TABLE 2-2
SURFACE WATER CHARACTERIZATION - FLOW RATES AND FIELD WATER QUALITY PARAMETERS
Leviathan Mine Site
Alpine County, California

Location[1]	Sample Date	Flow (cfs)	Temperature (°C)	pH (su)	Specific Electrical Conductance (µS/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction Potential (mV)	Location Description
CUD-Weir	5/2/2011	--	8.35	3.45	4105	4.72	173.2	Channel Underdrain inflow to USGS weir
DSL	5/2/2011	--	8.44	5.12	1863	6.34	114.8	Lower Delta Seep in collection tank
DSSD	5/2/2011	--	8.45	2.49	2390	10.58	451.7	Delta slope storm drainage pipe located approximately 40 feet east of Delta Seep capture tank
DSU	5/2/2011	--	7.89	4.98	1741	9.14	152.1	Upper Delta Seep in collection tank
	5/13/2011	0.023	--	--	--	--	--	
DSUD	5/2/2011	--	7.08	2.88	2903	11.29	510.2	Delta Seep Underdrain
	5/13/2011	0.021	--	--	--	--	--	
OS	5/2/2011	--	12.30	3.00	2685	3.70	355.0	Overburden Seep/Aspen Seep
OUS	5/2/2011	--	8.70	3.00	1548	6.90	396.0	Overburden Upper Seep/Upper Aspen Seep
	5/20/2011	0.038	--	--	--	--	--	
	5/24/2011	--	8.67	3.45	974	5.44	443.9	
	10/26/2011	0.024	8.43	3.57	1517	8.77	310.4	
Pond 4 Inflow	5/10/2011	--	7.53	2.87	2841	8.33	444.3	Collected from standpipe at south end of Pond 4
	6/22/2011	--	9.44	2.54	3359	4.56	485.2	
	7/11/2011	--	11.43	2.77	3987	4.20	350.5	
SD-01	5/3/2011	--	12.86	2.10	4162	9.31	488.9	Seep above Pond 4 and below the wind tower up-slope of the Crusher Road
	5/20/2011	0.001	--	--	--	--	--	
	5/24/2011	--	15.69	2.52	4000	6.11	504.1	
SD-02	5/3/2011	--	7.68	2.24	1100	6.74	466.5	Seep on the south side of the pit on the 5th bench up from the bottom just below the high wall
	5/19/2011	0.005	8.17	4.69	598	5.45	147.3	
SD-03	5/3/2011		7.05	2.98	1050	9.33	435.1	Seep in the 4-inch pipe on the uppermost v-ditch near MW-04
	5/19/2011	--	7.75	3.44	771	7.35	368.7	
SD-05	6/9/2011	--	12.09	3.81	1448	8.16	193.5	Lower reach of Upper Aspen Seep
SD-06	10/25/2011	--	8.77	7.35	2037	11.85	-0.3	Source of western feeder area to saturated ground on LCBL
SD-06A	10/24/2011	--	8.38	7.62	1982	11.67	208.5	Mid-slope in western feeder area to saturated ground on LCBL
SD-06B	5/13/2011	0.245	--	--	--	--	--	Flowing channel parallel to saturated ground on Nevada access road
	5/18/2011	--	9.41	7.91	1086	82.60	-45.8	
	10/24/2011	--	8.31	8.02	1021	14.08	144.1	
SD-07	10/24/2011	--	9.17	3.73	1991	10.34	216.0	Source of eastern feeder area to saturated ground on LCBL
SD-07A	5/18/2011	0.01	10.29	3.89	1346	68.3[2]	206.4	Mid-slope in saturated ground on the LCBL east/northeast of PZ-05A, downgradient of SD-07
	10/24/2011	--	8.48	3.65	2001	14.16	333.3	
SD-07B	5/18/2011	--	11.94	4.82	1367	62.1[2]	120.7	Mid-slope in saturated ground on the LCBL east/northeast of PZ-05A
	10/24/2011	--	7.11	3.69	2218	14.88	334.0	
SD-07C	10/24/2011	--	6.45	3.90	2054	12.41	305.5	Bottom of eastern feeder area to saturated ground on LCBL
SD-07D	10/24/2011	--	7.79	4.22	2102	9.45	294.5	Immediate source of saturated ground next to Nevada access road
SD-07E	10/25/2011	--	10.04	4.45	2110	12.90	220.7	Ponded area on saturated ground next to road
SD-08	10/24/2011	--	9.22	8.15	1913	10.31	51.3	Seep below bottom of wetland downgradient of SD-14
SD-08A	10/24/2011	--	8.70	8.28	1930	12.20	46.1	Toe of LCBL approximately 1,000 feet up-slope of the Leviathan Creek waterfall located at the base of Hairpin turn
SD-09	5/19/2011	0.002	6.63	3.16	2074	3.17	327.8	Seep along east side of Leviathan Mine Road above Pond 1
SD-10	10/24/2011	--	9.76	4.84	1943	5.98	200.8	Seep feeding the ephemeral flowing wetland area on the LCBL downgradient of NV access road
SD-10A	5/19/2011	0.001	8.35	6.16	1423	6.67	-24.4	Ephemeral flowing wetland area on LCBL downgradient of Nevada access road
	10/24/2011	--	10.74	5.71	2017	9.20	207.1	

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SURFACE WATER CHARACTERIZATION - FLOW RATES AND FIELD WATER QUALITY PARAMETERS
Leviathan Mine Site
Alpine County, California

Location[1]	Sample Date	Flow (cfs)	Temperature (°C)	pH (su)	Specific Electrical Conductance (µS/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction Potential (mV)	Location Description
SD-11	5/19/2011	0.001	8.58	7.11	1478	7.74	-20.0	Secondary LCBL seep downstream of waterfall into Aspen Creek waterfall, directly west of the hairpin turn
SD-11A	5/19/2011	0.002	11.50	7.45	1655	7.65	-43.3	Downgradient of SD-11
SD-12	5/20/2011	0.118	--	--	--	--	--	Lower Tributary immediately above the concrete-channelized portion
	5/24/2011	--	6.55	6.96	170	8.82	102.5	
SD-13	5/20/2011	0.003	--	--	--	--	--	Seep located immediately above the concrete-channelized portion of the Lower Tributary
	5/24/2011	--	7.42	6.92	241	5.77	93.6	
SD-14	10/24/2011	--	9.69	8.06	1914	12.10	61.4	Bottom of wetland downgradient of SW-17
SD-15	10/24/2011	--	10.73	7.63	188	9.09	38.1	Campsite Seep above road approximately 1,500 feet north of the Aspen gate
SD-16	5/19/2011	--	7.89	7.55	113	9.28	-35.0	Tributary into Leviathan Creek at the Beaver Pond below the confluence with 4L Creek and above the confluence of Aspen Creek
	5/20/2011	0.152	--	--	--	--	--	
	6/9/2011	0.001	--	--	--	--	--	
SD-17	6/9/2011	--	15.95	4.44	1506	6.05	321.9	Secondary seep down-gradient of Upper Aspen Seep near Aspen Creek
SD-17A	10/26/2011	--	5.21	4.66	1315	12.59	244.6	Wetland downgradient of SD-17 and Aspen Seep near Aspen Creek
SD-19	10/25/2011	--	6.17	6.70	1214	8.77	-19.3	Wetland on Leviathan side, upstream of confluence of Aspen and Leviathan Creeks
SD-19A	10/25/2011	--	7.61	7.03	604	12.20	-42.3	Wetland on Leviathan side, upstream of confluence of Aspen and Leviathan Creeks, down-gradient of SD-19
SW-01	10/26/2011	--	1.65	8.00	142	19.31	76.2	Leviathan Creek upstream of Leviathan Mine collocated with USGS flow gage at Station 1 and storm water monitoring station ST-1
SW-04	5/20/2011	0.806	--	--	--	--	--	Upper Tributary immediately above the concrete-channelized portion
	5/24/2011	--	10.53	6.21	68	7.92	66.9	
	10/26/2011	--	4.35	6.47	249	4.79	335.3	
SW-11	10/25/2011	--	4.86	7.47	732	14.67	-33.9	Leviathan Creek just upstream of the confluence with 4L Creek (SW-12)
SW-12	10/25/2011	--	5.53	7.26	463	14.71	4.0	4L Creek just upstream of the confluence with Leviathan Creek
SW-14	5/19/2011	--	8.30	7.58	553	7.89	-7.9	Beaver Pond (west side of Leviathan Creek)
	10/24/2011	--	9.05	6.10	1591	8.25	97.6	
SW-15	10/25/2011	--	7.87	7.00	1536	13.16	-40.3	Leviathan Creek above Aspen Creek collocated with USGS flow gage at Station 15
SW-16	5/19/2011	--	7.89	7.55	113	9.28	-35.0	Leviathan Creek, downstream of confluence with Aspen Creek
	10/25/2011	--	8.69	7.57	834	12.01	-65.0	
SW-17	5/13/2011	0.08	--	--	--	--	--	Flowing water in wetland approximately 10 feet downstream of the culvert that crosses the Nevada access road near the saturated ground
	5/18/2011	--	9.70	7.81	1117	73.9[2]	-19.5	
	10/24/2011	--	8.79	7.97	1885	11.48	71.3	
SW-18	10/24/2011	--	11.62	7.86	191	9.21	32.7	Aspen Creek, above site collocated with USGS flow gage at Station 22
SW-19	6/9/2011	0.071	18.58	8.21	180	7.85	25.7	Culvert on Aspen access road approximately 1,500 feet north of Aspen gate

Notes:
1. Locations shown on Figures 2-1 and 2-2.
2. Units of measure in percent.

Abbreviations:
°C = degrees Celsius
µS/cm = microsiemens per centimeter
-- = not measured
cfs = cubic feet per second
LCBL = Leviathan Creek Basin Landslide
mg/L = milligrams per liter
mV = millivolts
su = standard units
USGS = U.S. Geological Survey