
Subregion (LRR): Northern Alaska Lat: 67.01879440 Long: -154.30386150 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Pond
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: pond. About 12 inches deep. Algal mat about 12 inches above waters edge and 8 feet to west.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	0 (A)	0 (B)

Prevalence Index = B/A = 0.00

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 0 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks:

SOIL

Sampling Point T104-529

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 08/25/2013
Applicant/Owner: AIDEA Sampling Point: T104-530
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): Northern Alaska Lat: 67.01089980 Long: -154.45475720 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: The sample location was taken on the south side of the alignment within sn upland on the east side of the stream confluence. Photos 4134-4138. UPLAND	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	10	Yes	FACW
2.			
3.			
4.			
Total Cover: 10			
50% of total cover: 5 20% of total cover: 2			
Sapling/Shrub Stratum			
1. Picea mariana	5	No	FACW
2. salix spp	60	Yes	FAC
3. Vaccinium uliginosum	30	Yes	FAC
4.			
5.			
6.			
Total Cover: 95			
50% of total cover: 47 20% of total cover: 19			
Herb Stratum			
1. Equisetum arvense	11	Yes	FAC
2. Chamaenerion angustifolium	10	Yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 21			
50% of total cover: 10 20% of total cover: 4			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	15	x 2 = 30
FAC species	101	x 3 = 303
FACU species	10	x 4 = 40
UPL species	0	x 5 = 0
Column Totals:	126 (A)	373 (B)

Prevalence Index = B/A = 2.96

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T104-530

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1		100		0				organic
1-17	10YR 3/1	100		0			Sandy Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
X Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: none
Depth (inches): 0

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 08/26/2013
Applicant/Owner: AIDEA Sampling Point: T104-531
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Drainageway Local relief (concave, convex, none): concave Slope (%): 1
Subregion (LRR): Northern Alaska Lat: 67.01731210 Long: -154.30477240 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/EM1B, IIB1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**

Remarks: drainage inbetween two hills. photos 74-78. Channel approximately 8 feet to south. 18 inches wide 4 inches deep bankfull 24 inches wide and 24 inches deep. Silty sand substrate.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. salix sp	95	Yes	FAC
2. Vaccinium uliginosum	25	Yes	FAC
3.			
4.			
5.			
6.			
Total Cover: 120			
50% of total cover: 60 20% of total cover: 24			
Herb Stratum			
1. Calamagrostis canadensis	40	Yes	FAC
2. Comarum palustre	20	Yes	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 60			
50% of total cover: 30 20% of total cover: 12			

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 80
(Where applicable)

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	20	x 1 = 20
FACW species	0	x 2 = 0
FAC species	160	x 3 = 480
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	180 (A)	500 (B)

Prevalence Index = B/A = 2.78

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 80%.

SOIL

Sampling Point T104-531

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	organic	100		0				
3-13	10YR 2/1	100		0			Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
X Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 13

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 08/25/2013
Applicant/Owner: AIDEA Sampling Point: T104-532
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): convex Slope (%): 3
Subregion (LRR): Northern Alaska Lat: 67.01008800 Long: -154.45182360 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: The sample location was taken on the south side of the alignment after crossing the lower perennial stream previously mapped. Photos 4139-4143. UPLAND	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	5	Yes	FACW
2.			
3.			
4.			
Total Cover: 5			
50% of total cover: 2 20% of total cover: 1			
Sapling/Shrub Stratum			
1. Picea mariana	3	No	FACW
2. Betula nana	40	Yes	FAC
3. Vaccinium uliginosum	40	Yes	FAC
4. salix spp	60	Yes	FAC
5. Arctostaphylos alpina	30	No	FACU
6.			
Total Cover: 173			
50% of total cover: 86 20% of total cover: 34			
Herb Stratum			
1. Calamagrostis canadensis	30	Yes	FAC
2. Chamaenerion angustifolium	15	Yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 45			
50% of total cover: 22 20% of total cover: 9			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 83 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	8	x 2 = 16
FAC species	170	x 3 = 510
FACU species	45	x 4 = 180
UPL species	0	x 5 = 0
Column Totals:	223 (A)	706 (B)

Prevalence Index = B/A = 3.17

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T104-532

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2		100		0				organic
2-16	10YR 3/1	100		0			Loamy Fine Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
X Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: none
Depth (inches): 0

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 08/26/2013
Applicant/Owner: AIDEA Sampling Point: T104-533
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Stream terrace Local relief (concave, convex, none): convex Slope (%): 2
Subregion (LRR): Northern Alaska Lat: 67.01574510 Long: -154.30242040 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/EM1B
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: pss terrace between two drainages. Photos 79-83.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	10	Yes	FACW
2.			
3.			
4.			
Total Cover: 10			
50% of total cover: 5 20% of total cover: 2			
Sapling/Shrub Stratum			
1. Picea mariana	40	Yes	FACW
2. Vaccinium uliginosum	65	Yes	FAC
3. Rubus chamaemorus	10	No	FACW
4. Empetrum nigrum	15	No	FAC
5. Vaccinium vitis-idaea	5	No	FAC
6. Rhododendron groenlandicum	10	No	FAC
Total Cover: 145			
50% of total cover: 72 20% of total cover: 29			
Herb Stratum			
1. Calamagrostis canadensis	50	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 50			
50% of total cover: 25 20% of total cover: 10			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	60	x 2 = 120
FAC species	145	x 3 = 435
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	205 (A)	555 (B)

Prevalence Index = B/A = 2.71

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 90
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 85%, reindeer lichen 5%. Picea stunted.

SOIL

Sampling Point T104-533

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	organic	100		0				
10-15	10YR 3/1	100		0			Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 15

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 6
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 08/25/2013
Applicant/Owner: AIDEA Sampling Point: T104-534
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 2
Subregion (LRR): Northern Alaska Lat: 67.01264340 Long: -154.45527300 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PEM1, IIIA3
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: PEM WETLAND. The sample location was taken on centerline. Photos 4144-4148.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. salix sp	2	Yes	FAC
2.			
3.			
4.			
5.			
6.			
Total Cover: 2			
50% of total cover: 1 20% of total cover: 0			
Herb Stratum			
1. Calamagrostis canadensis	80	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 80			
50% of total cover: 40 20% of total cover: 16			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	82	x 3 = 246
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	82 (A)	246 (B)

Prevalence Index = B/A = 3.00

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 5 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T104-534

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2		100		0				saturated organics
2-14	Gley 1 10Y 2.5/1	100		0			Sandy Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
X Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: none
Depth (inches): 0

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 7
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: saturated to the surface

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 08/26/2013
Applicant/Owner: AIDEA Sampling Point: T104-535
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Stream terrace Local relief (concave, convex, none): convex Slope (%): 2
Subregion (LRR): Northern Alaska Lat: 67.01560780 Long: -154.30325780 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PFO4/SS1B, IA2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: terraces inbetween two drainages. terrace higher elevation than T104-533. Photos 84-88.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	40	Yes	FACW
2. Populus balsamifera	5	No	FACU
3.			
4.			
Total Cover: 45			
50% of total cover: 22 20% of total cover: 9			
Sapling/Shrub Stratum			
1. Picea mariana	5	No	FACW
2. Populus balsamifera	15	No	FACU
3. Alnus viridis	15	No	FAC
4. salix sp	40	Yes	FAC
5. Vaccinium uliginosum	40	Yes	FAC
6. Vaccinium vitis-idaea	15	No	FAC
Total Cover: 130			
50% of total cover: 65 20% of total cover: 26			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	45	x 2 = 90
FAC species	110	x 3 = 330
FACU species	20	x 4 = 80
UPL species	0	x 5 = 0
Column Totals:	175 (A)	500 (B)

Prevalence Index = B/A = 2.86

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 70
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 70%

SOIL

Sampling Point T104-535

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	organic	100		0				
5-16	10YR 3/1	100		0			Silty Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
X Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 16

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 08/26/2013
Applicant/Owner: AIDEA Sampling Point: T105-537
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hill Local relief (concave, convex, none): convex Slope (%): 2
Subregion (LRR): Northern Alaska Lat: 67.04160330 Long: -154.21720000 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: photos 89-94. Burnt picea tree layer.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Picea mariana	30	Yes	FACW
2. Betula nana	20	No	FAC
3. salix sp	12	No	FAC
4. Vaccinium uliginosum	25	Yes	FAC
5. Spiraea stevenii	25	Yes	FACU
6. Rhododendron groenlandicum	20	No	FAC
Total Cover: 132			
50% of total cover: 66 20% of total cover: 26			
Herb Stratum			
1. Calamagrostis canadensis	45	Yes	FAC
2. Chamaenerion angustifolium	8	No	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 53			
50% of total cover: 26 20% of total cover: 10			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	30	x 2 = 60
FAC species	122	x 3 = 366
FACU species	33	x 4 = 132
UPL species	0	x 5 = 0
Column Totals:	185 (A)	558 (B)

Prevalence Index = B/A = 3.02

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 85
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnm 85%

SOIL

Sampling Point T105-537

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	organic	100		0				
3-10	2.5Y 4/2	100		0			Sandy Gravely Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks: restrictive layer for digging gravel

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 08/26/2013
Applicant/Owner: AIDEA Sampling Point: T105-539
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hill Local relief (concave, convex, none): convex Slope (%): 3
Subregion (LRR): Northern Alaska Lat: 67.04114520 Long: -154.21567330 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: located on edge of burned picea. Upland photos 95-99	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	30	Yes	FACW
2.			
3.			
4.			
Total Cover: 30			
50% of total cover: 15 20% of total cover: 6			
Sapling/Shrub Stratum			
1. salix sp	35	Yes	FAC
2. Alnus viridis	5	No	FAC
3. Betula nana	45	Yes	FAC
4. Vaccinium uliginosum	40	Yes	FAC
5. Rhododendron groenlandicum	25	No	FAC
6. Picea mariana	5	No	FACW
Total Cover: 155			
50% of total cover: 77 20% of total cover: 31			
Herb Stratum			
1. Equisetum arvense	5	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 5			
50% of total cover: 2 20% of total cover: 1			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	35	x 2 = 70
FAC species	155	x 3 = 465
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	190 (A)	535 (B)

Prevalence Index = B/A = 2.82

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 30
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 30%

SOIL

Sampling Point T105-539

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	organic	100		0				
12-20	10YR 3/1	100		0			Silty Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks: restrictive layer for digging gravel

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 08/26/2013
Applicant/Owner: AIDEA Sampling Point: T105-541
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 5
Subregion (LRR): Northern Alaska Lat: 67.03922450 Long: -154.21265370 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: photos 100-104	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	35	Yes	FACW
2. Picea glauca	5	No	FACU
3.			
4.			
Total Cover: 40			
50% of total cover: 20 20% of total cover: 8			
Sapling/Shrub Stratum			
1. Picea mariana	2	No	FACW
2. Alnus viridis	45	Yes	FAC
3. salix sp	30	No	FAC
4. Vaccinium uliginosum	60	Yes	FAC
5. Betula nana	15	No	FAC
6. Vaccinium vitis-idaea	10	No	FAC
Total Cover: 162			
50% of total cover: 81 20% of total cover: 32			
Herb Stratum			
1. Equisetum arvense	10	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 10			
50% of total cover: 5 20% of total cover: 2			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	37	x 2 = 74
FAC species	170	x 3 = 510
FACU species	5	x 4 = 20
UPL species	0	x 5 = 0
Column Totals:	212 (A)	604 (B)

Prevalence Index = B/A = 2.85

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 35
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 35%

SOIL

Sampling Point T105-541

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	organic	100		0				
8-14	10YR 2/1	100		0			Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
___Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks: restrictive layer for digging gravel

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 08/26/2013
Applicant/Owner: AIDEA Sampling Point: T105-543
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 5
Subregion (LRR): Northern Alaska Lat: 67.04035840 Long: -154.21320770 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: photos 105-110	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Betula nana	45	Yes	FAC
2. Picea mariana	20	No	FACW
3. Vaccinium uliginosum	65	Yes	FAC
4. Spiraea stevenii	15	No	FACU
5. Rhododendron groenlandicum	30	No	FAC
6. Vaccinium vitis-idaea	5	No	FAC
Total Cover: 180			
50% of total cover: 90 20% of total cover: 36			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	20	x 2 = 40
FAC species	145	x 3 = 435
FACU species	15	x 4 = 60
UPL species	0	x 5 = 0
Column Totals:	180 (A)	535 (B)

Prevalence Index = B/A = 2.97

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 45
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 10%, false pixie cup 35%. Tree layer burnt picea.

SOIL

Sampling Point T105-543

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	organic	100		0				
6-20	10YR 3/2	100		0			gravelly clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks: restrictive layer for digging gravel

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 08/26/2013
Applicant/Owner: AIDEA Sampling Point: T106-536
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): Northern Alaska Lat: 67.01876040 Long: -154.31162480 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/EM1B, IIC1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: The sample location was taken on the south side of the alignment within a PSS WETLAND with deep tussocks. Photos 4140-4153.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	10	Yes	FACW
2.			
3.			
4.			
Total Cover: 10			
50% of total cover: 5 20% of total cover: 2			
Sapling/Shrub Stratum			
1. Picea mariana	5	No	FACW
2. Betula nana	35	Yes	FAC
3. Vaccinium uliginosum	20	Yes	FAC
4. salix spp	15	No	FAC
5. Vaccinium vitis-idaea	15	No	FAC
6. Rhododendron groenlandicum	10	No	FAC
Total Cover: 100			
50% of total cover: 50 20% of total cover: 20			
Herb Stratum			
1. Eriophorum angustifolium	50	Yes	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 50			
50% of total cover: 25 20% of total cover: 10			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	50	x 1 = 50
FACW species	15	x 2 = 30
FAC species	95	x 3 = 285
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	160 (A)	365 (B)

Prevalence Index = B/A = 2.28

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 40
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T106-536

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12		100		0				saturated organics

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

X Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 12

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: saturated to the surface

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 08/26/2013
Applicant/Owner: AIDEA Sampling Point: T106-538
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): Northern Alaska Lat: 67.01761370 Long: -154.31194340 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/EM1B
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**

Remarks: The sample location was taken on the south side of the alignment within the same PSS WETLAND described in the previous sample point. Photos 4154-4158.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	5	Yes	FACW
2.			
3.			
4.			
Total Cover: 5			
50% of total cover: 2 20% of total cover: 1			
Sapling/Shrub Stratum			
1. Picea mariana	5	No	FACW
2. salix spp	15	No	FAC
3. Betula nana	45	Yes	FAC
4. Vaccinium vitis-idaea	5	No	FAC
5. Vaccinium uliginosum	45	Yes	FAC
6.			
Total Cover: 115			
50% of total cover: 57 20% of total cover: 23			
Herb Stratum			
1. Equisetum pratense	15	Yes	FACW
2. Carex media	40	Yes	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 55			
50% of total cover: 27 20% of total cover: 11			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	65	x 2 = 130
FAC species	110	x 3 = 330
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	175 (A)	460 (B)

Prevalence Index = B/A = 2.63

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 45
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T106-538

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-14		100		0				saturated organics
14-20	10YR 2/1	100		0			Silt Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 20

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 13
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: saturated organics

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 08/26/2013
Applicant/Owner: AIDEA Sampling Point: T106-540
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Drainageway Local relief (concave, convex, none): concave Slope (%): 5
Subregion (LRR): Northern Alaska Lat: 67.01714910 Long: -154.31200380 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/EM1C
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**

Remarks: The sample location was taken on the south side of the alignment within a Salix spp drainage feature ~500ft wide. Flowing water with mucky sand substrate was observed within the channel. Photos 4159-4163.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Salix spp	70	Yes	FAC
2. Vaccinium uliginosum	30	Yes	FAC
3. Betula nana	40	Yes	FAC
4.			
5.			
6.			
Total Cover: 140			
50% of total cover: 70 20% of total cover: 28			
Herb Stratum			
1. Carex rostrata	31	Yes	OBL
2. Calamagrostis canadensis	10	Yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 41			
50% of total cover: 20 20% of total cover: 8			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	31	x 1 = 31
FACW species	0	x 2 = 0
FAC species	150	x 3 = 450
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	181 (A)	481 (B)

Prevalence Index = B/A = 2.66

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T106-540

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 3/2	80	7.5YR 4/6	20	RM	M	Loamy Fine Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
X Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 16

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: stream present in drainage feature flowing east-west

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/26/2013
Applicant/Owner: AIDEA Sampling Point: T106-545
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 3
Subregion (LRR): Northern Alaska Lat: 67.03976170 Long: -154.12224070 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PFO4/SS1B, IA2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: photos 111-115. pfo	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	35	Yes	FACW
2.			
3.			
4.			
Total Cover: 35			
50% of total cover: 17 20% of total cover: 7			
Sapling/Shrub Stratum			
1. Betula nana	15	No	FAC
2. Picea mariana	10	No	FACW
3. Rhododendron groenlandicum	35	Yes	FAC
4. Rubus chamaemorus	30	Yes	FACW
5. Vaccinium uliginosum	20	No	FAC
6. Empetrum nigrum	10	No	FAC
Total Cover: 120			
50% of total cover: 60 20% of total cover: 24			
Herb Stratum			
1. Carex rostrata	40	Yes	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 40			
50% of total cover: 20 20% of total cover: 8			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	40	x 1 = 40
FACW species	75	x 2 = 150
FAC species	80	x 3 = 240
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	195 (A)	430 (B)

Prevalence Index = B/A = 2.21

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 90
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 90%

SOIL

Sampling Point T106-545

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-14	organic	100		0				

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- X Histosol or Histel(A1)
- X Histic Epipedon (A2)
- __Hydrogen Sulfide (A4)
- __Thick Dark Surface (A12)
- __Alaska Gleyed (A13)
- __Alaska Redox (A14)
- __Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

- __Alaska Color Change (TA4)[4]
- __Alaska Alpine Swales (TA5)
- __Alaska Redox With 2.5Y Hue
- __Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- __Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 14

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- __Surface Water (A1)
- __High Water Table (A2)
- X Saturation (A3)
- __Water Marks (B1)
- __Sediment Deposits (B2)
- __Drift Deposits (B3)
- __Algal Mat or Crust (B4)
- __Iron Deposits (B5)
- __Surface Soil Cracks (B6)
- __Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __Marl Deposits (B15)
- __Hydrogen Sulfide Odor (C1)
- __Dry Season Water Table (C2)
- __Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- __Water-stained Leaves (B9)
- __Drainage Patterns (B10)
- __Oxidized Rhizospheres along Living Roots (C3)
- __Presence of Reduced Iron (C4)
- __Salt Deposits (C5)
- __Stunted or Stressed Plants (D1)
- __Geomorphic Position (D2)
- X Shallow Aquitard (D3)
- __Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 5
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/26/2013
Applicant/Owner: AIDEA Sampling Point: T106-547
Investigator(s): EG, AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 0
Subregion (LRR): Northern Alaska Lat: 67.03924840 Long: -154.12226050 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PEM1B
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: pem surrounded by pfo. photos 116-119.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Betula nana	5	Yes	FAC
2. Vaccinium uliginosum	15	Yes	FAC
3.			
4.			
5.			
6.			
Total Cover: 20			
50% of total cover: 10 20% of total cover: 4			
Herb Stratum			
1. Carex rostrata	70	Yes	OBL
2. Eriophorum angustifolium	10	No	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 80			
50% of total cover: 40 20% of total cover: 16			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	80	x 1 = 80
FACW species	0	x 2 = 0
FAC species	20	x 3 = 60
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	100 (A)	140 (B)

Prevalence Index = B/A = 1.40

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 100
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 100%

SOIL

Sampling Point T106-547

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	organic	100		0				saturated

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

X Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 16

Hydric Soil Present? Yes

Remarks: saturated

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 3
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: pockets of inundation.

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/26/2013
Applicant/Owner: AIDEA Sampling Point: T106-549
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 3
Subregion (LRR): Northern Alaska Lat: 67.03671040 Long: -154.12370750 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PFO4/SS1B, IA2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: photos 120-124.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	35	Yes	FACW
2.			
3.			
4.			
Total Cover: 35			
50% of total cover: 17 20% of total cover: 7			
Sapling/Shrub Stratum			
1. Picea mariana	15	No	FACW
2. Betula nana	30	Yes	FAC
3. Vaccinium uliginosum	40	Yes	FAC
4. Rhododendron groenlandicum	25	No	FAC
5. Vaccinium vitis-idaea	25	No	FAC
6.			
Total Cover: 135			
50% of total cover: 67 20% of total cover: 27			
Herb Stratum			
1. Carex rostrata	60	Yes	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 60			
50% of total cover: 30 20% of total cover: 12			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	60	x 1 = 60
FACW species	50	x 2 = 100
FAC species	120	x 3 = 360
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	230 (A)	520 (B)

Prevalence Index = B/A = 2.26

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 60
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 40%, reindeer lichen 20%

SOIL

Sampling Point T106-549

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-15	organic	100		0				

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- X Histosol or Histel(A1)
- X Histic Epipedon (A2)
- __Hydrogen Sulfide (A4)
- __Thick Dark Surface (A12)
- __Alaska Gleyed (A13)
- __Alaska Redox (A14)
- __Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

- __Alaska Color Change (TA4)[4]
- __Alaska Alpine Swales (TA5)
- __Alaska Redox With 2.5Y Hue
- __Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- __Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 15

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- __Surface Water (A1)
- __High Water Table (A2)
- __Saturation (A3)
- __Water Marks (B1)
- __Sediment Deposits (B2)
- __Drift Deposits (B3)
- __Algal Mat or Crust (B4)
- __Iron Deposits (B5)
- __Surface Soil Cracks (B6)
- __Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __Marl Deposits (B15)
- __Hydrogen Sulfide Odor (C1)
- __Dry Season Water Table (C2)
- __Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- __Water-stained Leaves (B9)
- __Drainage Patterns (B10)
- __Oxidized Rhizospheres along Living Roots (C3)
- __Presence of Reduced Iron (C4)
- __Salt Deposits (C5)
- __Stunted or Stressed Plants (D1)
- __Geomorphic Position (D2)
- X Shallow Aquitard (D3)
- __Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: very moist

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/26/2013
Applicant/Owner: AIDEA Sampling Point: T106-551
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 2
Subregion (LRR): Northern Alaska Lat: 67.03468520 Long: -154.12020510 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/EM1B, IIC2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: south approximately 20 feet of drainageway. Channel 30 inches wide by 18 inches deep. Silty substrate. Photos 125-129.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. salix spp	10	Yes	FAC
2. Betula nana	10	Yes	FAC
3. Vaccinium uliginosum	15	Yes	FAC
4.			
5.			
6.			
Total Cover: 35			
50% of total cover: 17 20% of total cover: 7			
Herb Stratum			
1. Calamagrostis canadensis	70	Yes	FAC
2. Carex rostrata	35	Yes	OBL
3. Comarum palustre	25	No	OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 130			
50% of total cover: 65 20% of total cover: 26			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	60	x 1 = 60
FACW species	0	x 2 = 0
FAC species	105	x 3 = 315
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	165 (A)	375 (B)

Prevalence Index = B/A = 2.27

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is <3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 10
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 10%

SOIL

Sampling Point T106-551

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-22	10YR 3/2	50	organic	50			Silty Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

X Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 20
Saturation Present? Yes Depth (inches): 3
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 08/26/2013
Applicant/Owner: AIDEA Sampling Point: T107-542
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 2
Subregion (LRR): Northern Alaska Lat: 67.04273370 Long: -154.22427390 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/EM1, IIB1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: The sample location was taken on the north side of the alignment within a salix dominated wetland, just I side the transect. PSS WETLAND Photos 4164-4168.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	10	Yes	FACW
2.			
3.			
4.			
Total Cover: 10			
50% of total cover: 5 20% of total cover: 2			
Sapling/Shrub Stratum			
1. Picea mariana	15	No	FACW
2. salix spp	55	Yes	FAC
3. Vaccinium uliginosum	35	Yes	FAC
4. Rubus pubescens	25	No	FACW
5. Betula nana	15	No	FAC
6. Rhododendron groenlandicum	10	No	FAC
Total Cover: 155			
50% of total cover: 77 20% of total cover: 31			
Herb Stratum			
1. Comarum palustre	40	Yes	OBL
2. Carex media	25	Yes	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 65			
50% of total cover: 32 20% of total cover: 13			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	40	x 1 = 40
FACW species	75	x 2 = 150
FAC species	115	x 3 = 345
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	230 (A)	535 (B)

Prevalence Index = B/A = 2.33

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 25
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T107-542

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1		100		0				saturated organics
1-19	gley 1 10y 2.5/1	100		0			Silt Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
X Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 19

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: saturated to the surface with ponding

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 08/26/2013
Applicant/Owner: AIDEA Sampling Point: T107-544
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): convex Slope (%): 4
Subregion (LRR): Northern Alaska Lat: 67.04091820 Long: -154.22372230 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: The sample location was taken on north side of the alignment within a Salix spp dominanted shrub layer with burned Picea. UPLAND photos 4169-4173	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	10	Yes	FACW
2.			
3.			
4.			
Total Cover: 10			
50% of total cover: 5 20% of total cover: 2			
Sapling/Shrub Stratum			
1. Picea mariana	10	No	FACW
2. salix spp	65	Yes	FAC
3. Vaccinium uliginosum	25	No	FAC
4. Betula nana	30	Yes	FAC
5.			
6.			
Total Cover: 130			
50% of total cover: 65 20% of total cover: 26			
Herb Stratum			
1. Chamaenerion angustifolium	25	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 25			
50% of total cover: 12 20% of total cover: 5			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	20	x 2 = 40
FAC species	120	x 3 = 360
FACU species	25	x 4 = 100
UPL species	0	x 5 = 0
Column Totals:	165 (A)	500 (B)

Prevalence Index = B/A = 3.03

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 35
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T107-544

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4		100		0				organics
4-9	10YR 4/1	100		0			Sandy Gravely Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 9

Hydric Soil Present? No

Remarks: Restrictive digging layer of gravel.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 08/26/2013
Applicant/Owner: AIDEA Sampling Point: T107-546
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): convex Slope (%): 0
Subregion (LRR): Northern Alaska Lat: 67.04009710 Long: -154.22168290 Datum: WGS84
Soil Map Unit Name: _ NWI classification: R2AB2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? Yes**

Remarks: The sample location was taken on south side of the alignment at a lower perennial stream flowing northeast to southwest. Small rocks and sand substrate, with slow moving water. Photo point only 4174-4178. Appx 5ft wide.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	0 (A)	0 (B)

Prevalence Index = B/A = 0.00

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 0 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks:

SOIL

Sampling Point T107-546

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Northwest Arctic Borough Sampling Date: 08/26/2013
Applicant/Owner: AIDEA Sampling Point: T107-548
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): Northern Alaska Lat: 67.04007240 Long: -154.22128180 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: The sample location was taken on the south side of the alignment within salix spp upland about 10ft. From the stream. UPLAND.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	20	Yes	FACW
2.			
3.			
4.			
Total Cover: 20			
50% of total cover: 10 20% of total cover: 4			
Sapling/Shrub Stratum			
1. Picea mariana	15	No	FACW
2. Vaccinium uliginosum	30	Yes	FAC
3. salix spp	55	Yes	FAC
4. Alnus viridis	5	No	FAC
5. Betula nana	20	No	FAC
6.			
Total Cover: 125			
50% of total cover: 62 20% of total cover: 25			
Herb Stratum			
1. Equisetum arvense	15	Yes	FAC
2. Viola epipsila	5	Yes	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 20			
50% of total cover: 10 20% of total cover: 4			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	40	x 2 = 80
FAC species	125	x 3 = 375
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	165 (A)	455 (B)

Prevalence Index = B/A = 2.76

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 5
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T107-548

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 2/1	100		0			Sandy Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
___Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 10

Hydric Soil Present? No

Remarks: Restrictive digging layer of rocks.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/26/2013
Applicant/Owner: AIDEA Sampling Point: T107-553
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): convex Slope (%): 1
Subregion (LRR): Northern Alaska Lat: 67.03529950 Long: -154.02079950 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS3B, IIC1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: photos 130-134. pss	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	25	Yes	FACW
2.			
3.			
4.			
Total Cover: 25			
50% of total cover: 12 20% of total cover: 5			
Sapling/Shrub Stratum			
1. Picea mariana	5	No	FACW
2. Betula nana	15	No	FAC
3. Vaccinium uliginosum	5	No	FAC
4. Rhododendron groenlandicum	45	Yes	FAC
5. Rubus chamaemorus	30	Yes	FACW
6. Vaccinium vitis-idaea	25	Yes	FAC
Total Cover: 125			
50% of total cover: 62 20% of total cover: 25			
Herb Stratum			
1. Eriophorum vaginatum	20	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 20			
50% of total cover: 10 20% of total cover: 4			

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 100
(Where applicable)

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	80	x 2 = 160
FAC species	90	x 3 = 270
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	170 (A)	430 (B)

Prevalence Index = B/A = 2.53

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 40%, reindeer lichen 60%.

SOIL

Sampling Point T107-553

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	organic	100		0				
5-16	peat	100		0				saturated

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

X Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 16

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 5
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/26/2013
Applicant/Owner: AIDEA Sampling Point: T107-555
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Drainageway Local relief (concave, convex, none): concave Slope (%): 2
Subregion (LRR): Northern Alaska Lat: 67.03400010 Long: -154.01760920 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1B, IIB1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: drainageway inbetween two pfo. Pss. photos 135-139.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Picea mariana	10	No	FACW
2. salix sp	65	Yes	FAC
3. Vaccinium uliginosum	35	Yes	FAC
4. Betula nana	10	No	FAC
5. Rubus chamaemorus	8	No	FACW
6. Vaccinium vitis-idaea	8	No	FAC
Total Cover: 136			
50% of total cover: 68 20% of total cover: 27			
Herb Stratum			
1. Petasites frigidus	5	No	FACW
2. Calamagrostis canadensis	15	Yes	FAC
3. Equisetum arvense	5	No	FAC
4. Lycopodium clavatum	5	No	FACU
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 30			
50% of total cover: 15 20% of total cover: 6			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	23	x 2 = 46
FAC species	138	x 3 = 414
FACU species	5	x 4 = 20
UPL species	0	x 5 = 0
Column Totals:	166 (A)	480 (B)

Prevalence Index = B/A = 2.89

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 60
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 60%

SOIL

Sampling Point T107-555

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	organic	100		0				
5-22	10YR 3/1	100		0			Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
X Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 22

Hydric Soil Present? Yes

Remarks: Swale draining to beaver pond.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 5
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/26/2013
Applicant/Owner: AIDEA Sampling Point: T107-557
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 1
Subregion (LRR): Northern Alaska Lat: 67.03364320 Long: -154.01650920 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PUBH, Pond
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: beaver pond surrounded by pem. photos 140-144	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Herb Stratum			
1. Calamagrostis canadensis	10	No	FAC
2. Carex rostrata	70	Yes	OBL
3. Eriophorum vaginatum	8	No	FACW
4. Hippuris vulgaris	30	Yes	OBL
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 118			
50% of total cover: 59 20% of total cover: 23			

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	100	x 1 = 100
FACW species	8	x 2 = 16
FAC species	10	x 3 = 30
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	118 (A)	146 (B)

Prevalence Index = B/A = 1.24

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T107-557

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-25	2.5Y 3/1	100		0			Sandy Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
X Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks: Saturated, edge of beaver pond.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 14
Saturation Present? Yes Depth (inches): 1
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/26/2013
Applicant/Owner: AIDEA Sampling Point: T108-550
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): convex Slope (%): 3
Subregion (LRR): Northern Alaska Lat: 67.03900940 Long: -154.11323120 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PEM1C, IIIA3
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: The sample location was taken on north side of the alignment within a PEM WETLAND visible from the aerial. Photos 4144-4148.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Betula nana	10	Yes	FAC
2. Picea mariana	5	Yes	FACW
3. salix spp	5	Yes	FAC
4.			
5.			
6.			
Total Cover: 20			
50% of total cover: 10 20% of total cover: 4			
Herb Stratum			
1. Comarum palustre	15	No	OBL
2. Carex rostrata	50	Yes	OBL
3. Eriophorum angustifolium	20	Yes	OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 85			
50% of total cover: 42 20% of total cover: 17			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	85	x 1 = 85
FACW species	5	x 2 = 10
FAC species	15	x 3 = 45
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	105 (A)	140 (B)

Prevalence Index = B/A = 1.33

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 60
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T108-550

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-17		100		0				saturated organics

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

X Histosol or Histel(A1)
__Histic Epipedon (A2)
X Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: none
Depth (inches): 0

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches): 0
Water Table Present? Yes Depth (inches): 2
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: saturated to the surface with ponding

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/26/2013
Applicant/Owner: AIDEA Sampling Point: T108-552
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 5
Subregion (LRR): Northern Alaska Lat: 67.03871060 Long: -154.11342120 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PFO4/SS1, IA2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**

Remarks: The sample location was taken north side of the alignment within a PSS WETLAND at the transition from the PEM described previously. Photos 4189-4193.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	30	Yes	FACW
2.			
3.			
4.			
Total Cover: 30			
50% of total cover: 15 20% of total cover: 6			
Sapling/Shrub Stratum			
1. Picea mariana	10	No	FACW
2. Betula nana	35	Yes	FAC
3. Vaccinium uliginosum	60	Yes	FAC
4. Rhododendron groenlandicum	35	Yes	FAC
5. Vaccinium vitis-idaea	15	No	FAC
6.			
Total Cover: 155			
50% of total cover: 77 20% of total cover: 31			
Herb Stratum			
1. Calamagrostis canadensis	10	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 10			
50% of total cover: 5 20% of total cover: 2			

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 60
(Where applicable)

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	40	x 2 = 80
FAC species	155	x 3 = 465
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	195 (A)	545 (B)

Prevalence Index = B/A = 2.79

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T108-552

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4		100		0				saturated organics
4-17	Gley 10y 2.5/1	100		0			Silt Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
X Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 17

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
X Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/26/2013
Applicant/Owner: AIDEA Sampling Point: T108-554
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 8
Subregion (LRR): Northern Alaska Lat: 67.03725090 Long: -154.11598580 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PFO4/SS1B, IA2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: The sample location was taken on north side of the alignment within a PFO WETLAND. The area containes the same vegetation as the previous PSS point but containes a higher percentage of trees. Photos 4194-4198.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	40	Yes	FACW
2.			
3.			
4.			
Total Cover: 40			
50% of total cover: 20 20% of total cover: 8			
Sapling/Shrub Stratum			
1. Picea mariana	15	No	FACW
2. Alnus viridis	5	No	FAC
3. salix spp	20	Yes	FAC
4. Vaccinium uliginosum	30	Yes	FAC
5. Rhododendron groenlandicum	20	Yes	FAC
6. Vaccinium vitis-idaea	10	No	FAC
Total Cover: 100			
50% of total cover: 50 20% of total cover: 20			
Herb Stratum			
1. Carex media	35	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 35			
50% of total cover: 17 20% of total cover: 7			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	90	x 2 = 180
FAC species	85	x 3 = 255
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	175 (A)	435 (B)

Prevalence Index = B/A = 2.49

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 35
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T108-554

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10		100		0				saturated organics
10-15	gley 1 3/10y	100		0			Silty Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 15

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
X Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/26/2013
Applicant/Owner: AIDEA Sampling Point: T108-556
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 10
Subregion (LRR): Northern Alaska Lat: 67.03609390 Long: -154.11650140 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PFO4/SS1B, IA2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: photos 4199-4203. The PFO WETLAND. Continues to the 2000ft southern boundary.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	40	Yes	FACW
2.			
3.			
4.			
Total Cover: 40			
50% of total cover: 20 20% of total cover: 8			
Sapling/Shrub Stratum			
1. Picea mariana	20	No	FACW
2. Betula nana	35	Yes	FAC
3. Myrica gale	15	No	OBL
4. Vaccinium uliginosum	25	Yes	FAC
5. Alnus viridis	10	No	FAC
6. Vaccinium vitis-idaea	10	No	FAC
Total Cover: 115			
50% of total cover: 57 20% of total cover: 23			
Herb Stratum			
1. Carex media	30	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 30			
50% of total cover: 15 20% of total cover: 6			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	15	x 1 = 15
FACW species	90	x 2 = 180
FAC species	80	x 3 = 240
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	185 (A)	435 (B)

Prevalence Index = B/A = 2.35

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 40
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T108-556

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5		100		0				saturated organics
5-16	Gley 1 5GY 3/1	90	10YR 3/6	10			Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
X Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 16

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
X Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/27/2013
Applicant/Owner: AIDEA Sampling Point: T108-559
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Valley floor Local relief (concave, convex, none): convex Slope (%): 2
Subregion (LRR): Northern Alaska Lat: 67.04681330 Long: -153.90496300 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: Upland knoll. photos 145-149.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	30	Yes	FACW
2. Picea glauca	5	No	FACU
3.			
4.			
Total Cover: 35			
50% of total cover: 17 20% of total cover: 7			
Sapling/Shrub Stratum			
1. salix sp	15	No	FAC
2. Vaccinium uliginosum	55	Yes	FAC
3. Rubus chamaemorus	25	No	FACW
4. Vaccinium vitis-idaea	35	Yes	FAC
5. Empetrum nigrum	15	No	FAC
6.			
Total Cover: 145			
50% of total cover: 72 20% of total cover: 29			
Herb Stratum			
1. Calamagrostis canadensis	10	Yes	FAC
2. Geocaulon lividum	8	Yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 18			
50% of total cover: 9 20% of total cover: 3			

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 100
(Where applicable)

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	55	x 2 = 110
FAC species	130	x 3 = 390
FACU species	13	x 4 = 52
UPL species	0	x 5 = 0
Column Totals:	198 (A)	552 (B)

Prevalence Index = B/A = 2.79

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 60%, pelt lichen 30%, and reindeer lichen 10%.

SOIL

Sampling Point T108-559

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-9	organic	100		0				
9-14	10YR 3/1	100		0			Sandy Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 14

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/27/2013
Applicant/Owner: AIDEA Sampling Point: T108-561
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Drainageway Local relief (concave, convex, none): concave Slope (%): 1
Subregion (LRR): Northern Alaska Lat: 67.04648510 Long: -153.90327490 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/EM1B
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: drainageway leading to beaver ponds. Pss. Channel 8 feet to west is 16 inches wide and 9 inches deep. Silty substrate. Photos 150-154.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. salix spp	85	Yes	FAC
2. Vaccinium uliginosum	10	No	FAC
3. Rubus pubescens	5	No	FACW
4.			
5.			
6.			
Total Cover: 100			
50% of total cover: 50 20% of total cover: 20			
Herb Stratum			
1. Carex rostrata	60	Yes	OBL
2. Comarum palustre	10	No	OBL
3. Equisetum arvense	5	No	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 75			
50% of total cover: 37 20% of total cover: 15			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	70	x 1 = 70
FACW species	5	x 2 = 10
FAC species	100	x 3 = 300
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	175 (A)	380 (B)

Prevalence Index = B/A = 2.17

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 35
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T108-561

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-23	10YR 3/1	75	organic	25			Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
X Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 23

Hydric Soil Present? Yes

Remarks: active drainage, soils have not developed hydric characteristics.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
X Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 15
Saturation Present? Yes Depth (inches): 8
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/27/2013
Applicant/Owner: AIDEA Sampling Point: T108-563
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hill Local relief (concave, convex, none): convex Slope (%): 25
Subregion (LRR): Northern Alaska Lat: 67.04675040 Long: -153.89596180 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: photos 160-164	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	15	Yes	FACW
2. Picea glauca	4	Yes	FACU
3.			
4.			
Total Cover: 19			
50% of total cover: 9 20% of total cover: 3			
Sapling/Shrub Stratum			
1. Betula nana	10	No	FAC
2. Vaccinium vitis-idaea	10	No	FAC
3. Empetrum nigrum	35	Yes	FAC
4. Vaccinium uliginosum	5	No	FAC
5. Rhododendron groenlandicum	8	No	FAC
6.			
Total Cover: 68			
50% of total cover: 34 20% of total cover: 13			
Herb Stratum			
1. Geocaulon lividum	15	Yes	FACU
2. Lycopodium clavatum	3	Yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 18			
50% of total cover: 9 20% of total cover: 3			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 40 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	15	x 2 = 30
FAC species	68	x 3 = 204
FACU species	22	x 4 = 88
UPL species	0	x 5 = 0
Column Totals:	105 (A)	322 (B)

Prevalence Index = B/A = 3.07

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
__ Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 90
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks: reindeer lichen 90%

SOIL

Sampling Point T108-563

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1	organic	100		0				
1-17	10YR 4/6	100		0			Sandy Gravely Loam	sandy gravel

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks: restrictive layer for digging gravel

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/27/2013
Applicant/Owner: AIDEA Sampling Point: T108-565
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 5
Subregion (LRR): Northern Alaska Lat: 67.04619040 Long: -153.89473650 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: photos 165-170	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Populus tremuloides	20	Yes	FACU
2. Picea mariana	20	Yes	FACW
3. Picea glauca	8	No	FACU
4.			
Total Cover: 48			
50% of total cover: 24 20% of total cover: 9			
Sapling/Shrub Stratum			
1. Picea mariana	3	No	FACW
2. Populus tremuloides	20	Yes	FACU
3. Betula nana	5	No	FAC
4. salix sp	3	No	FAC
5. Vaccinium uliginosum	30	Yes	FAC
6. Empetrum nigrum	40	Yes	FAC
Total Cover: 101			
50% of total cover: 50 20% of total cover: 20			
Herb Stratum			
1. Geocaulon lividum	15	Yes	FACU
2. Lycopodium clavatum	10	Yes	FACU
3. Pedicularis labradorica	3	No	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 28			
50% of total cover: 14 20% of total cover: 5			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 42 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	26	x 2 = 52
FAC species	78	x 3 = 234
FACU species	73	x 4 = 292
UPL species	0	x 5 = 0
Column Totals:	177 (A)	578 (B)

Prevalence Index = B/A = 3.27

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
__ Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 5 Total Cover of Bryophytes: 95
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks: pelt lichen 40%, reindeer lichen 35%, sphagnum 20%

SOIL

Sampling Point T108-565

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	organic	100		0				
2-5	10YR 4/6	100		0			Sand	
5-26	2.5Y 4/2	100		0			Fine Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/27/2013
Applicant/Owner: AIDEA Sampling Point: T108-567
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 3
Subregion (LRR): Northern Alaska Lat: 67.04514850 Long: -153.89159690 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PFO4/SS1B, IA2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: photos 171-175	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	20	Yes	FACW
2. Picea glauca	10	Yes	FACU
3.			
4.			
Total Cover: 30			
50% of total cover: 15 20% of total cover: 6			
Sapling/Shrub Stratum			
1. Picea mariana	15	No	FACW
2. Picea glauca	5	No	FACU
3. salix spp	20	No	FAC
4. Vaccinium uliginosum	35	Yes	FAC
5. Vaccinium vitis-idaea	15	No	FAC
6. Empetrum nigrum	25	Yes	FAC
Total Cover: 115			
50% of total cover: 57 20% of total cover: 23			
Herb Stratum			
1. Carex rostrata	20	Yes	OBL
2. Lycopodium clavatum	5	Yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 25			
50% of total cover: 12 20% of total cover: 5			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	20	x 1 = 20
FACW species	35	x 2 = 70
FAC species	95	x 3 = 285
FACU species	20	x 4 = 80
UPL species	0	x 5 = 0
Column Totals:	170 (A)	455 (B)

Prevalence Index = B/A = 2.68

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 80
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 35%, reindeer lichen 45%

SOIL

Sampling Point T108-567

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	organic	100		0				
5-23	2.5Y 4/2	100		0			Sandy Clay Loam	sandy clay

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
X Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks: Thixotropic soil.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 5
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/26/2013
Applicant/Owner: AIDEA Sampling Point: T109-558
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 5
Subregion (LRR): Northern Alaska Lat: 67.03623390 Long: -154.01986700 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/EM1B, IIC1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: The sample location was taken on north side of the alignment within a PSS WETLAND knoll visible from the aerial. To the east and west are PEM WETLAND. Photos.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	15	Yes	FACW
2.			
3.			
4.			
Total Cover: 15			
50% of total cover: 7 20% of total cover: 3			
Sapling/Shrub Stratum			
1. Vaccinium uliginosum	40	Yes	FAC
2. Rhododendron groenlandicum	25	Yes	FAC
3. Betula nana	25	Yes	FAC
4.			
5.			
6.			
Total Cover: 90			
50% of total cover: 45 20% of total cover: 18			
Herb Stratum			
1. Vaccinium vitis-idaea	30	Yes	FAC
2. Eriophorum angustifolium	10	Yes	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 40			
50% of total cover: 20 20% of total cover: 8			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	10	x 1 = 10
FACW species	15	x 2 = 30
FAC species	120	x 3 = 360
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	145 (A)	400 (B)

Prevalence Index = B/A = 2.76

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 35
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T109-558

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-14		100		0				saturated organics

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

X Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 14

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
X Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/26/2013
Applicant/Owner: AIDEA Sampling Point: T109-560
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 5
Subregion (LRR): Northern Alaska Lat: 67.03711950 Long: -154.01844230 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1B, IB3
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**

Remarks: The sample location was taken on north side of the alignment within a PSS WETLAND described in sample point 558. Intermixed are PEM WETLAND visible from the aerial. Photos 4209-4213.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	15	Yes	FACW
2.			
3.			
4.			
Total Cover: 15			
50% of total cover: 7 20% of total cover: 3			
Sapling/Shrub Stratum			
1. Vaccinium uliginosum	40	Yes	FAC
2. Betula nana	30	Yes	FAC
3. Rhododendron groenlandicum	35	Yes	FAC
4. Vaccinium vitis-idaea	30	No	FAC
5. Rubus chamaemorus	20	No	FACW
6.			
Total Cover: 155			
50% of total cover: 77 20% of total cover: 31			
Herb Stratum			
1. Eriophorum angustifolium	15	Yes	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 15			
50% of total cover: 7 20% of total cover: 3			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	15	x 1 = 15
FACW species	35	x 2 = 70
FAC species	135	x 3 = 405
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	185 (A)	490 (B)

Prevalence Index = B/A = 2.65

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 40
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T109-560

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-14		100		0				saturated organics

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

X Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 14

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
X Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: saturated to the surface

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/26/2013
Applicant/Owner: AIDEA Sampling Point: T109-562
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Drainageway Local relief (concave, convex, none): concave Slope (%): 5
Subregion (LRR): Northern Alaska Lat: 67.03723780 Long: -154.01859270 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/EM1B, IIB1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**

Remarks: The sample location was taken on north side of the alignment within a salix spp drainage feature about 100ft wide, terminating on the north side with a PEM wetland and PSS wetlands to the east and west. Photos 4214-4218. PSS WETLAND

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. salix spp	80	Yes	FAC
2. Vaccinium uliginosum	25	Yes	FAC
3.			
4.			
5.			
6.			
Total Cover: 105			
50% of total cover: 52 20% of total cover: 21			
Herb Stratum			
1. Comarum palustre	50	Yes	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 50			
50% of total cover: 25 20% of total cover: 10			

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 50
(Where applicable)

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	50	x 1 = 50
FACW species	0	x 2 = 0
FAC species	105	x 3 = 315
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	155 (A)	365 (B)

Prevalence Index = B/A = 2.35

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T109-562

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18		100		0				saturated organics

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

X Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: none
Depth (inches): 0

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches): 0
Water Table Present? Yes Depth (inches): 1
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/26/2013
Applicant/Owner: AIDEA Sampling Point: T109-564
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 5
Subregion (LRR): Northern Alaska Lat: 67.03576520 Long: -154.01982370 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/EM1B, IIC2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: The sample location was taken on centerline with a PEM WETLAND visible from the aerial.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Betula nana	5	Yes	FAC
2. Myrica gale	15	Yes	OBL
3. Picea mariana	5	No	FACW
4. Vaccinium uliginosum	5	No	FAC
5. Vaccinium vitis-idaea	5	No	FAC
6.			
Total Cover: 35			
50% of total cover: 17 20% of total cover: 7			
Herb Stratum			
1. Eriophorum angustifolium	50	Yes	OBL
2. Carex rostrata	55	Yes	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 105			
50% of total cover: 52 20% of total cover: 21			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	120	x 1 = 120
FACW species	5	x 2 = 10
FAC species	15	x 3 = 45
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	140 (A)	175 (B)

Prevalence Index = B/A = 1.25

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 80
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T109-564

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-15		100		0				organics

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

X Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 15

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches): 0
Water Table Present? Yes Depth (inches): 2
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/27/2013
Applicant/Owner: AIDEA Sampling Point: T109-569
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 20
Subregion (LRR): Northern Alaska Lat: 67.06242930 Long: -153.79363670 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: photos 176-180. upland	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	15	Yes	FACW
2. Picea glauca	15	Yes	FACU
3.			
4.			
Total Cover: 30			
50% of total cover: 15 20% of total cover: 6			
Sapling/Shrub Stratum			
1. Alnus viridis	10	No	FAC
2. Vaccinium uliginosum	45	Yes	FAC
3. Vaccinium vitis-idaea	30	Yes	FAC
4. Rhododendron groenlandicum	5	No	FAC
5. Spiraea stevenii	8	No	FACU
6.			
Total Cover: 98			
50% of total cover: 49 20% of total cover: 19			
Herb Stratum			
1. Calamagrostis canadensis	10	Yes	FAC
2. Lycopodium clavatum	5	Yes	FACU
3. Chamaenerion angustifolium	2	No	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 17			
50% of total cover: 8 20% of total cover: 3			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	15	x 2 = 30
FAC species	100	x 3 = 300
FACU species	30	x 4 = 120
UPL species	0	x 5 = 0
Column Totals:	145 (A)	450 (B)

Prevalence Index = B/A = 3.10

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 90
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: reindeer lichen 75%, sphagnum 10%, and pelt lichen 5%.

SOIL

Sampling Point T109-569

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	organic	100		0				
2-11	10YR 3/4	100		0			Sandy Gravely Loam	sandy gravel

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks: restrictive layer for digging gravel

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/27/2013
Applicant/Owner: AIDEA Sampling Point: T109-573
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 4
Subregion (LRR): Northern Alaska Lat: 67.06099950 Long: -153.79557810 Datum: WGS84
Soil Map Unit Name: _ NWI classification: R3UBH
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? Yes**

Remarks: 22 feet wide, 10 inches deep. Bankfull 36 feet wide. 11 inch diameter cobbles with gravels less than 1 inch diameter substrate. Photos 186-188. riparian alnus viridis and cham ang.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Plot size (radius, or length x width): 0 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	0 (A)	0 (B)

Prevalence Index = B/A = 0.00

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? No

Remarks:

SOIL

Sampling Point T109-573

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/27/2013
Applicant/Owner: AIDEA Sampling Point: T109-575
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Drainageway Local relief (concave, convex, none): concave Slope (%): 2
Subregion (LRR): Northern Alaska Lat: 67.06101080 Long: -153.79756940 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/EM1B
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: drainageway with channel approximately 5 feet to east. Channel 12 inches wide by 5 inches deep. Silty substrate . photos 189-193. pss	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. salix spp	65	Yes	FAC
2. Vaccinium uliginosum	25	Yes	FAC
3. Picea mariana	3	No	FACW
4. Alnus viridis	5	No	FAC
5. Dasiphora fruticosa	3	No	FAC
6.			
Total Cover: 101			
50% of total cover: 50 20% of total cover: 20			
Herb Stratum			
1. Carex rostrata	60	Yes	OBL
2. Comarum palustre	5	No	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 65			
50% of total cover: 32 20% of total cover: 13			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	65	x 1 = 65
FACW species	3	x 2 = 6
FAC species	98	x 3 = 294
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	166 (A)	365 (B)

Prevalence Index = B/A = 2.20

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 80
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 80%

SOIL

Sampling Point T109-575

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	organic	100		0				saturated
10-15	10YR 3/3	100		0			Silty Clay Loam	
15-22	2.5Y 3/1	100		0			Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
X Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 22

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
X Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
X Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 12
Saturation Present? Yes Depth (inches): 2
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: pockets of inundation.

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/27/2013
Applicant/Owner: AIDEA Sampling Point: T109-577
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Drainageway Local relief (concave, convex, none): concave Slope (%): 2
Subregion (LRR): Northern Alaska Lat: 67.06099710 Long: -153.79874930 Datum: WGS84
Soil Map Unit Name: _ NWI classification: R2UB3
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: channel 30 inches wide by 4 inches deep. Silty substrate . riparian salix spp and carex rostrata. photos 194-198.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	0 (A)	0 (B)

Prevalence Index = B/A = 0.00

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 0 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks:

SOIL

Sampling Point T109-577

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/27/2013
Applicant/Owner: AIDEA Sampling Point: T109-579
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 5
Subregion (LRR): Northern Alaska Lat: 67.06104870 Long: -153.80090800 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PFO4/SS1B, IA2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: hillslope above pss drainageway. photos 199-203.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	35	Yes	FACW
2.			
3.			
4.			
Total Cover: 35			
50% of total cover: 17 20% of total cover: 7			
Sapling/Shrub Stratum			
1. Picea mariana	8	No	FACW
2. Alnus viridis	15	Yes	FAC
3. Betula nana	8	No	FAC
4. salix spp	15	Yes	FAC
5. Vaccinium uliginosum	25	Yes	FAC
6. Arctostaphylos rubra	5	No	FAC
Total Cover: 76			
50% of total cover: 38 20% of total cover: 15			
Herb Stratum			
1. Equisetum arvense	15	No	FAC
2. Carex rostrata	65	Yes	OBL
3. Chamaenerion angustifolium	3	No	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 83			
50% of total cover: 41 20% of total cover: 16			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	65	x 1 = 65
FACW species	43	x 2 = 86
FAC species	83	x 3 = 249
FACU species	3	x 4 = 12
UPL species	0	x 5 = 0
Column Totals:	194 (A)	412 (B)

Prevalence Index = B/A = 2.12

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 85
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 80% and pelt lichen 5%.

SOIL

Sampling Point T109-579

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-9	organic	100		0				
9-24	gley1 10Y 5/1	90	10YR 5/6	10	RM	M	Silty Clay Loam	silty sandy clay

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
X Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 24

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
X Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/27/2013
Applicant/Owner: AIDEA Sampling Point: T110-568
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hill Local relief (concave, convex, none): convex Slope (%): 3
Subregion (LRR): Northern Alaska Lat: 67.04418170 Long: -153.91329090 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: the sample location was taken on the south side of the alignment within an UPLAND. photos 4224-4228.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	35	Yes	FACU
2.			
3.			
4.			
Total Cover: 35			
50% of total cover: 17 20% of total cover: 7			
Sapling/Shrub Stratum			
1. Picea glauca	20	No	FACU
2. Betula nana	55	Yes	FAC
3. Vaccinium uliginosum	30	No	FAC
4. Empetrum nigrum	50	Yes	FAC
5. Vaccinium vitis-idaea	40	Yes	FAC
6. Rhododendron groenlandicum	20	No	FAC
Total Cover: 215			
50% of total cover: 107 20% of total cover: 43			
Herb Stratum			
1. Calamagrostis canadensis	10	Yes	FAC
2. Lycopodium clavatum	20	Yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 30			
50% of total cover: 15 20% of total cover: 6			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	205	x 3 =	615
FACU species	75	x 4 =	300
UPL species	0	x 5 =	0
Column Totals:	280 (A)		915 (B)

Prevalence Index = B/A = 3.27

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
__ Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 40
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T110-568

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1		100		0				organics
1-10	10YR 3/2	100		0			Sandy Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 10

Hydric Soil Present? No

Remarks: Restrictive digging layer of rock.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/27/2013
Applicant/Owner: AIDEA Sampling Point: T110-570
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): Northern Alaska Lat: 67.04527560 Long: -153.91398120 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**

Remarks: the sample location was taken on the south side of the alignment within a forested upland. Photos 4229-4233. UPLAND.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	40	Yes	FACW
2.			
3.			
4.			
Total Cover: 40			
50% of total cover: 20 20% of total cover: 8			
Sapling/Shrub Stratum			
1. Picea mariana	10	No	FACW
2. salix spp	30	Yes	FAC
3. Vaccinium vitis-idaea	25	Yes	FAC
4. Vaccinium uliginosum	30	Yes	FAC
5. Rhododendron groenlandicum	30	Yes	FAC
6.			
Total Cover: 125			
50% of total cover: 62 20% of total cover: 25			
Herb Stratum			
1. Petasites frigidus	20	Yes	FACW
2. Chamaenerion angustifolium	10	Yes	FACU
3. Calamagrostis canadensis	20	Yes	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 50			
50% of total cover: 25 20% of total cover: 10			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 87 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	70	x 2 = 140
FAC species	135	x 3 = 405
FACU species	10	x 4 = 40
UPL species	0	x 5 = 0
Column Totals:	215 (A)	585 (B)

Prevalence Index = B/A = 2.72

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is <3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 55
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T110-570

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3		100		0				organics
3-14	10YR 2/1	100		0			Sandy Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: none
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/27/2013
Applicant/Owner: AIDEA Sampling Point: T110-572
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): Northern Alaska Lat: 67.04404270 Long: -153.91185970 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland, IIC1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: The sample location was taken on the south side of the alignment within a forest. photos 4234-4238.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	40	Yes	FACW
2.			
3.			
4.			
Total Cover: 40			
50% of total cover: 20 20% of total cover: 8			
Sapling/Shrub Stratum			
1. Picea mariana	15	No	FACW
2. salix spp	21	Yes	FAC
3. Vaccinium uliginosum	50	Yes	FAC
4. Vaccinium vitis-idaea	15	No	FAC
5.			
6.			
Total Cover: 101			
50% of total cover: 50 20% of total cover: 20			
Herb Stratum			
1. Petasites frigidus	30	Yes	FACW
2. Equisetum arvense	30	Yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 60			
50% of total cover: 30 20% of total cover: 12			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	85	x 2 = 170
FAC species	116	x 3 = 348
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	201 (A)	518 (B)

Prevalence Index = B/A = 2.58

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 30
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T110-572

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3		100		0				organics
3-19	2.5Y 4/1	85	7.5YR 3/4	15			Sandy Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
X Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: none
Depth (inches): 0

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__ Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/27/2013
Applicant/Owner: AIDEA Sampling Point: T110-574
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Drainageway Local relief (concave, convex, none): concave Slope (%): 3
Subregion (LRR): Northern Alaska Lat: 67.04233400 Long: -153.91054860 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PFO4/SS1B
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**

Remarks: The sample location was taken on the south side of the alignment within a salix spp drainage feature 300ft wide visible from the aerial with PFO on both sides. Photos 4239-4243. PROBLEMATIC HYDRIC SOILS likely

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	30	Yes	FACW
2.			
3.			
4.			
Total Cover: 30			
50% of total cover: 15 20% of total cover: 6			
Sapling/Shrub Stratum			
1. Picea mariana	15	No	FACW
2. salix spp	70	Yes	FAC
3. Vaccinium uliginosum	20	No	FAC
4. Betula nana	15	No	FAC
5. Vaccinium vitis-idaea	5	No	FAC
6. Rubus pubescens	50	Yes	FAC
Total Cover: 175			
50% of total cover: 87 20% of total cover: 35			
Herb Stratum			
1. Equisetum pratense	65	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 65			
50% of total cover: 32 20% of total cover: 13			

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 50
(Where applicable)

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	110	x 2 = 220
FAC species	160	x 3 = 480
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	270 (A)	700 (B)

Prevalence Index = B/A = 2.59

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T110-574

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	organic	100		0				saturated organics
4-20	10YR 3/1	100		0			Sandy Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
X Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: none
Depth (inches): 0

Hydric Soil Present? Yes

Remarks: Hydric soil indicators may not have formed, sample location is not near a wetland/upland boundary.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 9
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: saturated to the surface and pockets of inundation.

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/27/2013
Applicant/Owner: AIDEA Sampling Point: T110-576
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 5
Subregion (LRR): Northern Alaska Lat: 67.04243000 Long: -153.90909830 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: the sample location was taken on the south side of the alignment within a transition area between the PFO WETLAND and upland. Photos 4244-4248.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	30	Yes	FACW
2. Populus tremuloides	5	No	FACU
3.			
4.			
Total Cover: 35			
50% of total cover: 17 20% of total cover: 7			
Sapling/Shrub Stratum			
1. Picea mariana	15	No	FACW
2. Vaccinium uliginosum	35	Yes	FAC
3. Rhododendron groenlandicum	25	Yes	FAC
4. Vaccinium vitis-idaea	30	Yes	FAC
5. Betula nana	25	No	FAC
6. Alnus viridis	5	No	FAC
Total Cover: 135			
50% of total cover: 67 20% of total cover: 27			
Herb Stratum			
1. Lycopodium clavatum	20	Yes	FACU
2. Calamagrostis canadensis	5	Yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 25			
50% of total cover: 12 20% of total cover: 5			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 83 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	45	x 2 = 90
FAC species	125	x 3 = 375
FACU species	25	x 4 = 100
UPL species	0	x 5 = 0
Column Totals:	195 (A)	565 (B)

Prevalence Index = B/A = 2.90

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 40
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T110-576

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3		100		0				organics
3-16	2.5Y 4/3	90	2.5Y 4/1	10			Sandy Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
X Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: none
Depth (inches): 0

Hydric Soil Present? No

Remarks: Problematic hydric soil indicators are present but hydrology is absent; therefore soils remain un-hydric.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/28/2013
Applicant/Owner: AIDEA Sampling Point: T110-581
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): Northern Alaska Lat: 66.79550690 Long: -150.71070300 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PFO5/SS4B, IA2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: Fire in July 2013. Photos 204-208.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	35	Yes	FACW
2.			
3.			
4.			
Total Cover: 35			
50% of total cover: 17 20% of total cover: 7			
Sapling/Shrub Stratum			
1. Picea mariana	25	Yes	FACW
2. Rubus chamaemorus	10	No	FACW
3. Betula nana	15	No	FAC
4. Vaccinium vitis-idaea	35	Yes	FAC
5. Rhododendron groenlandicum	25	Yes	FAC
6.			
Total Cover: 110			
50% of total cover: 55 20% of total cover: 22			
Herb Stratum			
1. Eriophorum vaginatum	65	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 65			
50% of total cover: 32 20% of total cover: 13			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	135	x 2 = 270
FAC species	75	x 3 = 225
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	210 (A)	495 (B)

Prevalence Index = B/A = 2.36

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 45
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: picea mariana burnt July 2013. Tree layer 1% untouched by fire. Picea shrub 10-15% burnt. sphagnum 40%, reindeer lichen 5%.

SOIL

Sampling Point T110-581

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	organic	100		0				
12-23	10YR 3/2	100		0			Loamy Fine Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 23

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 9
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/28/2013
Applicant/Owner: AIDEA Sampling Point: T110-583
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 0
Subregion (LRR): Northern Alaska Lat: 66.79575270 Long: -150.71603880 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PEM1B
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: pem. Photos 209-213	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. salix sp	1	Yes	FAC
2. Rubus pubescens	8	Yes	FACW
3.			
4.			
5.			
6.			
Total Cover: 9			
50% of total cover: 4 20% of total cover: 1			
Herb Stratum			
1. Carex rostrata	60	Yes	OBL
2. Calamagrostis canadensis	15	No	FAC
3. Comarum palustre	10	No	OBL
4. Achillea sp.	4	No	FACU
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 89			
50% of total cover: 44 20% of total cover: 17			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	70	x 1 = 70
FACW species	8	x 2 = 16
FAC species	16	x 3 = 48
FACU species	4	x 4 = 16
UPL species	0	x 5 = 0
Column Totals:	98 (A)	150 (B)

Prevalence Index = B/A = 1.53

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 35
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 35%

SOIL

Sampling Point T110-583

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-17	organic	100		0				saturated

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

X Histosol or Histel(A1)
__Histic Epipedon (A2)
X Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
X Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 0
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: pockets of inundation .

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/28/2013
Applicant/Owner: AIDEA Sampling Point: T110-585
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 2
Subregion (LRR): Northern Alaska Lat: 66.79614770 Long: -150.71554930 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: photos 214-218	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Populus balsamifera	40	Yes	FACU
2. Salix sp	45	Yes	FAC
3. Picea glauca	5	No	FACU
4.			
Total Cover: 90			
50% of total cover: 45 20% of total cover: 18			
Sapling/Shrub Stratum			
1. Alnus viridis	15	Yes	FAC
2. Picea glauca	8	No	FACU
3. Rubus pubescens	25	Yes	FACW
4. Vaccinium uliginosum	8	No	FAC
5.			
6.			
Total Cover: 56			
50% of total cover: 28 20% of total cover: 11			
Herb Stratum			
1. Equisetum arvense	20	Yes	FAC
2. Calamagrostis canadensis	8	No	FAC
3. Viola epipsila	15	Yes	FACW
4. Aconitum delphiniifolium	15	Yes	FAC
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 58			
50% of total cover: 29 20% of total cover: 11			

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 25
(Where applicable)

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 85 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	40	x 2 = 80
FAC species	111	x 3 = 333
FACU species	53	x 4 = 212
UPL species	0	x 5 = 0
Column Totals:	204 (A)	625 (B)

Prevalence Index = B/A = 3.06

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 25%

SOIL

Sampling Point T110-585

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	organic	100		0				
8-21	10YR 3/2	90	7.5YR 4/6	10	C	RC	Loamy Fine Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks: restrictive layer for digging gravel

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/28/2013
Applicant/Owner: AIDEA Sampling Point: T110-587
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 2
Subregion (LRR): Northern Alaska Lat: 66.79623350 Long: -150.72351350 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland, IIB2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: Photos 219-223.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. salix spp	35	Yes	FAC
2. Picea mariana	3	No	FACW
3.			
4.			
5.			
6.			
Total Cover: 38			
50% of total cover: 19 20% of total cover: 7			
Herb Stratum			
1. Calamagrostis canadensis	15	No	FAC
2. Carex utriculata	75	Yes	OBL
3. achillea millefolium	2	No	FACU
4. Chamaenerion angustifolium	3	No	FACU
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 95			
50% of total cover: 47 20% of total cover: 19			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	75	x 1 = 75
FACW species	3	x 2 = 6
FAC species	50	x 3 = 150
FACU species	5	x 4 = 20
UPL species	0	x 5 = 0
Column Totals:	133 (A)	251 (B)

Prevalence Index = B/A = 1.89

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 75
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 75%

SOIL

Sampling Point T110-587

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	organic	100		0				
6-10	10YR 3/1	100		0			Loamy Fine Sand	
10-23	10YR 5/4	100		0			Sandy Gravely Loam	no loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks: restrictive layer for digging gravel. Gravel indicates low carbon content; however, wetland is absent and soils are classified as not hydric.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/27/2013
Applicant/Owner: AIDEA Sampling Point: T111-578
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 3
Subregion (LRR): Northern Alaska Lat: 67.06209830 Long: -153.80014830 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PFO4/SS1B, IA2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: The the sample location was taken on western side of the alignment within a PSS WETLAND. Further west is likley upland. Photos 4249-4253.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	30	Yes	FACW
2.			
3.			
4.			
Total Cover: 30			
50% of total cover: 15 20% of total cover: 6			
Sapling/Shrub Stratum			
1. Picea mariana	25	No	FACW
2. Alnus viridis	10	No	FAC
3. salix spp	25	No	FAC
4. Betula nana	40	Yes	FAC
5. Vaccinium uliginosum	45	Yes	FAC
6. Empetrum nigrum	15	No	FAC
Total Cover: 160			
50% of total cover: 80 20% of total cover: 32			
Herb Stratum			
1. Carex media	50	Yes	FACW
2. Equisetum pratense	10	No	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 60			
50% of total cover: 30 20% of total cover: 12			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	115	x 2 = 230
FAC species	135	x 3 = 405
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	250 (A)	635 (B)

Prevalence Index = B/A = 2.54

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 50
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T111-578

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8		100		0				saturated organics

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: N/A
Depth (inches): 0

Hydric Soil Present? Yes

Remarks: Restrictive digging layer of gravel at 8 inches.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches): 0
Water Table Present? Yes Depth (inches): 4
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: saturated to the surface

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/27/2013
Applicant/Owner: AIDEA Sampling Point: T111-580
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hill Local relief (concave, convex, none): convex Slope (%): 10
Subregion (LRR): Northern Alaska Lat: 67.06229360 Long: -153.80075560 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: the sample location was taken on the south side of the alignment within an UPLAND. Photos 4254-4258.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	30	Yes	FACU
2.			
3.			
4.			
Total Cover: 30			
50% of total cover: 15 20% of total cover: 6			
Sapling/Shrub Stratum			
1. Vaccinium uliginosum	45	Yes	FAC
2. Betula nana	45	Yes	FAC
3. Vaccinium vitis-idaea	20	No	FAC
4. Rhododendron groenlandicum	30	No	FAC
5. salix spp	15	No	FAC
6. Vaccinium alaskaense	10	No	FAC
Total Cover: 165			
50% of total cover: 82 20% of total cover: 33			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	165	x 3 = 495
FACU species	30	x 4 = 120
UPL species	0	x 5 = 0
Column Totals:	195 (A)	615 (B)

Prevalence Index = B/A = 3.15

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 50
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T111-580

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5		100		0				organics
5-12	10YR 3/3	95	10YR 3/1	5			Sandy Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: none
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/27/2013
Applicant/Owner: AIDEA Sampling Point: T111-582
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): concave Slope (%): 5
Subregion (LRR): Northern Alaska Lat: 67.06279130 Long: -153.80317110 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: The sample location was taken on west side of the alignment within an upland . Photos 4259-4263.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	25	Yes	FACW
2.			
3.			
4.			
Total Cover: 25			
50% of total cover: 12 20% of total cover: 5			
Sapling/Shrub Stratum			
1. salix spp	40	Yes	FAC
2. Vaccinium uliginosum	60	Yes	FAC
3. Empetrum nigrum	20	No	FAC
4. Rubus chamaemorus	15	No	FACW
5. Vaccinium vitis-idaea	10	No	FAC
6. Picea mariana	15	No	FACW
Total Cover: 160			
50% of total cover: 80 20% of total cover: 32			
Herb Stratum			
1. Carex media	55	Yes	FACW
2. Equisetum pratense	10	No	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 65			
50% of total cover: 32 20% of total cover: 13			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	120	x 2 = 240
FAC species	130	x 3 = 390
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	250 (A)	630 (B)

Prevalence Index = B/A = 2.52

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 15
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T111-582

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10		100		0				organic

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 10

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/27/2013
Applicant/Owner: AIDEA Sampling Point: T111-584
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Drainageway Local relief (concave, convex, none): concave Slope (%): 5
Subregion (LRR): Northern Alaska Lat: 67.06332630 Long: -153.80396510 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PFO4/SS1B, IA2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: The sample location was west side of the alignment within a salix spp drainage feature next to the upland. PSS WETLAND	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	30	Yes	FACW
2.			
3.			
4.			
Total Cover: 30			
50% of total cover: 15 20% of total cover: 6			
Sapling/Shrub Stratum			
1. Picea mariana	15	No	FACW
2. salix spp	80	Yes	FAC
3. Vaccinium uliginosum	45	Yes	FAC
4. Alnus viridis	5	No	FAC
5. Rubus pubescens	36	Yes	FACW
6.			
Total Cover: 181			
50% of total cover: 90 20% of total cover: 36			
Herb Stratum			
1. Equisetum palustre	9	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 9			
50% of total cover: 4 20% of total cover: 1			

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 10
(Where applicable)

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	90	x 2 = 180
FAC species	130	x 3 = 390
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	220 (A)	570 (B)

Prevalence Index = B/A = 2.59

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T111-584

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10		100		0				saturated organics
10-14	10YR 3/1	100		0			Sandy Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 14

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 4
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: saturated to the surface

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/28/2013
Applicant/Owner: AIDEA Sampling Point: T112-586
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Drainageway Local relief (concave, convex, none): concave Slope (%): 0
Subregion (LRR): Northern Alaska Lat: 66.79376370 Long: -150.71232690 Datum: WGS84
Soil Map Unit Name: _ NWI classification: R2UB1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? Yes**

Remarks: The sample location was taken on the south side of the alignment at a upper perennial stream that intersects with the major stream crossing. Bankfull width 300ft, wetted width 50ft. Substrate is sand with some cobble. Moderate flowing, north to south. About 3ft at the deepest. Salix spp in the riparian zone. Photos 4269-4274

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	0 (A)	0 (B)

Prevalence Index = B/A = 0.00

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 0 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks:

SOIL

Sampling Point T112-586

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/28/2013
Applicant/Owner: AIDEA Sampling Point: T112-588
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hill Local relief (concave, convex, none): convex Slope (%): 8
Subregion (LRR): Northern Alaska Lat: 66.79318930 Long: -150.71774850 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: The sample location was taken on the south side of the alignment within an UPLAND. Photos 4275-4279.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. picea sp	65	Yes	FAC
2. Betula neoalaskana	5	No	FACU
3. Populus tremuloides	70	Yes	FACU
4.			
Total Cover: 140			
50% of total cover: 70 20% of total cover: 28			
Sapling/Shrub Stratum			
1. Picea glauca	20	No	FACU
2. Populus tremuloides	45	Yes	FACU
3. salix spp	40	Yes	FAC
4. Shepherdia canadensis	10	No	FACU
5.			
6.			
Total Cover: 115			
50% of total cover: 57 20% of total cover: 23			
Herb Stratum			
1. Calamagrostis canadensis	20	Yes	FAC
2. Chamaenerion angustifolium	55	Yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 75			
50% of total cover: 37 20% of total cover: 15			

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 35
(Where applicable)

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	125	x 3 = 375
FACU species	205	x 4 = 820
UPL species	0	x 5 = 0
Column Totals:	330 (A)	1195 (B)

Prevalence Index = B/A = 3.62

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
__ Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? No

Remarks: previously burned forested upland

SOIL

Sampling Point T112-588

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1		100		0				organics
1-5	10YR 3/6	100		0			Sandy Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 5

Hydric Soil Present? No

Remarks: Restrictive digging layer of rock.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/28/2013
Applicant/Owner: AIDEA Sampling Point: T112-590
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 5
Subregion (LRR): Northern Alaska Lat: 66.79305160 Long: -150.71306450 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: Photos 4280-4284. The sample location was taken on the south side of the alignment within an UPLAND	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. picea sp	50	Yes	FAC
2. Populus tremuloides	20	Yes	FACU
3. Populus balsamifera	5	No	FACU
4.			
Total Cover: 75			
50% of total cover: 37 20% of total cover: 15			
Sapling/Shrub Stratum			
1. picea sp	40	No	FAC
2. Populus tremuloides	20	No	FACU
3. Vaccinium uliginosum	55	Yes	FAC
4. salix spp	61	Yes	FAC
5. Shepherdia canadensis	45	Yes	FACU
6.			
Total Cover: 221			
50% of total cover: 110 20% of total cover: 44			
Herb Stratum			
1. Chamaenerion angustifolium	80	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 80			
50% of total cover: 40 20% of total cover: 16			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	206	x 3 = 618
FACU species	170	x 4 = 680
UPL species	0	x 5 = 0
Column Totals:	376 (A)	1298 (B)

Prevalence Index = B/A = 3.45

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
__ Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks:

SOIL

Sampling Point T112-590

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 3/2	100		0			Loamy Fine Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 18

Hydric Soil Present? No

Remarks: Restrictive digging layer of rock.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
X Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/28/2013
Applicant/Owner: AIDEA Sampling Point: T112-592
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): Northern Alaska Lat: 66.79274450 Long: -150.71139150 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: The sample location was taken on the south side of the alignment within an UPLAND. photos 4285-4289.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Populus balsamifera	80	Yes	FACU
2. Populus tremuloides	40	Yes	FACU
3.			
4.			
Total Cover: 120			
50% of total cover: 60 20% of total cover: 24			
Sapling/Shrub Stratum			
1. Populus tremuloides	20	No	FACU
2. Picea glauca	5	No	FACU
3. Shepherdia canadensis	55	Yes	FACU
4. Rosa acicularis	15	No	FACU
5. Vaccinium uliginosum	50	Yes	FAC
6. Vaccinium vitis-idaea	25	No	FAC
Total Cover: 170			
50% of total cover: 85 20% of total cover: 34			
Herb Stratum			
1. Calamagrostis canadensis	40	Yes	FAC
2. Ranunculus occidentalis	5	No	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 45			
50% of total cover: 22 20% of total cover: 9			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 40 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	5	x 2 = 10
FAC species	115	x 3 = 345
FACU species	215	x 4 = 860
UPL species	0	x 5 = 0
Column Totals:	335 (A)	1215 (B)

Prevalence Index = B/A = 3.63

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
__ Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks:

SOIL

Sampling Point T112-592

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1		100		0				organics
1-17	10YR 2/2	95	10YR 3/6	5			Sandy Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 17

Hydric Soil Present? No

Remarks: Restrictive digging layer of roots.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/28/2013
Applicant/Owner: AIDEA Sampling Point: T113-594
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): Northern Alaska Lat: 66.79323890 Long: -150.73250640 Datum: WGS84
Soil Map Unit Name: _ NWI classification: R2UB1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? Yes**

Remarks: The sample location was taken at the Jim River crossing. The bankfull width is 500ft, wetted width 100ft, with sand and cobble substrate. The flow was west-east at the crossing. Fast flowing water. The ripiarian area contains salix spp and alnus viridis. Photos 4290-4293.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	0 (A)	0 (B)

Prevalence Index = B/A = 0.00

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 0 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks:

SOIL

Sampling Point T113-594

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/28/2013
Applicant/Owner: AIDEA Sampling Point: T114-589
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): convex Slope (%): 1
Subregion (LRR): Northern Alaska Lat: 66.79637690 Long: -150.74226820 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: less than 1% of picea untouched by fire. Photos 224-228.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	40	Yes	FACW
2.			
3.			
4.			
Total Cover: 40			
50% of total cover: 20 20% of total cover: 8			
Sapling/Shrub Stratum			
1. Populus balsamifera	3	No	FACU
2. Populus tremuloides	5	No	FACU
3. Vaccinium vitis-idaea	30	Yes	FAC
4. Rosa acicularis	2	No	FACU
5. Vaccinium uliginosum	3	No	FAC
6.			
Total Cover: 43			
50% of total cover: 21 20% of total cover: 8			
Herb Stratum			
1. Festuca pratensis	5	No	FACU
2. Calamagrostis canadensis	25	Yes	FAC
3. Chamaenerion angustifolium	40	Yes	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 70			
50% of total cover: 35 20% of total cover: 14			

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 25
(Where applicable)

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	40	x 2 = 80
FAC species	58	x 3 = 174
FACU species	55	x 4 = 220
UPL species	0	x 5 = 0
Column Totals:	153 (A)	474 (B)

Prevalence Index = B/A = 3.10

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes

Remarks: 25% sphagnum. Picea burnt in July 2013.

SOIL

Sampling Point T114-589

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	organic	100		0				
2-15	7.5YR 5/6	100		0			sandy gravel	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks: restrictive layer for digging gravel

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/28/2013
Applicant/Owner: AIDEA Sampling Point: T114-591
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): none Slope (%): 1
Subregion (LRR): Northern Alaska Lat: 66.79579480 Long: -150.74360060 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: photos 229-233	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	35	Yes	FACW
2.			
3.			
4.			
Total Cover: 35			
50% of total cover: 17 20% of total cover: 7			
Sapling/Shrub Stratum			
1. Picea mariana	10	No	FACW
2. Vaccinium vitis-idaea	40	Yes	FAC
3. Populus tremuloides	3	No	FACU
4. Betula nana	10	No	FAC
5. Rhododendron groenlandicum	15	Yes	FAC
6. Spiraea stevenii	5	No	FACU
Total Cover: 83			
50% of total cover: 41 20% of total cover: 16			
Herb Stratum			
1. Calamagrostis canadensis	45	Yes	FAC
2. Chamaenerion angustifolium	30	Yes	FACU
3. Eriophorum vaginatum	15	No	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 90			
50% of total cover: 45 20% of total cover: 18			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	60	x 2 = 120
FAC species	110	x 3 = 330
FACU species	38	x 4 = 152
UPL species	0	x 5 = 0
Column Totals:	208 (A)	602 (B)

Prevalence Index = B/A = 2.89

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 25
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: picea burnt in July 2013, no picea unburnt. sphagnum 25%.

SOIL

Sampling Point T114-591

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1	organic	100		0				
1-12	10YR 4/2	100		0			Silt Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks: 85% cobbles 3 inch diameter.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/28/2013
Applicant/Owner: AIDEA Sampling Point: T114-593
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Stream terrace Local relief (concave, convex, none): convex Slope (%): 2
Subregion (LRR): Northern Alaska Lat: 66.79333120 Long: -150.74431340 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: photos 234-238	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	45	Yes	FACU
2.			
3.			
4.			
Total Cover: 45			
50% of total cover: 22 20% of total cover: 9			
Sapling/Shrub Stratum			
1. salix sp	10	No	FAC
2. Populus balsamifera	5	No	FACU
3. Rosa acicularis	30	Yes	FACU
4. Vaccinium uliginosum	45	Yes	FAC
5. Vaccinium vitis-idaea	15	No	FAC
6. Ribes triste	3	No	FAC
Total Cover: 108			
50% of total cover: 54 20% of total cover: 21			
Herb Stratum			
1. Equisetum arvense	10	Yes	FAC
2. Calamagrostis canadensis	20	Yes	FAC
3. Viola palustris	2	No	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 32			
50% of total cover: 16 20% of total cover: 6			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 60 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	105	x 3 = 315
FACU species	80	x 4 = 320
UPL species	0	x 5 = 0
Column Totals:	185 (A)	635 (B)

Prevalence Index = B/A = 3.43

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 5 Total Cover of Bryophytes: 95
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 93%, pelt lichen 2%

SOIL

Sampling Point T114-593

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	organic	100		0				
2-26	10YR 4/3	100		0			Fine Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/28/2013
Applicant/Owner: AIDEA Sampling Point: T114-595
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 3
Subregion (LRR): Northern Alaska Lat: 66.79645580 Long: -150.74725480 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PEM1B, IIIA3
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: The sample location was taken on north side of the alignment within a PEM WETLAND. Photos 4294-4288.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Herb Stratum			
1. Eriophorum angustifolium	95	Yes	OBL
2. Chamaenerion angustifolium	7	No	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 102			
50% of total cover: 51 20% of total cover: 20			

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 45
(Where applicable)

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	95	x 1 = 95
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	7	x 4 = 28
UPL species	0	x 5 = 0
Column Totals:	102 (A)	123 (B)

Prevalence Index = B/A = 1.21

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T114-595

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	organic	100		0				saturated organics
4-20	10YR 2/1	100		0			Sandy Gravely Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
X Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks: Restrictive digging layer of gravel at 20 inches.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: saturated to the surface

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/28/2013
Applicant/Owner: AIDEA Sampling Point: T114-596
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): Northern Alaska Lat: 66.79687600 Long: -150.74937360 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: The sample location was taken on north side of the alignment within an UPLAND. Fire burned area july 2013. Photos 4299-4303	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	70	Yes	FACW
2.			
3.			
4.			
Total Cover: 70			
50% of total cover: 35 20% of total cover: 14			
Sapling/Shrub Stratum			
1. Picea mariana	11	No	FACW
2. Betula nana	55	Yes	FAC
3. Rhododendron groenlandicum	50	Yes	FAC
4. Rubus chamaemorus	15	No	FACW
5.			
6.			
Total Cover: 131			
50% of total cover: 65 20% of total cover: 26			
Herb Stratum			
1. Chamaenerion angustifolium	30	Yes	FACU
2. Carex media	50	Yes	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 80			
50% of total cover: 40 20% of total cover: 16			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	146	x 2 = 292
FAC species	105	x 3 = 315
FACU species	30	x 4 = 120
UPL species	0	x 5 = 0
Column Totals:	281 (A)	727 (B)

Prevalence Index = B/A = 2.59

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 45
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: tree layer burned

SOIL

Sampling Point T114-596

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4		100		0				organic
4-21	10YR 3/6	90	10YR 4/1	10			Sandy Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: none
Depth (inches): 0

Hydric Soil Present? No

Remarks: soils should be hydric, but due to fire, not hydric

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/28/2013
Applicant/Owner: AIDEA Sampling Point: T114-598
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): concave Slope (%): 3
Subregion (LRR): Northern Alaska Lat: 66.79480520 Long: -150.74817230 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: photos 4304-4308. The sample location was taken on north side of the alignment within an UPLAND	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	60	Yes	FACW
2. Populus tremuloides	15	Yes	FACU
3.			
4.			
Total Cover: 75			
50% of total cover: 37 20% of total cover: 15			
Sapling/Shrub Stratum			
1. Picea mariana	10	No	FACW
2. Alnus viridis	10	No	FAC
3. Populus tremuloides	5	No	FACU
4. salix spp	40	Yes	FAC
5. Vaccinium uliginosum	60	Yes	FAC
6. Rhododendron groenlandicum	50	Yes	FAC
Total Cover: 175			
50% of total cover: 87 20% of total cover: 35			
Herb Stratum			
1. Calamagrostis canadensis	20	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 20			
50% of total cover: 10 20% of total cover: 4			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 83 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	70	x 2 = 140
FAC species	180	x 3 = 540
FACU species	20	x 4 = 80
UPL species	0	x 5 = 0
Column Totals:	270 (A)	760 (B)

Prevalence Index = B/A = 2.81

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 20
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T114-598

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3		100		0				organics
3-17	10YR 3/1	100		0			Sandy Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: none
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/28/2013
Applicant/Owner: AIDEA Sampling Point: T114-600
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): Northern Alaska Lat: 66.79402160 Long: -150.74894430 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland, IA3
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: The sample location was taken on the south side of the alignment within a forested upland with an intermittent stream channel about 10 feet north. Upland, photos 4309-4313	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	10	Yes	FACW
2.			
3.			
4.			
Total Cover: 10			
50% of total cover: 5 20% of total cover: 2			
Sapling/Shrub Stratum			
1. salix spp	65	Yes	FAC
2. Betula nana	30	No	FAC
3. Vaccinium uliginosum	31	Yes	FAC
4. Shepherdia canadensis	20	No	FACU
5. Vaccinium vitis-idaea	15	No	FAC
6.			
Total Cover: 161			
50% of total cover: 80 20% of total cover: 32			
Herb Stratum			
1. Aconitum delphiniifolium	30	Yes	FAC
2. Ranunculus occidentalis	20	Yes	FACW
3. Viola palustris	10	No	FAC
4. Equisetum arvense	10	No	FAC
5. Chamaenerion angustifolium	5	No	FACU
6.			
7.			
8.			
9.			
10.			
Total Cover: 75			
50% of total cover: 37 20% of total cover: 15			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	30	x 2 = 60
FAC species	191	x 3 = 573
FACU species	25	x 4 = 100
UPL species	0	x 5 = 0
Column Totals:	246 (A)	733 (B)

Prevalence Index = B/A = 2.98

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T114-600

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-20	10YR 3/3	100		0			Sandy Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/28/2013
Applicant/Owner: AIDEA Sampling Point: T115-595
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Drainageway Local relief (concave, convex, none): concave Slope (%): 2
Subregion (LRR): Northern Alaska Lat: 66.79320760 Long: -150.85872780 Datum: WGS84
Soil Map Unit Name: _ NWI classification: R3UB1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**

Remarks: channel 12 feet wide by 11 inches deep. 12 inch diameter Cobbles with gravels less than 2 inches. riparian salix sp and vacc uli. Photos 239-242. Near vertical banks.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	0 (A)	0 (B)

Prevalence Index = B/A = 0.00

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 0 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks:

SOIL

Sampling Point T115-595

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/28/2013
Applicant/Owner: AIDEA Sampling Point: T115-597
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 5
Subregion (LRR): Northern Alaska Lat: 66.79202050 Long: -150.85599400 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PFO5B, IA2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: tree, shrub and herb burnt. Observations from regrowth. photos 243-247.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. picea sp	45	Yes	FAC
2.			
3.			
4.			
Total Cover: 45			
50% of total cover: 22 20% of total cover: 9			
Sapling/Shrub Stratum			
1. picea sp	30	Yes	FAC
2. Vaccinium uliginosum	5	No	FAC
3. Alnus viridis	4	No	FAC
4. Rosa acicularis	3	No	FACU
5. salix sp	5	No	
6.			
Total Cover: 47			
50% of total cover: 23 20% of total cover: 9			
Herb Stratum			
1. Calamagrostis canadensis	30	Yes	FAC
2. Chamaenerion angustifolium	15	Yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 45			
50% of total cover: 22 20% of total cover: 9			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	114	x 3 = 342
FACU species	18	x 4 = 72
UPL species	0	x 5 = 0
Column Totals:	132 (A)	414 (B)

Prevalence Index = B/A = 3.14

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
__ Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 20
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: picea tree 100% burnt approximately 10-15 feet tall and 2-4 inch diameter. sphagnum 20%.

SOIL

Sampling Point T115-597

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-11	organic	100		0				
11-22	2.5Y 4/4	90	gley1 10Y 5/1	10	RM	M	Sandy Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
X Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 22

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 5
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/28/2013
Applicant/Owner: AIDEA Sampling Point: T115-602
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): Northern Alaska Lat: 66.78927350 Long: -150.85496490 Datum: WGS84
Soil Map Unit Name: _ NWI classification: R2UB1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? Yes**
Remarks: The sample location was taken at the transition between a BURNED UPLAND and the Jim River. Photos 4314-4317	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	0 (A)	0 (B)

Prevalence Index = B/A = 0.00

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 0 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks:

SOIL

Sampling Point T115-602

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/28/2013
Applicant/Owner: AIDEA Sampling Point: T116-599
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): convex Slope (%): 1
Subregion (LRR): Northern Alaska Lat: 66.78759380 Long: -150.94813630 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PFO5B, IA2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: vegetation new growth shrub and herb. Swales located to east and west. Photos 248-252. 2013 Fire.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. picea sp	35	Yes	FAC
2.			
3.			
4.			
Total Cover: 35			
50% of total cover: 17 20% of total cover: 7			
Sapling/Shrub Stratum			
1. Picea sp	15	Yes	FAC
2. Rubus chamaemorus	15	Yes	FACW
3. Vaccinium uliginosum	10	No	FAC
4. Alnus viridis	5	No	FAC
5. Rhododendron groenlandicum	10	No	FAC
6. Vaccinium vitis-idaea	5	No	FAC
Total Cover: 60			
50% of total cover: 30 20% of total cover: 12			
Herb Stratum			
1. Eriophorum vaginatum	25	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 25			
50% of total cover: 12 20% of total cover: 5			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	40	x 2 = 80
FAC species	80	x 3 = 240
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	120 (A)	320 (B)

Prevalence Index = B/A = 2.67

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 35
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 35%. Picea burnt 100%.

SOIL

Sampling Point T116-599

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	organic	100		0				
8-19	10YR 4/2	100		0			Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 19

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 5
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/28/2013
Applicant/Owner: AIDEA Sampling Point: T116-601
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Drainageway Local relief (concave, convex, none): concave Slope (%): 1
Subregion (LRR): Northern Alaska Lat: 66.78752010 Long: -150.94803740 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/EM1B
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks:	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Betula nana	35	Yes	FAC
2. salix sp	15	No	FAC
3. Vaccinium uliginosum	25	Yes	FAC
4. Myrica gale	10	No	OBL
5.			
6.			
Total Cover: 85			
50% of total cover: 42 20% of total cover: 17			
Herb Stratum			
1. Carex rostrata	40	Yes	OBL
2. Comarum palustre	20	Yes	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 60			
50% of total cover: 30 20% of total cover: 12			

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 95
(Where applicable)

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	70	x 1 = 70
FACW species	0	x 2 = 0
FAC species	75	x 3 = 225
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	145 (A)	295 (B)

Prevalence Index = B/A = 2.03

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 95

SOIL

Sampling Point T116-601

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-20	organic	100		0				

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

X Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches): 0
Water Table Present? Yes Depth (inches): 0.5
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: pockets of inundation

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/28/2013
Applicant/Owner: AIDEA Sampling Point: T116-603
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): convex Slope (%): 1
Subregion (LRR): Northern Alaska Lat: 66.78802320 Long: -150.93890290 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS4/EM1B, IIA2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: photos 258-262.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. picea sp	10	Yes	FAC
2.			
3.			
4.			
Total Cover: 10			
50% of total cover: 5 20% of total cover: 2			
Sapling/Shrub Stratum			
1. picea sp	45	Yes	FAC
2. Rhododendron groenlandicum	20	Yes	FAC
3. Rubus chamaemorus	10	No	FACW
4. Vaccinium uliginosum	5	No	FAC
5.			
6.			
Total Cover: 80			
50% of total cover: 40 20% of total cover: 16			
Herb Stratum			
1. Eriophorum vaginatum	55	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 55			
50% of total cover: 27 20% of total cover: 11			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	65	x 2 = 130
FAC species	80	x 3 = 240
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	145 (A)	370 (B)

Prevalence Index = B/A = 2.55

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 30
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 30%. picea 100% burnt.

SOIL

Sampling Point T116-603

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-11	organic	100		0				
11-19	10YR 3/2	100		0			Silty Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 19

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 11
Saturation Present? Yes Depth (inches): 3
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/28/2013
Applicant/Owner: AIDEA Sampling Point: T116-604
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): Northern Alaska Lat: 66.78969970 Long: -150.94088300 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PFO4,5/SS4B, IA2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**

Remarks: The sample location was taken on north side of the alignment within about 100ft off the winter trail in a burned picea wetland. BURNED PFO WETLAND. Photos 4318-4322.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	45	Yes	FACW
2.			
3.			
4.			
Total Cover: 45			
50% of total cover: 22 20% of total cover: 9			
Sapling/Shrub Stratum			
1. Picea mariana	20	Yes	FACW
2. Vaccinium vitis-idaea	15	Yes	FAC
3. Rubus chamaemorus	15	No	FACW
4. Vaccinium uliginosum	20	Yes	FAC
5. Rhododendron groenlandicum	15	No	FAC
6. Alnus viridis	3	No	FAC
Total Cover: 88			
50% of total cover: 44 20% of total cover: 17			
Herb Stratum			
1. Eriophorum angustifolium	60	Yes	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 60			
50% of total cover: 30 20% of total cover: 12			

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 60
(Where applicable)

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	60	x 1 = 60
FACW species	80	x 2 = 160
FAC species	53	x 3 = 159
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	193 (A)	379 (B)

Prevalence Index = B/A = 1.96

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes

Remarks: burned forest

SOIL

Sampling Point T116-604

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-17		100		0				saturated organics

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

X Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 17

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/28/2013
Applicant/Owner: AIDEA Sampling Point: T116-606
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 8
Subregion (LRR): Northern Alaska Lat: 66.78984310 Long: -150.93702340 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PEM1B/IIIA3
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: The sample location was taken on north side of the alignment within a PEM WETLAND surrounded by burned PFO wetlands. Photos 4323-4327.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Herb Stratum			
1. Eriophorum angustifolium	95	Yes	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 95			
50% of total cover: 47 20% of total cover: 19			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	95	x 1 = 95
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	95 (A)	95 (B)

Prevalence Index = B/A = 1.00

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 60
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T116-606

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-26		100		0				saturated organics

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

X Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 26

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches): 0
Water Table Present? Yes Depth (inches): 0
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Pockets of inundation.

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/28/2013
Applicant/Owner: AIDEA Sampling Point: T117-605
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): convex Slope (%): 1
Subregion (LRR): Northern Alaska Lat: 66.84279240 Long: -151.08320080 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS4B, IA3
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: photos 263-268.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. picea sp	10	Yes	FAC
2.			
3.			
4.			
Total Cover: 10			
50% of total cover: 5 20% of total cover: 2			
Sapling/Shrub Stratum			
1. picea sp	45	Yes	FAC
2. Betula nana	35	Yes	FAC
3. salix sp	5	No	FAC
4. Alnus viridis	5	No	FAC
5. Vaccinium uliginosum	10	No	FAC
6. Vaccinium vitis-idaea	5	No	FAC
Total Cover: 105			
50% of total cover: 52 20% of total cover: 21			
Herb Stratum			
1. Eriophorum vaginatum	25	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 25			
50% of total cover: 12 20% of total cover: 5			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	25	x 2 = 50
FAC species	115	x 3 = 345
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	140 (A)	395 (B)

Prevalence Index = B/A = 2.82

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 45
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 45%. Picea tree 100% burnt, sapling 80% burnt.

SOIL

Sampling Point T117-605

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	organic	100		0				
8-15	10YR 3/1	100		0			Silty Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 15

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 3
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/28/2013
Applicant/Owner: AIDEA Sampling Point: T117-607
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): convex Slope (%): 1
Subregion (LRR): Northern Alaska Lat: 66.84349830 Long: -151.08595810 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland, IA2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: photos 269-273.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	20	Yes	FACW
2. Picea glauca	10	Yes	FACU
3.			
4.			
Total Cover: 30			
50% of total cover: 15 20% of total cover: 6			
Sapling/Shrub Stratum			
1. Picea mariana	12	No	FACW
2. Picea glauca	2	No	FACU
3. Betula nana	30	Yes	FAC
4. Vaccinium uliginosum	25	Yes	FAC
5. Vaccinium vitis-idaea	10	No	FAC
6. salix sp	5	No	FAC
Total Cover: 84			
50% of total cover: 42 20% of total cover: 16			
Herb Stratum			
1. Calamagrostis canadensis	40	Yes	FAC
2. Chamaenerion angustifolium	30	Yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 70			
50% of total cover: 35 20% of total cover: 14			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	32	x 2 = 64
FAC species	110	x 3 = 330
FACU species	42	x 4 = 168
UPL species	0	x 5 = 0
Column Totals:	184 (A)	562 (B)

Prevalence Index = B/A = 3.05

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 85
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 70%, reindeer lichen 10%, pelt lichen 5%. 90 % picea tree layer burnt.

SOIL

Sampling Point T117-607

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	organic	100		0				
2-4	gley1 10Y 5/1	100		0			Silty Clay	
4-14	7.5YR 3/3	100		0			Sandy Gravel	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
X Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks: restrictive layer for digging gravel

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/28/2013
Applicant/Owner: AIDEA Sampling Point: T117-608
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 5
Subregion (LRR): Northern Alaska Lat: 66.84097800 Long: -151.08332740 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/EM1C, IIC2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: The sample location was taken on south side of the alignment within a PEM WETLAND visible from the aerial. Photo 4328-4332.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Myrica gale	41	Yes	OBL
2.			
3.			
4.			
5.			
6.			
Total Cover: 41			
50% of total cover: 20 20% of total cover: 8			
Herb Stratum			
1. Equisetum fluviatile	50	Yes	OBL
2. Comarum palustre	40	Yes	OBL
3. Carex rostrata	50	Yes	OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 140			
50% of total cover: 70 20% of total cover: 28			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	181	x 1 = 181
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	181 (A)	181 (B)

Prevalence Index = B/A = 1.00

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T117-608

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-26		100		0				saturated organics

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

X Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 26

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

X Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes Depth (inches): 1
Water Table Present? No Depth (inches): 0
Saturation Present? No Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: inundated to the surface

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/28/2013
Applicant/Owner: AIDEA Sampling Point: T117-609
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): convex Slope (%): 1
Subregion (LRR): Northern Alaska Lat: 66.84363100 Long: -151.08758000 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: photos 274-278	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	15	Yes	FACU
2.			
3.			
4.			
Total Cover: 15			
50% of total cover: 7 20% of total cover: 3			
Sapling/Shrub Stratum			
1. Alnus viridis	90	Yes	FAC
2. Vaccinium uliginosum	15	No	FAC
3. Vaccinium vitis-idaea	5	No	FAC
4. Rhododendron groenlandicum	8	No	FAC
5.			
6.			
Total Cover: 118			
50% of total cover: 59 20% of total cover: 23			
Herb Stratum			
1. Equisetum arvense	15	Yes	FAC
2. Viola epipsila	7	Yes	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 22			
50% of total cover: 11 20% of total cover: 4			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	7	x 2 = 14
FAC species	133	x 3 = 399
FACU species	15	x 4 = 60
UPL species	0	x 5 = 0
Column Totals:	155 (A)	473 (B)

Prevalence Index = B/A = 3.05

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 20
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 20%. Leaf litter.

SOIL

Sampling Point T117-609

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	organic	100		0				
8-15	10YR 3/2	100		0			Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 15

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/28/2013
Applicant/Owner: AIDEA Sampling Point: T117-610
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): convex Slope (%): 5
Subregion (LRR): Northern Alaska Lat: 66.84066430 Long: -151.08669770 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PFO4/SS1B, IA2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**

Remarks: The sample location was taken on the south side of the alignment within a PSS WETLAND. Tne vegetation is consistent to the winter trail.
Photos 4333-4337

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	30	Yes	FACW
2.			
3.			
4.			
Total Cover: 30			
50% of total cover: 15 20% of total cover: 6			
Sapling/Shrub Stratum			
1. Picea mariana	46	Yes	FACW
2. Betula nana	45	Yes	FAC
3. Alnus viridis	40	No	FAC
4. Vaccinium uliginosum	65	Yes	FAC
5. Myrica gale	21	No	OBL
6. Rhododendron groenlandicum	21	No	FAC
Total Cover: 238			
50% of total cover: 119 20% of total cover: 47			
Herb Stratum			
1. Carex media	40	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 40			
50% of total cover: 20 20% of total cover: 8			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	21	x 1 = 21
FACW species	116	x 2 = 232
FAC species	171	x 3 = 513
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	308 (A)	766 (B)

Prevalence Index = B/A = 2.49

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 5 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 50
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T117-610

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3		100		0				saturated organics
3-8	10YR 3/2	100		0			Loamy Fine Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
X Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 8

Hydric Soil Present? Yes

Remarks: Problematic Hydric Soils - Restrictive layer within upper 12" of soil profile.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Pockets of inundation.

Wetlands data compiled using Electronic Data Solutions' Everglade™ wetland delineation software. Alaska Region

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/28/2013
Applicant/Owner: AIDEA Sampling Point: T117-612
Investigator(s): EG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): convex Slope (%): 0
Subregion (LRR): Northern Alaska Lat: 66.84015700 Long: -151.08661800 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Boundary for PEM1B, IIIA3 and PSS1B, IIC2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: Photo point only. The sample location was taken on the south side of the alignment within a PEM WETLAND. Visible from the aerial abutting the pss wetland previously described. Photos 4338-4341.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	0 (A)	0 (B)

Prevalence Index = B/A = 0.00

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 0 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T117-612

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/29/2013
Applicant/Owner: AIDEA Sampling Point: T118-620
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 3
Subregion (LRR): Northern Alaska Lat: 67.06274740 Long: -153.76025190 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PFO4/SS1B, IA2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: photos 279-283. Located west of pss drainage.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	30	Yes	FACW
2.			
3.			
4.			
Total Cover: 30			
50% of total cover: 15 20% of total cover: 6			
Sapling/Shrub Stratum			
1. Picea mariana	5	No	FACW
2. Betula nana	25	Yes	FAC
3. Vaccinium uliginosum	40	Yes	FAC
4. Vaccinium vitis-idaea	20	No	FAC
5. Rubus chamaemorus	5	No	FACW
6. Rhododendron groenlandicum	10	No	FAC
Total Cover: 105			
50% of total cover: 52 20% of total cover: 21			
Herb Stratum			
1. Carex rostrata	35	Yes	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 35			
50% of total cover: 17 20% of total cover: 7			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	35	x 1 = 35
FACW species	40	x 2 = 80
FAC species	95	x 3 = 285
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	170 (A)	400 (B)

Prevalence Index = B/A = 2.35

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 100
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 75%, reindeer lichen 20%, pelt lichen 5%

SOIL

Sampling Point T118-620

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-9	organics	100		0				
9-23	gley1 10Y 3/1	100		0			Silty Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
X Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 23

Hydric Soil Present? Yes

Remarks: Near drainage feature hydric indicators likely have not had sufficient time to form.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 7
Saturation Present? Yes Depth (inches): 7
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/29/2013
Applicant/Owner: AIDEA Sampling Point: T118-621
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Drainageway Local relief (concave, convex, none): concave Slope (%): 1
Subregion (LRR): Northern Alaska Lat: 67.06394760 Long: -153.75814560 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1B, IIB2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: photos 284-288. Drainageway pss	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	5	Yes	FACW
2.			
3.			
4.			
Total Cover: 5			
50% of total cover: 2 20% of total cover: 1			
Sapling/Shrub Stratum			
1. salix sp	65	Yes	FAC
2. Vaccinium uliginosum	40	Yes	FAC
3.			
4.			
5.			
6.			
Total Cover: 105			
50% of total cover: 52 20% of total cover: 21			
Herb Stratum			
1. Calamagrostis canadensis	35	Yes	FAC
2. Comarum palustre	8	Yes	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 43			
50% of total cover: 21 20% of total cover: 8			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	8	x 1 = 8
FACW species	5	x 2 = 10
FAC species	140	x 3 = 420
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	153 (A)	438 (B)

Prevalence Index = B/A = 2.86

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 30
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 30%

SOIL

Sampling Point T118-621

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	organics	100		0				
3-19	2.5Y 3/2	100		0			Silty Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
X Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 19

Hydric Soil Present? Yes

Remarks: Problematic soil. Shallow aquitard.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 3
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/29/2013
Applicant/Owner: AIDEA Sampling Point: T118-622
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 10
Subregion (LRR): Northern Alaska Lat: 67.06650660 Long: -153.75815130 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: photos 289-293. Upland.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	40	Yes	FACW
2.			
3.			
4.			
Total Cover: 40			
50% of total cover: 20 20% of total cover: 8			
Sapling/Shrub Stratum			
1. Picea mariana	8	No	FACW
2. Betula nana	10	No	FAC
3. Vaccinium uliginosum	12	Yes	FAC
4. Rhododendron groenlandicum	20	Yes	FAC
5. Vaccinium vitis-idaea	8	No	FAC
6. Empetrum nigrum	3	No	FAC
Total Cover: 61			
50% of total cover: 30 20% of total cover: 12			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	48	x 2 = 96
FAC species	53	x 3 = 159
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	101 (A)	255 (B)

Prevalence Index = B/A = 2.52

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 5 Total Cover of Bryophytes: 90
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: reindeer lichen 77%, sphagnum 5%, pelt lichen 3%, false pixie cup 5%

SOIL

Sampling Point T118-622

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	organics	100		0				
5-17	10YR 4/3	100		0			gravelly loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks: restrictive layer for digging gravel

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/29/2013
Applicant/Owner: AIDEA Sampling Point: T118-623
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Drainageway Local relief (concave, convex, none): concave Slope (%): 5
Subregion (LRR): Northern Alaska Lat: 67.06639820 Long: -153.76289700 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1B, IIC1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: DRAINAGE inbetween uplands. Photos 294-298.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	5	Yes	FACU
2. Picea mariana	1	Yes	FACW
3.			
4.			
Total Cover: 6			
50% of total cover: 3 20% of total cover: 1			
Sapling/Shrub Stratum			
1. salix spp	45	Yes	FAC
2. Vaccinium uliginosum	65	Yes	FAC
3. Dasiphora fruticosa	10	No	FAC
4. Betula nana	10	No	FAC
5.			
6.			
Total Cover: 130			
50% of total cover: 65 20% of total cover: 26			
Herb Stratum			
1. Equisetum arvense	5	Yes	FAC
2. Calamagrostis canadensis	10	Yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 15			
50% of total cover: 7 20% of total cover: 3			

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 60
(Where applicable)

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 83 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	1	x 2 = 2
FAC species	145	x 3 = 435
FACU species	5	x 4 = 20
UPL species	0	x 5 = 0
Column Totals:	151 (A)	457 (B)

Prevalence Index = B/A = 3.03

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
__ Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 60%

SOIL

Sampling Point T118-623

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	organics	100		0				
6-16	10YR 3/2	100		0			Silt Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
X Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks: cobbles average 5 inch diameter restrictive digging layer. Drainage feature.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 6
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/29/2013
Applicant/Owner: AIDEA Sampling Point: T118-624
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 10
Subregion (LRR): Northern Alaska Lat: 67.06632480 Long: -153.76486720 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: upland. Photos 299-303.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	30	Yes	FACW
2.			
3.			
4.			
Total Cover: 30			
50% of total cover: 15 20% of total cover: 6			
Sapling/Shrub Stratum			
1. Picea mariana	10	No	FACW
2. Betula nana	15	Yes	FAC
3. Vaccinium uliginosum	40	Yes	FAC
4. Vaccinium vitis-idaea	5	No	FAC
5. Rhododendron groenlandicum	10	No	FAC
6. Spiraea stevenii	3	No	FACU
Total Cover: 83			
50% of total cover: 41 20% of total cover: 16			
Herb Stratum			
1. Carex rostrata	3	Yes	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 3			
50% of total cover: 1 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	3	x 1 = 3
FACW species	40	x 2 = 80
FAC species	70	x 3 = 210
FACU species	3	x 4 = 12
UPL species	0	x 5 = 0
Column Totals:	116 (A)	305 (B)

Prevalence Index = B/A = 2.63

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 95
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 10%, reindeer lichen 85%

SOIL

Sampling Point T118-624

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	organics	100		0				
6-19	10YR 3/2	75	10YR 3/6	25	RM	M	gravelly loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks: restrictive digging layer

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/29/2013
Applicant/Owner: AIDEA Sampling Point: T118-625
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Drainageway Local relief (concave, convex, none): concave Slope (%): 2
Subregion (LRR): Northern Alaska Lat: 67.06625040 Long: -153.76255690 Datum: WGS84
Soil Map Unit Name: _ NWI classification: R3UB1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**

Remarks: channel 24 inches wide by 6 inches deep. 2 inch diameter gravel substrate. riparian vac uli and salix sp. Photos 304-306

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	0 (A)	0 (B)

Prevalence Index = B/A = 0.00

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 0 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks:

SOIL

Sampling Point T118-625

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/29/2013
Applicant/Owner: AIDEA Sampling Point: T118-626
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Drainageway Local relief (concave, convex, none): concave Slope (%): 2
Subregion (LRR): Northern Alaska Lat: 67.06560260 Long: -153.75810950 Datum: WGS84
Soil Map Unit Name: _ NWI classification: R3UB3
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: channel 12 inches wide by 3 inches deep. Silty substrate. riparian salix spp, vac uli, and cal can. Photos 307-310	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	0 (A)	0 (B)

Prevalence Index = B/A = 0.00

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 0 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks:

SOIL

Sampling Point T118-626

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/29/2013
Applicant/Owner: AIDEA Sampling Point: T119-627
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hill Local relief (concave, convex, none): convex Slope (%): 10
Subregion (LRR): Northern Alaska Lat: 67.06041850 Long: -153.68226070 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: photos 311-315	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	40	Yes	FACW
2. Populus tremuloides	5	No	FACU
3.			
4.			
Total Cover: 45			
50% of total cover: 22 20% of total cover: 9			
Sapling/Shrub Stratum			
1. Picea mariana	5	No	FACW
2. Populus tremuloides	5	No	FACU
3. salix sp	1	No	FAC
4. Betula nana	5	No	FAC
5. Vaccinium uliginosum	3	No	FAC
6. Vaccinium vitis-idaea	45	Yes	FAC
Total Cover: 64			
50% of total cover: 32 20% of total cover: 12			
Herb Stratum			
1. Geocaulon lividum	5	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 5			
50% of total cover: 2 20% of total cover: 1			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	45	x 2 = 90
FAC species	54	x 3 = 162
FACU species	15	x 4 = 60
UPL species	0	x 5 = 0
Column Totals:	114 (A)	312 (B)

Prevalence Index = B/A = 2.74

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 90
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: reindeer lichen 75%, pelt lichen 10%, sphagnum 5%

SOIL

Sampling Point T119-627

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1	organics	100		0				
1-15	10YR 3/4	100		0			gravelly loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks: restrictive digging layer gravel

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/29/2013
Applicant/Owner: AIDEA Sampling Point: T119-628
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 5
Subregion (LRR): Northern Alaska Lat: 67.05975610 Long: -153.68068510 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PFO4/SS1B, IA2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: photos 316-320.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	45	Yes	FACW
2.			
3.			
4.			
Total Cover: 45			
50% of total cover: 22 20% of total cover: 9			
Sapling/Shrub Stratum			
1. Picea mariana	30	Yes	FACW
2. Vaccinium uliginosum	55	Yes	FAC
3. Betula nana	15	No	FAC
4. Vaccinium vitis-idaea	25	No	FAC
5. Rhododendron groenlandicum	15	No	FAC
6. Rubus chamaemorus	5	No	FACW
Total Cover: 145			
50% of total cover: 72 20% of total cover: 29			
Herb Stratum			
1. Petasites frigidus	2	No	FACW
2. Carex rostrata	25	Yes	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 27			
50% of total cover: 13 20% of total cover: 5			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	25	x 1 = 25
FACW species	82	x 2 = 164
FAC species	110	x 3 = 330
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	217 (A)	519 (B)

Prevalence Index = B/A = 2.39

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 90
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: reindeer lichen 35%, pelt lichen 5%, sphagnum 50%.

SOIL

Sampling Point T119-628

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	organics	100		0				
12-16	10YR 3/1	100		0				

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks: restrictive digging layer gravel.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 10
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/29/2013
Applicant/Owner: AIDEA Sampling Point: T119-629
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Stream terrace Local relief (concave, convex, none): concave Slope (%): 1
Subregion (LRR): Northern Alaska Lat: 67.06163880 Long: -153.67750440 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1, IIB2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: photos 321-325.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. salix spp	80	Yes	FAC
2. Alnus viridis	5	No	FAC
3. Vaccinium uliginosum	10	No	FAC
4.			
5.			
6.			
Total Cover: 95			
50% of total cover: 47 20% of total cover: 19			
Herb Stratum			
1. Ranunculus occidentalis	15	Yes	FACW
2. Viola epipsila	2	No	FACW
3. Equisetum arvense	15	Yes	FAC
4. Chamaenerion angustifolium	2	No	FACU
5. Thalictrum occidentale	8	Yes	FACU
6.			
7.			
8.			
9.			
10.			
Total Cover: 42			
50% of total cover: 21 20% of total cover: 8			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	17	x 2 = 34
FAC species	110	x 3 = 330
FACU species	10	x 4 = 40
UPL species	0	x 5 = 0
Column Totals:	137 (A)	404 (B)

Prevalence Index = B/A = 2.95

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 30
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 30%

SOIL

Sampling Point T119-629

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	organics	100		0				
2-23	10YR 3/1	100		0			Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
X Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks: restrictive digging layer gravel. Problematic soil active channel

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
X Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
X Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/29/2013
Applicant/Owner: AIDEA Sampling Point: T119-630
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Stream terrace Local relief (concave, convex, none): concave Slope (%): 3
Subregion (LRR): Northern Alaska Lat: 67.06247870 Long: -153.67751910 Datum: WGS84
Soil Map Unit Name: _ NWI classification: R3UB1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**

Remarks: channel wetted width 30 feet, and bankfull width 33 feet. riparian salix spp, equ arv, and car utr. substrate 8 inch cobbles with coarse sand and gravels less than 1 inch diameter. photos 226-328.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	0 (A)	0 (B)

Prevalence Index = B/A = 0.00

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 0 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks:

SOIL

Sampling Point T119-630

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/30/2013
Applicant/Owner: AIDEA Sampling Point: T120-631
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hill Local relief (concave, convex, none): convex Slope (%): 2
Subregion (LRR): Northern Alaska Lat: 67.05357480 Long: -153.48294040 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: 329-334.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	45	Yes	FACW
2.			
3.			
4.			
Total Cover: 45			
50% of total cover: 22 20% of total cover: 9			
Sapling/Shrub Stratum			
1. Picea mariana	10	No	FACW
2. Betula nana	20	Yes	FAC
3. Vaccinium uliginosum	10	No	FAC
4. Vaccinium vitis-idaea	20	Yes	FAC
5. Rhododendron groenlandicum	25	Yes	FAC
6. Populus tremuloides	8	No	FACU
Total Cover: 93			
50% of total cover: 46 20% of total cover: 18			
Herb Stratum			
1. Lycopodium clavatum	3	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 3			
50% of total cover: 1 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	55	x 2 = 110
FAC species	75	x 3 = 225
FACU species	11	x 4 = 44
UPL species	0	x 5 = 0
Column Totals:	141 (A)	379 (B)

Prevalence Index = B/A = 2.69

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 70
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: reindeer lichen 44%, sphagnum 20%, false pixie cup 3%, pelt lichen 3%.

SOIL

Sampling Point T120-631

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1	organics	100		0				
1-14	10YR 3/6	100		0			gravelly loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks: restrictive digging layer of gravel about 2 inch diameter.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/30/2013
Applicant/Owner: AIDEA Sampling Point: T120-632
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 0
Subregion (LRR): Northern Alaska Lat: 67.05499270 Long: -153.48162650 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1B, IIB1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: photos 335-339. pss	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. salix spp	80	Yes	FAC
2. Betula nana	3	No	FAC
3. Rubus pubescens	10	No	FACW
4.			
5.			
6.			
Total Cover: 93			
50% of total cover: 46 20% of total cover: 18			
Herb Stratum			
1. Comarum palustre	10	No	OBL
2. Carex rostrata	75	Yes	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 85			
50% of total cover: 42 20% of total cover: 17			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	85	x 1 = 85
FACW species	10	x 2 = 20
FAC species	83	x 3 = 249
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	178 (A)	354 (B)

Prevalence Index = B/A = 1.99

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 30
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 30%.

SOIL

Sampling Point T120-632

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-14	organics	100		0				saturated

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
X Histic Epipedon (A2)
X Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 14

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
X Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 0.5
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: pockets of inundation

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/30/2013
Applicant/Owner: AIDEA Sampling Point: T120-633
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 4
Subregion (LRR): Northern Alaska Lat: 67.05563380 Long: -153.48092440 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: photos 340-344. upland	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Populus tremuloides	80	Yes	FACU
2. Picea mariana	3	No	FACW
3.			
4.			
Total Cover: 83			
50% of total cover: 41 20% of total cover: 16			
Sapling/Shrub Stratum			
1. Picea mariana	8	No	FACW
2. Populus tremuloides	2	No	FACU
3. Vaccinium uliginosum	45	Yes	FAC
4. Rosa acicularis	5	No	FACU
5. Vaccinium vitis-idaea	25	Yes	FAC
6. Rhododendron groenlandicum	10	No	FAC
Total Cover: 95			
50% of total cover: 47 20% of total cover: 19			
Herb Stratum			
1. Festuca pratensis	10	Yes	FACU
2. Calamagrostis canadensis	5	Yes	FAC
3. Chamaenerion angustifolium	3	Yes	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 18			
50% of total cover: 9 20% of total cover: 3			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	11	x 2 = 22
FAC species	85	x 3 = 255
FACU species	100	x 4 = 400
UPL species	0	x 5 = 0
Column Totals:	196 (A)	677 (B)

Prevalence Index = B/A = 3.45

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
__ Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 15
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks: sphagnum 15%. Leaf litter

SOIL

Sampling Point T120-633

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	organics	100		0				
2-13	2.5Y 5/4	100		0			Sandy Gravely Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks: restrictive digging layer gravel

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/30/2013
Applicant/Owner: AIDEA Sampling Point: T120-634
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): convex Slope (%): 1
Subregion (LRR): Northern Alaska Lat: 67.05746500 Long: -153.47746720 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1B, IIC1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: photos 345-349. pss	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	20	Yes	FACW
2.			
3.			
4.			
Total Cover: 20			
50% of total cover: 10 20% of total cover: 4			
Sapling/Shrub Stratum			
1. Picea mariana	8	No	FACW
2. Picea glauca	1	No	FACU
3. Betula nana	50	Yes	FAC
4. Vaccinium uliginosum	65	Yes	FAC
5. Rubus chamaemorus	2	No	FACW
6. Rhododendron groenlandicum	5	No	FAC
Total Cover: 131			
50% of total cover: 65 20% of total cover: 26			
Herb Stratum			
1. Calamagrostis canadensis	15	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 15			
50% of total cover: 7 20% of total cover: 3			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	30	x 2 = 60
FAC species	135	x 3 = 405
FACU species	1	x 4 = 4
UPL species	0	x 5 = 0
Column Totals:	166 (A)	469 (B)

Prevalence Index = B/A = 2.83

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 60
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 55%, pelt lichen 5%

SOIL

Sampling Point T120-634

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	organics	100		0				
10-23	2.5Y 4/2	100		0			Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: N/A
Depth (inches): 0

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 3
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/30/2013
Applicant/Owner: AIDEA Sampling Point: T120-635
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): concave Slope (%): 1
Subregion (LRR): Northern Alaska Lat: 67.05677000 Long: -153.48965000 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: photos 350-354.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	30	Yes	FACW
2.			
3.			
4.			
Total Cover: 30			
50% of total cover: 15 20% of total cover: 6			
Sapling/Shrub Stratum			
1. Picea mariana	15	Yes	FACW
2. Betula nana	35	Yes	FAC
3. Spiraea stevenii	15	Yes	FACU
4. Vaccinium uliginosum	5	No	FAC
5. Vaccinium vitis-idaea	8	No	FAC
6. Rhododendron groenlandicum	3	No	FAC
Total Cover: 81			
50% of total cover: 40 20% of total cover: 16			
Herb Stratum			
1. Calamagrostis canadensis	5	Yes	FAC
2. Carex rostrata	15	Yes	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 20			
50% of total cover: 10 20% of total cover: 4			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 83 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	15	x 1 = 15
FACW species	45	x 2 = 90
FAC species	56	x 3 = 168
FACU species	15	x 4 = 60
UPL species	0	x 5 = 0
Column Totals:	131 (A)	333 (B)

Prevalence Index = B/A = 2.54

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 95
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 70%, reindeer lichen 10%, false pixie cup 5%, red pixie cup 2%, ste tom 8%. Upland swale.

SOIL

Sampling Point T120-635

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1	organics	100		0				
1-20	10YR 3/3	100		0			gravelly loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
X Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks: restrictive digging layer gravel. 5 inch diameter cobbles. Soils contain low carbon content, however, a primary hydrology indicator is absent; therefore, soils are not hydric.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/30/2013
Applicant/Owner: AIDEA Sampling Point: T120-636
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 0
Subregion (LRR): Northern Alaska Lat: 67.05405510 Long: -153.48975260 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PEM1, IIIA3
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: photos 355-359. pem	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. salix spp	5	Yes	FAC
2.			
3.			
4.			
5.			
6.			
Total Cover: 5			
50% of total cover: 2 20% of total cover: 1			
Herb Stratum			
1. Calamagrostis canadensis	90	Yes	FAC
2. Carex rostrata	15	No	OBL
3. Equisetum arvense	20	No	FAC
4. Comarum palustre	5	No	OBL
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 130			
50% of total cover: 65 20% of total cover: 26			

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	20	x 1 = 20
FACW species	0	x 2 = 0
FAC species	115	x 3 = 345
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	135 (A)	365 (B)

Prevalence Index = B/A = 2.70

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T120-636

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-20	5Y 4/1	60	organics	40			Silty Clay Loam	saturated

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: N/A
Depth (inches): 0

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 7
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/30/2013
Applicant/Owner: AIDEA Sampling Point: T120-637
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): concave Slope (%): 1
Subregion (LRR): Northern Alaska Lat: 67.06514760 Long: -153.38828840 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1B, IIB1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: swale pss in between uplands. Photos 360-364.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. salix spp	90	Yes	FAC
2. Rubus pubescens	15	No	FACW
3. Vaccinium uliginosum	10	No	FAC
4. Betula nana	3	No	FAC
5.			
6.			
Total Cover: 118			
50% of total cover: 59 20% of total cover: 23			
Herb Stratum			
1. Equisetum arvense	40	Yes	FAC
2. Calamagrostis canadensis	8	No	FAC
3. Chamaenerion angustifolium	10	No	FACU
4. Viola epipsila	15	Yes	FACW
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 73			
50% of total cover: 36 20% of total cover: 14			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	30	x 2 = 60
FAC species	151	x 3 = 453
FACU species	10	x 4 = 40
UPL species	0	x 5 = 0
Column Totals:	191 (A)	553 (B)

Prevalence Index = B/A = 2.90

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 75
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 75%. Leaf litter.

SOIL

Sampling Point T120-637

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	organics	100		0				saturated
10-20	2.5Y 4/1	100		0			Silty Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
X Histic Epipedon (A2)
X Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 20

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
X Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 3
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/30/2013
Applicant/Owner: AIDEA Sampling Point: T121-638
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Drainageway Local relief (concave, convex, none): concave Slope (%): 1
Subregion (LRR): Northern Alaska Lat: 67.06388040 Long: -153.39141220 Datum: WGS84
Soil Map Unit Name: _ NWI classification: R3UB3
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: channel 3 feet wide, 8 inches deep. Vertical banks. photos 365-367.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	2	Yes	FACW
2.			
3.			
4.			
Total Cover: 2			
50% of total cover: 1 20% of total cover: 0			
Sapling/Shrub Stratum			
1. salix spp	55	Yes	
2. Alnus viridis	5	No	FAC
3. Picea mariana	3	No	FACW
4. Vaccinium uliginosum	25	Yes	FAC
5. Rhododendron groenlandicum	2	No	FAC
6. rubus pubesense	3	No	
Total Cover: 93			
50% of total cover: 46 20% of total cover: 18			
Herb Stratum			
1. Calamagrostis canadensis	55	Yes	FAC
2. Chamaenerion angustifolium	3	No	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 58			
50% of total cover: 29 20% of total cover: 11			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	5	x 2 = 10
FAC species	87	x 3 = 261
FACU species	3	x 4 = 12
UPL species	0	x 5 = 0
Column Totals:	95 (A)	283 (B)

Prevalence Index = B/A = 2.98

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 0 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T121-638

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/30/2013
Applicant/Owner: AIDEA Sampling Point: T121-639
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hill Local relief (concave, convex, none): convex Slope (%): 3
Subregion (LRR): Northern Alaska Lat: 67.06361300 Long: -153.39336850 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: surrounded pss drainage. photos 368-372.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix sp	50	Yes	FAC
2. Picea mariana	35	Yes	FACW
3.			
4.			
Total Cover: 85			
50% of total cover: 42 20% of total cover: 17			
Sapling/Shrub Stratum			
1. Salix sp	8	Yes	FAC
2. Picea mariana	5	Yes	FACW
3. Alnus viridis	2	No	FAC
4.			
5.			
6.			
Total Cover: 15			
50% of total cover: 7 20% of total cover: 3			
Herb Stratum			
1. Equisetum arvense	95	Yes	FAC
2. Chamaenerion angustifolium	3	No	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 98			
50% of total cover: 49 20% of total cover: 19			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	40	x 2 = 80
FAC species	155	x 3 = 465
FACU species	3	x 4 = 12
UPL species	0	x 5 = 0
Column Totals:	198 (A)	557 (B)

Prevalence Index = B/A = 2.81

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 100
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 95%, pelt lichen 5%.

SOIL

Sampling Point T121-639

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-9	organics	100		0				
9-18	2.5Y 3/1	75	10YR 5/6	25	D	M	Silty Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 18

Hydric Soil Present? No

Remarks: moist soil.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/30/2013
Applicant/Owner: AIDEA Sampling Point: T121-640
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hill Local relief (concave, convex, none): convex Slope (%): 2
Subregion (LRR): Northern Alaska Lat: 67.06721380 Long: -153.39610890 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: located approximately 3-6 feet above drainageway. photos 373-377.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	60	Yes	FACW
2. Populus balsamifera	8	No	FACU
3. Salix sp	8	No	FAC
4.			
Total Cover: 76			
50% of total cover: 38 20% of total cover: 15			
Sapling/Shrub Stratum			
1. Salix spp	15	Yes	FAC
2. Picea mariana	20	Yes	FACW
3. Rhododendron groenlandicum	5	No	FAC
4.			
5.			
6.			
Total Cover: 40			
50% of total cover: 20 20% of total cover: 8			
Herb Stratum			
1. Equisetum sylvaticum	50	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 50			
50% of total cover: 25 20% of total cover: 10			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	80	x 2 = 160
FAC species	78	x 3 = 234
FACU species	8	x 4 = 32
UPL species	0	x 5 = 0
Column Totals:	166 (A)	426 (B)

Prevalence Index = B/A = 2.57

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 100
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 90%, pelt lichen 8%, reindeer lichen 2%.

SOIL

Sampling Point T121-640

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	organics	100		0				
5-10	10YR 5/1	60	10YR 3/6	40	D	M	Loamy Fine Sand	
10-17	2.5Y 5/2	60	2.5Y 5/4	40	D	M	Loamy Fine Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
X Alaska Redox With 2.5Y Hue
___Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/30/2013
Applicant/Owner: AIDEA Sampling Point: T121-641
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): convex Slope (%): 2
Subregion (LRR): Northern Alaska Lat: 67.06768350 Long: -153.39952040 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1B, IIB1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: photos 378-382	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Picea mariana	10	No	FACW
2. salix spp	45	Yes	FAC
3. Betula nana	20	Yes	FAC
4. Vaccinium uliginosum	20	No	FAC
5. Arctostaphylos rubra	8	No	FAC
6. Picea mariana	15	No	FACW
Total Cover: 118			
50% of total cover: 59 20% of total cover: 23			
Herb Stratum			
1. Equisetum arvense	35	Yes	FAC
2. Pedicularis labradorica	8	No	FACW
3. Chamaenerion angustifolium	5	No	FACU
4. Petasites frigidus	5	No	FACW
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 53			
50% of total cover: 26 20% of total cover: 10			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	38	x 2 = 76
FAC species	128	x 3 = 384
FACU species	5	x 4 = 20
UPL species	0	x 5 = 0
Column Totals:	171 (A)	480 (B)

Prevalence Index = B/A = 2.81

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 90
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 90%

SOIL

Sampling Point T121-641

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-7	organics	100		0				saturated
7-17	2.5Y 4/2	85	10YR 3/6	15	D	M	Silty Clay Loam	prominent redox

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
X Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 17

Hydric Soil Present? Yes

Remarks: Shallow aquitard.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 3
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/30/2013
Applicant/Owner: AIDEA Sampling Point: T122-642
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hill Local relief (concave, convex, none): convex Slope (%): 2
Subregion (LRR): Northern Alaska Lat: 67.07346880 Long: -153.31284320 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: photos 383-387. upland	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	15	Yes	FACW
2.			
3.			
4.			
Total Cover: 15			
50% of total cover: 7 20% of total cover: 3			
Sapling/Shrub Stratum			
1. Picea mariana	25	Yes	FACW
2. Betula nana	20	Yes	FAC
3. Populus balsamifera	3	No	FACU
4. Vaccinium uliginosum	15	No	FAC
5. Vaccinium vitis-idaea	25	Yes	FAC
6. Empetrum nigrum	8	No	FAC
Total Cover: 96			
50% of total cover: 48 20% of total cover: 19			
Herb Stratum			
1. Festuca pratensis	3	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 3			
50% of total cover: 1 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	40	x 2 = 80
FAC species	68	x 3 = 204
FACU species	6	x 4 = 24
UPL species	0	x 5 = 0
Column Totals:	114 (A)	308 (B)

Prevalence Index = B/A = 2.70

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 70
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: reindeer lichen 60%, sphagnum 10%.

SOIL

Sampling Point T122-642

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1	organics	100		0				
1-10	10YR 4/6	100		0			gravelly loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks: restrictive digging layer gravel. Likely low carbon content; however, hydrology is absent. Soils are not hydric.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/30/2013
Applicant/Owner: AIDEA Sampling Point: T122-643
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): Northern Alaska Lat: 67.07471700 Long: -153.31087340 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1B, IA3
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: photos 388-392	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	20	Yes	FACW
2.			
3.			
4.			
Total Cover: 20			
50% of total cover: 10 20% of total cover: 4			
Sapling/Shrub Stratum			
1. Picea mariana	10	No	FACW
2. Vaccinium uliginosum	55	Yes	FAC
3. salix spp	30	Yes	FAC
4. Rhododendron groenlandicum	10	No	FAC
5.			
6.			
Total Cover: 105			
50% of total cover: 52 20% of total cover: 21			
Herb Stratum			
1. Petasites frigidus	3	No	FACW
2. Carex rostrata	25	Yes	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 28			
50% of total cover: 14 20% of total cover: 5			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	25	x 1 = 25
FACW species	33	x 2 = 66
FAC species	95	x 3 = 285
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	153 (A)	376 (B)

Prevalence Index = B/A = 2.46

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 100
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 100%

SOIL

Sampling Point T122-643

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	organics	100		0				saturated at 3 inches
8-14	10YR 3/1	100		0			Silty Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 14

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 3
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/30/2013
Applicant/Owner: AIDEA Sampling Point: T122-644
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hill Local relief (concave, convex, none): convex Slope (%): 8
Subregion (LRR): Northern Alaska Lat: 67.07594360 Long: -153.31034100 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: photos 393-397.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	25	Yes	FACU
2. Picea mariana	3	No	FACW
3. Populus balsamifera	55	Yes	FACU
4. Salix sp	10	No	FAC
Total Cover: 93			
50% of total cover: 46 20% of total cover: 18			
Sapling/Shrub Stratum			
1. Alnus viridis	25	Yes	FAC
2. Picea glauca	5	No	FACU
3. Rosa acicularis	25	Yes	FACU
4.			
5.			
6.			
Total Cover: 55			
50% of total cover: 27 20% of total cover: 11			
Herb Stratum			
1. Equisetum arvense	5	Yes	FAC
2. Calamagrostis canadensis	3	Yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 8			
50% of total cover: 4 20% of total cover: 1			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	3	x 2 = 6
FAC species	43	x 3 = 129
FACU species	110	x 4 = 440
UPL species	0	x 5 = 0
Column Totals:	156 (A)	575 (B)

Prevalence Index = B/A = 3.69

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
__ Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 20
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks: sphagnum 5%, pelt lichen 15%. Leaf litter.

SOIL

Sampling Point T122-644

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	organics	100		0				
2-13	2.5Y 6/2	100		0			Sandy Gravely Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks: restrictive digging layer of gravel.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/30/2013
Applicant/Owner: AIDEA Sampling Point: T122-645
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hill Local relief (concave, convex, none): concave Slope (%): 1
Subregion (LRR): Northern Alaska Lat: 67.07527880 Long: -153.32748820 Datum: WGS84
Soil Map Unit Name: _ NWI classification: R2UB1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**

Remarks: channel 180 foot wetted width, over 18 inches deep, with cobbles 5 inch diameter, and gravels less than 1 inch diameter substrate. Bankfull 230 feet. photos 398-400. riparian salix sp, and cham ang.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	0 (A)	0 (B)

Prevalence Index = B/A = 0.00

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 0 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks:

SOIL

Sampling Point T122-645

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/31/2013
Applicant/Owner: AIDEA Sampling Point: T123-646
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 20
Subregion (LRR): Northern Alaska Lat: 67.08473040 Long: -153.24247970 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: photos 401-405	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Populus tremuloides	65	Yes	FACU
2. Picea glauca	10	No	FACU
3. Populus balsamifera	2	No	FACU
4.			
Total Cover: 77			
50% of total cover: 38 20% of total cover: 15			
Sapling/Shrub Stratum			
1. Populus tremuloides	5	No	FACU
2. Alnus viridis	10	Yes	FAC
3. salix sp	10	No	FAC
4. Rosa acicularis	10	No	FACU
5. Dasiphora fruticosa	5	No	FAC
6. Linnaea borealis	35	Yes	FACU
Total Cover: 75			
50% of total cover: 37 20% of total cover: 15			
Herb Stratum			
1. Galium boreale	5	No	FACU
2. Geocaulon lividum	5	No	FACU
3. Pedicularis labradorica	5	No	FACW
4. Festuca pratensis	20	Yes	FACU
5. Polemonium acutiflorum	8	No	FAC
6. Zigadenus elegans	20	Yes	FACU
7.			
8.			
9.			
10.			
Total Cover: 63			
50% of total cover: 31 20% of total cover: 12			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 20 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	5	x 2 = 10
FAC species	33	x 3 = 99
FACU species	177	x 4 = 708
UPL species	0	x 5 = 0
Column Totals:	215 (A)	817 (B)

Prevalence Index = B/A = 3.80

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
__ Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks: leaf litter

SOIL

Sampling Point T123-646

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	organics	100		0				
2-15	2.5Y 5/3	100		0			Sandy Gravely Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks: restrictive digging layer gravel

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/31/2013
Applicant/Owner: AIDEA Sampling Point: T123-647
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): convex Slope (%): 1
Subregion (LRR): Northern Alaska Lat: 67.08350040 Long: -153.24296280 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: photos 406-410	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	30	Yes	FACW
2. Picea glauca	5	No	FACU
3.			
4.			
Total Cover: 35			
50% of total cover: 17 20% of total cover: 7			
Sapling/Shrub Stratum			
1. Picea mariana	8	No	FACW
2. Betula nana	15	No	FAC
3. salix sp	5	No	FAC
4. Vaccinium uliginosum	55	Yes	FAC
5. Rhododendron groenlandicum	3	No	FAC
6. Vaccinium vitis-idaea	10	No	FAC
Total Cover: 96			
50% of total cover: 48 20% of total cover: 19			
Herb Stratum			
1. Festuca pratensis	4	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 4			
50% of total cover: 2 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	38	x 2 = 76
FAC species	88	x 3 = 264
FACU species	9	x 4 = 36
UPL species	0	x 5 = 0
Column Totals:	135 (A)	376 (B)

Prevalence Index = B/A = 2.79

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 70
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 45%, reindeer lichen 20%, false pixie cup 2%, pelt lichen 3%.

SOIL

Sampling Point T123-647

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	organics	100		0				
3-17	10YR 4/6	100		0			Sandy Gravely Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks: restrictive digging layer gravel. Low carbon content. Hydrology absent, soils are not hydric.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/31/2013
Applicant/Owner: AIDEA Sampling Point: T123-648
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 0
Subregion (LRR): Northern Alaska Lat: 67.08283670 Long: -153.24345240 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: photos 411-415. Surrounded by uplands. Is approximately 25 feet in diameter.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	1	Yes	FACW
2. Picea glauca	2	Yes	FACU
3.			
4.			
Total Cover: 3			
50% of total cover: 1 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Picea mariana	3	No	FACW
2. Betula nana	12	No	FAC
3. salix spp	15	Yes	FAC
4. Vaccinium uliginosum	40	Yes	FAC
5. Vaccinium vitis-idaea	15	No	FAC
6. Rosa acicularis	2	No	FACU
Total Cover: 87			
50% of total cover: 43 20% of total cover: 17			
Herb Stratum			
1. Carex rostrata	5	Yes	OBL
2. Geocaulon lividum	2	Yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 7			
50% of total cover: 3 20% of total cover: 1			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	5	x 1 = 5
FACW species	4	x 2 = 8
FAC species	82	x 3 = 246
FACU species	6	x 4 = 24
UPL species	0	x 5 = 0
Column Totals:	97 (A)	283 (B)

Prevalence Index = B/A = 2.92

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 95
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 70%, wooly corral 20%, pelt lichen 5%.

SOIL

Sampling Point T123-648

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	organics	100		0				
2-25	2.5Y 5/3	100		0			Silty Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 25

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: dug hole soil was liquified and oozed into open hole unable to get depth on water table or saturation. No water came out when soil was compressed.

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/31/2013
Applicant/Owner: AIDEA Sampling Point: T123-649
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): concave Slope (%): 1
Subregion (LRR): Northern Alaska Lat: 67.08236870 Long: -153.23597020 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: photos 416-420. Flat at base of upland hillslope.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	20	Yes	FACW
2.			
3.			
4.			
Total Cover: 20			
50% of total cover: 10 20% of total cover: 4			
Sapling/Shrub Stratum			
1. Picea mariana	3	No	FACW
2. salix spp	25	Yes	FAC
3. Betula nana	30	Yes	FAC
4. Vaccinium uliginosum	40	Yes	FAC
5. Vaccinium vitis-idaea	3	No	FAC
6. Rhododendron groenlandicum	5	No	FAC
Total Cover: 106			
50% of total cover: 53 20% of total cover: 21			
Herb Stratum			
1. Calamagrostis canadensis	50	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 50			
50% of total cover: 25 20% of total cover: 10			

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 70
(Where applicable)

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	23	x 2 = 46
FAC species	153	x 3 = 459
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	176 (A)	505 (B)

Prevalence Index = B/A = 2.87

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 55%, pelt lichen 15%.

SOIL

Sampling Point T123-649

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-7	organics	100		0				
7-22	2.5Y 4/2	100		0			Silty Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 22

Hydric Soil Present? No

Remarks: moist soils

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/31/2013
Applicant/Owner: AIDEA Sampling Point: T123-650
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): none Slope (%): 1
Subregion (LRR): Northern Alaska Lat: 67.08222760 Long: -153.23432410 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1B, IA3
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? No**
Remarks: photos 421-425. Pss located near base of upland hillslope.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	15	Yes	FACW
2.			
3.			
4.			
Total Cover: 15			
50% of total cover: 7 20% of total cover: 3			
Sapling/Shrub Stratum			
1. salix sp	10	No	FAC
2. Betula nana	30	Yes	FAC
3. Vaccinium uliginosum	20	Yes	FAC
4. Rhododendron groenlandicum	10	No	FAC
5. Myrica gale	5	No	OBL
6.			
Total Cover: 75			
50% of total cover: 37 20% of total cover: 15			
Herb Stratum			
1. Carex rostrata	65	Yes	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 65			
50% of total cover: 32 20% of total cover: 13			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	70	x 1 = 70
FACW species	15	x 2 = 30
FAC species	70	x 3 = 210
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	155 (A)	310 (B)

Prevalence Index = B/A = 2.00

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 25
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 20%, pelt lichen 5%.

SOIL

Sampling Point T123-650

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-14	organics	100		0				saturated at 3 inches

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 14

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 3
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/31/2013
Applicant/Owner: AIDEA Sampling Point: T123-651
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 0
Subregion (LRR): Northern Alaska Lat: 67.08553040 Long: -153.23781900 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/4H, IIC1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: photos 426-430. Pss surrounding a pem within an upland forest.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	3	Yes	FACW
2.			
3.			
4.			
Total Cover: 3			
50% of total cover: 1 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Picea mariana	5	No	FACW
2. Betula nana	10	No	FAC
3. Vaccinium uliginosum	25	Yes	FAC
4. Rhododendron groenlandicum	40	Yes	FAC
5. Myrica gale	3	No	OBL
6. Andromeda polifolia	8	No	OBL
Total Cover: 91			
50% of total cover: 45 20% of total cover: 18			
Herb Stratum			
1. Eriophorum angustifolium	50	Yes	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 50			
50% of total cover: 25 20% of total cover: 10			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	61	x 1 = 61
FACW species	8	x 2 = 16
FAC species	75	x 3 = 225
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	144 (A)	302 (B)

Prevalence Index = B/A = 2.10

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T123-651

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks: inundated with 4 inches.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

X Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes Depth (inches): 4
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/31/2013
Applicant/Owner: AIDEA Sampling Point: T123-652
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hill Local relief (concave, convex, none): convex Slope (%): 3
Subregion (LRR): Northern Alaska Lat: 67.08731230 Long: -153.23924270 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: photos 431-435.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Populus tremuloides	45	Yes	FACU
2. Picea mariana	3	No	FACW
3.			
4.			
Total Cover: 48			
50% of total cover: 24 20% of total cover: 9			
Sapling/Shrub Stratum			
1. Populus tremuloides	10	No	FACU
2. Picea mariana	8	No	FACW
3. salix sp	5	No	FAC
4. Rhododendron groenlandicum	15	Yes	FAC
5. Vaccinium vitis-idaea	25	Yes	FAC
6. Empetrum nigrum	8	No	FAC
Total Cover: 71			
50% of total cover: 35 20% of total cover: 14			
Herb Stratum			
1. Festuca pratensis	4	Yes	FACU
2. Geocaulon lividum	5	Yes	FACU
3. Lycopodium clavatum	3	Yes	FACU
4. Pedicularis labradorica	3	Yes	FACW
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 15			
50% of total cover: 7 20% of total cover: 3			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 42 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	14	x 2 = 28
FAC species	53	x 3 = 159
FACU species	67	x 4 = 268
UPL species	0	x 5 = 0
Column Totals:	134 (A)	455 (B)

Prevalence Index = B/A = 3.40

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
__ Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 80
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks: sphagnum 30%, reindeer lichen 50%.

SOIL

Sampling Point T123-652

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1	organics	100		0				
1-2	10YR 6/2	100		0			Fine Sand	
2-15	10YR 4/6	100		0			Sandy Gravely Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks: restrictive digging layer gravel .

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/31/2013
Applicant/Owner: AIDEA Sampling Point: T123-653
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 0
Subregion (LRR): Northern Alaska Lat: 67.08586160 Long: -153.24475810 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PEM1C, IIIA3
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: photos 436-440	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Myrica gale	3	Yes	OBL
2. Andromeda polifolia	5	Yes	OBL
3.			
4.			
5.			
6.			
Total Cover: 8			
50% of total cover: 4 20% of total cover: 1			
Herb Stratum			
1. Carex media	85	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 85			
50% of total cover: 42 20% of total cover: 17			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	8	x 1 = 8
FACW species	85	x 2 = 170
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	93 (A)	178 (B)

Prevalence Index = B/A = 1.91

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 10
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 10%

SOIL

Sampling Point T123-653

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-14	organics	100		0				saturated

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

X Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 0.5
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: pockets of inundation

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/31/2013
Applicant/Owner: AIDEA Sampling Point: T124-654
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Stream terrace Local relief (concave, convex, none): convex Slope (%): 3
Subregion (LRR): Northern Alaska Lat: 67.07277500 Long: -153.18349150 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1C, IIC1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: channel 6 feet south of point. 3 feet wide by 3 inches deep with sandy substrate with cobbles 5 inch diameter. Bankfull 5 feet wide. photos 441-446.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Betula nana	50	Yes	FAC
2. salix sp	8	No	FAC
3. Dasiphora fruticosa	45	Yes	FAC
4. Vaccinium uliginosum	30	Yes	FAC
5. Andromeda polifolia	3	No	OBL
6. Arctostaphylos rubra	5	No	FAC
Total Cover: 141			
50% of total cover: 70 20% of total cover: 28			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	3	x 1 = 3
FACW species	0	x 2 = 0
FAC species	138	x 3 = 414
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	141 (A)	417 (B)

Prevalence Index = B/A = 2.96

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: leaf litter

SOIL

Sampling Point T124-654

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1	organics	100		0				
1-23	10YR 3/3	70	organics	30			Sandy Gravely Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

X Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks: soils moist. Low carbon content.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
X Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
X Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/31/2013
Applicant/Owner: AIDEA Sampling Point: T124-655
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Stream terrace Local relief (concave, convex, none): convex Slope (%): 2
Subregion (LRR): Northern Alaska Lat: 67.07441590 Long: -153.18366160 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1B, IIC1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: photos 447-451. Pss inbetween upland and stream.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Betula nana	40	Yes	FAC
2. salix sp	10	No	FAC
3. Picea glauca	10	No	FACU
4. Vaccinium uliginosum	15	No	FAC
5. Myrica gale	15	No	OBL
6. Arctostaphylos rubra	20	Yes	FAC
Total Cover: 110			
50% of total cover: 55 20% of total cover: 22			
Herb Stratum			
1. Carex rostrata	25	Yes	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 25			
50% of total cover: 12 20% of total cover: 5			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	40	x 1 = 40
FACW species	0	x 2 = 0
FAC species	85	x 3 = 255
FACU species	10	x 4 = 40
UPL species	0	x 5 = 0
Column Totals:	135 (A)	335 (B)

Prevalence Index = B/A = 2.48

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 65
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 65%

SOIL

Sampling Point T124-655

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	organics	100		0				saturated. dark brown water when
10-23	2.5Y 3/2	100		0			Loamy Sand	sqeezed somewhat decomposed/identifiable organic

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 23

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 21
Saturation Present? Yes Depth (inches): 2
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/31/2013
Applicant/Owner: AIDEA Sampling Point: T124-656
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 0
Subregion (LRR): Northern Alaska Lat: 67.07454830 Long: -153.18387480 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PEM1C, IIIA3 (Bare)
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: photos 452-456. 50 feet north sphagnum bog the water table is approximately 3 feet below surface.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Herb Stratum			
1. Carex rostrata	3	Yes	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 3			
50% of total cover: 1 20% of total cover: 0			

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 100
(Where applicable)

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	3	x 1 = 3
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	3 (A)	3 (B)

Prevalence Index = B/A = 1.00

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 100%.

SOIL

Sampling Point T124-656

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-9	organics	100		0				saturated. dark brown/black water when sqeezed. organics somewhat identifiable large pieces.

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 9

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 5
Saturation Present? Yes Depth (inches): 1
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/31/2013
Applicant/Owner: AIDEA Sampling Point: T124-657
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hill Local relief (concave, convex, none): convex Slope (%): 10
Subregion (LRR): Northern Alaska Lat: 67.07447840 Long: -153.18428820 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: photos 461-465.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Populus tremuloides	70	Yes	FACU
2. Picea mariana	2	No	FACW
3.			
4.			
Total Cover: 72			
50% of total cover: 36 20% of total cover: 14			
Sapling/Shrub Stratum			
1. Picea mariana	15	Yes	FACW
2. Betula nana	4	No	FAC
3. Populus tremuloides	3	No	FACU
4. Vaccinium uliginosum	10	No	FAC
5. Vaccinium vitis-idaea	15	Yes	FAC
6. Empetrum nigrum	10	No	FAC
Total Cover: 57			
50% of total cover: 28 20% of total cover: 11			
Herb Stratum			
1. Festuca pratensis	8	Yes	FACU
2. Equisetum arvense	5	Yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 13			
50% of total cover: 6 20% of total cover: 2			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 60 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	17	x 2 = 34
FAC species	44	x 3 = 132
FACU species	81	x 4 = 324
UPL species	0	x 5 = 0
Column Totals:	142 (A)	490 (B)

Prevalence Index = B/A = 3.45

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 30
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 12%, reindeer lichen 12%, pelt lichen 6%.

SOIL

Sampling Point T124-657

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	organics	100		0				
3-27	10YR 5/6	100		0			Fine Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/31/2013
Applicant/Owner: AIDEA Sampling Point: T124-658
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hill Local relief (concave, convex, none): concave Slope (%): 3
Subregion (LRR): Northern Alaska Lat: 67.07454660 Long: -153.18328190 Datum: WGS84
Soil Map Unit Name: _ NWI classification: R3UB1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: channel wetted width 60 feet, 12 inches deep with cobbles 6 inches diameter and boulders 18 inches diameter. riparian salix sp, and carex rostrata.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	0 (A)	0 (B)

Prevalence Index = B/A = 0.00

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 0 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks:

SOIL

Sampling Point T124-658

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/31/2013
Applicant/Owner: AIDEA Sampling Point: T124-659
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Stream terrace Local relief (concave, convex, none): convex Slope (%): 2
Subregion (LRR): Northern Alaska Lat: 67.07476100 Long: -153.18264840 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: photos 469-473.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	30	Yes	FACU
2. Picea mariana	5	No	FACW
3.			
4.			
Total Cover: 35			
50% of total cover: 17 20% of total cover: 7			
Sapling/Shrub Stratum			
1. Picea glauca	10	No	FACU
2. Arctostaphylos rubra	10	No	FAC
3. Betula nana	10	No	FAC
4. salix spp	10	No	FAC
5. Vaccinium uliginosum	35	Yes	FAC
6. Dryas drummondii	15	Yes	FACU
Total Cover: 90			
50% of total cover: 45 20% of total cover: 18			
Herb Stratum			
1. Festuca pratensis	10	Yes	FACU
2. Carex rostrata	10	Yes	OBL
3. Astragalus alpinus	4	Yes	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 24			
50% of total cover: 12 20% of total cover: 4			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	10	x 1 = 10
FACW species	5	x 2 = 10
FAC species	69	x 3 = 207
FACU species	65	x 4 = 260
UPL species	0	x 5 = 0
Column Totals:	149 (A)	487 (B)

Prevalence Index = B/A = 3.27

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
__ Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 35
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks: sphagnum 35%.

SOIL

Sampling Point T124-659

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	organics	100		0				
3-21	2.5Y 4/4	100		0			Loamy Fine Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/31/2013
Applicant/Owner: AIDEA Sampling Point: T125-660
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 25
Subregion (LRR): Northern Alaska Lat: 67.06394660 Long: -153.17515640 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: photos 474-478.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Populus balsamifera	10	Yes	FACU
2. Picea glauca	10	Yes	FACU
3. Picea mariana	10	Yes	FACW
4.			
Total Cover: 30			
50% of total cover: 15 20% of total cover: 6			
Sapling/Shrub Stratum			
1. Alnus viridis	20	Yes	FAC
2. Picea mariana	5	No	FACW
3. salix spp	8	No	FAC
4. Vaccinium uliginosum	50	Yes	FAC
5. Betula nana	15	No	FAC
6. Spiraea stevenii	8	No	FACU
Total Cover: 106			
50% of total cover: 53 20% of total cover: 21			
Herb Stratum			
1. Carex rostrata	10	Yes	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 10			
50% of total cover: 5 20% of total cover: 2			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	10	x 1 = 10
FACW species	15	x 2 = 30
FAC species	93	x 3 = 279
FACU species	28	x 4 = 112
UPL species	0	x 5 = 0
Column Totals:	146 (A)	431 (B)

Prevalence Index = B/A = 2.95

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 100
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 100%.

SOIL

Sampling Point T125-660

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-9	organics	100		0				

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 9

Hydric Soil Present? No

Remarks: brown water when sqeezed somewhat identifiable plant material. organics moist.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/31/2013
Applicant/Owner: AIDEA Sampling Point: T125-661
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): concave Slope (%): 2
Subregion (LRR): Northern Alaska Lat: 67.06432580 Long: -153.17623210 Datum: WGS84
Soil Map Unit Name: _ NWI classification: R3UB1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: channel wetted width 120 feet, 10 inches deep with 2-3 inch diameter gravels. Bankfull 280 feet. riparian carex rostrata.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	0 (A)	0 (B)

Prevalence Index = B/A = 0.00

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 0 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks:

SOIL

Sampling Point T125-661

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/31/2013
Applicant/Owner: AIDEA Sampling Point: T125-662
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Stream terrace Local relief (concave, convex, none): convex Slope (%): 5
Subregion (LRR): Northern Alaska Lat: 67.06426710 Long: -153.17853630 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland, IA2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: photos 483-487	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	20	Yes	FACU
2. Picea mariana	15	Yes	FACW
3.			
4.			
Total Cover: 35			
50% of total cover: 17 20% of total cover: 7			
Sapling/Shrub Stratum			
1. Picea glauca	10	No	FACU
2. Picea mariana	5	No	FACW
3. Betula nana	20	No	FAC
4. salix spp	25	Yes	FAC
5. Vaccinium uliginosum	40	Yes	FAC
6. Rhododendron groenlandicum	20	No	FAC
Total Cover: 120			
50% of total cover: 60 20% of total cover: 24			
Herb Stratum			
1. Equisetum arvense	5	Yes	FAC
2. Calamagrostis canadensis	5	Yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 10			
50% of total cover: 5 20% of total cover: 2			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 83 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	20	x 2 = 40
FAC species	115	x 3 = 345
FACU species	30	x 4 = 120
UPL species	0	x 5 = 0
Column Totals:	165 (A)	505 (B)

Prevalence Index = B/A = 3.06

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 90
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 90%.

SOIL

Sampling Point T125-662

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	organics	100		0				
12-16	2.5Y 4/1	70	7.5YR 4/6	30	D	M	Silty Clay Loam	prominent redox

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 16

Hydric Soil Present? Yes

Remarks: Depleted matrix 12-16 inches.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: outside of active channel

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 08/31/2013
Applicant/Owner: AIDEA Sampling Point: T125-663
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): Northern Alaska Lat: 67.06479410 Long: -153.17916050 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PFO4/SS1B, IAII
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: photos 488-492.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	20	Yes	FACU
2. Picea mariana	20	Yes	FACW
3.			
4.			
Total Cover: 40			
50% of total cover: 20 20% of total cover: 8			
Sapling/Shrub Stratum			
1. Picea mariana	15	No	FACW
2. Betula nana	20	Yes	FAC
3. salix spp	25	Yes	FAC
4. Dasiphora fruticosa	15	No	FAC
5. Rhododendron groenlandicum	20	Yes	FAC
6. Arctostaphylos alpina	8	No	FACU
Total Cover: 103			
50% of total cover: 51 20% of total cover: 20			
Herb Stratum			
1. Carex rostrata	30	Yes	OBL
2. Petasites frigidus	2	No	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 32			
50% of total cover: 16 20% of total cover: 6			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 83 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	30	x 1 = 30
FACW species	37	x 2 = 74
FAC species	80	x 3 = 240
FACU species	28	x 4 = 112
UPL species	0	x 5 = 0
Column Totals:	175 (A)	456 (B)

Prevalence Index = B/A = 2.61

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 75
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 75%.

SOIL

Sampling Point T125-663

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	organics	100		0				
6-10	10YR 2/2	100		0			Silty Clay	
10-16	2.5Y 4/1	100		0			Silty Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
X Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 16

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/01/2013
Applicant/Owner: AIDEA Sampling Point: T126-664
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 5
Subregion (LRR): Northern Alaska Lat: 67.07082190 Long: -153.12904830 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1B, IIC1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: photos 4342-4346. Base steep hillslope changes from 10-15% to 5%	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Picea mariana	15	No	FACW
2. Betula nana	30	Yes	FAC
3. Vaccinium uliginosum	20	No	FAC
4. Rhododendron groenlandicum	25	Yes	FAC
5. Rubus chamaemorus	15	No	FACW
6. Empetrum nigrum	3	No	FAC
Total Cover: 108			
50% of total cover: 54 20% of total cover: 21			
Herb Stratum			
1. Eriophorum vaginatum	65	Yes	FACW
2. Carex rostrata	5	No	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 70			
50% of total cover: 35 20% of total cover: 14			

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 50
(Where applicable)

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	5	x 1 = 5
FACW species	95	x 2 = 190
FAC species	78	x 3 = 234
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	178 (A)	429 (B)

Prevalence Index = B/A = 2.41

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 50% located inbetween tussocks.

SOIL

Sampling Point T126-664

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	organics	100		0				saturated
10-17	10YR 3/1	100		0			Silty Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/01/2013
Applicant/Owner: AIDEA Sampling Point: T126-665
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 20
Subregion (LRR): Northern Alaska Lat: 67.07029480 Long: -153.12994020 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/EM1B, IA3
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: photos 4347-4351	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	10	Yes	FACW
2.			
3.			
4.			
Total Cover: 10			
50% of total cover: 5 20% of total cover: 2			
Sapling/Shrub Stratum			
1. Picea mariana	25	Yes	FACW
2. Betula nana	30	Yes	FAC
3. Vaccinium uliginosum	30	Yes	FAC
4. Rhododendron groenlandicum	30	Yes	FAC
5. Vaccinium vitis-idaea	10	No	FAC
6. Rubus chamaemorus	2	No	FACW
Total Cover: 127			
50% of total cover: 63 20% of total cover: 25			
Herb Stratum			
1. Carex rostrata	50	Yes	OBL
2. Eriophorum vaginatum	10	No	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 60			
50% of total cover: 30 20% of total cover: 12			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	50	x 1 = 50
FACW species	47	x 2 = 94
FAC species	100	x 3 = 300
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	197 (A)	444 (B)

Prevalence Index = B/A = 2.25

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 55
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 50%, pelt lichen 5%.

SOIL

Sampling Point T126-665

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-13	organics	100		0				

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- X Histosol or Histel(A1)
- X Histic Epipedon (A2)
- __Hydrogen Sulfide (A4)
- __Thick Dark Surface (A12)
- __Alaska Gleyed (A13)
- __Alaska Redox (A14)
- __Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

- __Alaska Color Change (TA4)[4]
- __Alaska Alpine Swales (TA5)
- __Alaska Redox With 2.5Y Hue
- __Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- __Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 13

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- __Surface Water (A1)
- __High Water Table (A2)
- __Saturation (A3)
- __Water Marks (B1)
- __Sediment Deposits (B2)
- __Drift Deposits (B3)
- __Algal Mat or Crust (B4)
- __Iron Deposits (B5)
- __Surface Soil Cracks (B6)
- __Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __Marl Deposits (B15)
- __Hydrogen Sulfide Odor (C1)
- __Dry Season Water Table (C2)
- __Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- __Water-stained Leaves (B9)
- __Drainage Patterns (B10)
- __Oxidized Rhizospheres along Living Roots (C3)
- __Presence of Reduced Iron (C4)
- __Salt Deposits (C5)
- __Stunted or Stressed Plants (D1)
- __Geomorphic Position (D2)
- X Shallow Aquitard (D3)
- __Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/01/2013
Applicant/Owner: AIDEA Sampling Point: T126-666
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 50
Subregion (LRR): Northern Alaska Lat: 67.06890010 Long: -153.12937960 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: photos 4352-4356	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	10	Yes	FACW
2.			
3.			
4.			
Total Cover: 10			
50% of total cover: 5 20% of total cover: 2			
Sapling/Shrub Stratum			
1. Picea mariana	20	Yes	FACW
2. Betula nana	25	Yes	FAC
3. Alnus viridis	10	No	FAC
4. Vaccinium uliginosum	15	No	FAC
5. Rhododendron groenlandicum	10	No	FAC
6. Vaccinium vitis-idaea	20	Yes	FAC
Total Cover: 100			
50% of total cover: 50 20% of total cover: 20			
Herb Stratum			
1. Carex rostrata	55	Yes	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 55			
50% of total cover: 27 20% of total cover: 11			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	55	x 1 = 55
FACW species	30	x 2 = 60
FAC species	80	x 3 = 240
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	165 (A)	355 (B)

Prevalence Index = B/A = 2.15

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 60
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 60%.

SOIL

Sampling Point T126-666

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-11	organics	100		0				
11-13	10YR 3/1	100		0			Sandy Gravely Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks: restrictive digging layer gravel

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/01/2013
Applicant/Owner: AIDEA Sampling Point: T126-667
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 40
Subregion (LRR): Northern Alaska Lat: 67.06803520 Long: -153.12960630 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: upland north facing slope. photos 4357-4361.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	45	Yes	FACW
2. Populus tremuloides	2	No	FACU
3. Populus balsamifera	5	No	FACU
4.			
Total Cover: 52			
50% of total cover: 26 20% of total cover: 10			
Sapling/Shrub Stratum			
1. Picea mariana	15	Yes	FACW
2. Populus tremuloides	5	No	FACU
3. Populus balsamifera	2	No	FACU
4. salix sp	2	No	FAC
5. Betula nana	15	Yes	FAC
6. Vaccinium uliginosum	5	No	FAC
Total Cover: 44			
50% of total cover: 22 20% of total cover: 8			
Herb Stratum			
1. Carex rostrata	8	Yes	OBL
2. Lycopodium clavatum	2	Yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 10			
50% of total cover: 5 20% of total cover: 2			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	8	x 1 = 8
FACW species	60	x 2 = 120
FAC species	22	x 3 = 66
FACU species	16	x 4 = 64
UPL species	0	x 5 = 0
Column Totals:	106 (A)	258 (B)

Prevalence Index = B/A = 2.43

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 87
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 25%, REINDEER LICHEN 35%, false pixie cup 10%, pelt lichen 15%, red pixie cup 2%.

SOIL

Sampling Point T126-667

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	organics	100		0				
5-9	2.5Y 4/2	100		0			Sandy Gravely Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks: restrictive digging layer gravel. Low carbon content.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/01/2013
Applicant/Owner: AIDEA Sampling Point: T126-668
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 50
Subregion (LRR): Northern Alaska Lat: 67.06804920 Long: -153.12389410 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: photos 4362-4366	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	2	Yes	FACW
2.			
3.			
4.			
Total Cover: 2			
50% of total cover: 1 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Picea mariana	10	No	FACW
2. Betula nana	25	No	FAC
3. Vaccinium uliginosum	15	No	FAC
4. Rhododendron groenlandicum	30	Yes	FAC
5. Vaccinium vitis-idaea	35	Yes	FAC
6. Alnus viridis	15	No	FAC
Total Cover: 130			
50% of total cover: 65 20% of total cover: 26			
Herb Stratum			
1. Carex rostrata	45	Yes	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 45			
50% of total cover: 22 20% of total cover: 9			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	45	x 1 = 45
FACW species	12	x 2 = 24
FAC species	120	x 3 = 360
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	177 (A)	429 (B)

Prevalence Index = B/A = 2.42

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 70
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 60%, reindeer lichen 10%.

SOIL

Sampling Point T126-668

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-11	organics	100		0				moist
11-15	10YR 2/2	100		0			fine sandy gravel loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks: restrictive digging layer gravel. Low carbon content,

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/01/2013
Applicant/Owner: AIDEA Sampling Point: T126-669
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 33
Subregion (LRR): Northern Alaska Lat: 67.06927170 Long: -153.12333500 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/EM1B, IIC1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: hillslope northeast facing photos 4367-4371.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	1	Yes	FACW
2.			
3.			
4.			
Total Cover: 1			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Picea mariana	20	No	FACW
2. Alnus viridis	8	No	FAC
3. Betula nana	35	Yes	FAC
4. Vaccinium uliginosum	30	Yes	FAC
5. Rhododendron groenlandicum	20	No	FAC
6. Vaccinium vitis-idaea	15	No	FAC
Total Cover: 128			
50% of total cover: 64 20% of total cover: 25			
Herb Stratum			
1. Carex rostrata	10	Yes	OBL
2. Eriophorum vaginatum	35	Yes	FACW
3. Lycopodium clavatum	3	No	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 48			
50% of total cover: 24 20% of total cover: 9			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	10	x 1 = 10
FACW species	56	x 2 = 112
FAC species	108	x 3 = 324
FACU species	3	x 4 = 12
UPL species	0	x 5 = 0
Column Totals:	177 (A)	458 (B)

Prevalence Index = B/A = 2.59

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 60
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 55%, reindeer lichen 5%.

SOIL

Sampling Point T126-669

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	organics	100		0				saturated at 5 inches

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

X Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks: restrictive digging layer gravel.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 5
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/01/2013
Applicant/Owner: AIDEA Sampling Point: T126-670
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): convex Slope (%): 2
Subregion (LRR): Northern Alaska Lat: 67.07114290 Long: -153.12336960 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/EM1B, IA3
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: photos 4372-4376.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	15	Yes	FACW
2.			
3.			
4.			
Total Cover: 15			
50% of total cover: 7 20% of total cover: 3			
Sapling/Shrub Stratum			
1. Picea mariana	30	No	FACW
2. Betula nana	35	Yes	FAC
3. Vaccinium uliginosum	50	Yes	FAC
4. salix sp	5	No	FAC
5. Rhododendron groenlandicum	30	No	FAC
6. Vaccinium vitis-idaea	20	No	FAC
Total Cover: 170			
50% of total cover: 85 20% of total cover: 34			
Herb Stratum			
1. Carex rostrata	30	Yes	OBL
2. Eriophorum vaginatum	15	Yes	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 45			
50% of total cover: 22 20% of total cover: 9			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	30	x 1 = 30
FACW species	60	x 2 = 120
FAC species	140	x 3 = 420
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	230 (A)	570 (B)

Prevalence Index = B/A = 2.48

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 70
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 70%

SOIL

Sampling Point T126-670

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-15	organics	100		0				saturated at 11

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 15

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 11
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/01/2013
Applicant/Owner: AIDEA Sampling Point: T126-671
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): concave Slope (%): 2
Subregion (LRR): Northern Alaska Lat: 67.07141040 Long: -153.12403820 Datum: WGS84
Soil Map Unit Name: _ NWI classification: R3UB1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? Yes**

Remarks: channel wetted width 9 feet, 8 inches deep, 5 inch diameter cobble substrate. bankfull 44 feet. riparian salix spp. Photos 4377-4378.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	0 (A)	0 (B)

Prevalence Index = B/A = 0.00

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 0 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks:

SOIL

Sampling Point T126-671

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/01/2013
Applicant/Owner: AIDEA Sampling Point: T126-672
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Stream terrace Local relief (concave, convex, none): convex Slope (%): 1
Subregion (LRR): Northern Alaska Lat: 67.07138510 Long: -153.12524380 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: photos 4379-4383. upland	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	25	Yes	FACU
2. Picea mariana	15	Yes	FACW
3. Populus balsamifera	30	Yes	FACU
4.			
Total Cover: 70			
50% of total cover: 35 20% of total cover: 14			
Sapling/Shrub Stratum			
1. Picea glauca	10	No	FACU
2. Picea mariana	10	No	FACW
3. Vaccinium uliginosum	30	Yes	FAC
4. Rhododendron groenlandicum	10	No	FAC
5. salix spp	10	No	FAC
6. Vaccinium vitis-idaea	15	Yes	FAC
Total Cover: 85			
50% of total cover: 42 20% of total cover: 17			
Herb Stratum			
1. Equisetum arvense	50	Yes	FAC
2. Calamagrostis canadensis	10	No	FAC
3. Chamaenerion angustifolium	3	No	FACU
4. Geocaulon lividum	2	No	FACU
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 65			
50% of total cover: 32 20% of total cover: 13			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	25	x 2 = 50
FAC species	125	x 3 = 375
FACU species	70	x 4 = 280
UPL species	0	x 5 = 0
Column Totals:	220 (A)	705 (B)

Prevalence Index = B/A = 3.20

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
___ Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 80
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 80%.

SOIL

Sampling Point T126-672

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-7	organics	100		0				
7-19	2.5Y 4/2	100		0			Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/01/2013
Applicant/Owner: AIDEA Sampling Point: T127-673
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 0
Subregion (LRR): Northern Alaska Lat: 67.09858270 Long: -152.93245940 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS4/EM1C, IID2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: photos 4384-4388.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Andromeda polifolia	45	Yes	OBL
2. Vaccinium oxycoccos	20	Yes	OBL
3. Vaccinium uliginosum	2	No	FAC
4. Chamaedaphne calyculata	10	No	FACW
5.			
6.			
Total Cover: 77			
50% of total cover: 38 20% of total cover: 15			
Herb Stratum			
1. Eriophorum vaginatum	70	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 70			
50% of total cover: 35 20% of total cover: 14			

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 50
(Where applicable)

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	65	x 1 = 65
FACW species	80	x 2 = 160
FAC species	2	x 3 = 6
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	147 (A)	231 (B)

Prevalence Index = B/A = 1.57

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 50%.

SOIL

Sampling Point T127-673

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-20	organics	100		0				saturated

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

X Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 20

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 0
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/01/2013
Applicant/Owner: AIDEA Sampling Point: T127-674
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 3
Subregion (LRR): Northern Alaska Lat: 67.09895600 Long: -152.93592580 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/EM1B, IIC2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: photos 4389-4393.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	3	Yes	FACW
2.			
3.			
4.			
Total Cover: 3			
50% of total cover: 1 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Picea mariana	8	No	FACW
2. salix spp	45	Yes	FAC
3. Vaccinium uliginosum	15	No	FAC
4. Betula nana	8	No	FAC
5. Rubus pubescens	30	Yes	FACW
6.			
Total Cover: 106			
50% of total cover: 53 20% of total cover: 21			
Herb Stratum			
1. Equisetum arvense	35	Yes	FAC
2. Calamagrostis canadensis	20	Yes	FAC
3. Carex rostrata	8	No	OBL
4. Ranunculus lapponicus	4	No	OBL
5. aster sp	4	No	FAC
6.			
7.			
8.			
9.			
10.			
Total Cover: 71			
50% of total cover: 35 20% of total cover: 14			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	12	x 1 = 12
FACW species	41	x 2 = 82
FAC species	127	x 3 = 381
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	180 (A)	475 (B)

Prevalence Index = B/A = 2.64

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 70
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 70%

SOIL

Sampling Point T127-674

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-7	organics	100		0				saturated
7-20	gley1 10Y 3/1	80	10YR 4/6	20	C	RC	Silty Clay Loam	prominent redox

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
X Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 7
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/01/2013
Applicant/Owner: AIDEA Sampling Point: T127-675
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 5
Subregion (LRR): Northern Alaska Lat: 67.09997350 Long: -152.94064620 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: photos 4394-4398. upland	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	25	Yes	FACW
2. Picea glauca	5	No	FACU
3.			
4.			
Total Cover: 30			
50% of total cover: 15 20% of total cover: 6			
Sapling/Shrub Stratum			
1. Picea mariana	10	No	FACW
2. Alnus viridis	20	No	FAC
3. Betula nana	15	No	FAC
4. Vaccinium uliginosum	75	Yes	FAC
5. Vaccinium vitis-idaea	8	No	FAC
6. Rhododendron groenlandicum	10	No	FAC
Total Cover: 138			
50% of total cover: 69 20% of total cover: 27			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	35	x 2 = 70
FAC species	128	x 3 = 384
FACU species	5	x 4 = 20
UPL species	0	x 5 = 0
Column Totals:	168 (A)	474 (B)

Prevalence Index = B/A = 2.82

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 40
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 30%, reindeer lichen 10%.

SOIL

Sampling Point T127-675

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	organics	100		0				
4-18	10YR 4/3	100		0			Sandy Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/01/2013
Applicant/Owner: AIDEA Sampling Point: T127-676
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 5
Subregion (LRR): Northern Alaska Lat: 67.10170620 Long: -152.94693870 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: photos 4399-4403. Northwest facing slope.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	30	Yes	FACW
2. Picea glauca	2	No	FACU
3.			
4.			
Total Cover: 32			
50% of total cover: 16 20% of total cover: 6			
Sapling/Shrub Stratum			
1. Picea mariana	15	No	FACW
2. Alnus viridis	20	Yes	FAC
3. Betula nana	10	No	FAC
4. Vaccinium uliginosum	25	Yes	FAC
5. Rhododendron groenlandicum	20	Yes	FAC
6. salix spp	10	No	FAC
Total Cover: 100			
50% of total cover: 50 20% of total cover: 20			
Herb Stratum			
1. Arctostaphylos alpina	25	Yes	FACU
2. Carex rostrata	30	Yes	OBL
3. Equisetum arvense	0	No	FAC
4. Calamagrostis canadensis	3	No	FAC
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 58			
50% of total cover: 29 20% of total cover: 11			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 83 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	30	x 1 = 30
FACW species	45	x 2 = 90
FAC species	88	x 3 = 264
FACU species	27	x 4 = 108
UPL species	0	x 5 = 0
Column Totals:	190 (A)	492 (B)

Prevalence Index = B/A = 2.59

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 80
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 40%, reindeer lichen 40%.

SOIL

Sampling Point T127-676

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	organics	100		0				
8-17	5Y 4/1	90	10YR 5/6	10	RM	M	Silty Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/01/2013
Applicant/Owner: AIDEA Sampling Point: T127-677
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 3
Subregion (LRR): Northern Alaska Lat: 67.09793600 Long: -152.94915280 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/EM1B, IIC1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: photos 4404-4408.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	15	Yes	FACW
2.			
3.			
4.			
Total Cover: 15			
50% of total cover: 7 20% of total cover: 3			
Sapling/Shrub Stratum			
1. Picea mariana	25	Yes	FACW
2. Betula nana	40	Yes	FAC
3. Vaccinium uliginosum	25	No	FAC
4. Rhododendron groenlandicum	30	Yes	FAC
5. Vaccinium vitis-idaea	20	No	FAC
6. Rubus chamaemorus	15	No	FACW
Total Cover: 155			
50% of total cover: 77 20% of total cover: 31			
Herb Stratum			
1. Carex rostrata	70	Yes	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 70			
50% of total cover: 35 20% of total cover: 14			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	70	x 1 = 70
FACW species	55	x 2 = 110
FAC species	115	x 3 = 345
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	240 (A)	525 (B)

Prevalence Index = B/A = 2.19

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 40
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 40%.

SOIL

Sampling Point T127-677

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	organics	100		0				saturated
5-18	10YR 4/1	95	10YR 4/6	5	D	M	Silty Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
X Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 18

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 1
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/01/2013
Applicant/Owner: AIDEA Sampling Point: T127-678
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 2
Subregion (LRR): Northern Alaska Lat: 67.09561470 Long: -152.93946350 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/4B, IA3
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: pss. Photos 287-291 adam's camera.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	15	Yes	FACW
2.			
3.			
4.			
Total Cover: 15			
50% of total cover: 7 20% of total cover: 3			
Sapling/Shrub Stratum			
1. Picea mariana	25	Yes	FACW
2. Betula nana	25	No	FAC
3. Vaccinium uliginosum	45	Yes	FAC
4. Vaccinium vitis-idaea	20	No	FAC
5. Rhododendron groenlandicum	35	Yes	FAC
6. Rubus chamaemorus	15	No	FACW
Total Cover: 165			
50% of total cover: 82 20% of total cover: 33			
Herb Stratum			
1. Carex rostrata	35	Yes	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 35			
50% of total cover: 17 20% of total cover: 7			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	35	x 1 = 35
FACW species	55	x 2 = 110
FAC species	125	x 3 = 375
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	215 (A)	520 (B)

Prevalence Index = B/A = 2.42

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 65
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 40%, reindeer lichen 20%, pelt lichen 5%

SOIL

Sampling Point T127-678

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-13	organics	100		0				saturated
13-19	2.5Y 3/2	100		0			Silty Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 19

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 2
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: North Slope Borough Sampling Date: 09/02/2013
Applicant/Owner: AIDEA Sampling Point: T128-683
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Stream terrace Local relief (concave, convex, none): convex Slope (%): 2
Subregion (LRR): Northern Alaska Lat: 67.09024210 Long: -152.78016420 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland, IIB1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**

Remarks: photos 4409-4413. riparian area. South 4 feet of stream channel. wetted width is 12 feet wide, 10 inches deep, near vertical banks. 1 % slope. Sandy silt substrate.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	1	Yes	FACU
2.			
3.			
4.			
Total Cover: 1			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. salix spp	55	Yes	FAC
2. Betula nana	15	No	FAC
3. Vaccinium uliginosum	30	Yes	FAC
4. Rhododendron groenlandicum	5	No	FAC
5. Chamaedaphne calyculata	2	No	FACW
6. Myrica gale	5	No	OBL
Total Cover: 112			
50% of total cover: 56 20% of total cover: 22			
Herb Stratum			
1. Calamagrostis canadensis	20	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 20			
50% of total cover: 10 20% of total cover: 4			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	5	x 1 = 5
FACW species	2	x 2 = 4
FAC species	125	x 3 = 375
FACU species	1	x 4 = 4
UPL species	0	x 5 = 0
Column Totals:	133 (A)	388 (B)

Prevalence Index = B/A = 2.92

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 15
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 15%

SOIL

Sampling Point T128-683

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	organics	100		0				moist
3-19	10YR 3/2	100		0			Loamy Fine Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 19

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: North Slope Borough Sampling Date: 09/02/2013
Applicant/Owner: AIDEA Sampling Point: T128-684
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): concave Slope (%): 3
Subregion (LRR): Northern Alaska Lat: 67.09189390 Long: -152.78269040 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/4B, IIA1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: photos 4414-4419. Tussocks are 12 to 14 inches tall	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	3	Yes	FACW
2.			
3.			
4.			
Total Cover: 3			
50% of total cover: 1 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Picea glauca	35	Yes	FACU
2. Picea mariana	10	No	FACW
3. Betula nana	35	Yes	FAC
4. salix spp	8	No	FAC
5. Vaccinium uliginosum	15	No	FAC
6. Vaccinium vitis-idaea	13	No	FAC
Total Cover: 116			
50% of total cover: 58 20% of total cover: 23			
Herb Stratum			
1. Eriophorum vaginatum	70	Yes	FACW
2. Carex rostrata	20	Yes	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 90			
50% of total cover: 45 20% of total cover: 18			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	20	x 1 = 20
FACW species	83	x 2 = 166
FAC species	71	x 3 = 213
FACU species	35	x 4 = 140
UPL species	0	x 5 = 0
Column Totals:	209 (A)	539 (B)

Prevalence Index = B/A = 2.58

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 20
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 20
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 15%, reindeer lichen 5%. Most vegetation growing on tussocks

SOIL

Sampling Point T128-684

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	gley1 10Y 3/1	90	10YR 3/6	10	RM	M	Silty Clay Loam	Prominent Redox

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
X Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
X Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: North Slope Borough Sampling Date: 09/02/2013
Applicant/Owner: AIDEA Sampling Point: T128-685
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 3
Subregion (LRR): Northern Alaska Lat: 67.09271890 Long: -152.78389800 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PFO4/SS1, IA2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: photos 4420-4424. pfo	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	35	Yes	FACW
2. Picea glauca	1	No	FACU
3.			
4.			
Total Cover: 36			
50% of total cover: 18 20% of total cover: 7			
Sapling/Shrub Stratum			
1. Picea mariana	45	Yes	FACW
2. Betula nana	30	Yes	FAC
3. salix spp	8	No	FAC
4. Vaccinium uliginosum	40	Yes	FAC
5. Rhododendron groenlandicum	15	No	FAC
6. Dasiphora fruticosa	8	No	FAC
Total Cover: 146			
50% of total cover: 73 20% of total cover: 29			
Herb Stratum			
1. Carex rostrata	10	Yes	OBL
2. Eriophorum vaginatum	30	Yes	FACW
3. Polemonium acutiflorum	8	No	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 48			
50% of total cover: 24 20% of total cover: 9			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	10	x 1 = 10
FACW species	110	x 2 = 220
FAC species	109	x 3 = 327
FACU species	1	x 4 = 4
UPL species	0	x 5 = 0
Column Totals:	230 (A)	561 (B)

Prevalence Index = B/A = 2.44

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 80
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: reindeer lichen 65%, sphagnum 15%.

SOIL

Sampling Point T128-685

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	organics	100		0				
4-22	gley1 10Y 3/1	90	5Y 4/2	10	C	RC	Clay Loam	Distinct Redox

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
X Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
X Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: North Slope Borough Sampling Date: 09/02/2013
Applicant/Owner: AIDEA Sampling Point: T128-686
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hill Local relief (concave, convex, none): convex Slope (%): 5
Subregion (LRR): Northern Alaska Lat: 67.09530050 Long: -152.78288480 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: upland. photos 4425-4429.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	35	Yes	FACW
2. Picea glauca	5	No	FACU
3.			
4.			
Total Cover: 40			
50% of total cover: 20 20% of total cover: 8			
Sapling/Shrub Stratum			
1. Picea mariana	10	No	FACW
2. Picea glauca	2	No	FACU
3. Alnus viridis	15	No	FAC
4. Vaccinium uliginosum	55	Yes	FAC
5. Vaccinium vitis-idaea	25	Yes	FAC
6. Rhododendron groenlandicum	15	No	FAC
Total Cover: 122			
50% of total cover: 61 20% of total cover: 24			
Herb Stratum			
1. Carex rostrata	15	Yes	OBL
2. Equisetum arvense	5	Yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 20			
50% of total cover: 10 20% of total cover: 4			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	15	x 1 = 15
FACW species	45	x 2 = 90
FAC species	115	x 3 = 345
FACU species	7	x 4 = 28
UPL species	0	x 5 = 0
Column Totals:	182 (A)	478 (B)

Prevalence Index = B/A = 2.63

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 80
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 15%, pelt lichen 5%, reindeer lichen 60%.

SOIL

Sampling Point T128-686

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	organics	100		0				
3-20	10YR 4/4	100		0			Sandy Gravely Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks: Low carbon content.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: North Slope Borough Sampling Date: 09/02/2013
Applicant/Owner: AIDEA Sampling Point: T128-687
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hill Local relief (concave, convex, none): convex Slope (%): 2
Subregion (LRR): Northern Alaska Lat: 67.09584120 Long: -152.78401630 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PFO4/SS1/4B, IA2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: pfo/pss. photos 4430-4434.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	30	Yes	FACW
2.			
3.			
4.			
Total Cover: 30			
50% of total cover: 15 20% of total cover: 6			
Sapling/Shrub Stratum			
1. Picea mariana	15	No	FACW
2. Betula nana	15	No	FAC
3. Vaccinium uliginosum	30	Yes	FAC
4. Vaccinium vitis-idaea	25	Yes	FAC
5. Rhododendron groenlandicum	20	No	FAC
6.			
Total Cover: 105			
50% of total cover: 52 20% of total cover: 21			
Herb Stratum			
1. Eriophorum vaginatum	45	Yes	FACW
2. Carex stylosa	20	Yes	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 65			
50% of total cover: 32 20% of total cover: 13			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	110	x 2 = 220
FAC species	90	x 3 = 270
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	200 (A)	490 (B)

Prevalence Index = B/A = 2.45

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 75
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 10%, pelt lichen 8%, reindeer lichen 57%. Hummocky.

SOIL

Sampling Point T128-687

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-11	organics	100		0				saturated

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 11

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 3
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: North Slope Borough Sampling Date: 09/02/2013
Applicant/Owner: AIDEA Sampling Point: T128-688
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hill Local relief (concave, convex, none): convex Slope (%): 2
Subregion (LRR): Northern Alaska Lat: 67.09511610 Long: -152.78830590 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: photos 4435-4439. Upland	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	40	Yes	FACW
2. Populus balsamifera	15	Yes	FACU
3.			
4.			
Total Cover: 55			
50% of total cover: 27 20% of total cover: 11			
Sapling/Shrub Stratum			
1. Picea mariana	10	No	FACW
2. Vaccinium uliginosum	35	Yes	FAC
3. Alnus viridis	8	No	FAC
4. Vaccinium vitis-idaea	20	Yes	FAC
5. Rhododendron groenlandicum	5	No	FAC
6. salix spp	5	No	FAC
Total Cover: 83			
50% of total cover: 41 20% of total cover: 16			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	50	x 2 = 100
FAC species	73	x 3 = 219
FACU species	15	x 4 = 60
UPL species	0	x 5 = 0
Column Totals:	138 (A)	379 (B)

Prevalence Index = B/A = 2.75

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 80
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 8%, pelt lichen 12%, reindeer lichen 60%.

SOIL

Sampling Point T128-688

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	organics	100		0				
2-21	2.5Y 4/3	100		0			Sandy Gravely Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks: Low carbon content.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: North Slope Borough Sampling Date: 09/02/2013
Applicant/Owner: AIDEA Sampling Point: T128-689
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): none Slope (%): 2
Subregion (LRR): Northern Alaska Lat: 67.09222940 Long: -152.79009610 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/EM1C, IIC1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: photos 4440-4445. Pss. Tussucks approximately 24 inches tall.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	5	Yes	FACW
2.			
3.			
4.			
Total Cover: 5			
50% of total cover: 2 20% of total cover: 1			
Sapling/Shrub Stratum			
1. Picea mariana	10	No	FACW
2. Betula nana	50	Yes	FAC
3. Chamaedaphne calyculata	20	Yes	FACW
4. salix sp	3	No	FAC
5. Vaccinium uliginosum	5	No	FAC
6. Rhododendron groenlandicum	5	No	FAC
Total Cover: 93			
50% of total cover: 46 20% of total cover: 18			
Herb Stratum			
1. Carex rostrata	80	Yes	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 80			
50% of total cover: 40 20% of total cover: 16			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	80	x 1 = 80
FACW species	35	x 2 = 70
FAC species	63	x 3 = 189
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	178 (A)	339 (B)

Prevalence Index = B/A = 1.90

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: Hummocky.

SOIL

Sampling Point T128-689

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-20	organics	100		0				saturated

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

X Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 20

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
X Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 0
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/01/2013
Applicant/Owner: AIDEA Sampling Point: T129-679
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 1
Subregion (LRR): Northern Alaska Lat: 67.09322590 Long: -152.72303420 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PEM1, IIIA3
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: photos 2932-2936. Pem.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. salix spp	8	Yes	FAC
2.			
3.			
4.			
5.			
6.			
Total Cover: 8			
50% of total cover: 4 20% of total cover: 1			
Herb Stratum			
1. Carex limosa	70	Yes	OBL
2. Carex media	10	No	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 80			
50% of total cover: 40 20% of total cover: 16			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	70	x 1 = 70
FACW species	10	x 2 = 20
FAC species	8	x 3 = 24
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	88 (A)	114 (B)

Prevalence Index = B/A = 1.30

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 15
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 10
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 10%.

SOIL

Sampling Point T129-679

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-22	organics	100		0				saturated

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

X Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
X Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/01/2013
Applicant/Owner: AIDEA Sampling Point: T129-680
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): none Slope (%): 2
Subregion (LRR): Northern Alaska Lat: 67.09211800 Long: -152.72435710 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/EM1B, IIA2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: pss. photos 2937-2941.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	5	Yes	FACW
2.			
3.			
4.			
Total Cover: 5			
50% of total cover: 2 20% of total cover: 1			
Sapling/Shrub Stratum			
1. Picea mariana	40	Yes	FACW
2. Betula nana	30	Yes	FAC
3. Vaccinium uliginosum	40	Yes	FAC
4. Chamaedaphne calyculata	10	No	FACW
5. salix spp	8	No	FAC
6. Arctostaphylos alpina	5	No	FACU
Total Cover: 133			
50% of total cover: 66 20% of total cover: 26			
Herb Stratum			
1. Eriophorum vaginatum	70	Yes	FACW
2. Carex rostrata	15	No	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 85			
50% of total cover: 42 20% of total cover: 17			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	15	x 1 = 15
FACW species	125	x 2 = 250
FAC species	78	x 3 = 234
FACU species	5	x 4 = 20
UPL species	0	x 5 = 0
Column Totals:	223 (A)	519 (B)

Prevalence Index = B/A = 2.33

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 65
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 60%, reindeer lichen 5% located inbetween tussocks.

SOIL

Sampling Point T129-680

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	organics	100		0				saturated
8-16	2.5Y 4/2	100		0			Silty Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 16

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 9
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/01/2013
Applicant/Owner: AIDEA Sampling Point: T129-681
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): concave Slope (%): 2
Subregion (LRR): Northern Alaska Lat: 67.09213290 Long: -152.72913180 Datum: WGS84
Soil Map Unit Name: _ NWI classification: R3UB1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: channel wetted 22 feet width , 6 inch depth, cobbles 6 inch with 22 inch boulders. Bankfull width 50 feet. Photos 2942-2943. riparian alnus viridis and salix sp.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	0 (A)	0 (B)

Prevalence Index = B/A = 0.00

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 0 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks:

SOIL

Sampling Point T129-681

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/01/2013
Applicant/Owner: AIDEA Sampling Point: T129-682
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Stream terrace Local relief (concave, convex, none): convex Slope (%): 10
Subregion (LRR): Northern Alaska Lat: 67.09227910 Long: -152.72921340 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PFO4/SS4B, IA2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: photos 2944-2948.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	10	Yes	FACU
2. Picea mariana	15	Yes	FACW
3. Populus balsamifera	10	Yes	FACU
4.			
Total Cover: 35			
50% of total cover: 17 20% of total cover: 7			
Sapling/Shrub Stratum			
1. Rhododendron groenlandicum	50	Yes	FAC
2. Alnus viridis	20	No	FAC
3. Vaccinium vitis-idaea	55	Yes	FAC
4. Rubus chamaemorus	20	No	FACW
5. Chamaedaphne calyculata	10	No	FACW
6. Vaccinium uliginosum	15	No	FAC
Total Cover: 170			
50% of total cover: 85 20% of total cover: 34			
Herb Stratum			
1. Calamagrostis canadensis	5	Yes	FAC
2. Equisetum arvense	5	Yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 10			
50% of total cover: 5 20% of total cover: 2			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 71 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	45	x 2 = 90
FAC species	150	x 3 = 450
FACU species	20	x 4 = 80
UPL species	0	x 5 = 0
Column Totals:	215 (A)	620 (B)

Prevalence Index = B/A = 2.88

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 75
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 65%, reindeer lichen 10%

SOIL

Sampling Point T129-682

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-14	organics	100		0				saturated

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks: restrictive digging layer rock

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 8
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/02/2013
Applicant/Owner: AIDEA Sampling Point: T130-690
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 3
Subregion (LRR): Northern Alaska Lat: 67.09460920 Long: -152.69278240 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS4/EM1B, IIC1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: photos 4446-4450.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	5	Yes	FACW
2.			
3.			
4.			
Total Cover: 5			
50% of total cover: 2 20% of total cover: 1			
Sapling/Shrub Stratum			
1. Picea mariana	35	Yes	FACW
2. Betula nana	15	No	FAC
3. Vaccinium uliginosum	35	Yes	FAC
4. Vaccinium vitis-idaea	10	No	FAC
5. Empetrum nigrum	25	No	FAC
6. Rhododendron groenlandicum	15	No	FAC
Total Cover: 135			
50% of total cover: 67 20% of total cover: 27			
Herb Stratum			
1. Eriophorum vaginatum	45	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 45			
50% of total cover: 22 20% of total cover: 9			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	85	x 2 =	170
FAC species	100	x 3 =	300
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	185 (A)		470 (B)

Prevalence Index = B/A = 2.54

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 70
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 50%, reindeer lichen 20%

SOIL

Sampling Point T130-690

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	organics	100		0				saturated
12-13	2.5Y 3/2	100		0			Silty Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 10
Saturation Present? Yes Depth (inches): 6
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/02/2013
Applicant/Owner: AIDEA Sampling Point: T130-691
Investigator(s): AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 10
Subregion (LRR): Northern Alaska Lat: 67.09377410 Long: -152.69505660 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/EM1B, IIC2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? No**
Remarks: photos 4451-4455	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. salix spp	20	Yes	FAC
2. Betula nana	15	No	FAC
3. Vaccinium uliginosum	40	Yes	FAC
4. Rhododendron groenlandicum	5	No	FAC
5. Arctostaphylos rubra	3	No	FAC
6. Chamaedaphne calyculata	1	No	FACW
Total Cover: 84			
50% of total cover: 42 20% of total cover: 16			
Herb Stratum			
1. Carex rostrata	3	No	OBL
2. Eriophorum angustifolium	60	Yes	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 63			
50% of total cover: 31 20% of total cover: 12			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	63	x 1 = 63
FACW species	1	x 2 = 2
FAC species	83	x 3 = 249
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	147 (A)	314 (B)

Prevalence Index = B/A = 2.14

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 0 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 15
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T130-691

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-11	organics	100		0				saturated
11-16	5Y 4/1	100		0			Silty Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 16

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
X Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 14
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/04/2013
Applicant/Owner: AIDEA Sampling Point: T136-729
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): none Slope (%): 1
Subregion (LRR): Northern Alaska Lat: 66.88515770 Long: -151.32699710 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1B, IIB1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: photos 605-609. previously burnt area with picea tree layer burnt.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Alnus viridis	30	Yes	FAC
2. Betula nana	8	No	FAC
3. salix spp	25	Yes	FAC
4. Vaccinium uliginosum	10	No	FAC
5. Rhododendron groenlandicum	8	No	FAC
6. Picea mariana	3	No	FACW
Total Cover: 84			
50% of total cover: 42 20% of total cover: 16			
Herb Stratum			
1. Chamaenerion angustifolium	15	Yes	FACU
2. Eriophorum vaginatum	15	Yes	FACW
3. Calamagrostis canadensis	30	Yes	FAC
4. Equisetum arvense	10	No	FAC
5. Petasites frigidus	1	No	FACW
6.			
7.			
8.			
9.			
10.			
Total Cover: 71			
50% of total cover: 35 20% of total cover: 14			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	19	x 2 = 38
FAC species	121	x 3 = 363
FACU species	15	x 4 = 60
UPL species	0	x 5 = 0
Column Totals:	155 (A)	461 (B)

Prevalence Index = B/A = 2.97

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 40
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 30%, marchantia polymorpha 10%.

SOIL

Sampling Point T136-729

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1	organics	100		0				
1-8	2.5Y 4/2	45	5Y 4/1	35	RM	M	Silty Clay Loam	Faint Redox
		0	7.5Y 4/6	20	D	M	Silty Clay Loam	Prominent Redox
8-22	2.5Y 4/2	65	5Y 4/1	35	RM	M	Silty Clay Loam	Faint Redox

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
X Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 16
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/04/2013
Applicant/Owner: AIDEA Sampling Point: T136-731
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): concave Slope (%): 0
Subregion (LRR): Northern Alaska Lat: 66.88710370 Long: -151.32927600 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/EM1B, IIB2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: adjacent to open water. photos 610-614. Pss.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. salix spp	45	Yes	FAC
2. Alnus viridis	12	No	FAC
3. Vaccinium uliginosum	5	No	FAC
4. Chamaedaphne calyculata	8	No	FACW
5.			
6.			
Total Cover: 70			
50% of total cover: 35 20% of total cover: 14			
Herb Stratum			
1. Calamagrostis canadensis	30	Yes	FAC
2. Carex utriculata	25	Yes	OBL
3. Eriophorum angustifolium	25	Yes	OBL
4. Carex rostrata	10	No	OBL
5. Ranunculus lapponicus	5	No	OBL
6.			
7.			
8.			
9.			
10.			
Total Cover: 95			
50% of total cover: 47 20% of total cover: 19			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	65	x 1 = 65
FACW species	8	x 2 = 16
FAC species	92	x 3 = 276
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	165 (A)	357 (B)

Prevalence Index = B/A = 2.16

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 30
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 30%.

SOIL

Sampling Point T136-731

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	organics	100		0				saturated
4-20	2.5Y 4/2	100		0			Sandy Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
X Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks: Problematic soil depressional feature, observed high water table late in growing season, and vegetation is hydrophytic.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 8
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/05/2013
Applicant/Owner: AIDEA Sampling Point: T138-718
Investigator(s): LG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Channel Local relief (concave, convex, none): convex Slope (%): 4
Subregion (LRR): Northern Alaska Lat: 67.08564060 Long: -152.59889650 Datum: WGS84
Soil Map Unit Name: _ NWI classification: upland, IB1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**

Remarks: photos 4521-4525 large dry drainage to the east of plot in the same vegetation. Cobble substrate in drainage.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Betula papyrifera	50	Yes	FAC
2. Picea glauca	15	Yes	FACU
3.			
4.			
Total Cover: 65			
50% of total cover: 32 20% of total cover: 13			
Sapling/Shrub Stratum			
1. salix sp	5	No	FAC
2. Alnus viridis	10	Yes	FAC
3. Rosa acicularis	10	Yes	FACU
4. Viburnum edule	15	Yes	FACU
5. Vaccinium uliginosum	3	No	FAC
6.			
Total Cover: 43			
50% of total cover: 21 20% of total cover: 8			
Herb Stratum			
1. Calamagrostis canadensis	20	Yes	FAC
2. Equisetum arvense	1	No	FAC
3. Hedysarum alpinum	1	No	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 22			
50% of total cover: 11 20% of total cover: 4			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	89	x 3 = 267
FACU species	41	x 4 = 164
UPL species	0	x 5 = 0
Column Totals:	130 (A)	431 (B)

Prevalence Index = B/A = 3.32

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
__ Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 10
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks: large trees for the area. Dry drainage to the east. ungulating with small hummocks

SOIL

Sampling Point T138-718

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	organic	100		0				
3-8	10YR 5/4	95	7.5YR 4/6	5	C	M	Sandy Gravely Loam	gravels 10% contained most roots
8-17	10YR 3/4	100		0			Sandy Gravely Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 17

Hydric Soil Present? No

Remarks: Restrictive digging layer of gravel.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/05/2013
Applicant/Owner: AIDEA Sampling Point: T138-722
Investigator(s): LG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Channel Local relief (concave, convex, none): convex Slope (%): 4
Subregion (LRR): Northern Alaska Lat: 67.08760700 Long: -152.59467740 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1B
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: shrub community with Vac uli, salix as prmary plants. Gravels and cobbles in pit photos 4530-4534	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Picea mariana	1	No	FACW
2. Betula nana	3	No	FAC
3. salix sp	40	Yes	FAC
4. Vaccinium uliginosum	60	Yes	FAC
5. Rhododendron groenlandicum	1	No	FAC
6. Chamaedaphne calyculata	3	No	FACW
Total Cover: 108			
50% of total cover: 54 20% of total cover: 21			
Herb Stratum			
1. Equisetum arvense	7	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 7			
50% of total cover: 3 20% of total cover: 1			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	4	x 2 =	8
FAC species	111	x 3 =	333
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	115 (A)		341 (B)

Prevalence Index = B/A = 2.97

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 80
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: small hummocks ungulating terrain. Creek to the east of plot

SOIL

Sampling Point T138-722

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	organic	0		0				
6-10	10YR 3/2	100		0			Sandy Gravely Loam	gravels 20%
10-16	10YR 3/2	100		0			Sandy Gravely Loam	gravels 70% cobbles 10%

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
X Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
X Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks: Gravel restrictive digging layer. Soils have low carbon content likely caused by newly formed soils. With hydrophytic vegetation, wetland hydrology, and the concave topography, soils are classified as hydric.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 3
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: creek approximately 30' east of hole

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/05/2013
Applicant/Owner: AIDEA Sampling Point: T138-739
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 8
Subregion (LRR): Northern Alaska Lat: 67.08633450 Long: -152.60097000 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PFO4/PSS4B, IA3
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: hillslope west of upland and intermittent/perrenial stream. Photos 630-635. Pfo. North facing slope	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	35	Yes	FACW
2.			
3.			
4.			
Total Cover: 35			
50% of total cover: 17 20% of total cover: 7			
Sapling/Shrub Stratum			
1. Picea mariana	30	Yes	FACW
2. Alnus viridis	10	No	FAC
3. Vaccinium uliginosum	25	Yes	FAC
4. Betula nana	20	Yes	FAC
5. Rhododendron groenlandicum	20	No	FAC
6. Vaccinium vitis-idaea	15	No	FAC
Total Cover: 120			
50% of total cover: 60 20% of total cover: 24			
Herb Stratum			
1. Carex rostrata	30	Yes	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 30			
50% of total cover: 15 20% of total cover: 6			

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 90
(Where applicable)

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	30	x 1 = 30
FACW species	65	x 2 = 130
FAC species	90	x 3 = 270
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	185 (A)	430 (B)

Prevalence Index = B/A = 2.32

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 62%, reindeer lichen 20%, pelt lichen 8%.

SOIL

Sampling Point T138-739

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 4/2	75	organics	25			Loam	
3-11	organics	100		0				saturated
11-14	gley1 10Y 4/1	75	10YR 4/4	25	D	M	Silty Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
X Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 14

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 11
Saturation Present? Yes Depth (inches): 3
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/05/2013
Applicant/Owner: AIDEA Sampling Point: T138-741
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 6
Subregion (LRR): Northern Alaska Lat: 67.08730320 Long: -152.60016300 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS3/EM1B, IIB1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: photos 635-639.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	8	Yes	FACW
2.			
3.			
4.			
Total Cover: 8			
50% of total cover: 4 20% of total cover: 1			
Sapling/Shrub Stratum			
1. Picea mariana	25	Yes	FACW
2. Betula nana	10	No	FAC
3. Vaccinium uliginosum	20	Yes	FAC
4. Rhododendron groenlandicum	25	Yes	FAC
5. Vaccinium vitis-idaea	15	No	FAC
6. Vaccinium oxycoccos	2	No	OBL
Total Cover: 97			
50% of total cover: 48 20% of total cover: 19			
Herb Stratum			
1. Eriophorum vaginatum	35	Yes	FACW
2. Carex rostrata	15	Yes	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 50			
50% of total cover: 25 20% of total cover: 10			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	17	x 1 = 17
FACW species	68	x 2 = 136
FAC species	70	x 3 = 210
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	155 (A)	363 (B)

Prevalence Index = B/A = 2.34

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 80
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 50%, reindeer lichen 25%, pelt lichen 5%.

SOIL

Sampling Point T138-741

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-14	organics	100		0				saturated at 6 inches

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

X Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 14

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 13
Saturation Present? Yes Depth (inches): 6
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/05/2013
Applicant/Owner: AIDEA Sampling Point: T138-743
Investigator(s): EG, AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 5
Subregion (LRR): Northern Alaska Lat: 67.08891680 Long: -152.59474770 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: photo 640-644. north facing slope upland	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	40	Yes	FACW
2.			
3.			
4.			
Total Cover: 40			
50% of total cover: 20 20% of total cover: 8			
Sapling/Shrub Stratum			
1. Picea mariana	10	No	FACW
2. Vaccinium uliginosum	8	No	FAC
3. Vaccinium vitis-idaea	20	Yes	FAC
4. Rhododendron groenlandicum	20	Yes	FAC
5. Rubus chamaemorus	3	No	FACW
6. Betula nana	8	No	FAC
Total Cover: 69			
50% of total cover: 34 20% of total cover: 13			
Herb Stratum			
1. Carex rostrata	20	Yes	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 20			
50% of total cover: 10 20% of total cover: 4			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	20	x 1 = 20
FACW species	53	x 2 = 106
FAC species	56	x 3 = 168
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	129 (A)	294 (B)

Prevalence Index = B/A = 2.28

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 90
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: reindeer lichen 65%, sphagnum 15%, pelt lichen 10%.

SOIL

Sampling Point T138-743

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1	organics	0		0				
1-13	10YR 4/4	100		0				

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
___Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks: restrictive digging layer gravel

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/05/2013
Applicant/Owner: AIDEA Sampling Point: T138-745
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): none Slope (%): 3
Subregion (LRR): Northern Alaska Lat: 67.08901420 Long: -152.58967070 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/EM1B, IIB1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: tussocks 11-12 inches tall. Photos 648-652. Pss.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. salix spp	25	Yes	FAC
2. Betula nana	20	Yes	FAC
3. Vaccinium uliginosum	30	Yes	FAC
4. Vaccinium vitis-idaea	20	No	FAC
5. Rhododendron groenlandicum	15	No	FAC
6. Chamaedaphne calyculata	3	No	FACW
Total Cover: 113			
50% of total cover: 56 20% of total cover: 22			
Herb Stratum			
1. Eriophorum vaginatum	80	Yes	FACW
2. Carex rostrata	8	No	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 88			
50% of total cover: 44 20% of total cover: 17			

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 25
(Where applicable)

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	8	x 1 = 8
FACW species	83	x 2 = 166
FAC species	110	x 3 = 330
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	201 (A)	504 (B)

Prevalence Index = B/A = 2.51

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 25

SOIL

Sampling Point T138-745

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	organics	100		0				saturated
12-16	2.5Y 3/2	100		0			Silty Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 16

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 8
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: North Slope Borough Sampling Date: 09/05/2013
Applicant/Owner: AIDEA Sampling Point: T138-SC
Investigator(s): EG, AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): concave Slope (%): 3
Subregion (LRR): Northern Alaska Lat: 67.08901910 Long: -152.59091990 Datum: WGS84
Soil Map Unit Name: _ NWI classification: R3UB2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: channel wetted width 5 foot, 5 inches deep, with sandy substrate. bankfull 9 feet wide. riparian salix spp, vacc uli. Photos 645-647.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	0 (A)	0 (B)

Prevalence Index = B/A = 0.00

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 0 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks:

SOIL

Sampling Point stream-perrenial

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/05/2013
Applicant/Owner: AIDEA Sampling Point: T139-724
Investigator(s): LG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): convex Slope (%): 3
Subregion (LRR): Northern Alaska Lat: 67.07927520 Long: -152.54497370 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS4B, IIC2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: photos 4537-4541	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	20	Yes	FACW
2.			
3.			
4.			
Total Cover: 20			
50% of total cover: 10 20% of total cover: 4			
Sapling/Shrub Stratum			
1. Picea mariana	20	Yes	FACW
2. Salix bebbiana	5	No	FAC
3. Salix barclayi	10	No	FAC
4. Vaccinium uliginosum	15	Yes	FAC
5. Betula nana	10	No	FAC
6. Rubus chamaemorus	5	No	FACW
Total Cover: 65			
50% of total cover: 32 20% of total cover: 13			
Herb Stratum			
1. Carex rostrata	5	Yes	OBL
2. Eriophorum angustifolium	15	Yes	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 20			
50% of total cover: 10 20% of total cover: 4			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	20	x 1 = 20
FACW species	45	x 2 = 90
FAC species	40	x 3 = 120
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	105 (A)	230 (B)

Prevalence Index = B/A = 2.19

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 80
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: small tussocks.

SOIL

Sampling Point T139-724

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	organic	100		0				saturated
10+	10YR 4/1	100		0			Silt Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 10

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
X Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
X Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 8
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/05/2013
Applicant/Owner: AIDEA Sampling Point: t139-726
Investigator(s): LG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): convex Slope (%): 0
Subregion (LRR): Northern Alaska Lat: 67.07956090 Long: -152.54424740 Datum: WGS84
Soil Map Unit Name: _ NWI classification: R2UB3
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? Yes**
Remarks: stream crossing. Wetted width 25 inches with a depth of 6 inches, no fsh observed.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	0 (A)	0 (B)

Prevalence Index = B/A = 0.00

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 0 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks:

SOIL

Sampling Point t139-726

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: North Slope Borough Sampling Date: 09/05/2013
Applicant/Owner: AIDEA Sampling Point: t139-728
Investigator(s): EG, AM, JG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): convex Slope (%): 0
Subregion (LRR): Northern Alaska Lat: 67.07969890 Long: -152.54436960 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks:	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	0 (A)	0 (B)

Prevalence Index = B/A = 0.00

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
__ Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 0 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks:

SOIL

Sampling Point t139-728

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/05/2013
Applicant/Owner: AIDEA Sampling Point: T139-730
Investigator(s): LG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): convex Slope (%): 7
Subregion (LRR): Northern Alaska Lat: 67.08081290 Long: -152.54365330 Datum: WGS84
Soil Map Unit Name: _ NWI classification: upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: photos 4546-4552	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	35	Yes	FACW
2. Betula neoalaskana	1	No	FACU
3. Populus tremuloides	3	No	FACU
4.			
Total Cover: 39			
50% of total cover: 19 20% of total cover: 7			
Sapling/Shrub Stratum			
1. Betula nana	1	No	FAC
2. Salix bebbiana	15	Yes	FAC
3. Rhododendron groenlandicum	12	Yes	FAC
4. Vaccinium uliginosum	3	No	FAC
5. Vaccinium vitis-idaea	7	No	FAC
6. Alnus viridis	5	No	FAC
Total Cover: 43			
50% of total cover: 21 20% of total cover: 8			
Herb Stratum			
1. Empetrum nigrum	10	Yes	FAC
2. Calamagrostis canadensis	1	No	FAC
3. Lupinus arcticus	2	No	FACU
4. Geocaulon lividum	1	No	FACU
5. Lycopodium clavatum	1	No	FACU
6.			
7.			
8.			
9.			
10.			
Total Cover: 15			
50% of total cover: 7 20% of total cover: 3			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	35	x 2 = 70
FAC species	54	x 3 = 162
FACU species	8	x 4 = 32
UPL species	0	x 5 = 0
Column Totals:	97 (A)	264 (B)

Prevalence Index = B/A = 2.72

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 90
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: ungulating

SOIL

Sampling Point T139-730

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1	organics	100		0				
1-4	7.5YR 4/4	20	10YR 4/6	0			Sandy Loam	2 matrix colors
4-8	10YR 5/6	100		0			Sand	
8-15	10YR 4/4	100		0			very gravely sand	65% gravels
15-24	5Y 4/3	100		0			Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/05/2013
Applicant/Owner: AIDEA Sampling Point: T139-732
Investigator(s): LG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): concave Slope (%): 5
Subregion (LRR): Northern Alaska Lat: 67.08293700 Long: -152.54190040 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS4/EM1B, IIC2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: photos 4553-4558	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	5	Yes	FACW
2.			
3.			
4.			
Total Cover: 5			
50% of total cover: 2 20% of total cover: 1			
Sapling/Shrub Stratum			
1. Picea mariana	30	Yes	FACW
2. Salix bebbiana	5	No	FAC
3. Salix barclayi	5	No	FAC
4. Rhododendron groenlandicum	30	Yes	FAC
5. Vaccinium uliginosum	10	No	FAC
6. Betula nana	25	Yes	FAC
Total Cover: 105			
50% of total cover: 52 20% of total cover: 21			
Herb Stratum			
1. Carex rostrata	10	Yes	OBL
2. Calamagrostis canadensis	3	No	FAC
3. Eriophorum angustifolium	10	Yes	OBL
4. Equisetum arvense	1	No	FAC
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 24			
50% of total cover: 12 20% of total cover: 4			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	20	x 1 = 20
FACW species	35	x 2 = 70
FAC species	79	x 3 = 237
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	134 (A)	327 (B)

Prevalence Index = B/A = 2.44

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 0 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 90
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: hummocky large ungulating BET NAN 6-8' tall

SOIL

Sampling Point T139-732

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	organic	100		0				saturated

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

X Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 18

Hydric Soil Present? Yes

Remarks: black Oe

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
X Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/05/2013
Applicant/Owner: AIDEA Sampling Point: T139-747
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): none Slope (%): 3
Subregion (LRR): Northern Alaska Lat: 67.08050480 Long: -152.54132960 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland, IA2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? No**
Remarks: photos 653-657. Toe of hillslope.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	35	Yes	FACW
2.			
3.			
4.			
Total Cover: 35			
50% of total cover: 17 20% of total cover: 7			
Sapling/Shrub Stratum			
1. Picea glauca	1	No	FACU
2. Picea mariana	25	Yes	FACW
3. Betula glandulosa	15	Yes	FAC
4. sailx sp	10	No	FAC
5. Dasiphora fruticosa	5	No	FAC
6. Vaccinium uliginosum	15	Yes	FAC
Total Cover: 71			
50% of total cover: 35 20% of total cover: 14			
Herb Stratum			
1. Dryas integrifolia	5	Yes	FACU
2. Festuca pratensis	5	Yes	FACU
3. Carex rostrata	3	Yes	OBL
4. aster hesperious	1	No	
5. Lupinus arcticus	3	Yes	FACU
6.			
7.			
8.			
9.			
10.			
Total Cover: 17			
50% of total cover: 8 20% of total cover: 3			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 62 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	3	x 1 = 3
FACW species	60	x 2 = 120
FAC species	45	x 3 = 135
FACU species	14	x 4 = 56
UPL species	0	x 5 = 0
Column Totals:	122 (A)	314 (B)

Prevalence Index = B/A = 2.57

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 80
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 30%, reindeer lichen 45%, pelt lichen 1%, false pixie cup 3%, red pixie cup 1%

SOIL

Sampling Point T139-747

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	organics	100		0				
2-20	2.5Y 4/3	100		0				

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks: restrictive digging layer gravel

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 18
Saturation Present? Yes Depth (inches): 12
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/05/2013
Applicant/Owner: AIDEA Sampling Point: T139-749
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): concave Slope (%): 2
Subregion (LRR): Northern Alaska Lat: 67.08019560 Long: -152.54146540 Datum: WGS84
Soil Map Unit Name: _ NWI classification: R3UB3
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: channel wetted width 2 feet, 6 inches deep, with silty substrate. bankfull width 4 feet. riparian salix spp. Photos 658-660.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	0 (A)	0 (B)

Prevalence Index = B/A = 0.00

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 0 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks:

SOIL

Sampling Point T139-749

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/05/2013
Applicant/Owner: AIDEA Sampling Point: T139-751
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): concave Slope (%): 3
Subregion (LRR): Northern Alaska Lat: 67.08005160 Long: -152.54062130 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1B, IIC2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: adjacent to perrenial stream. Photos 661-665.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	4	Yes	FACU
2. Picea mariana	2	Yes	FACW
3.			
4.			
Total Cover: 6			
50% of total cover: 3 20% of total cover: 1			
Sapling/Shrub Stratum			
1. Picea mariana	5	No	FACW
2. Picea glauca	3	No	FACU
3. Betula glandulosa	25	Yes	FAC
4. Vaccinium uliginosum	40	Yes	FAC
5. Rhododendron groenlandicum	10	No	FAC
6. Vaccinium vitis-idaea	5	No	FAC
Total Cover: 88			
50% of total cover: 44 20% of total cover: 17			
Herb Stratum			
1. Carex rostrata	35	Yes	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 35			
50% of total cover: 17 20% of total cover: 7			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	35	x 1 = 35
FACW species	7	x 2 = 14
FAC species	80	x 3 = 240
FACU species	7	x 4 = 28
UPL species	0	x 5 = 0
Column Totals:	129 (A)	317 (B)

Prevalence Index = B/A = 2.46

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 40
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 40%.

SOIL

Sampling Point T139-751

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	organics	100		0				saturated
5-11	2.5Y 3/2	75	organics	25			Silty Clay Loam	
11-12	organics	100		0				saturated
12-20	2.5Y 3/2	100		0			Silty Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 20

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
X Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 13
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/05/2013
Applicant/Owner: AIDEA Sampling Point: T139-753
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): concave Slope (%): 2
Subregion (LRR): Northern Alaska Lat: 67.08019540 Long: -152.54004780 Datum: WGS84
Soil Map Unit Name: _ NWI classification: R3UB3
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: channel wetted width 6 feet, 46 inches deep, silty substrate. bankfull 13 feet wide. riparian salix spp. photos 666-668	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	0 (A)	0 (B)

Prevalence Index = B/A = 0.00

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 0 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T139-753

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/05/2013
Applicant/Owner: AIDEA Sampling Point: T139-755
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 10
Subregion (LRR): Northern Alaska Lat: 67.08115790 Long: -152.53865120 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: photos 669-674.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	30	Yes	FACW
2. Picea glauca	3	No	FACU
3. Populus tremuloides	3	No	FACU
4.			
Total Cover: 36			
50% of total cover: 18 20% of total cover: 7			
Sapling/Shrub Stratum			
1. Picea mariana	3	No	FACW
2. Populus tremuloides	8	No	FACU
3. Salix sp	15	No	FAC
4. Rhododendron groenlandicum	25	Yes	FAC
5. Empetrum nigrum	35	Yes	FAC
6. Vaccinium uliginosum	10	No	FAC
Total Cover: 96			
50% of total cover: 48 20% of total cover: 19			
Herb Stratum			
1. Galium boreale	3	Yes	FACU
2. Festuca pratensis	5	Yes	FACU
3. Hedysarum alpinum	3	Yes	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 11			
50% of total cover: 5 20% of total cover: 2			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	33	x 2 = 66
FAC species	85	x 3 = 255
FACU species	25	x 4 = 100
UPL species	0	x 5 = 0
Column Totals:	143 (A)	421 (B)

Prevalence Index = B/A = 2.94

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 85
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 15%, reindeer lichen 65%, pelt lichen 5%

SOIL

Sampling Point T139-755

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1	organics	100		0				
1-23	2.5Y 5/4	100		0			Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/05/2013
Applicant/Owner: AIDEA Sampling Point: T139-757
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 3
Subregion (LRR): Northern Alaska Lat: 67.08328170 Long: -152.53826570 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/EM1B, IIB1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: photos 675-669. Pss.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	5	Yes	FACW
2. Picea glauca	1	Yes	FACU
3.			
4.			
Total Cover: 6			
50% of total cover: 3 20% of total cover: 1			
Sapling/Shrub Stratum			
1. Picea mariana	20	Yes	FACW
2. Picea glauca	2	No	FACU
3. Betula glandulosa	30	Yes	FAC
4. salix spp	8	No	FAC
5. Vaccinium uliginosum	15	Yes	FAC
6. Vaccinium vitis-idaea	3	No	FAC
Total Cover: 78			
50% of total cover: 39 20% of total cover: 15			
Herb Stratum			
1. Eriophorum vaginatum	65	Yes	FACW
2. Carex rostrata	5	No	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 70			
50% of total cover: 35 20% of total cover: 14			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 83 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	5	x 1 = 5
FACW species	90	x 2 = 180
FAC species	56	x 3 = 168
FACU species	3	x 4 = 12
UPL species	0	x 5 = 0
Column Totals:	154 (A)	365 (B)

Prevalence Index = B/A = 2.37

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 50
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 35%, reindeer lichen 15%.

SOIL

Sampling Point T139-757

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	organics	100		0				saturated
12-23	10YR 3/1	100		0			Silty Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 23

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 10
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: pockets of inundation.

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/05/2013
Applicant/Owner: AIDEA Sampling Point: T140-734
Investigator(s): LG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): concave Slope (%): 5
Subregion (LRR): Northern Alaska Lat: 67.05821000 Long: -152.43642000 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/EM1B, IIC1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: photos 4559-4563	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	20	Yes	FACW
2.			
3.			
4.			
Total Cover: 20			
50% of total cover: 10 20% of total cover: 4			
Sapling/Shrub Stratum			
1. Picea mariana	15	No	FACW
2. Betula nana	40	Yes	FAC
3. Vaccinium uliginosum	20	No	FAC
4. Rhododendron groenlandicum	50	Yes	FAC
5. Vaccinium vitis-idaea	5	No	FAC
6. Rubus chamaemorus	5	No	FACW
Total Cover: 135			
50% of total cover: 67 20% of total cover: 27			
Herb Stratum			
1. Petasites frigidus	1	No	FACW
2. Carex rostrata	35	Yes	OBL
3. Lycopodium clavatum	1	No	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 37			
50% of total cover: 18 20% of total cover: 7			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	35	x 1 = 35
FACW species	41	x 2 = 82
FAC species	115	x 3 = 345
FACU species	1	x 4 = 4
UPL species	0	x 5 = 0
Column Totals:	192 (A)	466 (B)

Prevalence Index = B/A = 2.43

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is <3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 70
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: large hummocks

SOIL

Sampling Point T140-734

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	organics	100		0				saturated
4-9	5Y 4/3	75	10YR 4/6	25	C	M	Silt Loam	organic material in horizon
9-13	5Y 4/3	100		0			Silt Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
X Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 13

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
X Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
X Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: saturated organic material tussocks forming grasses

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/05/2013
Applicant/Owner: AIDEA Sampling Point: T140-736
Investigator(s): LG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): convex Slope (%): 2
Subregion (LRR): Northern Alaska Lat: 67.05866960 Long: -152.42656200 Datum: WGS84
Soil Map Unit Name: _ NWI classification: upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: photos 4564-4568	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	45	Yes	FACW
2.			
3.			
4.			
Total Cover: 45			
50% of total cover: 22 20% of total cover: 9			
Sapling/Shrub Stratum			
1. Picea mariana	15	Yes	FACW
2. Rhododendron groenlandicum	1	No	FAC
3. Vaccinium uliginosum	15	Yes	FAC
4. Betula glandulosa	3	No	FAC
5. Vaccinium vitis-idaea	5	No	FAC
6. Salix barclayi	1	No	FAC
Total Cover: 40			
50% of total cover: 20 20% of total cover: 8			
Herb Stratum			
1. Empetrum nigrum	5	Yes	FAC
2. Carex rostrata	1	Yes	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 6			
50% of total cover: 3 20% of total cover: 1			

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 80
(Where applicable)

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	1	x 1 = 1
FACW species	60	x 2 = 120
FAC species	30	x 3 = 90
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	91 (A)	211 (B)

Prevalence Index = B/A = 2.32

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T140-736

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	organic	100		0				
2-7	10YR 5/4	100		0			Sandy Loam	1% gravels
7-13	10YR 5/3	100		0			Sandy Loam	gravel 15%
13-20	10YR 5/6	100		0			Sandy Gravely Loam	70% gravel

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/05/2013
Applicant/Owner: AIDEA Sampling Point: T140-738
Investigator(s): LG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): convex Slope (%): 0
Subregion (LRR): Northern Alaska Lat: 67.05866960 Long: -152.42656200 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland, IA2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks:	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	25	Yes	FACW
2.			
3.			
4.			
Total Cover: 25			
50% of total cover: 12 20% of total cover: 5			
Sapling/Shrub Stratum			
1. Picea mariana	20	Yes	FACW
2. Betula nana	10	No	FAC
3. Spiraea stevenii	3	No	FACU
4. Rhododendron groenlandicum	15	Yes	FAC
5. Vaccinium uliginosum	15	Yes	FAC
6. Vaccinium vitis-idaea	5	No	FAC
Total Cover: 68			
50% of total cover: 34 20% of total cover: 13			
Herb Stratum			
1. Carex rostrata	30	Yes	OBL
2. Rubus chamaemorus	1	No	FACW
3. Eriophorum angustifolium	3	No	OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 34			
50% of total cover: 17 20% of total cover: 6			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	33	x 1 = 33
FACW species	46	x 2 = 92
FAC species	45	x 3 = 135
FACU species	3	x 4 = 12
UPL species	0	x 5 = 0
Column Totals:	127 (A)	272 (B)

Prevalence Index = B/A = 2.14

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 70
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: moderate tussocks.

SOIL

Sampling Point T140-738

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-		0		0				

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/05/2013
Applicant/Owner: AIDEA Sampling Point: T140-759
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): concave Slope (%): 0
Subregion (LRR): Northern Alaska Lat: 67.05918590 Long: -152.41596310 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Pond
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: pond over 18 inches deep silty substrate. 5-7 acres.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	0 (A)	0 (B)

Prevalence Index = B/A = 0.00

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 0 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks:

SOIL

Sampling Point T140-759

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/05/2013
Applicant/Owner: AIDEA Sampling Point: T140-761
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): none Slope (%): 0
Subregion (LRR): Northern Alaska Lat: 67.05923170 Long: -152.41608940 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PEM1B, IIIA3
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: photos 684-688	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. salix spp	5	Yes	FAC
2.			
3.			
4.			
5.			
6.			
Total Cover: 5			
50% of total cover: 2 20% of total cover: 1			
Herb Stratum			
1. Calamagrostis canadensis	10	No	FAC
2. Eriophorum angustifolium	15	No	OBL
3. Carex rostrata	40	Yes	OBL
4. Carex limosa	35	Yes	OBL
5. Comarum palustre	3	No	OBL
6.			
7.			
8.			
9.			
10.			
Total Cover: 103			
50% of total cover: 51 20% of total cover: 20			

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 20
(Where applicable)

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	93	x 1 = 93
FACW species	0	x 2 = 0
FAC species	15	x 3 = 45
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	108 (A)	138 (B)

Prevalence Index = B/A = 1.28

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 20%

SOIL

Sampling Point T140-761

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-20	organics	100		0				saturated

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

X Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
X Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 1
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: pockets of inundation

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/05/2013
Applicant/Owner: AIDEA Sampling Point: T140-763
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): concave Slope (%): 2
Subregion (LRR): Northern Alaska Lat: 67.06060090 Long: -152.41499160 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/EM1B, IIB1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: photos 689-693.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	2	Yes	FACW
2.			
3.			
4.			
Total Cover: 2			
50% of total cover: 1 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Betula glandulosa	55	Yes	FAC
2. Vaccinium uliginosum	30	Yes	FAC
3. salix sp	3	No	FAC
4. Chamaedaphne calyculata	15	No	FACW
5. Vaccinium oxycoccos	2	No	OBL
6. Andromeda polifolia	8	No	OBL
Total Cover: 113			
50% of total cover: 56 20% of total cover: 22			
Herb Stratum			
1. Comarum palustre	5	No	OBL
2. Calamagrostis canadensis	8	No	FAC
3. Carex rostrata	20	Yes	OBL
4. Carex limosa	15	Yes	OBL
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 48			
50% of total cover: 24 20% of total cover: 9			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	50	x 1 = 50
FACW species	17	x 2 = 34
FAC species	96	x 3 = 288
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	163 (A)	372 (B)

Prevalence Index = B/A = 2.28

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 40
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 40%.

SOIL

Sampling Point T140-763

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-26	organics	100		0				saturated

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

X Histosol or Histel(A1)
__Histic Epipedon (A2)
X Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 26

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
X Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 19
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/05/2013
Applicant/Owner: AIDEA Sampling Point: T140-765
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 57
Subregion (LRR): Northern Alaska Lat: 67.06116470 Long: -152.41710490 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: photos 694-698.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	25	Yes	FACU
2. Picea mariana	5	No	FACW
3. Populus tremuloides	20	Yes	FACU
4.			
Total Cover: 50			
50% of total cover: 25 20% of total cover: 10			
Sapling/Shrub Stratum			
1. Picea glauca	2	No	FACU
2. Populus tremuloides	25	Yes	FACU
3. Populus balsamifera	10	No	FACU
4. Rhododendron groenlandicum	8	No	FAC
5. Vaccinium uliginosum	5	No	FAC
6. Empetrum nigrum	20	Yes	FAC
Total Cover: 70			
50% of total cover: 35 20% of total cover: 14			
Herb Stratum			
1. Geocaulon lividum	5	Yes	FACU
2. Lycopodium clavatum	8	Yes	FACU
3. Festuca altaica	5	Yes	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 18			
50% of total cover: 9 20% of total cover: 3			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 28 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	5	x 2 = 10
FAC species	38	x 3 = 114
FACU species	95	x 4 = 380
UPL species	0	x 5 = 0
Column Totals:	138 (A)	504 (B)

Prevalence Index = B/A = 3.65

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
__ Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 50
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks: reindeer lichen 50%.

SOIL

Sampling Point T140-765

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1	organics	100		0				
1-8	10YR 5/6	100		0				
8-18	2.5Y 5/6	100		0				

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks: restrictive digging layer gravel.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/05/2013
Applicant/Owner: AIDEA Sampling Point: T141-740
Investigator(s): LG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): convex Slope (%): 6
Subregion (LRR): Northern Alaska Lat: 67.03808950 Long: -152.41313530 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1B
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: photos 4574-4578	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	10	Yes	FACU
2. Picea mariana	10	Yes	FACW
3.			
4.			
Total Cover: 20			
50% of total cover: 10 20% of total cover: 4			
Sapling/Shrub Stratum			
1. Picea glauca	10	No	FACU
2. Picea mariana	10	No	FACW
3. Betula glandulosa	25	Yes	FAC
4. Salix bebbiana	30	Yes	FAC
5. Dasiphora fruticosa	10	No	FAC
6. Rhododendron groenlandicum	10	No	FAC
Total Cover: 95			
50% of total cover: 47 20% of total cover: 19			
Herb Stratum			
1. Carex rostrata	25	Yes	OBL
2. Arctostaphylos rubra	15	Yes	FAC
3. Arctostaphylos alpina	5	No	FACU
4. Calamagrostis canadensis	5	No	FAC
5. Equisetum scirpoides	1	No	FACU
6. Andromeda polifolia	10	No	OBL
7.			
8.			
9.			
10.			
Total Cover: 61			
50% of total cover: 30 20% of total cover: 12			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 83 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	35	x 1 = 35
FACW species	20	x 2 = 40
FAC species	95	x 3 = 285
FACU species	26	x 4 = 104
UPL species	0	x 5 = 0
Column Totals:	176 (A)	464 (B)

Prevalence Index = B/A = 2.64

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 0 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 60
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: ungulating gound with sporadic small tussocks . White spruce 45'

SOIL

Sampling Point T141-740

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	organic	0		0				
4-12	5Y 4/1	80	10YR 4/6	20	C	M	Sandy Gravely Loam	gravels 2%
12-14	5Y 4/1	40	10YR 4/6	60	C	M	Sandy Gravely Loam	gravel 20%
14-16	5Y 4/1	80	10YR 4/6	20	C	M	Sandy Gravely Loam	40% gravel

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
X Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 16

Hydric Soil Present? Yes

Remarks: restrictive gravel layer at 16 inches.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

X Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes Depth (inches): 1
Water Table Present? Yes Depth (inches): 12
Saturation Present? Yes Depth (inches): 11
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: surface water observed downslope of the pit 20'. Shurbs are growing primarily on micro hills

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/05/2013
Applicant/Owner: AIDEA Sampling Point: T141-742
Investigator(s): LG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): convex Slope (%): 3
Subregion (LRR): Northern Alaska Lat: 67.03824950 Long: -152.41642880 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/EM1B, IIC2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: photos 4579-4582 4584-85	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	1	Yes	FACW
2.			
3.			
4.			
Total Cover: 1			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Picea mariana	5	No	FACW
2. Betula nana	5	No	FAC
3. Vaccinium uliginosum	35	Yes	FAC
4. Vaccinium vitis-idaea	5	No	FAC
5. Rhododendron groenlandicum	5	No	FAC
6. Rubus chamaemorus	5	No	FACW
Total Cover: 60			
50% of total cover: 30 20% of total cover: 12			
Herb Stratum			
1. Eriophorum angustifolium	40	Yes	OBL
2. Carex rostrata	10	Yes	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 50			
50% of total cover: 25 20% of total cover: 10			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	50	x 1 = 50
FACW species	11	x 2 = 22
FAC species	50	x 3 = 150
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	111 (A)	222 (B)

Prevalence Index = B/A = 2.00

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 80
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: moderate tussocks with surface water

SOIL

Sampling Point T141-742

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6		100		0				saturated organics
6+		100		0				frozen organics

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

X Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 6

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
X Presence of Reduced Iron (C4)
__Salt Deposits (C5)
X Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
X Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 0
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/05/2013
Applicant/Owner: AIDEA Sampling Point: T141-767
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hill Local relief (concave, convex, none): convex Slope (%): 5
Subregion (LRR): Northern Alaska Lat: 67.04023090 Long: -152.41341880 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland, IA3
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: photos 699-703.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	25	Yes	FACW
2.			
3.			
4.			
Total Cover: 25			
50% of total cover: 12 20% of total cover: 5			
Sapling/Shrub Stratum			
1. salix sp	10	No	FAC
2. Picea mariana	5	No	FACW
3. Vaccinium uliginosum	30	Yes	FAC
4. Betula nana	10	No	FAC
5. Vaccinium vitis-idaea	15	Yes	FAC
6. Rhododendron groenlandicum	8	No	FAC
Total Cover: 78			
50% of total cover: 39 20% of total cover: 15			
Herb Stratum			
1. Carex rostrata	2	Yes	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 2			
50% of total cover: 1 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	2	x 1 = 2
FACW species	30	x 2 = 60
FAC species	73	x 3 = 219
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	105 (A)	281 (B)

Prevalence Index = B/A = 2.68

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 90
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 15%, pelt lichen 15%, reindeer lichen 60%.

SOIL

Sampling Point T141-767

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	organics	100		0				
3-11	2.5Y 4/2	70	10YR 4/6	15	D	M	Silty Clay Loam	Prominent Redox
		0	5Y 5/1	15	RM	M		Faint Redox
11-21	2.5Y 5/4	100		0			Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/05/2013
Applicant/Owner: AIDEA Sampling Point: T141-769
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): convex Slope (%): 2
Subregion (LRR): Northern Alaska Lat: 67.04060160 Long: -152.40894390 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/EM1B, IIB1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: pss. photos 704-708. pss	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	2	Yes	FACW
2. Picea glauca	5	Yes	FACU
3.			
4.			
Total Cover: 7			
50% of total cover: 3 20% of total cover: 1			
Sapling/Shrub Stratum			
1. Picea glauca	8	No	FACU
2. Picea mariana	15	No	FACW
3. Betula nana	30	Yes	FAC
4. salix spp	8	No	FAC
5. Rhododendron groenlandicum	30	Yes	FAC
6. Vaccinium uliginosum	15	No	FAC
Total Cover: 106			
50% of total cover: 53 20% of total cover: 21			
Herb Stratum			
1. Eriophorum vaginatum	65	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 65			
50% of total cover: 32 20% of total cover: 13			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	82	x 2 = 164
FAC species	83	x 3 = 249
FACU species	13	x 4 = 52
UPL species	0	x 5 = 0
Column Totals:	178 (A)	465 (B)

Prevalence Index = B/A = 2.61

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 45
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 20%, reindeer lichen 20%, pelt lichen 5%

SOIL

Sampling Point T141-769

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-17	organics	100		0				saturated

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

X Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 17

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 16
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/05/2013
Applicant/Owner: AIDEA Sampling Point: T141-771
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): concave Slope (%): 2
Subregion (LRR): Northern Alaska Lat: 67.04051790 Long: -152.40795550 Datum: WGS84
Soil Map Unit Name: _ NWI classification: R3UB1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: channel wetted width 5 feet, 6 inches deep, gravel substrate. Bankfull 6.5 feet. riparian salix spp . Photos 708-710	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	0 (A)	0 (B)

Prevalence Index = B/A = 0.00

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 0 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T141-771

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/06/2013
Applicant/Owner: AIDEA Sampling Point: T142-744
Investigator(s): LG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): convex Slope (%): 10
Subregion (LRR): Northern Alaska Lat: 67.04118220 Long: -152.31873540 Datum: WGS84
Soil Map Unit Name: _ NWI classification: upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: photos 4586-4590	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	15	Yes	FACW
2.			
3.			
4.			
Total Cover: 15			
50% of total cover: 7 20% of total cover: 3			
Sapling/Shrub Stratum			
1. Picea mariana	10	No	FACW
2. Betula nana	15	Yes	FAC
3. Rhododendron groenlandicum	20	Yes	FAC
4. Spiraea stevenii	3	No	FACU
5. Salix bebbiana	5	No	FAC
6. Salix barclayi	3	No	FAC
Total Cover: 56			
50% of total cover: 28 20% of total cover: 11			
Herb Stratum			
1. Empetrum nigrum	10	Yes	FAC
2. Equisetum arvense	1	No	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 11			
50% of total cover: 5 20% of total cover: 2			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	25	x 2 = 50
FAC species	54	x 3 = 162
FACU species	3	x 4 = 12
UPL species	0	x 5 = 0
Column Totals:	82 (A)	224 (B)

Prevalence Index = B/A = 2.73

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 7
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 93
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: talus slope ungulating

SOIL

Sampling Point T142-744

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1	organic	100		0				
1-15	10YR 5/4	100		0			Silt Loam	B/C horizon talus parent material cobbles 50% gravel 10%

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks: cobbles and gravels present and restricting digging at 15 inches.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/06/2013
Applicant/Owner: AIDEA Sampling Point: T142-746
Investigator(s): LG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): convex Slope (%): 10
Subregion (LRR): Northern Alaska Lat: 67.04343600 Long: -152.31588090 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS4C, IIC1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: photos 4591-4595	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	5	Yes	FACW
2.			
3.			
4.			
Total Cover: 5			
50% of total cover: 2 20% of total cover: 1			
Sapling/Shrub Stratum			
1. Picea mariana	25	Yes	FACW
2. Betula nana	5	No	FAC
3. Vaccinium uliginosum	30	Yes	FAC
4. Vaccinium vitis-idaea	10	No	FAC
5. Rubus chamaemorus	5	No	FACW
6. Alnus viridis	10	No	FAC
Total Cover: 85			
50% of total cover: 42 20% of total cover: 17			
Herb Stratum			
1. Lycopodium clavatum	1	Yes	FACU
2. Equisetum arvense	5	Yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 6			
50% of total cover: 3 20% of total cover: 1			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	35	x 2 = 70
FAC species	60	x 3 = 180
FACU species	1	x 4 = 4
UPL species	0	x 5 = 0
Column Totals:	96 (A)	254 (B)

Prevalence Index = B/A = 2.65

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 3
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 75
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: bare ground caused by possible springs. Creek to the east of plot. Moderate hummocks

SOIL

Sampling Point T142-746

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4		100		0				saturated organics
4-7	10YR 4/2	70	10YR 4/6	30	C	M	Silt Loam	prominent redox
7-10	10YR 4/1	100		0			Silt Loam	
10-12	10YR 4/2	50	organic	50			Silt Loam	
12-16	10YR 4/1	100		0			Silt Loam	organic streaks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
X Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 16

Hydric Soil Present? Yes

Remarks: organic band in pit, depleted matrix 4-7 inches. Sample point in depression with hydrophytic vegetation and wetland hydrology.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
X Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
X Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
X Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
X Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 7
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: water table in pit. Stream to the north of pit about 50' away

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/06/2013
Applicant/Owner: AIDEA Sampling Point: T142-746
Investigator(s): LG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): convex Slope (%): 0
Subregion (LRR): Northern Alaska Lat: 67.04350870 Long: -152.31519780 Datum: WGS84
Soil Map Unit Name: _ NWI classification: R2AB3
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: BRAIDED Stream. Wetted area 20' but only 2" deep. Willow spruce blueberry horsetail vegetation	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	0 (A)	0 (B)

Prevalence Index = B/A = 0.00

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 0 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks:

SOIL

Sampling Point T142-746

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: North Slope Borough Sampling Date: 09/06/2013
Applicant/Owner: AIDEA Sampling Point: T142-746
Investigator(s): LG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): convex Slope (%): 0
Subregion (LRR): Northern Alaska Lat: 67.04350870 Long: -152.31519780 Datum: WGS84
Soil Map Unit Name: _ NWI classification: R4UBH
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: BRAIDED Stream. Wetted area 20' but only 2" deep. Willow spruce blueberry horsetail vegetation	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	0 (A)	0 (B)

Prevalence Index = B/A = 0.00

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 0 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks:

SOIL

Sampling Point T142-746

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/06/2013
Applicant/Owner: AIDEA Sampling Point: T142-773
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 8
Subregion (LRR): Northern Alaska Lat: 67.03997570 Long: -152.31604610 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PFO4/PSS4B, IA2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: photos 712-716	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	30	Yes	FACW
2.			
3.			
4.			
Total Cover: 30			
50% of total cover: 15 20% of total cover: 6			
Sapling/Shrub Stratum			
1. Picea mariana	40	Yes	FACW
2. Betula glandulosa	15	No	FAC
3. Vaccinium uliginosum	40	Yes	FAC
4. Alnus viridis	3	No	FAC
5. Empetrum nigrum	15	No	FAC
6. Vaccinium vitis-idaea	20	No	FAC
Total Cover: 133			
50% of total cover: 66 20% of total cover: 26			
Herb Stratum			
1. Carex rostrata	60	Yes	OBL
2. Lycopodium clavatum	3	No	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 63			
50% of total cover: 31 20% of total cover: 12			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	60	x 1 = 60
FACW species	70	x 2 = 140
FAC species	93	x 3 = 279
FACU species	3	x 4 = 12
UPL species	0	x 5 = 0
Column Totals:	226 (A)	491 (B)

Prevalence Index = B/A = 2.17

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 90
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 50%, reindeer lichen 40%.

SOIL

Sampling Point T142-773

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	organics	100		0				saturated at 3 inches
12-20	2.5Y 4/3	60	10YR 5/6	25	D	M	Silty Clay Loam	
12-20		0	gley1 10Y 5/1	15	RM	M		

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
X Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 20

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 16
Saturation Present? Yes Depth (inches): 3
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/06/2013
Applicant/Owner: AIDEA Sampling Point: T142-775
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): concave Slope (%): 3
Subregion (LRR): Northern Alaska Lat: 67.04386970 Long: -152.31462360 Datum: WGS84
Soil Map Unit Name: _ NWI classification: R3UB4
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**

Remarks: channel wetted width 26 inches wide, 8 inches deep, organic substrate. riparian salix sp, vacc uli. photos 717-719. Multiple channels 775b is 18 inches wetted width, 2 inches deep, sandy gravels less than 3 inches diameter. bankfull width 4 feet. Sediment deposits. Same riparian. Photos 720-722

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	0 (A)	0 (B)

Prevalence Index = B/A = 0.00

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 0 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T142-775

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/06/2013
Applicant/Owner: AIDEA Sampling Point: T142-777
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 15
Subregion (LRR): Northern Alaska Lat: 67.04501980 Long: -152.31418080 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: photos 723-727. Upland.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	35	Yes	FACW
2.			
3.			
4.			
Total Cover: 35			
50% of total cover: 17 20% of total cover: 7			
Sapling/Shrub Stratum			
1. Picea mariana	15	No	FACW
2. Betula nana	25	Yes	FAC
3. Betula glandulosa	5	No	FAC
4. Vaccinium uliginosum	40	Yes	FAC
5. Rhododendron groenlandicum	20	No	FAC
6. Vaccinium vitis-idaea	15	No	FAC
Total Cover: 120			
50% of total cover: 60 20% of total cover: 24			
Herb Stratum			
1. Carex rostrata	3	Yes	OBL
2. Petasites frigidus	1	Yes	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 4			
50% of total cover: 2 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	3	x 1 = 3
FACW species	51	x 2 = 102
FAC species	105	x 3 = 315
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	159 (A)	420 (B)

Prevalence Index = B/A = 2.64

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 85
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: reindeer lichen 75%, sphagnum 8%, false pixie cup 2%.

SOIL

Sampling Point T142-777

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	organics	100		0				
2-22	2.5Y 4/3	100		0			gravelly loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks: restrictive digging layer gravel

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/06/2013
Applicant/Owner: AIDEA Sampling Point: T143-750
Investigator(s): LG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): convex Slope (%): 5
Subregion (LRR): Northern Alaska Lat: 67.04199590 Long: -152.18078750 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/EM1B, IIB1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: photos 4600-4607	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Picea mariana	35	Yes	FACW
2. salix sp	50	Yes	FAC
3. Betula glandulosa	10	No	FAC
4. Vaccinium uliginosum	30	Yes	FAC
5. Vaccinium vitis-idaea	10	No	FAC
6. Rhododendron groenlandicum	3	No	FAC
Total Cover: 138			
50% of total cover: 69 20% of total cover: 27			
Herb Stratum			
1. Carex rostrata	60	Yes	OBL
2. Petasites frigidus	5	No	FACW
3. Lycopodium clavatum	1	No	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 66			
50% of total cover: 33 20% of total cover: 13			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	60	x 1 = 60
FACW species	40	x 2 = 80
FAC species	103	x 3 = 309
FACU species	1	x 4 = 4
UPL species	0	x 5 = 0
Column Totals:	204 (A)	453 (B)

Prevalence Index = B/A = 2.22

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 80
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: small tussocks. On moderate hummocks

SOIL

Sampling Point T143-750

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1		100		0				saturated organics
1-5	5YR 5/1	70	10YR 4/6	30	C	M	Silt Loam	
5-10	10YR 5/1	70	10YR 5/6	30	C	M	Silt Loam	2% gravel
10-16	10YR 4/1	50	10YR 4/6	50	C	M	Silt Loam	organic band gravel 2%

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
X Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: n/a
Depth (inches): 0

Hydric Soil Present? Yes

Remarks: broken shovel. No restrictive layer noticed thixotropic soil.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
X Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
X Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 7
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: moderate hummocks in the area. Ground saturated drainages all over the hillside

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/06/2013
Applicant/Owner: AIDEA Sampling Point: T143-752
Investigator(s): LG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): convex Slope (%): 3
Subregion (LRR): Northern Alaska Lat: 67.04323940 Long: -152.17806260 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/4B, IIB1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: photos 4608-4612	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	1	Yes	FACW
2.			
3.			
4.			
Total Cover: 1			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Picea mariana	20	Yes	FACW
2. salix spp	70	Yes	FAC
3. Alnus viridis	5	No	FAC
4. Vaccinium uliginosum	1	No	FAC
5. Rhododendron groenlandicum	1	No	FAC
6. Rosa acicularis	1	No	FACU
Total Cover: 98			
50% of total cover: 49 20% of total cover: 19			
Herb Stratum			
1. Lycopodium clavatum	1	No	FACU
2. Eriophorum angustifolium	10	Yes	OBL
3. Chamaenerion angustifolium	1	No	FACU
4. Equisetum arvense	3	No	FAC
5. Equisetum sylvaticum	10	Yes	FAC
6. Calamagrostis canadensis	1	No	FAC
7.			
8.			
9.			
10.			
Total Cover: 26			
50% of total cover: 13 20% of total cover: 5			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	10	x 1 = 10
FACW species	21	x 2 = 42
FAC species	91	x 3 = 273
FACU species	3	x 4 = 12
UPL species	0	x 5 = 0
Column Totals:	125 (A)	337 (B)

Prevalence Index = B/A = 2.70

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 50
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: tussock forming grasses in plot. ungulating terrain. 45 sphag 5 lichen

SOIL

Sampling Point T143-752

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	Oe	100		0				saturated lots of living roots
4-12	5Y 4/1	70	10YR 5/6	30	C	M	Silt Loam	some organic in horizon relic rock
12-16	5Y 4/1	60	10YR 4/6	40	C	M	Silt Loam	1% gravel relic rock

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
X Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: n/a
Depth (inches): 0

Hydric Soil Present? Yes

Remarks: high water table redox in pit. Saturated soil

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
X Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
X Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 7
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: surface water in depressional pockets between tussock

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/06/2013
Applicant/Owner: AIDEA Sampling Point: T143-779
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hill Local relief (concave, convex, none): convex Slope (%): 3
Subregion (LRR): Northern Alaska Lat: 67.04569610 Long: -152.17787210 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: photos 728-732. Upland.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	25	Yes	FACW
2. Picea glauca	1	No	FACU
3. Salix sp	45	Yes	FAC
4.			
Total Cover: 71			
50% of total cover: 35 20% of total cover: 14			
Sapling/Shrub Stratum			
1. Salix spp	35	Yes	FAC
2. Picea mariana	15	Yes	FACW
3. Alnus viridis	2	No	FAC
4. Vaccinium uliginosum	3	No	FAC
5.			
6.			
Total Cover: 55			
50% of total cover: 27 20% of total cover: 11			
Herb Stratum			
1. Calamagrostis canadensis	10	No	FAC
2. Carex rostrata	10	No	OBL
3. Equisetum pratense	70	Yes	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 90			
50% of total cover: 45 20% of total cover: 18			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	10	x 1 = 10
FACW species	110	x 2 = 220
FAC species	95	x 3 = 285
FACU species	1	x 4 = 4
UPL species	0	x 5 = 0
Column Totals:	216 (A)	519 (B)

Prevalence Index = B/A = 2.40

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 50
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: pelt lichen 20%, sphagnum 30%. leaf litter.

SOIL

Sampling Point T143-779

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	organics	100		0				
4-7	5Y 4/2	85	10YR 4/6	15	D	M	Silt Loam	
7-9	5Y 4/2	60	10YR 4/6	40	D	M	Silt Loam	
9-13	gley1 10Y 5/1	85	10YR 4/6	15	D	M	Silt Loam	
13-22	10YR 4/4	75	5Y 5/1	25	RM	M	Silt Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
X Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/06/2013
Applicant/Owner: AIDEA Sampling Point: T143-781
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hill Local relief (concave, convex, none): concave Slope (%): 2
Subregion (LRR): Northern Alaska Lat: 67.04534370 Long: -152.17884610 Datum: WGS84
Soil Map Unit Name: _ NWI classification: R3UB4
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: channel wetted width 18 inches wide, 4 inches deep, aquatic/organic substrate. riparian salix spp, alnus, cal can. photos 733-735.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	0 (A)	0 (B)

Prevalence Index = B/A = 0.00

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 0 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T143-781

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/06/2013
Applicant/Owner: AIDEA Sampling Point: T143-783
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hill Local relief (concave, convex, none): concave Slope (%): 1
Subregion (LRR): Northern Alaska Lat: 67.04483960 Long: -152.17867530 Datum: WGS84
Soil Map Unit Name: _ NWI classification: R3UB3
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: channel wetted width 1 foot, 7 inches deep, silty substrate. riparian salix spp, alnus, and equisetum pratense.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	0 (A)	0 (B)

Prevalence Index = B/A = 0.00

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 0 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T143-783

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/06/2013
Applicant/Owner: AIDEA Sampling Point: T143-785
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): none Slope (%): 1
Subregion (LRR): Northern Alaska Lat: 67.04468050 Long: -152.16923270 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/EM1B, IIB1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: photos 738-742. Pss.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	15	Yes	FACW
2.			
3.			
4.			
Total Cover: 15			
50% of total cover: 7 20% of total cover: 3			
Sapling/Shrub Stratum			
1. Picea mariana	30	No	FACW
2. Betula nana	35	Yes	FAC
3. Vaccinium uliginosum	45	Yes	FAC
4. Rubus chamaemorus	35	Yes	FACW
5. Vaccinium vitis-idaea	8	No	FAC
6. Chamaedaphne calyculata	15	No	FACW
Total Cover: 168			
50% of total cover: 84 20% of total cover: 33			
Herb Stratum			
1. Eriophorum vaginatum	45	Yes	FACW
2. Carex rostrata	3	No	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 48			
50% of total cover: 24 20% of total cover: 9			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	3	x 1 = 3
FACW species	140	x 2 = 280
FAC species	88	x 3 = 264
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	231 (A)	547 (B)

Prevalence Index = B/A = 2.37

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 65
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 65%.

SOIL

Sampling Point T143-785

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-13	organics	100		0				saturated at 2 inches
13-18	gley1 10Y 3/1	100		0			Silty Clay Loam	
18-19	gley1 10Y 3/1	90	10YR 3/4	10	C	RC	Silty Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 19

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 16
Saturation Present? Yes Depth (inches): 2
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/06/2013
Applicant/Owner: AIDEA Sampling Point: T143-787
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): none Slope (%): 3
Subregion (LRR): Northern Alaska Lat: 67.04598260 Long: -152.18140950 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PEM1B, IIIA3
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: photos 743-747.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Herb Stratum			
1. Calamagrostis canadensis	95	Yes	FAC
2. Chamaenerion angustifolium	8	No	FACU
3. Equisetum pratense	25	No	FACW
4. Ranunculus cymbalaria	2	No	OBL
5. Stellaria calycantha	1	No	FACW
6.			
7.			
8.			
9.			
10.			
Total Cover: 131			
50% of total cover: 65 20% of total cover: 26			

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 10
(Where applicable)

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	2	x 1 = 2
FACW species	26	x 2 = 52
FAC species	95	x 3 = 285
FACU species	8	x 4 = 32
UPL species	0	x 5 = 0
Column Totals:	131 (A)	371 (B)

Prevalence Index = B/A = 2.83

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 10%.

SOIL

Sampling Point T143-787

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1	organics	100		0				
1-5	organics	65	2.5Y 4/1	35			Silt Loam	
5-29	2.5Y 4/2	75	5YR 4/6	25	C	RC	Silt Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
X Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 29

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
X Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
X Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 17
Saturation Present? Yes Depth (inches): 16
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/06/2013
Applicant/Owner: AIDEA Sampling Point: T144-754
Investigator(s): LG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): convex Slope (%): 1
Subregion (LRR): Northern Alaska Lat: 67.02481140 Long: -152.13135450 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS4/1B
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: photos 4613-4617	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	7	Yes	FACW
2.			
3.			
4.			
Total Cover: 7			
50% of total cover: 3 20% of total cover: 1			
Sapling/Shrub Stratum			
1. Picea mariana	40	Yes	FACW
2. Betula nana	5	No	FAC
3. Rubus chamaemorus	5	No	FACW
4. Rhododendron groenlandicum	25	Yes	FAC
5. Vaccinium uliginosum	5	No	FAC
6. Vaccinium vitis-idaea	15	No	FAC
Total Cover: 95			
50% of total cover: 47 20% of total cover: 19			
Herb Stratum			
1. Eriophorum angustifolium	50	Yes	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 50			
50% of total cover: 25 20% of total cover: 10			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:			Multiply by:
OBL species	50	x 1 =	50
FACW species	52	x 2 =	104
FAC species	50	x 3 =	150
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	152 (A)		304 (B)

Prevalence Index = B/A = 2.00

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 80
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: 50% sphagnum 30% lichen. Moderate tussocks

SOIL

Sampling Point T144-754

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	organic	100		0				saturated
8-13	10YR 4/1	100		0			Silt Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 13

Hydric Soil Present? Yes

Remarks: moderate tussocks.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
X Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
X Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 7
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: saturated organic material moderate tussocks broad valley bottom drainage

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/06/2013
Applicant/Owner: AIDEA Sampling Point: T144-756
Investigator(s): LG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): convex Slope (%): 2
Subregion (LRR): Northern Alaska Lat: 67.02343180 Long: -152.13729180 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS4/EM1, IA2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: photos 4618-4622	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	1	Yes	FACW
2.			
3.			
4.			
Total Cover: 1			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Picea mariana	45	Yes	FACW
2. Rubus chamaemorus	5	No	FACW
3. Betula glandulosa	10	No	FAC
4. Vaccinium uliginosum	15	No	FAC
5. Vaccinium vitis-idaea	15	No	FAC
6. Rhododendron groenlandicum	30	Yes	FAC
Total Cover: 120			
50% of total cover: 60 20% of total cover: 24			
Herb Stratum			
1. Eriophorum angustifolium	35	Yes	OBL
2. Carex rostrata	3	No	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 38			
50% of total cover: 19 20% of total cover: 7			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	38	x 1 = 38
FACW species	51	x 2 = 102
FAC species	70	x 3 = 210
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	159 (A)	350 (B)

Prevalence Index = B/A = 2.20

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 0 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 80
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: 50% sphagnum 30%lichen. Moderate tussocks broad valley bottom

SOIL

Sampling Point T144-756

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-11	organic	100		0				saturated organic material

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- X Histosol or Histel(A1)
- X Histic Epipedon (A2)
- __Hydrogen Sulfide (A4)
- __Thick Dark Surface (A12)
- __Alaska Gleyed (A13)
- __Alaska Redox (A14)
- __Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

- __Alaska Color Change (TA4)[4]
- __Alaska Alpine Swales (TA5)
- __Alaska Redox With 2.5Y Hue
- __Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- __Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 11

Hydric Soil Present? Yes

Remarks: saturated organic material flat wetland that drainage to a creek

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- __Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- __Water Marks (B1)
- __Sediment Deposits (B2)
- __Drift Deposits (B3)
- __Algal Mat or Crust (B4)
- __Iron Deposits (B5)
- __Surface Soil Cracks (B6)
- __Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __Marl Deposits (B15)
- __Hydrogen Sulfide Odor (C1)
- __Dry Season Water Table (C2)
- __Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- __Water-stained Leaves (B9)
- __Drainage Patterns (B10)
- __Oxidized Rhizospheres along Living Roots (C3)
- __Presence of Reduced Iron (C4)
- __Salt Deposits (C5)
- X Stunted or Stressed Plants (D1)
- __Geomorphic Position (D2)
- X Shallow Aquitard (D3)
- __Microtopographic Relief (D4)
- __FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 7
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: tussock forming plants. Surface water in depressional pockets between tussock

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/06/2013
Applicant/Owner: AIDEA Sampling Point: T144-758
Investigator(s): LG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Channel Local relief (concave, convex, none): concave Slope (%): 1
Subregion (LRR): Northern Alaska Lat: 67.02461490 Long: -152.14048830 Datum: WGS84
Soil Map Unit Name: _ NWI classification: R2UB3
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: stream crossing about 4 feet wide. Channel is about 7 inches deep to bottom of creek and 30 inches wide.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	0 (A)	0 (B)

Prevalence Index = B/A = 0.00

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 0 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks:

SOIL

Sampling Point T144-758

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/06/2013
Applicant/Owner: AIDEA Sampling Point: T144-760
Investigator(s): LG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Channel Local relief (concave, convex, none): concave Slope (%): 2
Subregion (LRR): Northern Alaska Lat: 67.02555220 Long: -152.13888800 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PFO4/SS1C
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: photo 4625-6429	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	30	Yes	FACW
2.			
3.			
4.			
Total Cover: 30			
50% of total cover: 15 20% of total cover: 6			
Sapling/Shrub Stratum			
1. Picea mariana	15	No	FACW
2. salix spp	25	Yes	FAC
3. Betula nana	10	No	FAC
4. Betula glandulosa	5	No	FAC
5. Vaccinium uliginosum	20	Yes	FAC
6. Rhododendron groenlandicum	15	No	FAC
Total Cover: 90			
50% of total cover: 45 20% of total cover: 18			
Herb Stratum			
1. Calamagrostis canadensis	1	No	FAC
2. Carex rostrata	10	Yes	OBL
3. Petasites frigidus	1	No	FACW
4. Eriophorum angustifolium	1	No	OBL
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 13			
50% of total cover: 6 20% of total cover: 2			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	11	x 1 = 11
FACW species	46	x 2 = 92
FAC species	76	x 3 = 228
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	133 (A)	331 (B)

Prevalence Index = B/A = 2.49

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 90
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: ungulating terrain with depressional pockets of inundation 30% sphagnum 60% lichen

SOIL

Sampling Point T144-760

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-11	organic	100		0				saturated
11-16	10YR 4/1	90	10YR 4/6	10	C	M	Silt Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- X Histosol or Histel(A1)
- X Histic Epipedon (A2)
- __Hydrogen Sulfide (A4)
- __Thick Dark Surface (A12)
- __Alaska Gleyed (A13)
- __Alaska Redox (A14)
- __Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

- __Alaska Color Change (TA4)[4]
- __Alaska Alpine Swales (TA5)
- __Alaska Redox With 2.5Y Hue
- __Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- __Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 16

Hydric Soil Present? Yes

Remarks: 1% gravel in mineral soil

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- X Surface Water (A1)
- __High Water Table (A2)
- X Saturation (A3)
- __Water Marks (B1)
- __Sediment Deposits (B2)
- __Drift Deposits (B3)
- __Algal Mat or Crust (B4)
- __Iron Deposits (B5)
- __Surface Soil Cracks (B6)
- __Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __Marl Deposits (B15)
- __Hydrogen Sulfide Odor (C1)
- __Dry Season Water Table (C2)
- __Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- __Water-stained Leaves (B9)
- __Drainage Patterns (B10)
- __Oxidized Rhizospheres along Living Roots (C3)
- __Presence of Reduced Iron (C4)
- __Salt Deposits (C5)
- X Stunted or Stressed Plants (D1)
- __Geomorphic Position (D2)
- __Shallow Aquitard (D3)
- X Microtopographic Relief (D4)
- __FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes Depth (inches): 3
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: thick organic layer that is saturated. Some depressional pockets between micro-highs have surface water. No water table observed in pit

Wetlands data compiled using Electronic Data Solutions' Everglade™ wetland delineation software. Alaska Region

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/06/2013
Applicant/Owner: AIDEA Sampling Point: T144-789
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Flats Local relief (concave, convex, none): concave Slope (%): 2
Subregion (LRR): Northern Alaska Lat: 67.02644090 Long: -152.13092170 Datum: WGS84
Soil Map Unit Name: _ NWI classification: R3UB1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**

Remarks: channel wetted width 12 feet, 9 inches deep with gravel 3 inch diameter substrate. riparian cal can and salix sp. photos 748-749. Beaver activity.

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Plot size (radius, or length x width): 0 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 0
(Where applicable)

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	0	x 2 = 0
FAC species	0	x 3 = 0
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	0 (A)	0 (B)

Prevalence Index = B/A = 0.00

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes

Remarks:

SOIL

Sampling Point T144-789

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/06/2013
Applicant/Owner: AIDEA Sampling Point: T144-791
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Stream terrace Local relief (concave, convex, none): convex Slope (%): 1
Subregion (LRR): Northern Alaska Lat: 67.02646390 Long: -152.13106100 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: stream terrace. Beaver activity. pPhotos 750-754.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	3	Yes	FACU
2.			
3.			
4.			
Total Cover: 3			
50% of total cover: 1 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Picea glauca	1	No	FACU
2. salix spp	40	Yes	
3. Betula glandulosa	5	No	FAC
4. rubus pubescens	20	Yes	
5. Vaccinium uliginosum	8	No	FAC
6. Chamaedaphne calyculata	5	No	FACW
Total Cover: 79			
50% of total cover: 39 20% of total cover: 15			
Herb Stratum			
1. Calamagrostis canadensis	75	Yes	FAC
2. Chamaenerion angustifolium	8	No	FACU
3. Carex rostrata	10	No	OBL
4. Equisetum sylvaticum	25	Yes	FAC
5. Comarum palustre	2	No	OBL
6.			
7.			
8.			
9.			
10.			
Total Cover: 120			
50% of total cover: 60 20% of total cover: 24			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 40 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	12	x 1 = 12
FACW species	5	x 2 = 10
FAC species	113	x 3 = 339
FACU species	12	x 4 = 48
UPL species	0	x 5 = 0
Column Totals:	142 (A)	409 (B)

Prevalence Index = B/A = 2.88

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 15
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 15%.

SOIL

Sampling Point T144-791

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	organics	100		0				
3-11	10YR 4/2	55	organics	35			Loamy Sand	7.5 YR 4/6 10%, C RC
11-19	2.5Y 3/1	80	7.5YR 4/6	20	C	RC	Silt Loam	
19-26	2.5Y 3/1	100		0			Silt Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
X Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 26

Hydric Soil Present? No

Remarks: Soils contain Alaska Redox problematic soil indicator, but lack hydrology; therefore the soils are determined to not be hydric.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/06/2013
Applicant/Owner: AIDEA Sampling Point: T144-793
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 3
Subregion (LRR): Northern Alaska Lat: 67.02693990 Long: -152.13574300 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: photos 755-759.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	10	Yes	FACU
2. Picea mariana	20	Yes	FACW
3.			
4.			
Total Cover: 30			
50% of total cover: 15 20% of total cover: 6			
Sapling/Shrub Stratum			
1. Picea mariana	20	Yes	FACW
2. Picea glauca	10	No	FACU
3. salix spp	15	No	
4. Betula glandulosa	15	No	FAC
5. Betula nana	3	No	FAC
6. Vaccinium uliginosum	30	Yes	FAC
Total Cover: 93			
50% of total cover: 46 20% of total cover: 18			
Herb Stratum			
1. Carex rostrata	25	Yes	OBL
2. Calamagrostis canadensis	10	Yes	FAC
3. Equisetum scirpoides	5	No	FACU
4. Petasites frigidus	2	No	FACW
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 42			
50% of total cover: 21 20% of total cover: 8			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 83 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	25	x 1 = 25
FACW species	42	x 2 = 84
FAC species	58	x 3 = 174
FACU species	25	x 4 = 100
UPL species	0	x 5 = 0
Column Totals:	150 (A)	383 (B)

Prevalence Index = B/A = 2.55

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 85
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 35%, pelt lichen 5%, reindeer lichen 45%.

SOIL

Sampling Point T144-793

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	organics	100		0				
2-8	2.5Y 4/3	55	5Y 4/1	35	RM	M	silty gravel loam	7.5YR 4/6, 10%, C RC
8-21	2.5Y 4/3	100		0			gravelly clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks: restrictive digging layer gravel. Thixotropic.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/07/2013
Applicant/Owner: AIDEA Sampling Point: T145-760
Investigator(s): LG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 4
Subregion (LRR): Northern Alaska Lat: 66.93384398 Long: -151.77225649 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland, IA2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? No**
Remarks: photos 4630-4634	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	50	Yes	FACW
2.			
3.			
4.			
Total Cover: 50			
50% of total cover: 25 20% of total cover: 10			
Sapling/Shrub Stratum			
1. Picea mariana	10	Yes	FACW
2. Vaccinium uliginosum	30	Yes	FAC
3. Vaccinium vitis-idaea	5	No	FAC
4. Betula nana	1	No	FAC
5. Rosa acicularis	5	No	FACU
6. Alnus viridis	1	No	FAC
Total Cover: 52			
50% of total cover: 26 20% of total cover: 10			
Herb Stratum			
1. Equisetum sylvaticum	1	No	FAC
2. Geocaulon lividum	10	Yes	FACU
3. Calamagrostis canadensis	1	No	FAC
4. Carex fuliginosa	5	Yes	FAC
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 17			
50% of total cover: 8 20% of total cover: 3			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	60	x 2 = 120
FAC species	44	x 3 = 132
FACU species	15	x 4 = 60
UPL species	0	x 5 = 0
Column Totals:	119 (A)	312 (B)

Prevalence Index = B/A = 2.62

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 0 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 90
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: 40% sphagnum 50% lichen. ungulating terrain small hummocks

SOIL

Sampling Point T145-760

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	organic	100		0				moist but not saturated organic
4-7	10YR 4/4	70	10YR 4/1	30	C	M	Silt Loam	material
7-9	2.5Y 4/4	100		0			Silt Loam	Distinct Redox
9-14	2.5Y 4/4	70	10YR 4/1	30	C	M	Silt Loam	5% gravel
14-18	2.5Y 4/4	75	10YR 4/6	25	C	M	Silt Loam	10% gravel, prominent redox distinct redox

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks: Restrictive digging layer of gravel at 18 inches. Bright soil colors.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 7
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/07/2013
Applicant/Owner: AIDEA Sampling Point: T145-762
Investigator(s): LG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 4
Subregion (LRR): Northern Alaska Lat: 66.93807690 Long: -151.76874120 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS4/EM1B, IIA2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: photos 4635-4639	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	3	Yes	FACW
2.			
3.			
4.			
Total Cover: 3			
50% of total cover: 1 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Picea mariana	45	Yes	FACW
2. Vaccinium vitis-idaea	20	No	FAC
3. Rhododendron groenlandicum	40	Yes	FAC
4. Rubus chamaemorus	20	No	FACW
5. Vaccinium uliginosum	5	No	FAC
6. Betula neoalaskana	3	No	FAC
Total Cover: 133			
50% of total cover: 66 20% of total cover: 26			
Herb Stratum			
1. Eriophorum angustifolium	15	Yes	OBL
2. Equisetum sylvaticum	1	No	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 16			
50% of total cover: 8 20% of total cover: 3			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	15	x 1 = 15
FACW species	68	x 2 = 136
FAC species	69	x 3 = 207
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	152 (A)	358 (B)

Prevalence Index = B/A = 2.36

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 90
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: 70% sphagnum 20% lichen. Ungulating moderate hummocks

SOIL

Sampling Point T145-762

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	organic	100		0				saturated
5-11	material 2.5Y 4/2	75	10YR 4/6	25	C	M	Silt Loam	matrix chroma should be 1

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
X Thick Dark Surface (A12)
__Alaska Gleyed (A13)
X Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 11

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
X Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
X Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: saturated organic material at the surface. Small depressional pockets

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/07/2013
Applicant/Owner: AIDEA Sampling Point: T145-764
Investigator(s): LG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Channel Local relief (concave, convex, none): convex Slope (%): 4
Subregion (LRR): Northern Alaska Lat: 66.93724231 Long: -151.76599849 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PFO4/SS1B, IA2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: photos 4640-4644	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	30	Yes	FACW
2. Betula neoalaskana	1	No	FAC
3.			
4.			
Total Cover: 31			
50% of total cover: 15 20% of total cover: 6			
Sapling/Shrub Stratum			
1. Betula glandulosa	10	No	FAC
2. Salix barclayi	20	Yes	FAC
3. Alnus viridis	20	Yes	FAC
4. Picea mariana	15	No	FACW
5. Vaccinium uliginosum	10	No	FAC
6. Vaccinium vitis-idaea	5	No	FAC
Total Cover: 80			
50% of total cover: 40 20% of total cover: 16			
Herb Stratum			
1. Equisetum sylvaticum	7	Yes	FAC
2. Equisetum arvense	3	Yes	FAC
3. Geocaulon lividum	1	No	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 11			
50% of total cover: 5 20% of total cover: 2			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	45	x 2 = 90
FAC species	76	x 3 = 228
FACU species	1	x 4 = 4
UPL species	0	x 5 = 0
Column Totals:	122 (A)	322 (B)

Prevalence Index = B/A = 2.64

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 90
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: high point between drainages. ungulating terrain 5% lichen 85% sphagnum

SOIL

Sampling Point T145-764

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-7	organic	100		0				saturated
7-11	material	95	10YR 4/6	5	C	M	Silt Loam	
11-15	10YR 2/1	75	10YR 4/6	25	C	M	Silt Loam	
	10YR 3/1							

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
X Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 15

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

X Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes Depth (inches): 2
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: surface water observed in a small channel saturated organic material

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/07/2013
Applicant/Owner: AIDEA Sampling Point: T145-795
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hill Local relief (concave, convex, none): convex Slope (%): 2
Subregion (LRR): Northern Alaska Lat: 66.93425740 Long: -151.76964640 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: photos 760-764. Hilltop. Upland.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	45	Yes	FACW
2. Populus balsamifera	5	No	FACU
3. Populus tremuloides	2	No	FACU
4.			
Total Cover: 52			
50% of total cover: 26 20% of total cover: 10			
Sapling/Shrub Stratum			
1. Picea mariana	15	No	FACW
2. Picea glauca	1	No	FACU
3. salix spp	8	No	
4. Vaccinium uliginosum	30	Yes	FAC
5. Vaccinium vitis-idaea	30	Yes	FAC
6. Rhododendron groenlandicum	20	Yes	FAC
Total Cover: 104			
50% of total cover: 52 20% of total cover: 20			
Herb Stratum			
1. Geocaulon lividum	15	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 15			
50% of total cover: 7 20% of total cover: 3			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	60	x 2 = 120
FAC species	80	x 3 = 240
FACU species	23	x 4 = 92
UPL species	0	x 5 = 0
Column Totals:	163 (A)	452 (B)

Prevalence Index = B/A = 2.77

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 85
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 25%, pelt lichen 15%, reindeer lichen 45%.

SOIL

Sampling Point T145-795

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	organics	100		0				
2-7	10YR 4/6	100		0			Loam	
7-15	10YR 4/6	100		0			Sandy Gravely Loam	35% gravel

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks: restrictive digging layer gravel

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/07/2013
Applicant/Owner: AIDEA Sampling Point: T145-797
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 60
Subregion (LRR): Northern Alaska Lat: 66.93525620 Long: -151.77073830 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? No Hydric Soil Present? No Wetland Hydrology Present? No	**Is the Sampled Area within a Wetland? No**
Remarks: photos 765-769.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	50	Yes	FACU
2. Picea mariana	2	No	FACW
3. Populus balsamifera	20	Yes	FACU
4.			
Total Cover: 72			
50% of total cover: 36 20% of total cover: 14			
Sapling/Shrub Stratum			
1. Alnus viridis	25	Yes	FAC
2. Picea glauca	8	Yes	FACU
3. Rosa acicularis	3	No	FACU
4. Ribes triste	3	No	FAC
5. Populus balsamifera	1	No	FACU
6.			
Total Cover: 40			
50% of total cover: 20 20% of total cover: 8			
Herb Stratum			
1. Geocaulon lividum	5	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 5			
50% of total cover: 2 20% of total cover: 1			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 20 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	2	x 2 = 4
FAC species	28	x 3 = 84
FACU species	87	x 4 = 348
UPL species	0	x 5 = 0
Column Totals:	117 (A)	436 (B)

Prevalence Index = B/A = 3.73

Hydrophytic Vegetation Indicators:
__ Dominance Test is >50%
__ Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 52
(Where applicable)

Hydrophytic Vegetation Present? No

Remarks: sphagnum 50%, pelt lichen 2%.

SOIL

Sampling Point T145-797

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	organics	100		0				
3-13	2.5Y 5/4	100		0			Sandy Gravely Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? No

Remarks: restrictive digging layer gravel

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
__Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? No Depth (inches):
(includes capillary fringe)

Wetland Hydrology Present? No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/07/2013
Applicant/Owner: AIDEA Sampling Point: T145-799
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): none Slope (%): 8
Subregion (LRR): Northern Alaska Lat: 66.93604400 Long: -151.76950980 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland, IA3
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? No**
Remarks: photos 770-774. Transtion from steep to moderately steep slope.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	10	Yes	FACW
2.			
3.			
4.			
Total Cover: 10			
50% of total cover: 5 20% of total cover: 2			
Sapling/Shrub Stratum			
1. Picea mariana	55	Yes	FACW
2. salix spp	30	Yes	FAC
3. Alnus viridis	2	No	FAC
4. Rhododendron groenlandicum	25	No	FAC
5. Chamaedaphne calyculata	20	No	FACW
6. Vaccinium uliginosum	10	No	FAC
Total Cover: 142			
50% of total cover: 71 20% of total cover: 28			
Herb Stratum			
1. Equisetum pratense	10	Yes	FACW
2. Calamagrostis canadensis	5	Yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 15			
50% of total cover: 7 20% of total cover: 3			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	95	x 2 = 190
FAC species	72	x 3 = 216
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	167 (A)	406 (B)

Prevalence Index = B/A = 2.43

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 80
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 65%, reindeer lichen 15%. Unkown grass 5%.

SOIL

Sampling Point T145-799

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-9	organics	100		0				saturated at 4 inches
9-14	2.5Y 4/3	60	10YR 5/6	20	D	M	Silty Clay Loam	Prominent Redox
		0	2.5Y 4/1	20	RM	M		Distinct Redox

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 14

Hydric Soil Present? No

Remarks: gravel layer at 14, 3-5 inch diameter

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 4
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/07/2013
Applicant/Owner: AIDEA Sampling Point: T146-766
Investigator(s): LG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): convex Slope (%): 0
Subregion (LRR): Northern Alaska Lat: 66.95504430 Long: -151.85517330 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS3/EM1C
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: photos 4645-4649	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	15	Yes	FACW
2.			
3.			
4.			
Total Cover: 15			
50% of total cover: 7 20% of total cover: 3			
Sapling/Shrub Stratum			
1. Picea mariana	15	No	FACW
2. Betula glandulosa	10	No	FAC
3. Rubus chamaemorus	20	No	FACW
4. Empetrum nigrum	5	No	FAC
5. Chamaedaphne calyculata	65	Yes	FACW
6. Vaccinium uliginosum	10	No	FAC
Total Cover: 125			
50% of total cover: 62 20% of total cover: 25			
Herb Stratum			
1. Eriophorum angustifolium	3	Yes	OBL
2. Equisetum arvense	3	Yes	FAC
3. Calamagrostis canadensis	1	No	FAC
4. Lycopodium clavatum	5	Yes	FACU
5. Carex rostrata	3	Yes	OBL
6.			
7.			
8.			
9.			
10.			
Total Cover: 15			
50% of total cover: 7 20% of total cover: 3			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 83 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	6	x 1 = 6
FACW species	115	x 2 = 230
FAC species	29	x 3 = 87
FACU species	5	x 4 = 20
UPL species	0	x 5 = 0
Column Totals:	155 (A)	343 (B)

Prevalence Index = B/A = 2.21

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 70
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: surface water observed 5%

SOIL

Sampling Point T146-766

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	organic	100		0				saturated

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

X Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 12

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
X High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
X Geomorphic Position (D2)
X Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 0
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: depressional pockets of surface water with average depth of 2 inches. Located between 2 ponds

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/07/2013
Applicant/Owner: AIDEA Sampling Point: T146-768
Investigator(s): LG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): convex Slope (%): 5
Subregion (LRR): Northern Alaska Lat: 66.95539470 Long: -151.86616870 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS4/1B
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: photos 4650-4654	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Picea mariana	50	Yes	FACW
2. Salix barclayi	10	No	FAC
3. Salix bebbiana	5	No	FAC
4. Alnus viridis	20	Yes	FAC
5. Vaccinium uliginosum	15	No	FAC
6. Vaccinium vitis-idaea	10	No	FAC
Total Cover: 110			
50% of total cover: 55 20% of total cover: 22			
Herb Stratum			
1. Lycopodium clavatum	1	No	FACU
2. Carex rostrata	15	Yes	OBL
3. Petasites frigidus	1	No	FACW
4. Calamagrostis canadensis	5	Yes	FAC
5. Equisetum sylvaticum	5	Yes	FAC
6.			
7.			
8.			
9.			
10.			
Total Cover: 27			
50% of total cover: 13 20% of total cover: 5			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	15	x 1 = 15
FACW species	51	x 2 = 102
FAC species	70	x 3 = 210
FACU species	1	x 4 = 4
UPL species	0	x 5 = 0
Column Totals:	137 (A)	331 (B)

Prevalence Index = B/A = 2.42

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 0 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 90
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: 70% sphagnum 20% lichen hummocks moderate

SOIL

Sampling Point T146-768

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	organic	0		0				saturated
8-12	material	75	10YR 4/1	5	D	RC	Silt Loam	20% organic material
	10YR 2/2							

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 12

Hydric Soil Present? Yes

Remarks: saturated organic material

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
X Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
X Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: moderate hummocks

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/07/2013
Applicant/Owner: AIDEA Sampling Point: T146-770
Investigator(s): LG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): concave Slope (%): 0
Subregion (LRR): Northern Alaska Lat: 66.95751550 Long: -151.86122170 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1/EM1C
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: photos 4655-4659	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Vaccinium oxycoccos	50	Yes	OBL
2. Chamaedaphne calyculata	10	No	FACW
3. Betula nana	1	No	FAC
4. salix sp	5	No	FAC
5. Andromeda polifolia	15	No	OBL
6.			
Total Cover: 81			
50% of total cover: 40 20% of total cover: 16			
Herb Stratum			
1. Carex rostrata	20	Yes	OBL
2. Carex limosa	40	Yes	OBL
3. Eriophorum angustifolium	5	No	OBL
4. Comarum palustre	3	No	OBL
5. Carex aquatilis	3	No	OBL
6. Equisetum hyemale	1	No	FACW
7.			
8.			
9.			
10.			
Total Cover: 72			
50% of total cover: 36 20% of total cover: 14			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	136	x 1 = 136
FACW species	11	x 2 = 22
FAC species	6	x 3 = 18
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	153 (A)	176 (B)

Prevalence Index = B/A = 1.15

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 0 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 80
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: pond edge floating bog

SOIL

Sampling Point T146-770

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-13	organic	100		0				saturated

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- X Histosol or Histel(A1)
- X Histic Epipedon (A2)
- __Hydrogen Sulfide (A4)
- __Thick Dark Surface (A12)
- __Alaska Gleyed (A13)
- __Alaska Redox (A14)
- __Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

- __Alaska Color Change (TA4)[4]
- __Alaska Alpine Swales (TA5)
- __Alaska Redox With 2.5Y Hue
- __Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
- __Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 13

Hydric Soil Present? Yes

Remarks: pond edge floating bog

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- __Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- __Water Marks (B1)
- __Sediment Deposits (B2)
- __Drift Deposits (B3)
- __Algal Mat or Crust (B4)
- __Iron Deposits (B5)
- __Surface Soil Cracks (B6)
- __Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __Marl Deposits (B15)
- __Hydrogen Sulfide Odor (C1)
- __Dry Season Water Table (C2)
- __Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- __Water-stained Leaves (B9)
- __Drainage Patterns (B10)
- __Oxidized Rhizospheres along Living Roots (C3)
- __Presence of Reduced Iron (C4)
- __Salt Deposits (C5)
- __Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- __Shallow Aquitard (D3)
- __Microtopographic Relief (D4)
- __FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 0
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: floating bog, 72 inch pond depth taken at edge of bog.

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/07/2013
Applicant/Owner: AIDEA Sampling Point: T146-801
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 2
Subregion (LRR): Northern Alaska Lat: 66.95848020 Long: -151.86330840 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PFO4/PSS1B, IA2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: photos 775-779. Pfo.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	40	Yes	FACW
2.			
3.			
4.			
Total Cover: 40			
50% of total cover: 20 20% of total cover: 8			
Sapling/Shrub Stratum			
1. Picea mariana	15	No	FACW
2. Picea glauca	1	No	FACU
3. Betula nana	35	Yes	FAC
4. Vaccinium uliginosum	20	No	FAC
5. Vaccinium vitis-idaea	30	Yes	FAC
6. Rubus chamaemorus	20	No	FACW
Total Cover: 121			
50% of total cover: 60 20% of total cover: 24			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	75	x 2 = 150
FAC species	85	x 3 = 255
FACU species	1	x 4 = 4
UPL species	0	x 5 = 0
Column Totals:	161 (A)	409 (B)

Prevalence Index = B/A = 2.54

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 90
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 85%, reindeer lichen 5%.

SOIL

Sampling Point T146-801

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	organics	100		0				saturated at 3 inches

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

X Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 12

Hydric Soil Present? Yes

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 3
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/07/2013
Applicant/Owner: AIDEA Sampling Point: T146-803
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hill Local relief (concave, convex, none): convex Slope (%): 3
Subregion (LRR): Northern Alaska Lat: 66.95684540 Long: -151.87191620 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS1B, IA2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: upland. Photos 780-784.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea glauca	25	Yes	FACU
2. Picea mariana	3	No	FACW
3.			
4.			
Total Cover: 28			
50% of total cover: 14 20% of total cover: 5			
Sapling/Shrub Stratum			
1. Alnus viridis	75	Yes	FAC
2. salix spp	10	No	FAC
3. Picea glauca	3	No	FACU
4. Spiraea stevenii	20	No	FACU
5. Rosa acicularis	3	No	FACU
6. Betula nana	2	No	FAC
Total Cover: 113			
50% of total cover: 56 20% of total cover: 22			
Herb Stratum			
1. Equisetum sylvaticum	15	Yes	FAC
2. Calamagrostis canadensis	25	Yes	FAC
3. Lycopodium clavatum	25	Yes	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 65			
50% of total cover: 32 20% of total cover: 13			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 60 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	3	x 2 = 6
FAC species	127	x 3 = 381
FACU species	76	x 4 = 304
UPL species	0	x 5 = 0
Column Totals:	206 (A)	691 (B)

Prevalence Index = B/A = 3.35

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
__ Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 27
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 25%, pelt lichen 2%. Leaf litter.

SOIL

Sampling Point T146-803

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
8-20	2.5Y 4/3	75	10YR 4/6	25	D	M	Silty Clay Loam	prominent redox
0-3	organics	100		0				
3-8	10YR 4/2	50	10YR 3/6	25	D	M	Silt Loam	prominent redox
		0	organic	25				

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
X Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks: Thixotropic, depleted matrix 3-8 inches.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 2
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/07/2013
Applicant/Owner: AIDEA Sampling Point: T147-772
Investigator(s): LG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): concave Slope (%): 2
Subregion (LRR): Northern Alaska Lat: 66.97887560 Long: -151.90303510 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? No**
Remarks: plot is in an elevated ridge. OMF canopy photos. 4660-4664	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	40	Yes	FACW
2. Betula neoalaskana	15	Yes	FAC
3.			
4.			
Total Cover: 55			
50% of total cover: 27 20% of total cover: 11			
Sapling/Shrub Stratum			
1. Picea mariana	10	No	FACW
2. Salix barclayi	20	Yes	FAC
3. Alnus viridis	20	Yes	FAC
4. Rosa acicularis	3	No	FACU
5. Vaccinium uliginosum	1	No	FAC
6. Viburnum edule	1	No	FACU
Total Cover: 55			
50% of total cover: 27 20% of total cover: 11			
Herb Stratum			
1. Calamagrostis canadensis	3	Yes	FAC
2. Empetrum nigrum	2	No	FAC
3. Equisetum arvense	9	Yes	FAC
4. Rubus chamaemorus	2	No	FACW
5. Lycopodium clavatum	1	No	FACU
6.			
7.			
8.			
9.			
10.			
Total Cover: 17			
50% of total cover: 8 20% of total cover: 3			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	52	x 2 = 104
FAC species	70	x 3 = 210
FACU species	5	x 4 = 20
UPL species	0	x 5 = 0
Column Totals:	127 (A)	334 (B)

Prevalence Index = B/A = 2.63

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 80
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: 70 sphagnum 10% lichen OMF Ungulating terrain

SOIL

Sampling Point T147-772

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	organic	100		0				saturated
5-13	10YR 3/1	75	10YR 3/6	15	C	M	Silt Loam	10% organic material

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 13

Hydric Soil Present? No

Remarks: saturated organics possibly problematic

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

X Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
X Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

X Water-stained Leaves (B9)
X Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes Depth (inches): 1
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: surface water observed 15' away from pit. Alder/willow swale wuth equisetum arevense. ungulating terrain water stainednleaves in the drainage

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/07/2013
Applicant/Owner: AIDEA Sampling Point: T147-774
Investigator(s): LG, CF Section, Township, Range:
Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): concave Slope (%): 15
Subregion (LRR): Northern Alaska Lat: 66.98080310 Long: -151.89519590 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PSS4B, IIA1
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks:	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
50% of total cover: 0 20% of total cover: 0			
Sapling/Shrub Stratum			
1. Picea mariana	55	Yes	FACW
2. Betula nana	10	No	FAC
3. Betula glandulosa	15	No	FAC
4. Rhododendron groenlandicum	50	Yes	FAC
5. Vaccinium uliginosum	5	No	FAC
6. Rubus chamaemorus	10	No	FACW
Total Cover: 145			
50% of total cover: 72 20% of total cover: 29			
Herb Stratum			
1. Eriophorum angustifolium	15	Yes	OBL
2. Calamagrostis canadensis	1	No	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 16			
50% of total cover: 8 20% of total cover: 3			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	15	x 1 = 15
FACW species	65	x 2 = 130
FAC species	81	x 3 = 243
FACU species	0	x 4 = 0
UPL species	0	x 5 = 0
Column Totals:	161 (A)	388 (B)

Prevalence Index = B/A = 2.41

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 90
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: stunted black spruce and moderate hummocks and some small tussocks. Small seeps in plot

SOIL

Sampling Point T147-774

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-7	organics	100		0				saturated
7-13	10YR 4/1	85		0			Silt Loam	
7-13	10YR 4/6	15		0			Silt Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
X Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 13

Hydric Soil Present? Yes

Remarks: Depleted matrix 7-13 inches.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
X Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
X Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
X Shallow Aquitard (D3)
X Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? No Depth (inches):
Saturation Present? Yes Depth (inches): 0
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: small depressional pockets between hummocks. seasonal seeps on hillside with sediment observed

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/07/2013
Applicant/Owner: AIDEA Sampling Point: T147-805
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 8
Subregion (LRR): Northern Alaska Lat: 66.97723310 Long: -151.89703930 Datum: WGS84
Soil Map Unit Name: _ NWI classification: PFO4/PSS1B, IA2
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? Yes**
Remarks: photos 785-789. Pfo/pss. North of upland hillslope with populus balsamifera.	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	30	Yes	FACW
2.			
3.			
4.			
Total Cover: 30			
50% of total cover: 15 20% of total cover: 6			
Sapling/Shrub Stratum			
1. Picea mariana	15	No	FACW
2. salix spp	10	No	FAC
3. Betula glandulosa	15	No	FAC
4. Vaccinium uliginosum	40	Yes	FAC
5. Vaccinium vitis-idaea	15	No	FAC
6. Rhododendron groenlandicum	20	Yes	FAC
Total Cover: 115			
50% of total cover: 57 20% of total cover: 23			
Herb Stratum			
1. Carex rostrata	35	Yes	OBL
2. Calamagrostis canadensis	5	No	FAC
3. Lycopodium clavatum	2	No	FACU
4. Equisetum scirpoides	3	No	FACU
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 45			
50% of total cover: 22 20% of total cover: 9			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	35	x 1 = 35
FACW species	45	x 2 = 90
FAC species	105	x 3 = 315
FACU species	5	x 4 = 20
UPL species	0	x 5 = 0
Column Totals:	190 (A)	460 (B)

Prevalence Index = B/A = 2.42

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
X Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 15
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 85
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 82%, reindeer lichen 2%,false pixie cup 1%.

SOIL

Sampling Point T147-805

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	organic	100		0				saturated
8-9	2.5Y 3/2	100		0			Loam	
9-17	2.5Y 4/3	100		0			Loamy gravel	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
X Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type:
Depth (inches): 0

Hydric Soil Present? Yes

Remarks: restrictive digging layer gravel. 1-3 inch diameter gravel.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
__FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 11
Saturation Present? Yes Depth (inches): 2
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Alaska Region

Project/Site: Ambler Borough/City: Yukon-Koyukuk Borough Sampling Date: 09/07/2013
Applicant/Owner: AIDEA Sampling Point: T147-807
Investigator(s): AM, JG Section, Township, Range:
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 3
Subregion (LRR): Northern Alaska Lat: 66.97889450 Long: -151.89554080 Datum: WGS84
Soil Map Unit Name: _ NWI classification: Upland, IA3
Are climatic/hydrologic conditions on the site typical for this time of year? yes (if no, explain in Remarks.)
Are Vegetation ___ , Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes
Are Vegetation ___, Soil ___ , or Hydrology ___ naturally problematic? (if needed explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes Hydric Soil Present? No Wetland Hydrology Present? Yes	**Is the Sampled Area within a Wetland? No**
Remarks: photos 790-794. pss	

VEGETATION – Use scientific names of plants. List all species in the plot.

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
1. Picea mariana	20	Yes	FACW
2.			
3.			
4.			
Total Cover: 20			
50% of total cover: 10 20% of total cover: 4			
Sapling/Shrub Stratum			
1. Picea mariana	35	Yes	FACW
2. salix spp	20	No	FAC
3. Alnus viridis	3	No	FAC
4. Vaccinium uliginosum	40	Yes	FAC
5. Vaccinium vitis-idaea	15	No	FAC
6. Rhododendron lapponicum	30	Yes	FAC
Total Cover: 143			
50% of total cover: 71 20% of total cover: 28			
Herb Stratum			
1. Calamagrostis canadensis	20	Yes	FAC
2. Equisetum sylvaticum	8	Yes	FAC
3. Lycopodium clavatum	1	No	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
Total Cover: 29			
50% of total cover: 14 20% of total cover: 5			

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	0	x 1 = 0
FACW species	55	x 2 = 110
FAC species	136	x 3 = 408
FACU species	1	x 4 = 4
UPL species	0	x 5 = 0
Column Totals:	192 (A)	522 (B)

Prevalence Index = B/A = 2.72

Hydrophytic Vegetation Indicators:
X Dominance Test is >50%
X Prevalence Index is ≤3.0
__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Plot size (radius, or length x width): 15 % Bare ground: 0
% Cover of Wetland Bryophytes: 0 Total Cover of Bryophytes: 90
(Where applicable)

Hydrophytic Vegetation Present? Yes

Remarks: sphagnum 75%, pelt lichen 5%, reindeer lichen 15%. unknown grass 2%

SOIL

Sampling Point T147-807

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

	Matrix		Redox Features					
Depth (in.)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	organic	100		0				saturated at 2 inches
5-16	2.5Y 4/3	60	2.5Y 5/6	20	D	M		Distinct Redox
5-16		0	5y 5/1	20	C	R		Distinct Redox
16-22	2.5y 4/3	100		0			Gravelly Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

__Histosol or Histel(A1)
__Histic Epipedon (A2)
__Hydrogen Sulfide (A4)
__Thick Dark Surface (A12)
__Alaska Gleyed (A13)
__Alaska Redox (A14)
__Alaska Gleyed Pores (A15)

Indicators for Problematic Hydric Soils[3]:

__Alaska Color Change (TA4)[4]
__Alaska Alpine Swales (TA5)
__Alaska Redox With 2.5Y Hue
__Alaska Gleyed Without Hue 5Y or Redder Underlying Layer
__Other (Explain in Remarks)

[3]One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology, and an appropriate landscape position must be present unless disturbed or problematic.
[4]Give details of color change in Remarks.

Restrictive Layer (if present):
Type: permafrost
Depth (inches): 22

Hydric Soil Present? No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

__Surface Water (A1)
__High Water Table (A2)
X Saturation (A3)
__Water Marks (B1)
__Sediment Deposits (B2)
__Drift Deposits (B3)
__Algal Mat or Crust (B4)
__Iron Deposits (B5)
__Surface Soil Cracks (B6)
__Inundation Visible on Aerial Imagery (B7)
__ Sparsely Vegetated Concave Surface (B8)
__Marl Deposits (B15)
__Hydrogen Sulfide Odor (C1)
__Dry Season Water Table (C2)
__Other (Explain in Remarks)

Secondary Indicators (2 or more required)

__Water-stained Leaves (B9)
__Drainage Patterns (B10)
__Oxidized Rhizospheres along Living Roots (C3)
__Presence of Reduced Iron (C4)
__Salt Deposits (C5)
__Stunted or Stressed Plants (D1)
__Geomorphic Position (D2)
__Shallow Aquitard (D3)
__Microtopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? No Depth (inches):
Water Table Present? Yes Depth (inches): 18
Saturation Present? Yes Depth (inches): 2
(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: