DEPARTMENT OF THE ARMY
WASHINGTON AQUEDUCT
U.S. ARMY CORPS OF ENGINEERS, BALTIMORE DISTRICT
5900 MACARTHUR BOULEVARD, N.W.
WASHINGTON, D.C. 20016-2514

July 9, 2018

Plant Operations Branch

Ms. Karen Crumlish, Branch Chief
Drinking Water Branch (3WP21)
Water Protection Division
U.S. EPA Region III
1650 Arch Street
Philadelphia, PA 19103-2029

Enclosed are the Washington Aqueduct's water quality data for the month of June 2018.

If you require any additional information, please contact Mr. Mel Tesema at (202) 764-2701.

Sincerely,

Thomas P. Jacobus
General Manager

Enclosure: Washington Aqueduct Water Quality Data

U.S. Army Corps of Engineers
Washington Aqueduct
5900 MacArthur Blvd., NW
Washington, DC 20016-2514

June 2018

Water Quality Data

Washington Aqueduct Laboratory Analytical Data

01 June 2018 To: 30 June 2018

Parameter	Raw Water			Dalecarlia Finished			McMillan Finished		
	MAX	MIN	AVG	MAX	MIN	AVG	MAX	MIN	AVG
Alkalinity as $CaCO_3$	92	64	77	87	61	75	74	58	65
Ammonia, Total	0.09	ND	0.05	1.1	0.63	0.83	0.84	0.63	0.75
Calcium	38	25	31	42	31	37	35	31	32
Conductivity	293	188	231	327	246	291	327	286	301
Fluoride	ND	ND	ND	0.78	0.67	0.74	0.76	0.66	0.72
Magnesium	6	5	5	6	5	5	7	5	6
Temperature (^oF)	81	69	73	78	68	73	82	69	72
Total Hardness as $CaCO_3$	121	82	98	128	96	113	115	100	105

ND= Non-detect or < Reporting Limit (< 0.05 mg/L for Total Ammonia and < 0.1 mg/L for Fluoride)

Parameter	Date	EPA Limit	Reporting Limit	Raw Water	Dalecarlia Finished	McMillan Finished
Dissolved Solids	6/13/18			145	202	175
Suspended Solids	6/13/18			129	< 1	1
Total Solids	6/13/18			274	202	176
Bromide	6/6/18		0.04	ND	ND	ND
Chloride	6/6/18		2	10	13	25
Nitrate as N	6/6/18	10	0.2	0.97	0.78	1.3
Nitrite as N	6/6/18	1	0.02	ND	ND	ND
Orthophosphate as PO_4	6/6/18		0.3	ND	See plant orthophosphate page	
Perchlorate	6/6/18		0.05	0.14	0.17	0.22
Sulfate	6/6/18		5	13	36	38

ND= Non-detect or < Reporting Limit

All results are in mg/L except perchlorate. Perchlorate results are in ug/L.

Sodium

Date Collected	Dalecarlia Finished (mg/L)	McMillan Finished (mg/L)
6/5/18	22.5	20.0
6/12/18	15.9	20.1
6/19/18	14.8	19.9
6/26/18	13.1	21.6

Washington Aqueduct Laboratory Analytical Data

01 June 2018 To: 30 June 2018

Summary for TOC

	6/4/18*	6/11/18	6/18/18	6/25/18
Raw Water Alkalinity	74	83	86	72
Raw Water Intake TOC	5.98	2.95	2.89	5.40
% Required Removal	35.0	25.0	25.0	35.0
#12 Dalecarlia Settled TOC	3.25	2.35	1.99	2.73
#15 Dalecarlia Filtered TOC	3.14	2.26	2.00	2.69
% Dalecarlia Removal	47.5	23.4	30.8	50.2
Removal Ratio	1.36	0.94	1.23	1.43
F McMillan Settled TOC	2.52	2.38	2.10	2.39
G McMillan Filtered TOC	2.41	2.25	2.00	2.20
% McMillan Removal	59.7	23.7	30.8	59.3
Removal Ratio	1.71	0.95	1.23	1.69

All results are in mg/L unless otherwise noted

* Raw water TOC is a weighted average of Great Falls and Little Falls.
6/4/18 TOC: GF 5.98 mg/L (61.1% flow); LF 5.97 mg/L (38.9% flow)

TOC removals are calculated as follows:
Dalecarlia removals are based on samples collected 2 days after Great Falls sample collection.
McMillan removals are based on samples collected 7 days after Great Falls sample collection.

TOC Removal Compliance Calculations. Compliance is achieved when RAA removal ratio $\geq$ 1

2018 Dalecarlia Month	Removal Ratio	Quarterly Avg. Ratio	RAA Ratio
January	1.53		
February	1.52		
March	1.27	1.44	1.33
April	1.47		
May	1.27		
June	1.24	1.33	1.32
July			
August			
September			
October			
November			
December			

2018 McMillan Month	Removal Ratio	Quarterly Avg. Ratio	RAA Ratio
January	1.22		
February	1.55		
March	1.27	1.35	1.45
April	1.42		
May	1.04		
June	1.39	1.28	1.43
July			
August			
September			
October			
November			
December			

Washington Aqueduct Laboratory Analytical Data

01 June 2018 To: 30 June 2018

Trihalomethane Data by EPA Method 524.2

Sample Location	Dalecarlia Finished	McMillan Finished
Sample Date	6/13/2018	6/13/2018
Analysis Date	6/14/2018	6/15/2018
Units	ug/L	ug/L
Chloroform	26.4	40.0
Bromodichloromethane	8.8	9.4
Chlorodibromomethane	1.3	1.1
Bromoform	ND	ND
Total THMs	37	51

Reporting limit is 0.5 ug/L

2018 Washington Aqueduct Yearly Trihalomethane Data

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	LRA*
Dalecarlia Finished	22	19	16	25	34	37							33
McMillan Finished	20	17	17	25	42	51							38

*LRA = Annual Location Running Average

Washington Aqueduct Laboratory Analytical Data
01 June 2018 To: 30 June 2018

Volatile Organic Compounds (VOCs) Data by EPA Method 524.2

Sample Location	Reporting Limit	Dalecarlia Finished	McMillan Finished
Sample Date		6/13/2018	6/13/2018
Analysis Date		6/14/2018	6/15/2018
Units	ug/L	ug/L	ug/L
Benzene	0.5	ND	ND
Bromobenzene	0.5	ND	ND
Bromochloromethane	0.5	ND	ND
Bromodichloromethane	0.5	8.8	9.4
Bromoform	0.5	ND	ND
tert-Butylbenzene	0.5	ND	ND
sec-Butylbenzene	0.5	ND	ND
n-Butylbenzene	0.5	ND	ND
Carbon tetrachloride	0.5	ND	ND
Chlorobenzene	0.5	ND	ND
Chloroethane	2	ND	ND
Chloroform	0.5	26.4	40.0
Chloromethane	0.5	ND	ND
2-Chlorotoluene	0.5	ND	ND
4-Chlorotoluene	0.5	ND	ND
1,2-DiBr-3-Clpropane (DBCP)	0.5	ND	ND
Dibromochloromethane	0.5	1.3	1.1
1,2-Dibromoethane (EDB)	0.5	ND	ND
Dibromomethane	0.5	ND	ND
1,3-Dichlorobenzene	0.5	ND	ND
1,4-Dichlorobenzene	0.5	ND	ND
1,2-Dichlorobenzene	0.5	ND	ND
Dichlorodifluoromethane	0.5	ND	ND
1,1-Dichloroethane	0.5	ND	ND
1,2-Dichloroethane	0.5	ND	ND
trans-1,2-Dichloroethylene	0.5	ND	ND
cis-1,2-Dichloroethylene	0.5	ND	ND
1,1-Dichloroethylene	0.5	ND	ND
1,3-Dichloropropane	0.5	ND	ND
2,2-Dichloropropane	0.5	ND	ND
1,2-Dichloropropane	0.5	ND	ND
trans-1,3-Dichloropropene	0.5	ND	ND
cis-1,3-Dichloropropen	0.5	ND	ND
1,1-Dichloropropene	0.5	ND	ND
Ethylbenzene	0.5	ND	ND
Hexachlorobutadiene	0.5	ND	ND
Isopropylbenzene	0.5	ND	ND
p-Isopropyltoluene	0.5	ND	ND
Naphthalene	0.5	ND	ND
n-Propylbenzene	0.5	ND	ND
Styrene	0.5	ND	ND
1,1,1,2-Tetrachloroethane	0.5	ND	ND
1,1,2,2-Tetrachloroethane	0.5	ND	ND
Tetrachloroethylene	0.5	ND	ND
Toluene	0.5	ND	ND
1,2,3-Trichlorobenzene	0.5	ND	ND
1,2,4-Trichlorobenzene	0.5	ND	ND

Washington Aqueduct Laboratory Analytical Data
01 June 2018 To: 30 June 2018

Volatile Organic Compounds (VOCs) Data by EPA Method 524.2 continued

Sample Location	Reporting Limit	Dalecarlia Finished	McMillan Finished
Sample Date		6/13/2018	6/13/2018
Analysis Date		6/14/2018	6/15/2018
Units	ug/L	ug/L	ug/L
1,1,1-Trichloroethane	0.5	ND	ND
1,1,2-Trichloroethane	0.5	ND	ND
Trichloroethylene	0.5	ND	ND
Trichlorofluoromethane	0.5	ND	ND
1,2,3-Trichloropropane	0.5	ND	ND
1,2,4-Trimethylbenzene	0.5	ND	ND
1,3,5-Trimethylbenzene	0.5	ND	ND
Vinyl chloride	0.5	ND	ND
m & p-Xylene	0.5	ND	ND
o-Xylene	0.5	ND	ND
Total THMs	0.5	37	51
Methylene Chloride	0.5	ND	ND

ND= Non-detect or < Reporting Limit
NA = Not Available

Washington Aqueduct Laboratory Analytical Data

01 June 2018 To: 30 June 2018

Summary for Metals Analysis by Method EPA 200.8

Parameter (all results are in mg/L)	EPA Limit	Reporting Limit	Raw	Dalecarlia Finished	McMillan Finished
Aluminum		0.01	1.40	0.028	0.029
Antimony	0.006	0.0002	ND	ND	ND
Arsenic	0.01	0.0002	ND	0.0002	ND
Barium	2	0.0002	0.072	0.034	0.038
Beryllium	0.004	0.0002	ND	ND	ND
Cadmium	0.005	0.0002	ND	ND	ND
Chromium	0.1	0.002	ND	ND	ND
Copper		0.0002	0.005	0.0008	0.007
Lead		0.0002	0.004	ND	ND
Lithium		0.0002	0.002	0.002	0.001
Manganese		0.0002	0.221	0.0007	0.0006
Mercury	0.002	0.0002	no data	ND	ND
Nickel		0.0005	0.006	0.0009	0.0005
Selenium	0.05	0.001	ND	ND	ND
Silver		0.01	ND	ND	ND
Strontium		0.0002	0.089	0.098	0.134
Thallium	0.002	0.0005	ND	ND	ND
Uranium	0.03	0.0002	0.0003	ND	ND
Zinc		0.0005	0.015	ND	ND

ND = Non-detect or < Reporting Limit

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1 800 566 LABS (1 800 566 5227)

Laboratory Hits

Report: 732717
Project: QUARTERLY
Group: Quarterly 2018

U.S. Army Corps of Engineers
Mike Chicoine
Washington Aqueduct
5900 MacArthur Blvd. NW
Washington, DC 20016

Samples Received on:
04/19/2018 1836

Analyzed	Analyte	Sample ID	Result	Federal MCL	Units	MRL
	201804190544	**18**				
04/29/2018 02:30	Bromodichloromethane		11		ug/L	0.5
04/29/2018 02:30	Chlorodibromomethane		2.7		ug/L	0.5
04/29/2018 02:30	Chloroform (Trichloromethane)		27		ug/L	0.5
05/12/2018 09:25	N-Nitroso-dimethylamine (NDMA)		2.3		ng/L	2
04/29/2018 02:30	Total THM		41	80	ug/L	0.5
	201804190546	**GF**				
05/01/2018 08:15	2,4-D		0.59	70	ug/L	0.1
05/01/2018 08:15	Dicamba		0.11		ug/L	0.1

SUMMARY OF POSITIVE DATA ONLY

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Laboratory Data

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U.S. Army Corps of Engineers
Mike Chicoine
Washington Aqueduct
5900 MacArthur Blvd. NW
Washington, DC 20016

Samples Received on:
04/19/2018 1836

Prepped	Analyzed	Prep Batch	Analytical Batch	Method	Analyte	Result	Units	MRL	Dilution
18 (201804190544)						**Sampled on 04/17/2018 0950**			
		EPA 505 - Organochlorine Pesticides/PCBs							
04/24/18	04/25/18 01:02	1085346	1086959	(EPA 505)	Alachlor (Alanex)	ND	ug/L	0.1	1
04/24/18	04/25/18 01:02	1085346	1086959	(EPA 505)	Aldrin	ND	ug/L	0.01	1
04/24/18	04/25/18 01:02	1085346	1086959	(EPA 505)	Chlordane	ND	ug/L	0.1	1
04/24/18	04/25/18 01:02	1085346	1086959	(EPA 505)	Dieldrin	ND	ug/L	0.01	1
04/24/18	04/25/18 01:02	1085346	1086959	(EPA 505)	Endrin	ND	ug/L	0.01	1
04/24/18	04/25/18 01:02	1085346	1086959	(EPA 505)	Heptachlor	ND	ug/L	0.01	1
04/24/18	04/25/18 01:02	1085346	1086959	(EPA 505)	Heptachlor Epoxide	ND	ug/L	0.01	1
04/24/18	04/25/18 01:02	1085346	1086959	(EPA 505)	Lindane (gamma-BHC)	ND	ug/L	0.01	1
04/24/18	04/25/18 01:02	1085346	1086959	(EPA 505)	Methoxychlor	ND	ug/L	0.05	1
04/24/18	04/25/18 01:02	1085346	1086959	(EPA 505)	PCB 1016 Aroclor	ND	ug/L	0.08	1
04/24/18	04/25/18 01:02	1085346	1086959	(EPA 505)	PCB 1221 Aroclor	ND	ug/L	0.1	1
04/24/18	04/25/18 01:02	1085346	1086959	(EPA 505)	PCB 1232 Aroclor	ND	ug/L	0.1	1
04/24/18	04/25/18 01:02	1085346	1086959	(EPA 505)	PCB 1242 Aroclor	ND	ug/L	0.1	1
04/24/18	04/25/18 01:02	1085346	1086959	(EPA 505)	PCB 1248 Aroclor	ND	ug/L	0.1	1
04/24/18	04/25/18 01:02	1085346	1086959	(EPA 505)	PCB 1254 Aroclor	ND	ug/L	0.1	1
04/24/18	04/25/18 01:02	1085346	1086959	(EPA 505)	PCB 1260 Aroclor	ND	ug/L	0.1	1
04/24/18	04/25/18 01:02	1085346	1086959	(EPA 505)	Total PCBs	ND	ug/L	0.1	1
04/24/18	04/25/18 01:02	1085346	1086959	(EPA 505)	Toxaphene	ND	ug/L	0.5	1
04/24/18	04/25/18 01:02	1085346	1086959	(EPA 505)	Tetrachlorometaxylene	105	%		1
		EPA 515.4 - Chlorophenoxy Herbicides							
04/27/18	05/01/18 07:21	1086200	1086915	(EPA 515.4)	2,4,5-T	ND	ug/L	0.2	1
04/27/18	05/01/18 07:21	1086200	1086915	(EPA 515.4)	2,4,5-TP (Silvex)	ND	ug/L	0.2	1
04/27/18	05/01/18 07:21	1086200	1086915	(EPA 515.4)	2,4-D	ND	ug/L	0.1	1
04/27/18	05/01/18 07:21	1086200	1086915	(EPA 515.4)	2,4-DB	ND	ug/L	2	1
04/27/18	05/01/18 07:21	1086200	1086915	(EPA 515.4)	3,5-Dichlorobenzoic acid	ND	ug/L	0.5	1
04/27/18	05/01/18 07:21	1086200	1086915	(EPA 515.4)	Acifluorfen	ND	ug/L	0.2	1
04/27/18	05/01/18 07:21	1086200	1086915	(EPA 515.4)	Bentazon	ND	ug/L	0.5	1
04/27/18	05/01/18 07:21	1086200	1086915	(EPA 515.4)	Dalapon	ND	ug/L	1	1
04/27/18	05/01/18 07:21	1086200	1086915	(EPA 515.4)	Dicamba	ND	ug/L	0.1	1
04/27/18	05/01/18 07:21	1086200	1086915	(EPA 515.4)	Dichlorprop	ND	ug/L	0.5	1
04/27/18	05/01/18 07:21	1086200	1086915	(EPA 515.4)	Dinoseb	ND	ug/L	0.2	1
04/27/18	05/01/18 07:21	1086200	1086915	(EPA 515.4)	Pentachlorophenol	ND	ug/L	0.04	1
04/27/18	05/01/18 07:21	1086200	1086915	(EPA 515.4)	Picloram	ND	ug/L	0.1	1
04/27/18	05/01/18 07:21	1086200	1086915	(EPA 515.4)	Tot DCPA Mono&Diacid Degradate	ND	ug/L	0.1	1
04/27/18	05/01/18 07:21	1086200	1086915	(EPA 515.4)	2,4-Dichlorophenyl acetic acid	115	%		1

Rounding on totals after summation.
(c) - indicates calculated results

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Laboratory Data

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Samples Received on:
04/19/2018 1836

Prepped	Analyzed	Prep Batch	Analytical Batch	Method	Analyte	Result	Units	MRL	Dilution
04/27/18	05/01/18 07:21	1086200	1086915	(EPA 515.4)	4,4-Dibromooctafluorobiphenyl	88	%		1
		EPA 551.1 - EDB/DBCP/HAN by EPA 551.1							
04/26/18	04/28/18 11:08	1085965	1086292	(EPA 551.1)	Dibromochloropropane (DBCP)	ND	ug/L	0.01	1
04/26/18	04/28/18 11:08	1085965	1086292	(EPA 551.1)	Ethylene Dibromide (EDB)	ND	ug/L	0.01	1
04/26/18	04/28/18 11:08	1085965	1086292	(EPA 551.1)	1,2-Dibromopropane	104	%		1
		EPA 525.2 - Semivolatiles by GCMS							
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	2,4-DDD	ND	ug/L	0.1	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	2,4-DDE	ND	ug/L	0.1	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	2,4-DDT	ND	ug/L	0.1	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	2,4-Dinitrotoluene	ND	ug/L	0.1	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	2,6-Dinitrotoluene	ND	ug/L	0.1	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	4,4-DDD	ND	ug/L	0.1	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	4,4-DDE	ND	ug/L	0.1	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	4,4-DDT	ND	ug/L	0.1	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	Acenaphthene	ND	ug/L	0.1	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	Acenaphthylene	ND	ug/L	0.1	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	Acetochlor	ND	ug/L	0.1	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	Alachlor	ND	ug/L	0.05	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	Aldrin	ND (L4)	ug/L	0.05	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	Alpha-BHC	ND	ug/L	0.1	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	alpha-Chlordane	ND	ug/L	0.05	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	Anthracene	ND	ug/L	0.02	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	Atrazine	ND	ug/L	0.05	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	Benz(a)Anthracene	ND	ug/L	0.05	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	Benzo(a)pyrene	ND	ug/L	0.02	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	Benzo(b)Fluoranthene	ND	ug/L	0.02	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	Benzo(g,h,i)Perylene	ND	ug/L	0.05	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	Benzo(k)Fluoranthene	ND	ug/L	0.02	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	Beta-BHC	ND	ug/L	0.1	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	Bromacil	ND	ug/L	0.2	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	Butachlor	ND	ug/L	0.05	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	Butylbenzylphthalate	ND	ug/L	0.5	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	Caffeine by method 525mod	ND	ug/L	0.05	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	Chlorobenzilate	ND	ug/L	0.1	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	Chloroneb	ND	ug/L	0.1	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	Chlorothalonil(Draconil,Bravo)	ND	ug/L	0.1	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	Chlorpyrifos (Dursban)	ND	ug/L	0.05	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	Chrysene	ND	ug/L	0.02	1

Rounding on totals after summation.
(c) - indicates calculated results

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Samples Received on:
04/19/2018 1836

Prepped	Analyzed	Prep Batch	Analytical Batch	Method	Analyte	Result	Units	MRL	Dilution
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	Delta-BHC	ND	ug/L	0.1	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	Di-(2-Ethylhexyl)adipate	ND	ug/L	0.6	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	Di(2-Ethylhexyl)phthalate	ND	ug/L	0.6	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	Diazinon (Qualitative)	ND (R7)	ug/L	0.1	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	Dibenz(a,h)Anthracene	ND (VC)	ug/L	0.05	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	Dichlorvos (DDVP)	ND	ug/L	0.05	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	Dieldrin	ND	ug/L	0.2	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	Diethylphthalate	ND	ug/L	0.5	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	Dimethoate	ND	ug/L	0.1	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	Dimethylphthalate	ND	ug/L	0.5	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	Di-n-Butylphthalate	ND	ug/L	1	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	Di-N-octylphthalate	ND	ug/L	0.1	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	Endosulfan I (Alpha)	ND	ug/L	0.1	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	Endosulfan II (Beta)	ND (LE)	ug/L	0.1	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	Endosulfan Sulfate	ND	ug/L	0.1	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	Endrin	ND	ug/L	0.2	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	Endrin Aldehyde	ND	ug/L	0.1	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	EPTC	ND	ug/L	0.1	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	Fluoranthene	ND	ug/L	0.1	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	Fluorene	ND	ug/L	0.05	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	gamma-Chlordane	ND	ug/L	0.05	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	Heptachlor	ND	ug/L	0.04	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	Heptachlor Epoxide (isomer B)	ND	ug/L	0.05	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	Hexachlorobenzene	ND	ug/L	0.05	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	Hexachlorocyclopentadiene	ND	ug/L	0.05	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	Indeno(1,2,3,c,d)Pyrene	ND (VC,LK)	ug/L	0.05	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	Isophorone	ND	ug/L	0.5	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	Lindane	ND	ug/L	0.04	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	Malathion	ND	ug/L	0.1	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	Methoxychlor	ND	ug/L	0.1	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	Metolachlor	ND	ug/L	0.05	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	Metribuzin	ND	ug/L	0.05	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	Molinate	ND	ug/L	0.1	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	Naphthalene	ND	ug/L	0.3	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	Parathion	ND	ug/L	0.1	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	Pendimethalin	ND	ug/L	0.1	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	Pentachlorophenol	ND	ug/L	1	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	Permethrin (mixed isomers)	ND	ug/L	0.2	1

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Laboratory Data

Report: 732717
Project: QUARTERLY
Group: Quarterly 2018

U.S. Army Corps of Engineers
Mike Chicoine
Washington Aqueduct
5900 MacArthur Blvd. NW
Washington, DC 20016

Samples Received on:
04/19/2018 1836

Prepped	Analyzed	Prep Batch	Analytical Batch	Method	Analyte	Result	Units	MRL	Dilution
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	Phenanthrene	ND	ug/L	0.04	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	Propachlor	ND	ug/L	0.05	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	Pyrene	ND	ug/L	0.05	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	Simazine	ND	ug/L	0.05	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	Terbacil	ND	ug/L	0.1	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	Terbuthylazine	ND	ug/L	0.1	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	Thiobencarb (ELAP)	ND	ug/L	0.2	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	trans-Nonachlor	ND	ug/L	0.05	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	Trifluralin	ND	ug/L	0.1	1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	1,3-Dimethyl-2-nitrobenzene	99	%		1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	Acenaphthene-d10	80	%		1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	Chrysene-d12	83	%		1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	Perylene-d12	92	%		1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	Phenanthrene-d10	82	%		1
04/27/18	05/02/18 0:42	1086117	1087997	(EPA 525.2)	Triphenylphosphate	108	%		1
		EPA 548.1 - Endothall							
04/20/18	05/01/18 19:24	1084811	1091134	(EPA 548.1)	Endothall	ND	ug/L	5	1
		EPA 521 - Nitrosamines by GCMS							
05/01/18	05/12/18 09:25	1087142	1090649	(EPA 521)	N-Nitrosodibutylamine (NDBA)	ND	ng/L	2	1
05/01/18	05/12/18 09:25	1087142	1090649	(EPA 521)	N-Nitrosodiethylamine (NDEA)	ND	ng/L	2	1
05/01/18	05/12/18 09:25	1087142	1090649	(EPA 521)	N-Nitroso-dimethylamine (NDMA)	2.3	ng/L	2	1
05/01/18	05/12/18 09:25	1087142	1090649	(EPA 521)	N-Nitrosodi-n-propylamine (NDPA)	ND	ng/L	2	1
05/01/18	05/12/18 09:25	1087142	1090649	(EPA 521)	N-Nitrosomethylethylamine (NMEA)	ND	ng/L	2	1
05/01/18	05/12/18 09:25	1087142	1090649	(EPA 521)	N-Nitrosopyrollidine (NPYR)	ND	ng/L	2	1
05/01/18	05/12/18 09:25	1087142	1090649	(EPA 521)	NDMA-D6	93	%		1
		EPA 547 - Glyphosate							
	04/23/18 20:53		1085460	(EPA 547)	Glyphosate	ND	ug/L	6	1
		EPA 531.2 - Aldicarbs							
	04/27/18 23:35		1086413	(EPA 531.2)	3-Hydroxycarbofuran	ND	ug/L	0.5	1
	04/27/18 23:35		1086413	(EPA 531.2)	Aldicarb (Temik)	ND	ug/L	0.5	1
	04/27/18 23:35		1086413	(EPA 531.2)	Aldicarb sulfone	ND	ug/L	0.5	1
	04/27/18 23:35		1086413	(EPA 531.2)	Aldicarb sulfoxide	ND	ug/L	0.5	1
	04/27/18 23:35		1086413	(EPA 531.2)	Baygon	ND	ug/L	0.5	1
	04/27/18 23:35		1086413	(EPA 531.2)	Carbaryl	ND	ug/L	0.5	1
	04/27/18 23:35		1086413	(EPA 531.2)	Carbofuran (Furadan)	ND	ug/L	0.5	1
	04/27/18 23:35		1086413	(EPA 531.2)	Methiocarb	ND	ug/L	0.5	1
	04/27/18 23:35		1086413	(EPA 531.2)	Methomyl	ND	ug/L	0.5	1
	04/27/18 23:35		1086413	(EPA 531.2)	Oxamyl (Vydate)	ND	ug/L	0.5	1

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	04/27/18 23:35		1086413	(EPA 531.2)	4-Bromo-3,5-dimethylphenyl-N-methylc arbamate	93	%		1
		EPA 549.2 - Diquat and Paraquat							
04/23/18	04/23/18 23:23	1085058	1085146	(EPA 549.2)	Diquat	ND	ug/L	0.4	1
04/23/18	04/23/18 23:23	1085058	1085146	(EPA 549.2)	Paraquat	ND	ug/L	2	1
		EPA 335.4 - Cyanide by manual distillation							
05/01/18	05/01/18 20:08	1085860	1087296	(EPA 335.4)	Cyanide by manual distillation	ND	mg/L	0.005	1
		EPA 1613B - 2,3,7,8-TCDD							
05/23/18	05/24/18 17:24			(EPA 1613B)	2,3,7,8-TCDD	ND	pg/L	4.8	1
		EPA 524.2 - Volatile Organics by GCMS							
04/28/18	04/29/18 02:30	1086625	1086642	(EPA 524.2)	1,1,1,2-Tetrachloroethane	ND	ug/L	0.5	1
04/28/18	04/29/18 02:30	1086625	1086642	(EPA 524.2)	1,1,1-Trichloroethane	ND	ug/L	0.5	1
04/28/18	04/29/18 02:30	1086625	1086642	(EPA 524.2)	1,1,2,2-Tetrachloroethane	ND	ug/L	0.5	1
04/28/18	04/29/18 02:30	1086625	1086642	(EPA 524.2)	1,1,2-Trichloroethane	ND	ug/L	0.5	1
04/28/18	04/29/18 02:30	1086625	1086642	(EPA 524.2)	1,1-Dichloroethane	ND	ug/L	0.5	1
04/28/18	04/29/18 02:30	1086625	1086642	(EPA 524.2)	1,1-Dichloroethylene	ND	ug/L	0.5	1
04/28/18	04/29/18 02:30	1086625	1086642	(EPA 524.2)	1,1-Dichloropropene	ND	ug/L	0.5	1
04/28/18	04/29/18 02:30	1086625	1086642	(EPA 524.2)	1,2,3-Trichlorobenzene	ND	ug/L	0.5	1
04/28/18	04/29/18 02:30	1086625	1086642	(EPA 524.2)	1,2,3-Trichloropropane	ND	ug/L	0.5	1
04/28/18	04/29/18 02:30	1086625	1086642	(EPA 524.2)	1,2,4-Trichlorobenzene	ND	ug/L	0.5	1
04/28/18	04/29/18 02:30	1086625	1086642	(EPA 524.2)	1,2,4-Trimethylbenzene	ND	ug/L	0.5	1
04/28/18	04/29/18 02:30	1086625	1086642	(EPA 524.2)	1,2-Dichloroethane	ND	ug/L	0.5	1
04/28/18	04/29/18 02:30	1086625	1086642	(EPA 524.2)	1,2-Dichloropropane	ND	ug/L	0.5	1
04/28/18	04/29/18 02:30	1086625	1086642	(EPA 524.2)	1,3,5-Trimethylbenzene	ND	ug/L	0.5	1
04/28/18	04/29/18 02:30	1086625	1086642	(EPA 524.2)	1,3-Dichloropropane	ND	ug/L	0.5	1
04/28/18	04/29/18 02:30	1086625	1086642	(EPA 524.2)	2,2-Dichloropropane	ND	ug/L	0.5	1
04/28/18	04/29/18 02:30	1086625	1086642	(EPA 524.2)	2-Butanone (MEK)	ND	ug/L	5	1
04/28/18	04/29/18 02:30	1086625	1086642	(EPA 524.2)	4-Methyl-2-Pentanone (MIBK)	ND	ug/L	5	1
04/28/18	04/29/18 02:30	1086625	1086642	(EPA 524.2)	Benzene	ND	ug/L	0.5	1
04/28/18	04/29/18 02:30	1086625	1086642	(EPA 524.2)	Bromobenzene	ND	ug/L	0.5	1
04/28/18	04/29/18 02:30	1086625	1086642	(EPA 524.2)	Bromochloromethane	ND	ug/L	0.5	1
04/28/18	04/29/18 02:30	1086625	1086642	(EPA 524.2)	Bromodichloromethane	11	ug/L	0.5	1
04/28/18	04/29/18 02:30	1086625	1086642	(EPA 524.2)	Bromoethane	ND	ug/L	0.5	1
04/28/18	04/29/18 02:30	1086625	1086642	(EPA 524.2)	Bromoform	ND	ug/L	0.5	1
04/28/18	04/29/18 02:30	1086625	1086642	(EPA 524.2)	Bromomethane (Methyl Bromide)	ND (LK)	ug/L	0.5	1
04/28/18	04/29/18 02:30	1086625	1086642	(EPA 524.2)	Carbon disulfide	ND	ug/L	0.5	1
04/28/18	04/29/18 02:30	1086625	1086642	(EPA 524.2)	Carbon Tetrachloride	ND	ug/L	0.5	1
04/28/18	04/29/18 02:30	1086625	1086642	(EPA 524.2)	Chlorobenzene	ND	ug/L	0.5	1
04/28/18	04/29/18 02:30	1086625	1086642	(EPA 524.2)	Chlorodibromomethane	2.7	ug/L	0.5	1

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Prepped	Analyzed	Prep Batch	Analytical Batch	Method	Analyte	Result	Units	MRL	Dilution
04/28/18	04/29/18 02:30	1086625	1086642	(EPA 524.2)	Chloroethane	ND	ug/L	0.5	1
04/28/18	04/29/18 02:30	1086625	1086642	(EPA 524.2)	Chloroform (Trichloromethane)	27	ug/L	0.5	1
04/28/18	04/29/18 02:30	1086625	1086642	(EPA 524.2)	Chloromethane(Methyl Chloride)	ND	ug/L	0.5	1
04/28/18	04/29/18 02:30	1086625	1086642	(EPA 524.2)	cis-1,2-Dichloroethylene	ND	ug/L	0.5	1
04/28/18	04/29/18 02:30	1086625	1086642	(EPA 524.2)	cis-1,3-Dichloropropene	ND	ug/L	0.5	1
04/28/18	04/29/18 02:30	1086625	1086642	(EPA 524.2)	Dibromomethane	ND	ug/L	0.5	1
04/28/18	04/29/18 02:30	1086625	1086642	(EPA 524.2)	Dichlorodifluoromethane	ND	ug/L	0.5	1
04/28/18	04/29/18 02:30	1086625	1086642	(EPA 524.2)	Dichloromethane	ND	ug/L	0.5	1
04/28/18	04/29/18 02:30	1086625	1086642	(EPA 524.2)	Di-isopropyl ether	ND	ug/L	3	1
04/28/18	04/29/18 02:30	1086625	1086642	(EPA 524.2)	Ethyl benzene	ND	ug/L	0.5	1
04/28/18	04/29/18 02:30	1086625	1086642	(EPA 524.2)	Hexachlorobutadiene	ND	ug/L	0.5	1
04/28/18	04/29/18 02:30	1086625	1086642	(EPA 524.2)	Isopropylbenzene	ND	ug/L	0.5	1
04/28/18	04/29/18 02:30	1086625	1086642	(EPA 524.2)	m,p-Xylenes	ND	ug/L	0.5	1
04/28/18	04/29/18 02:30	1086625	1086642	(EPA 524.2)	m-Dichlorobenzene (1,3-DCB)	ND	ug/L	0.5	1
04/28/18	04/29/18 02:30	1086625	1086642	(EPA 524.2)	Methyl Tert-butyl ether (MTBE)	ND	ug/L	0.5	1
04/28/18	04/29/18 02:30	1086625	1086642	(EPA 524.2)	Naphthalene	ND	ug/L	0.5	1
04/28/18	04/29/18 02:30	1086625	1086642	(EPA 524.2)	n-Butylbenzene	ND	ug/L	0.5	1
04/28/18	04/29/18 02:30	1086625	1086642	(EPA 524.2)	n-Propylbenzene	ND	ug/L	0.5	1
04/28/18	04/29/18 02:30	1086625	1086642	(EPA 524.2)	o-Chlorotoluene	ND	ug/L	0.5	1
04/28/18	04/29/18 02:30	1086625	1086642	(EPA 524.2)	o-Dichlorobenzene (1,2-DCB)	ND	ug/L	0.5	1
04/28/18	04/29/18 02:30	1086625	1086642	(EPA 524.2)	o-Xylene	ND	ug/L	0.5	1
04/28/18	04/29/18 02:30	1086625	1086642	(EPA 524.2)	p-Chlorotoluene	ND	ug/L	0.5	1
04/28/18	04/29/18 02:30	1086625	1086642	(EPA 524.2)	p-Dichlorobenzene (1,4-DCB)	ND	ug/L	0.5	1
04/28/18	04/29/18 02:30	1086625	1086642	(EPA 524.2)	p-Isopropyltoluene	ND	ug/L	0.5	1
04/28/18	04/29/18 02:30	1086625	1086642	(EPA 524.2)	sec-Butylbenzene	ND	ug/L	0.5	1
04/28/18	04/29/18 02:30	1086625	1086642	(EPA 524.2)	Styrene	ND	ug/L	0.5	1
04/28/18	04/29/18 02:30	1086625	1086642	(EPA 524.2)	tert-amyl Methyl Ether	ND	ug/L	3	1
04/28/18	04/29/18 02:30	1086625	1086642	(EPA 524.2)	tert-Butyl Ethyl Ether	ND	ug/L	3	1
04/28/18	04/29/18 02:30	1086625	1086642	(EPA 524.2)	tert-Butylbenzene	ND	ug/L	0.5	1
04/28/18	04/29/18 02:30	1086625	1086642	(EPA 524.2)	Tetrachloroethylene (PCE)	ND	ug/L	0.5	1
04/28/18	04/29/18 02:30	1086625	1086642	(EPA 524.2)	Toluene	ND	ug/L	0.5	1
04/28/18	04/29/18 02:30	1086625	1086642	(EPA 524.2)	Total 1,3-Dichloropropene	ND	ug/L	0.5	1
04/28/18	04/29/18 02:30	1086625	1086642	(EPA 524.2)	Total THM	41	ug/L	0.5	1
04/28/18	04/29/18 02:30	1086625	1086642	(EPA 524.2)	Total xylenes	ND	ug/L	0.5	1
04/28/18	04/29/18 02:30	1086625	1086642	(EPA 524.2)	trans-1,2-Dichloroethylene	ND	ug/L	0.5	1
04/28/18	04/29/18 02:30	1086625	1086642	(EPA 524.2)	trans-1,3-Dichloropropene	ND	ug/L	0.5	1
04/28/18	04/29/18 02:30	1086625	1086642	(EPA 524.2)	Trichloroethylene (TCE)	ND	ug/L	0.5	1
04/28/18	04/29/18 02:30	1086625	1086642	(EPA 524.2)	Trichlorofluoromethane	ND	ug/L	0.5	1

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U.S. Army Corps of Engineers
Mike Chicoine
Washington Aqueduct
5900 MacArthur Blvd. NW
Washington, DC 20016

Samples Received on:
04/19/2018 1836

Prepped	Analyzed	Prep Batch	Analytical Batch	Method	Analyte	Result	Units	MRL	Dilution
04/28/18	04/29/18 02:30	1086625	1086642	(EPA 524.2)	Trichlorotrifluoroethane(Freon 113)	ND	ug/L	0.5	1
04/28/18	04/29/18 02:30	1086625	1086642	(EPA 524.2)	Vinyl chloride (VC)	ND	ug/L	0.3	1
04/28/18	04/29/18 02:30	1086625	1086642	(EPA 524.2)	1,2-Dichloroethane-d4	103	%		1
04/28/18	04/29/18 02:30	1086625	1086642	(EPA 524.2)	4-Bromofluorobenzene	99	%		1
04/28/18	04/29/18 02:30	1086625	1086642	(EPA 524.2)	Toluene-d8	100	%		1
GF (201804190546)							**Sampled on 04/17/2018 0830**		
		EPA 515.4 - Chlorophenoxy Herbicides							
04/27/18	05/01/18 08:15	1086200	1086915	(EPA 515.4)	2,4,5-T	ND	ug/L	0.2	1
04/27/18	05/01/18 08:15	1086200	1086915	(EPA 515.4)	2,4,5-TP (Silvex)	ND	ug/L	0.2	1
04/27/18	05/01/18 08:15	1086200	1086915	(EPA 515.4)	2,4-D	0.59	ug/L	0.1	1
04/27/18	05/01/18 08:15	1086200	1086915	(EPA 515.4)	2,4-DB	ND	ug/L	2	1
04/27/18	05/01/18 08:15	1086200	1086915	(EPA 515.4)	3,5-Dichlorobenzoic acid	ND	ug/L	0.5	1
04/27/18	05/01/18 08:15	1086200	1086915	(EPA 515.4)	Acifluorfen	ND	ug/L	0.2	1
04/27/18	05/01/18 08:15	1086200	1086915	(EPA 515.4)	Bentazon	ND	ug/L	0.5	1
04/27/18	05/01/18 08:15	1086200	1086915	(EPA 515.4)	Dalapon	ND	ug/L	1	1
04/27/18	05/01/18 08:15	1086200	1086915	(EPA 515.4)	Dicamba	0.11	ug/L	0.1	1
04/27/18	05/01/18 08:15	1086200	1086915	(EPA 515.4)	Dichlorprop	ND	ug/L	0.5	1
04/27/18	05/01/18 08:15	1086200	1086915	(EPA 515.4)	Dinoseb	ND	ug/L	0.2	1
04/27/18	05/01/18 08:15	1086200	1086915	(EPA 515.4)	Pentachlorophenol	ND	ug/L	0.04	1
04/27/18	05/01/18 08:15	1086200	1086915	(EPA 515.4)	Picloram	ND	ug/L	0.1	1
04/27/18	05/01/18 08:15	1086200	1086915	(EPA 515.4)	Tot DCPA Mono&Diacid Degradate	ND	ug/L	0.1	1
04/27/18	05/01/18 08:15	1086200	1086915	(EPA 515.4)	2,4-Dichlorophenyl acetic acid	113	%		1
04/27/18	05/01/18 08:15	1086200	1086915	(EPA 515.4)	4,4-Dibromooctafluorobiphenyl	97	%		1
TRAVEL BLANK - HOLD (201804190547)							**Sampled on 04/17/2018 0950**		
		EPA 551.1 - EDB/DBCP/HAN by EPA 551.1							
04/26/18	04/28/18 11:32	1085965	1086292	(EPA 551.1)	Dibromochloropropane (DBCP)	NA	ug/L	0.01	1
04/26/18	04/28/18 11:32	1085965	1086292	(EPA 551.1)	Ethylene Dibromide (EDB)	NA	ug/L	0.01	1
04/26/18	04/28/18 11:32	1085965	1086292	(EPA 551.1)	1,2-Dibromopropane	NA	%		1
		EPA 524.2 - Volatile Organics by GCMS							
04/28/18	04/29/18 02:53	1086624	1086642	(EPA 524.2)	1,1,1,2-Tetrachloroethane	NA	ug/L	0.5	1
04/28/18	04/29/18 02:53	1086624	1086642	(EPA 524.2)	1,1,1-Trichloroethane	NA	ug/L	0.5	1
04/28/18	04/29/18 02:53	1086624	1086642	(EPA 524.2)	1,1,2,2-Tetrachloroethane	NA	ug/L	0.5	1
04/28/18	04/29/18 02:53	1086624	1086642	(EPA 524.2)	1,1,2-Trichloroethane	NA	ug/L	0.5	1
04/28/18	04/29/18 02:53	1086624	1086642	(EPA 524.2)	1,1-Dichloroethane	NA	ug/L	0.5	1
04/28/18	04/29/18 02:53	1086624	1086642	(EPA 524.2)	1,1-Dichloroethylene	NA	ug/L	0.5	1
04/28/18	04/29/18 02:53	1086624	1086642	(EPA 524.2)	1,1-Dichloropropene	NA	ug/L	0.5	1

Rounding on totals after summation.
(c) - indicates calculated results

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1 800 566 LABS (1 800 566 5227)

Laboratory Data

Report: 732717
Project: QUARTERLY
Group: Quarterly 2018

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Mike Chicoine
Washington Aqueduct
5900 MacArthur Blvd. NW
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Samples Received on:
04/19/2018 1836

Prepped	Analyzed	Prep Batch	Analytical Batch	Method	Analyte	Result	Units	MRL	Dilution
04/28/18	04/29/18 02:53	1086624	1086642	(EPA 524.2)	1,2,3-Trichlorobenzene	NA	ug/L	0.5	1
04/28/18	04/29/18 02:53	1086624	1086642	(EPA 524.2)	1,2,3-Trichloropropane	NA	ug/L	0.5	1
04/28/18	04/29/18 02:53	1086624	1086642	(EPA 524.2)	1,2,4-Trichlorobenzene	NA	ug/L	0.5	1
04/28/18	04/29/18 02:53	1086624	1086642	(EPA 524.2)	1,2,4-Trimethylbenzene	NA	ug/L	0.5	1
04/28/18	04/29/18 02:53	1086624	1086642	(EPA 524.2)	1,2-Dichloroethane	NA	ug/L	0.5	1
04/28/18	04/29/18 02:53	1086624	1086642	(EPA 524.2)	1,2-Dichloropropane	NA	ug/L	0.5	1
04/28/18	04/29/18 02:53	1086624	1086642	(EPA 524.2)	1,3,5-Trimethylbenzene	NA	ug/L	0.5	1
04/28/18	04/29/18 02:53	1086624	1086642	(EPA 524.2)	1,3-Dichloropropane	NA	ug/L	0.5	1
04/28/18	04/29/18 02:53	1086624	1086642	(EPA 524.2)	2,2-Dichloropropane	NA	ug/L	0.5	1
04/28/18	04/29/18 02:53	1086624	1086642	(EPA 524.2)	2-Butanone (MEK)	NA	ug/L	5	1
04/28/18	04/29/18 02:53	1086624	1086642	(EPA 524.2)	4-Methyl-2-Pentanone (MIBK)	NA	ug/L	5	1
04/28/18	04/29/18 02:53	1086624	1086642	(EPA 524.2)	Benzene	NA	ug/L	0.5	1
04/28/18	04/29/18 02:53	1086624	1086642	(EPA 524.2)	Bromobenzene	NA	ug/L	0.5	1
04/28/18	04/29/18 02:53	1086624	1086642	(EPA 524.2)	Bromochloromethane	NA	ug/L	0.5	1
04/28/18	04/29/18 02:53	1086624	1086642	(EPA 524.2)	Bromodichloromethane	NA	ug/L	0.5	1
04/28/18	04/29/18 02:53	1086624	1086642	(EPA 524.2)	Bromoethane	NA	ug/L	0.5	1
04/28/18	04/29/18 02:53	1086624	1086642	(EPA 524.2)	Bromoform	NA	ug/L	0.5	1
04/28/18	04/29/18 02:53	1086624	1086642	(EPA 524.2)	Bromomethane (Methyl Bromide)	NA	ug/L	0.5	1
04/28/18	04/29/18 02:53	1086624	1086642	(EPA 524.2)	Carbon disulfide	NA	ug/L	0.5	1
04/28/18	04/29/18 02:53	1086624	1086642	(EPA 524.2)	Carbon Tetrachloride	NA	ug/L	0.5	1
04/28/18	04/29/18 02:53	1086624	1086642	(EPA 524.2)	Chlorobenzene	NA	ug/L	0.5	1
04/28/18	04/29/18 02:53	1086624	1086642	(EPA 524.2)	Chlorodibromomethane	NA	ug/L	0.5	1
04/28/18	04/29/18 02:53	1086624	1086642	(EPA 524.2)	Chloroethane	NA	ug/L	0.5	1
04/28/18	04/29/18 02:53	1086624	1086642	(EPA 524.2)	Chloroform (Trichloromethane)	NA	ug/L	0.5	1
04/28/18	04/29/18 02:53	1086624	1086642	(EPA 524.2)	Chloromethane(Methyl Chloride)	NA	ug/L	0.5	1
04/28/18	04/29/18 02:53	1086624	1086642	(EPA 524.2)	cis-1,2-Dichloroethylene	NA	ug/L	0.5	1
04/28/18	04/29/18 02:53	1086624	1086642	(EPA 524.2)	cis-1,3-Dichloropropene	NA	ug/L	0.5	1
04/28/18	04/29/18 02:53	1086624	1086642	(EPA 524.2)	Dibromomethane	NA	ug/L	0.5	1
04/28/18	04/29/18 02:53	1086624	1086642	(EPA 524.2)	Dichlorodifluoromethane	NA	ug/L	0.5	1
04/28/18	04/29/18 02:53	1086624	1086642	(EPA 524.2)	Dichloromethane	NA	ug/L	0.5	1
04/28/18	04/29/18 02:53	1086624	1086642	(EPA 524.2)	Di-isopropyl ether	NA	ug/L	3	1
04/28/18	04/29/18 02:53	1086624	1086642	(EPA 524.2)	Ethyl benzene	NA	ug/L	0.5	1
04/28/18	04/29/18 02:53	1086624	1086642	(EPA 524.2)	Hexachlorobutadiene	NA	ug/L	0.5	1
04/28/18	04/29/18 02:53	1086624	1086642	(EPA 524.2)	Isopropylbenzene	NA	ug/L	0.5	1
04/28/18	04/29/18 02:53	1086624	1086642	(EPA 524.2)	m,p-Xylenes	NA	ug/L	0.5	1
04/28/18	04/29/18 02:53	1086624	1086642	(EPA 524.2)	m-Dichlorobenzene (1,3-DCB)	NA	ug/L	0.5	1
04/28/18	04/29/18 02:53	1086624	1086642	(EPA 524.2)	Methyl Tert-butyl ether (MTBE)	NA	ug/L	0.5	1
04/28/18	04/29/18 02:53	1086624	1086642	(EPA 524.2)	Naphthalene	NA	ug/L	0.5	1

Rounding on totals after summation.
(c) - indicates calculated results

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Laboratory Data

Report: 732717
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04/19/2018 1836

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04/28/18	04/29/18 02:53	1086624	1086642	(EPA 524.2)	n-Butylbenzene	NA	ug/L	0.5	1
04/28/18	04/29/18 02:53	1086624	1086642	(EPA 524.2)	n-Propylbenzene	NA	ug/L	0.5	1
04/28/18	04/29/18 02:53	1086624	1086642	(EPA 524.2)	o-Chlorotoluene	NA	ug/L	0.5	1
04/28/18	04/29/18 02:53	1086624	1086642	(EPA 524.2)	o-Dichlorobenzene (1,2-DCB)	NA	ug/L	0.5	1
04/28/18	04/29/18 02:53	1086624	1086642	(EPA 524.2)	o-Xylene	NA	ug/L	0.5	1
04/28/18	04/29/18 02:53	1086624	1086642	(EPA 524.2)	p-Chlorotoluene	NA	ug/L	0.5	1
04/28/18	04/29/18 02:53	1086624	1086642	(EPA 524.2)	p-Dichlorobenzene (1,4-DCB)	NA	ug/L	0.5	1
04/28/18	04/29/18 02:53	1086624	1086642	(EPA 524.2)	p-Isopropyltoluene	NA	ug/L	0.5	1
04/28/18	04/29/18 02:53	1086624	1086642	(EPA 524.2)	sec-Butylbenzene	NA	ug/L	0.5	1
04/28/18	04/29/18 02:53	1086624	1086642	(EPA 524.2)	Styrene	NA	ug/L	0.5	1
04/28/18	04/29/18 02:53	1086624	1086642	(EPA 524.2)	tert-amyl Methyl Ether	NA	ug/L	3	1
04/28/18	04/29/18 02:53	1086624	1086642	(EPA 524.2)	tert-Butyl Ethyl Ether	NA	ug/L	3	1
04/28/18	04/29/18 02:53	1086624	1086642	(EPA 524.2)	tert-Butylbenzene	NA	ug/L	0.5	1
04/28/18	04/29/18 02:53	1086624	1086642	(EPA 524.2)	Tetrachloroethylene (PCE)	NA	ug/L	0.5	1
04/28/18	04/29/18 02:53	1086624	1086642	(EPA 524.2)	Toluene	NA	ug/L	0.5	1
04/28/18	04/29/18 02:53	1086624	1086642	(EPA 524.2)	Total 1,3-Dichloropropene	NA	ug/L	0.5	1
04/28/18	04/29/18 02:53	1086624	1086642	(EPA 524.2)	Total THM	NA	ug/L	0.5	1
04/28/18	04/29/18 02:53	1086624	1086642	(EPA 524.2)	Total xylenes	NA	ug/L	0.5	1
04/28/18	04/29/18 02:53	1086624	1086642	(EPA 524.2)	trans-1,2-Dichloroethylene	NA	ug/L	0.5	1
04/28/18	04/29/18 02:53	1086624	1086642	(EPA 524.2)	trans-1,3-Dichloropropene	NA	ug/L	0.5	1
04/28/18	04/29/18 02:53	1086624	1086642	(EPA 524.2)	Trichloroethylene (TCE)	NA	ug/L	0.5	1
04/28/18	04/29/18 02:53	1086624	1086642	(EPA 524.2)	Trichlorofluoromethane	NA	ug/L	0.5	1
04/28/18	04/29/18 02:53	1086624	1086642	(EPA 524.2)	Trichlorotrifluoroethane(Freon 113)	NA	ug/L	0.5	1
04/28/18	04/29/18 02:53	1086624	1086642	(EPA 524.2)	Vinyl chloride (VC)	NA	ug/L	0.3	1
04/28/18	04/29/18 02:53	1086624	1086642	(EPA 524.2)	1,2-Dichloroethane-d4	NA	%		1
04/28/18	04/29/18 02:53	1086624	1086642	(EPA 524.2)	4-Bromofluorobenzene	NA	%		1
04/28/18	04/29/18 02:53	1086624	1086642	(EPA 524.2)	Toluene-d8	NA	%		1

Rounding on totals after summation.
(c) - indicates calculated results

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Laboratory Comments

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Flags Legend:

L4 - The associated blank spike recovery was below method acceptance limits.

LE - MRL Check recovery was above laboratory acceptance limits.

LK - The associated blank spike recovery was above method acceptance limits. This target analyte was not detected in the sample.

R7 - LFB/LFBD RPD exceeded the laboratory acceptance limit. Recovery met acceptance criteria.

VC - CCV is high biased, ND data are reportable as per TNI V1M4 1.7.2.e).i.

The Comments Report may be blank if there are no comments for this report.

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Laboratory Hits

Report: 735218
Project: QUARTERLY
Group: Quarterly 2018

U.S. Army Corps of Engineers
Mike Chicoine
Washington Aqueduct
5900 MacArthur Blvd. NW
Washington, DC 20016

Samples Received on:
04/19/2018 1853

Analyzed	Analyte	Sample ID	Result	Federal MCL	Units	MRL
	201804190545	**J**				
04/29/2018 02:52	Bromodichloromethane		8.5		ug/L	0.5
04/29/2018 02:52	Chlorodibromomethane		2.4		ug/L	0.5
04/29/2018 02:52	Chloroform (Trichloromethane)		16		ug/L	0.5
04/29/2018 02:52	Total THM		27	80	ug/L	0.5

SUMMARY OF POSITIVE DATA ONLY

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Laboratory Data

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Samples Received on:
04/19/2018 1853

Prepped	Analyzed	Prep Batch	Analytical Batch	Method	Analyte	Result	Units	MRL	Dilution
J (201804190545)						**Sampled on 04/17/2018 1205**			
		EPA 505 - Organochlorine Pesticides/PCBs							
04/24/18	04/25/18 01:26	1085346	1086959	(EPA 505)	Alachlor (Alanex)	ND	ug/L	0.1	1
04/24/18	04/25/18 01:26	1085346	1086959	(EPA 505)	Aldrin	ND	ug/L	0.01	1
04/24/18	04/25/18 01:26	1085346	1086959	(EPA 505)	Chlordane	ND	ug/L	0.1	1
04/24/18	04/25/18 01:26	1085346	1086959	(EPA 505)	Dieldrin	ND	ug/L	0.01	1
04/24/18	04/25/18 01:26	1085346	1086959	(EPA 505)	Endrin	ND	ug/L	0.01	1
04/24/18	04/25/18 01:26	1085346	1086959	(EPA 505)	Heptachlor	ND	ug/L	0.01	1
04/24/18	04/25/18 01:26	1085346	1086959	(EPA 505)	Heptachlor Epoxide	ND	ug/L	0.01	1
04/24/18	04/25/18 01:26	1085346	1086959	(EPA 505)	Lindane (gamma-BHC)	ND	ug/L	0.01	1
04/24/18	04/25/18 01:26	1085346	1086959	(EPA 505)	Methoxychlor	ND	ug/L	0.05	1
04/24/18	04/25/18 01:26	1085346	1086959	(EPA 505)	PCB 1016 Aroclor	ND	ug/L	0.08	1
04/24/18	04/25/18 01:26	1085346	1086959	(EPA 505)	PCB 1221 Aroclor	ND	ug/L	0.1	1
04/24/18	04/25/18 01:26	1085346	1086959	(EPA 505)	PCB 1232 Aroclor	ND	ug/L	0.1	1
04/24/18	04/25/18 01:26	1085346	1086959	(EPA 505)	PCB 1242 Aroclor	ND	ug/L	0.1	1
04/24/18	04/25/18 01:26	1085346	1086959	(EPA 505)	PCB 1248 Aroclor	ND	ug/L	0.1	1
04/24/18	04/25/18 01:26	1085346	1086959	(EPA 505)	PCB 1254 Aroclor	ND	ug/L	0.1	1
04/24/18	04/25/18 01:26	1085346	1086959	(EPA 505)	PCB 1260 Aroclor	ND	ug/L	0.1	1
04/24/18	04/25/18 01:26	1085346	1086959	(EPA 505)	Total PCBs	ND	ug/L	0.1	1
04/24/18	04/25/18 01:26	1085346	1086959	(EPA 505)	Toxaphene	ND	ug/L	0.5	1
04/24/18	04/25/18 01:26	1085346	1086959	(EPA 505)	Tetrachlorometaxylene	101	%		1
		EPA 515.4 - Chlorophenoxy Herbicides							
04/27/18	05/01/18 07:48	1086200	1086915	(EPA 515.4)	2,4,5-T	ND	ug/L	0.2	1
04/27/18	05/01/18 07:48	1086200	1086915	(EPA 515.4)	2,4,5-TP (Silvex)	ND	ug/L	0.2	1
04/27/18	05/01/18 07:48	1086200	1086915	(EPA 515.4)	2,4-D	ND	ug/L	0.1	1
04/27/18	05/01/18 07:48	1086200	1086915	(EPA 515.4)	2,4-DB	ND	ug/L	2	1
04/27/18	05/01/18 07:48	1086200	1086915	(EPA 515.4)	3,5-Dichlorobenzoic acid	ND	ug/L	0.5	1
04/27/18	05/01/18 07:48	1086200	1086915	(EPA 515.4)	Acifluorfen	ND	ug/L	0.2	1
04/27/18	05/01/18 07:48	1086200	1086915	(EPA 515.4)	Bentazon	ND	ug/L	0.5	1
04/27/18	05/01/18 07:48	1086200	1086915	(EPA 515.4)	Dalapon	ND	ug/L	1	1
04/27/18	05/01/18 07:48	1086200	1086915	(EPA 515.4)	Dicamba	ND	ug/L	0.1	1
04/27/18	05/01/18 07:48	1086200	1086915	(EPA 515.4)	Dichlorprop	ND	ug/L	0.5	1
04/27/18	05/01/18 07:48	1086200	1086915	(EPA 515.4)	Dinoseb	ND	ug/L	0.2	1
04/27/18	05/01/18 07:48	1086200	1086915	(EPA 515.4)	Pentachlorophenol	ND	ug/L	0.04	1
04/27/18	05/01/18 07:48	1086200	1086915	(EPA 515.4)	Picloram	ND	ug/L	0.1	1
04/27/18	05/01/18 07:48	1086200	1086915	(EPA 515.4)	Tot DCPA Mono&Diacid Degradate	ND	ug/L	0.1	1
04/27/18	05/01/18 07:48	1086200	1086915	(EPA 515.4)	2,4-Dichlorophenyl acetic acid	113	%		1

Rounding on totals after summation.
(c) - indicates calculated results

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Washington Aqueduct
5900 MacArthur Blvd. NW
Washington, DC 20016

Samples Received on:
04/19/2018 1853

Prepped	Analyzed	Prep Batch	Analytical Batch	Method	Analyte	Result	Units	MRL	Dilution
04/27/18	05/01/18 07:48	1086200	1086915	(EPA 515.4)	4,4-Dibromooctafluorobiphenyl	92	%		1
		EPA 551.1 - EDB/DBCP/HAN by EPA 551.1							
04/26/18	04/28/18 11:32	1085965	1086292	(EPA 551.1)	Dibromochloropropane (DBCP)	ND	ug/L	0.01	1
04/26/18	04/28/18 11:32	1085965	1086292	(EPA 551.1)	Ethylene Dibromide (EDB)	ND	ug/L	0.01	1
04/26/18	04/28/18 11:32	1085965	1086292	(EPA 551.1)	1,2-Dibromopropane	103	%		1
		EPA 525.2 - Semivolatiles by GCMS							
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	2,4-DDD	ND	ug/L	0.1	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	2,4-DDE	ND	ug/L	0.1	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	2,4-DDT	ND	ug/L	0.1	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	2,4-Dinitrotoluene	ND	ug/L	0.1	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	2,6-Dinitrotoluene	ND	ug/L	0.1	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	4,4-DDD	ND	ug/L	0.1	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	4,4-DDE	ND	ug/L	0.1	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	4,4-DDT	ND	ug/L	0.1	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	Acenaphthene	ND	ug/L	0.1	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	Acenaphthylene	ND	ug/L	0.1	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	Acetochlor	ND	ug/L	0.1	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	Alachlor	ND	ug/L	0.05	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	Aldrin	ND (L4)	ug/L	0.05	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	Alpha-BHC	ND	ug/L	0.1	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	alpha-Chlordane	ND	ug/L	0.05	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	Anthracene	ND	ug/L	0.02	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	Atrazine	ND	ug/L	0.05	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	Benz(a)Anthracene	ND	ug/L	0.05	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	Benzo(a)pyrene	ND	ug/L	0.02	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	Benzo(b)Fluoranthene	ND	ug/L	0.02	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	Benzo(g,h,i)Perylene	ND	ug/L	0.05	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	Benzo(k)Fluoranthene	ND	ug/L	0.02	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	Beta-BHC	ND	ug/L	0.1	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	Bromacil	ND	ug/L	0.2	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	Butachlor	ND	ug/L	0.05	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	Butylbenzylphthalate	ND	ug/L	0.5	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	Caffeine by method 525mod	ND	ug/L	0.05	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	Chlorobenzilate	ND	ug/L	0.1	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	Chloroneb	ND	ug/L	0.1	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	Chlorothalonil(Draconil,Bravo)	ND	ug/L	0.1	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	Chlorpyrifos (Dursban)	ND	ug/L	0.05	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	Chrysene	ND	ug/L	0.02	1

Rounding on totals after summation.
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1 800 566 LABS (1 800 566 5227)

Laboratory Data

Report: 735218
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Group: Quarterly 2018

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04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	Delta-BHC	ND	ug/L	0.1	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	Di-(2-Ethylhexyl)adipate	ND	ug/L	0.6	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	Di(2-Ethylhexyl)phthalate	ND	ug/L	0.6	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	Diazinon (Qualitative)	ND (R7)	ug/L	0.1	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	Dibenz(a,h)Anthracene	ND (VC)	ug/L	0.05	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	Dichlorvos (DDVP)	ND	ug/L	0.05	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	Dieldrin	ND	ug/L	0.2	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	Diethylphthalate	ND	ug/L	0.5	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	Dimethoate	ND	ug/L	0.1	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	Dimethylphthalate	ND	ug/L	0.5	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	Di-n-Butylphthalate	ND	ug/L	1	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	Di-N-octylphthalate	ND	ug/L	0.1	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	Endosulfan I (Alpha)	ND	ug/L	0.1	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	Endosulfan II (Beta)	ND (LE)	ug/L	0.1	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	Endosulfan Sulfate	ND	ug/L	0.1	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	Endrin	ND	ug/L	0.2	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	Endrin Aldehyde	ND	ug/L	0.1	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	EPTC	ND	ug/L	0.1	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	Fluoranthene	ND	ug/L	0.1	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	Fluorene	ND	ug/L	0.05	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	gamma-Chlordane	ND	ug/L	0.05	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	Heptachlor	ND	ug/L	0.04	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	Heptachlor Epoxide (isomer B)	ND	ug/L	0.05	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	Hexachlorobenzene	ND	ug/L	0.05	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	Hexachlorocyclopentadiene	ND	ug/L	0.05	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	Indeno(1,2,3,c,d)Pyrene	ND (VC,LK)	ug/L	0.05	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	Isophorone	ND	ug/L	0.5	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	Lindane	ND	ug/L	0.04	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	Malathion	ND	ug/L	0.1	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	Methoxychlor	ND	ug/L	0.1	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	Metolachlor	ND	ug/L	0.05	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	Metribuzin	ND	ug/L	0.05	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	Molinate	ND	ug/L	0.1	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	Naphthalene	ND	ug/L	0.3	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	Parathion	ND	ug/L	0.1	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	Pendimethalin	ND	ug/L	0.1	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	Pentachlorophenol	ND	ug/L	1	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	Permethrin (mixed isomers)	ND	ug/L	0.2	1

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04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	Phenanthrene	ND	ug/L	0.04	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	Propachlor	ND	ug/L	0.05	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	Pyrene	ND	ug/L	0.05	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	Simazine	ND	ug/L	0.05	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	Terbacil	ND	ug/L	0.1	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	Terbuthylazine	ND	ug/L	0.1	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	Thiobencarb (ELAP)	ND	ug/L	0.2	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	trans-Nonachlor	ND	ug/L	0.05	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	Trifluralin	ND	ug/L	0.1	1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	1,3-Dimethyl-2-nitrobenzene	100	%		1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	Acenaphthene-d10	96	%		1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	Chrysene-d12	104	%		1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	Perylene-d12	79	%		1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	Phenanthrene-d10	101	%		1
04/27/18	05/02/18 1:06	1086117	1087997	(EPA 525.2)	Triphenylphosphate	109	%		1
		EPA 548.1 - Endothall							
04/20/18	05/01/18 19:36	1084811	1091134	(EPA 548.1)	Endothall	ND	ug/L	5	1
		EPA 521 - Nitrosamines by GCMS							
05/01/18	05/10/18 08:34	1087142	1089786	(EPA 521)	N-Nitrosodibutylamine (NDBA)	ND	ng/L	2	1
05/01/18	05/10/18 08:34	1087142	1089786	(EPA 521)	N-Nitrosodiethylamine (NDEA)	ND	ng/L	2	1
05/01/18	05/10/18 08:34	1087142	1089786	(EPA 521)	N-Nitroso-dimethylamine (NDMA)	ND	ng/L	2	1
05/01/18	05/10/18 08:34	1087142	1089786	(EPA 521)	N-Nitrosodi-n-propylamine (NDPA)	ND	ng/L	2	1
05/01/18	05/10/18 08:34	1087142	1089786	(EPA 521)	N-Nitrosomethylethylamine (NMEA)	ND	ng/L	2	1
05/01/18	05/10/18 08:34	1087142	1089786	(EPA 521)	N-Nitrosopyrollidine (NPYR)	ND	ng/L	2	1
05/01/18	05/10/18 08:34	1087142	1089786	(EPA 521)	NDMA-D6	102	%		1
		EPA 547 - Glyphosate							
	04/23/18 21:06		1085460	(EPA 547)	Glyphosate	ND	ug/L	6	1
		EPA 531.2 - Aldicarbs							
	04/28/18 00:16		1086413	(EPA 531.2)	3-Hydroxycarbofuran	ND	ug/L	0.5	1
	04/28/18 00:16		1086413	(EPA 531.2)	Aldicarb (Temik)	ND	ug/L	0.5	1
	04/28/18 00:16		1086413	(EPA 531.2)	Aldicarb sulfone	ND	ug/L	0.5	1
	04/28/18 00:16		1086413	(EPA 531.2)	Aldicarb sulfoxide	ND	ug/L	0.5	1
	04/28/18 00:16		1086413	(EPA 531.2)	Baygon	ND	ug/L	0.5	1
	04/28/18 00:16		1086413	(EPA 531.2)	Carbaryl	ND	ug/L	0.5	1
	04/28/18 00:16		1086413	(EPA 531.2)	Carbofuran (Furadan)	ND	ug/L	0.5	1
	04/28/18 00:16		1086413	(EPA 531.2)	Methiocarb	ND	ug/L	0.5	1
	04/28/18 00:16		1086413	(EPA 531.2)	Methomyl	ND	ug/L	0.5	1
	04/28/18 00:16		1086413	(EPA 531.2)	Oxamyl (Vydate)	ND	ug/L	0.5	1

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	04/28/18 00:16		1086413	(EPA 531.2)	4-Bromo-3,5-dimethylphenyl-N-methylc arbamate	94	%		1
		EPA 549.2 - Diquat and Paraquat							
04/23/18	04/23/18 23:36	1085058	1085146	(EPA 549.2)	Diquat	ND	ug/L	0.4	1
04/23/18	04/23/18 23:36	1085058	1085146	(EPA 549.2)	Paraquat	ND	ug/L	2	1
		EPA 335.4 - Cyanide by manual distillation							
04/23/18	04/24/18 23:23	1084436	1084812	(EPA 335.4)	Cyanide by manual distillation	ND	mg/L	0.005	1
		EPA 1613B - 2,3,7,8-TCDD							
05/23/18	05/24/18 16:28			(EPA 1613B)	2,3,7,8-TCDD	ND	pg/L	4.7	1
		EPA 524.2 - Volatile Organics by GCMS							
04/28/18	04/29/18 02:52	1086625	1086642	(EPA 524.2)	1,1,1,2-Tetrachloroethane	ND	ug/L	0.5	1
04/28/18	04/29/18 02:52	1086625	1086642	(EPA 524.2)	1,1,1-Trichloroethane	ND	ug/L	0.5	1
04/28/18	04/29/18 02:52	1086625	1086642	(EPA 524.2)	1,1,2,2-Tetrachloroethane	ND	ug/L	0.5	1
04/28/18	04/29/18 02:52	1086625	1086642	(EPA 524.2)	1,1,2-Trichloroethane	ND	ug/L	0.5	1
04/28/18	04/29/18 02:52	1086625	1086642	(EPA 524.2)	1,1-Dichloroethane	ND	ug/L	0.5	1
04/28/18	04/29/18 02:52	1086625	1086642	(EPA 524.2)	1,1-Dichloroethylene	ND	ug/L	0.5	1
04/28/18	04/29/18 02:52	1086625	1086642	(EPA 524.2)	1,1-Dichloropropene	ND	ug/L	0.5	1
04/28/18	04/29/18 02:52	1086625	1086642	(EPA 524.2)	1,2,3-Trichlorobenzene	ND	ug/L	0.5	1
04/28/18	04/29/18 02:52	1086625	1086642	(EPA 524.2)	1,2,3-Trichloropropane	ND	ug/L	0.5	1
04/28/18	04/29/18 02:52	1086625	1086642	(EPA 524.2)	1,2,4-Trichlorobenzene	ND	ug/L	0.5	1
04/28/18	04/29/18 02:52	1086625	1086642	(EPA 524.2)	1,2,4-Trimethylbenzene	ND	ug/L	0.5	1
04/28/18	04/29/18 02:52	1086625	1086642	(EPA 524.2)	1,2-Dichloroethane	ND	ug/L	0.5	1
04/28/18	04/29/18 02:52	1086625	1086642	(EPA 524.2)	1,2-Dichloropropane	ND	ug/L	0.5	1
04/28/18	04/29/18 02:52	1086625	1086642	(EPA 524.2)	1,3,5-Trimethylbenzene	ND	ug/L	0.5	1
04/28/18	04/29/18 02:52	1086625	1086642	(EPA 524.2)	1,3-Dichloropropane	ND	ug/L	0.5	1
04/28/18	04/29/18 02:52	1086625	1086642	(EPA 524.2)	2,2-Dichloropropane	ND	ug/L	0.5	1
04/28/18	04/29/18 02:52	1086625	1086642	(EPA 524.2)	2-Butanone (MEK)	ND	ug/L	5	1
04/28/18	04/29/18 02:52	1086625	1086642	(EPA 524.2)	4-Methyl-2-Pentanone (MIBK)	ND	ug/L	5	1
04/28/18	04/29/18 02:52	1086625	1086642	(EPA 524.2)	Benzene	ND	ug/L	0.5	1
04/28/18	04/29/18 02:52	1086625	1086642	(EPA 524.2)	Bromobenzene	ND	ug/L	0.5	1
04/28/18	04/29/18 02:52	1086625	1086642	(EPA 524.2)	Bromochloromethane	ND	ug/L	0.5	1
04/28/18	04/29/18 02:52	1086625	1086642	(EPA 524.2)	Bromodichloromethane	8.5	ug/L	0.5	1
04/28/18	04/29/18 02:52	1086625	1086642	(EPA 524.2)	Bromoethane	ND	ug/L	0.5	1
04/28/18	04/29/18 02:52	1086625	1086642	(EPA 524.2)	Bromoform	ND	ug/L	0.5	1
04/28/18	04/29/18 02:52	1086625	1086642	(EPA 524.2)	Bromomethane (Methyl Bromide)	ND (LK)	ug/L	0.5	1
04/28/18	04/29/18 02:52	1086625	1086642	(EPA 524.2)	Carbon disulfide	ND	ug/L	0.5	1
04/28/18	04/29/18 02:52	1086625	1086642	(EPA 524.2)	Carbon Tetrachloride	ND	ug/L	0.5	1
04/28/18	04/29/18 02:52	1086625	1086642	(EPA 524.2)	Chlorobenzene	ND	ug/L	0.5	1
04/28/18	04/29/18 02:52	1086625	1086642	(EPA 524.2)	Chlorodibromomethane	2.4	ug/L	0.5	1

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Samples Received on:
04/19/2018 1853

Prepped	Analyzed	Prep Batch	Analytical Batch	Method	Analyte	Result	Units	MRL	Dilution
04/28/18	04/29/18 02:52	1086625	1086642	(EPA 524.2)	Chloroethane	ND	ug/L	0.5	1
04/28/18	04/29/18 02:52	1086625	1086642	(EPA 524.2)	Chloroform (Trichloromethane)	16	ug/L	0.5	1
04/28/18	04/29/18 02:52	1086625	1086642	(EPA 524.2)	Chloromethane(Methyl Chloride)	ND	ug/L	0.5	1
04/28/18	04/29/18 02:52	1086625	1086642	(EPA 524.2)	cis-1,2-Dichloroethylene	ND	ug/L	0.5	1
04/28/18	04/29/18 02:52	1086625	1086642	(EPA 524.2)	cis-1,3-Dichloropropene	ND	ug/L	0.5	1
04/28/18	04/29/18 02:52	1086625	1086642	(EPA 524.2)	Dibromomethane	ND	ug/L	0.5	1
04/28/18	04/29/18 02:52	1086625	1086642	(EPA 524.2)	Dichlorodifluoromethane	ND	ug/L	0.5	1
04/28/18	04/29/18 02:52	1086625	1086642	(EPA 524.2)	Dichloromethane	ND	ug/L	0.5	1
04/28/18	04/29/18 02:52	1086625	1086642	(EPA 524.2)	Di-isopropyl ether	ND	ug/L	3	1
04/28/18	04/29/18 02:52	1086625	1086642	(EPA 524.2)	Ethyl benzene	ND	ug/L	0.5	1
04/28/18	04/29/18 02:52	1086625	1086642	(EPA 524.2)	Hexachlorobutadiene	ND	ug/L	0.5	1
04/28/18	04/29/18 02:52	1086625	1086642	(EPA 524.2)	Isopropylbenzene	ND	ug/L	0.5	1
04/28/18	04/29/18 02:52	1086625	1086642	(EPA 524.2)	m,p-Xylenes	ND	ug/L	0.5	1
04/28/18	04/29/18 02:52	1086625	1086642	(EPA 524.2)	m-Dichlorobenzene (1,3-DCB)	ND	ug/L	0.5	1
04/28/18	04/29/18 02:52	1086625	1086642	(EPA 524.2)	Methyl Tert-butyl ether (MTBE)	ND	ug/L	0.5	1
04/28/18	04/29/18 02:52	1086625	1086642	(EPA 524.2)	Naphthalene	ND	ug/L	0.5	1
04/28/18	04/29/18 02:52	1086625	1086642	(EPA 524.2)	n-Butylbenzene	ND	ug/L	0.5	1
04/28/18	04/29/18 02:52	1086625	1086642	(EPA 524.2)	n-Propylbenzene	ND	ug/L	0.5	1
04/28/18	04/29/18 02:52	1086625	1086642	(EPA 524.2)	o-Chlorotoluene	ND	ug/L	0.5	1
04/28/18	04/29/18 02:52	1086625	1086642	(EPA 524.2)	o-Dichlorobenzene (1,2-DCB)	ND	ug/L	0.5	1
04/28/18	04/29/18 02:52	1086625	1086642	(EPA 524.2)	o-Xylene	ND	ug/L	0.5	1
04/28/18	04/29/18 02:52	1086625	1086642	(EPA 524.2)	p-Chlorotoluene	ND	ug/L	0.5	1
04/28/18	04/29/18 02:52	1086625	1086642	(EPA 524.2)	p-Dichlorobenzene (1,4-DCB)	ND	ug/L	0.5	1
04/28/18	04/29/18 02:52	1086625	1086642	(EPA 524.2)	p-Isopropyltoluene	ND	ug/L	0.5	1
04/28/18	04/29/18 02:52	1086625	1086642	(EPA 524.2)	sec-Butylbenzene	ND	ug/L	0.5	1
04/28/18	04/29/18 02:52	1086625	1086642	(EPA 524.2)	Styrene	ND	ug/L	0.5	1
04/28/18	04/29/18 02:52	1086625	1086642	(EPA 524.2)	tert-amyl Methyl Ether	ND	ug/L	3	1
04/28/18	04/29/18 02:52	1086625	1086642	(EPA 524.2)	tert-Butyl Ethyl Ether	ND	ug/L	3	1
04/28/18	04/29/18 02:52	1086625	1086642	(EPA 524.2)	tert-Butylbenzene	ND	ug/L	0.5	1
04/28/18	04/29/18 02:52	1086625	1086642	(EPA 524.2)	Tetrachloroethylene (PCE)	ND	ug/L	0.5	1
04/28/18	04/29/18 02:52	1086625	1086642	(EPA 524.2)	Toluene	ND	ug/L	0.5	1
04/28/18	04/29/18 02:52	1086625	1086642	(EPA 524.2)	Total 1,3-Dichloropropene	ND	ug/L	0.5	1
04/28/18	04/29/18 02:52	1086625	1086642	(EPA 524.2)	Total THM	27	ug/L	0.5	1
04/28/18	04/29/18 02:52	1086625	1086642	(EPA 524.2)	Total xylenes	ND	ug/L	0.5	1
04/28/18	04/29/18 02:52	1086625	1086642	(EPA 524.2)	trans-1,2-Dichloroethylene	ND	ug/L	0.5	1
04/28/18	04/29/18 02:52	1086625	1086642	(EPA 524.2)	trans-1,3-Dichloropropene	ND	ug/L	0.5	1
04/28/18	04/29/18 02:52	1086625	1086642	(EPA 524.2)	Trichloroethylene (TCE)	ND	ug/L	0.5	1
04/28/18	04/29/18 02:52	1086625	1086642	(EPA 524.2)	Trichlorofluoromethane	ND	ug/L	0.5	1

Rounding on totals after summation.
(c) - indicates calculated results

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1 800 566 LABS (1 800 566 5227)

Laboratory Data

Report: 735218
Project: QUARTERLY
Group: Quarterly 2018

U.S. Army Corps of Engineers
Mike Chicoine
Washington Aqueduct
5900 MacArthur Blvd. NW
Washington, DC 20016

Samples Received on:
04/19/2018 1853

Prepped	Analyzed	Prep Batch	Analytical Batch	Method	Analyte	Result	Units	MRL	Dilution
04/28/18	04/29/18 02:52	1086625	1086642	(EPA 524.2)	Trichlorotrifluoroethane(Freon 113)	ND	ug/L	0.5	1
04/28/18	04/29/18 02:52	1086625	1086642	(EPA 524.2)	Vinyl chloride (VC)	ND	ug/L	0.3	1
04/28/18	04/29/18 02:52	1086625	1086642	(EPA 524.2)	1,2-Dichloroethane-d4	102	%		1
04/28/18	04/29/18 02:52	1086625	1086642	(EPA 524.2)	4-Bromofluorobenzene	101	%		1
04/28/18	04/29/18 02:52	1086625	1086642	(EPA 524.2)	Toluene-d8	104	%		1

Rounding on totals after summation.
(c) - indicates calculated results

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Laboratory Comments

Report: 735218
Project: QUARTERLY
Group: Quarterly 2018

U.S. Army Corps of Engineers
Mike Chicoine
Washington Aqueduct
5900 MacArthur Blvd. NW
Washington, DC 20016

Folder Comments

Analytical Results for Dioxins/Furans by 1613B are submitted by Eurofins Lancaster Laboratories

Flags Legend:

L4 - The associated blank spike recovery was below method acceptance limits.

LE - MRL Check recovery was above laboratory acceptance limits.

LK - The associated blank spike recovery was above method acceptance limits. This target analyte was not detected in the sample.

R7 - LFB/LFBD RPD exceeded the laboratory acceptance limit. Recovery met acceptance criteria.

VC - CCV is high biased, ND data are reportable as per TNI V1M4 1.7.2.e).i.

The Comments Report may be blank if there are no comments for this report.

Case Narrative

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

Project Name: 735218
ELLE Group #: 1944540

General Comments:

See the Laboratory Sample Analysis Record section of the Analysis Report for the method references.

All QC met criteria unless otherwise noted in an Analysis Specific Comment below.

Refer to the QC Summary for specific values and acceptance criteria.

Project specific QC samples are not included in this data set.

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in an Analysis Specific Comment below.

The samples were received at the appropriate temperature and in accordance with the chain of custody unless otherwise noted.

Analysis Specific Comments:

No additional comments are necessary.

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Analysis Report

Sample Description: **201804190545 Potable Water**
Folder# 735218 Sub PO# 99-58396 Job# 1000014

Project Name: **735218**

Submittal Date/Time: 05/17/2018 10:00
Collection Date/Time: 04/17/2018 12:05

Eurofins Eaton Analytical, Inc
ELLE Sample #: PW 9614379
ELLE Group #: 1944540
Matrix: Potable Water

CAT No.	Analysis Name	CAS Number	Result	MRL*	EDL	Dilution Factor
Dioxins/Furans	**EPA 1613B October 1994**		**pg/l**	**pg/l**	**pg/l**	
12935	2378-TCDD	1746-01-6	< 4.73	4.73	0.167	1

Labeled Compounds	**%Rec**	**Windows**
13C12-2378-TCDD	94	25 - 164

Dioxins/Furans Data Qualifiers:

B	*Detected in Method Blank*
U	*Undetected*
J	*Estimated concentration between Estimated Detection Limit and Minimum Reporting Level*
E	*Exceeds calibration range*
C	*Confirmed quantitation on secondary GC column*
Q	*EMPC - Estimated Maximum Possible Concentration*
F	*Interference is present*
S	*Saturation of detection signal*

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12935	2378-TCDD in Potable Water	EPA 1613B October 1994	1	18143002	05/24/2018 16:28	Joseph D Anderson	1
10914	Dioxins/Furans in Water - SepF	EPA 1613B October 1994	1	18143002	05/23/2018 07:30	Deborah M Zimmerman	1

EDL = Estimated Detection Limit
*=This limit was used in the evaluation of the final result

A# 14482 G# 1944540 S# 9614379

Submittal Form & Purchase Order 99-58396

Date: 5/16/2018

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Ship To:
Eurofins Lancaster Laboratories
2425 New Holland Pike

Lancaster, PA 17601

Phone: 717-656-2300 Fax:

Folder #:	Report Due:	Sub PO #:
735218	05/30/2018	99-58396

*REPORTING REQUIRMENTS: *Do Not Combine Reports with any other samples submitted under different Folder Numbers!*
Report & Invoice must have the Folder# 735218 Sub PO# 99-58396 and Job # 1000014

Report all quality control data according to Method, Include dates analyzed. Date extracted (if extracted) and Method reference on the report.
Results must have Complete data & QC with Approval Signature.

Reports: Jackie Contreras Sub-Contracting Administrator
EMAIL TO: us20_subcontract@eurofinsus.com
Eurofins Eaton Analytical, LLC 750 Royal Oaks Drive, Suite 100, Monrovia, CA 91016
Phone (626) 386-1165 Fax (626) 386-1122
Invoices to: Eurofins Eaton Analytical, LLC

Provide in each Report the Specified State Certification # & Exp Date for requested tests + matrix.

Samples from: DISTRICT OF COLUMBIA

20 out of the 100 samples
10 day TAT needed

JLS	Client Sample ID for reference only	Analysis Requested	Sample Date & Time	Matrix	PWS Systemcode	PWSID
	201804190545 J		04/17/18 1205	DW		
	Sample type:	Sample Event:	Facility ID:	Sample Point ID: {CL_SAMPLEPOINTID}	Static ID:	
EPA 1613B	2,3,7,8-TCDD		2,3,7,8-TCDD			

Relinquished by: Sample Control Date 5/16/18 Time 1142
Received by: Date Time
Relinquished by: Sample Control Date Time
Received by: Date 5/17/18 Time 1000

NOTIFICATION REQUIRED IF RECEIVED OUTSIDE OF 0-6 CELSIUS
An Acknowledgement of Receipt is requested to attn: Jackie Contreras

750 Royal Oaks Drive, Suite 100, Monrovia, CA 91016 Tel (626) 386-1100 Fax (866) 988-3757 www.EurofinsUS.com/Eaton

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mg**	milligram(s)
C	degrees Celsius	**mL**	milliliter(s)
cfu	colony forming units	**MPN**	Most Probable Number
CP Units	cobalt-chloroplatinate units	**N.D.**	non-detect
F	degrees Fahrenheit	**ng**	nanogram(s)
g	gram(s)	**NTU**	nephelometric turbidity units
IU	International Units	**pg/L**	picogram/liter
kg	kilogram(s)	**RL**	Reporting Limit
L	liter(s)	**TNTC**	Too Numerous To Count
lb.	pound(s)	**µg**	microgram(s)
m3	cubic meter(s)	**µL**	microliter(s)
meq	milliequivalents	**umhos/cm**	micromhos/cm

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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Laboratory Data

Report: 737065
Project: QUARTERLY
Group: Quarterly 2018

U.S. Army Corps of Engineers
Mike Chicoine
Washington Aqueduct
5900 MacArthur Blvd. NW
Washington, DC 20016

Samples Received on:
05/09/2018 1732

GF (201805100422) **Sampled on 05/07/2018 1020**

EPA 525.2 - Semivolatiles by GCMS

Prepped	Analyzed	Prep Batch	Analytical Batch	Method	Analyte	Result	Units	MRL	Dilution
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	2,4-DDD	ND (LE)	ug/L	0.1	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	2,4-DDE	ND	ug/L	0.1	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	2,4-DDT	ND	ug/L	0.1	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	2,4-Dinitrotoluene	ND	ug/L	0.1	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	2,6-Dinitrotoluene	ND	ug/L	0.1	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	4,4-DDD	ND	ug/L	0.1	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	4,4-DDE	ND	ug/L	0.1	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	4,4-DDT	ND	ug/L	0.1	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	Acenaphthene	ND	ug/L	0.1	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	Acenaphthylene	ND	ug/L	0.1	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	Acetochlor	ND	ug/L	0.1	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	Alachlor	ND	ug/L	0.05	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	Aldrin	ND	ug/L	0.05	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	Alpha-BHC	ND	ug/L	0.1	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	alpha-Chlordane	ND	ug/L	0.05	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	Anthracene	ND	ug/L	0.02	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	Atrazine	ND	ug/L	0.05	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	Benz(a)Anthracene	ND	ug/L	0.05	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	Benzo(a)pyrene	ND	ug/L	0.02	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	Benzo(b)Fluoranthene	ND	ug/L	0.02	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	Benzo(g,h,i)Perylene	ND	ug/L	0.05	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	Benzo(k)Fluoranthene	ND	ug/L	0.02	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	Beta-BHC	ND	ug/L	0.1	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	Bromacil	ND (LE)	ug/L	0.2	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	Butachlor	ND	ug/L	0.05	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	Butylbenzylphthalate	ND	ug/L	0.5	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	Caffeine by method 525mod	ND (R7)	ug/L	0.05	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	Chlorobenzilate	ND	ug/L	0.1	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	Chloroneb	ND	ug/L	0.1	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	Chlorothalonil(Draconil,Bravo)	ND	ug/L	0.1	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	Chlorpyrifos (Dursban)	ND	ug/L	0.05	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	Chrysene	ND	ug/L	0.02	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	Delta-BHC	ND	ug/L	0.1	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	Di-(2-Ethylhexyl)adipate	ND	ug/L	0.6	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	Di(2-Ethylhexyl)phthalate	ND	ug/L	0.6	1

Rounding on totals after summation.
(c) - indicates calculated results

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Laboratory Data

Report: 737065
Project: QUARTERLY
Group: Quarterly 2018

U.S. Army Corps of Engineers
Mike Chicoine
Washington Aqueduct
5900 MacArthur Blvd. NW
Washington, DC 20016

Samples Received on:
05/09/2018 1732

Prepped	Analyzed	Prep Batch	Analytical Batch	Method	Analyte	Result	Units	MRL	Dilution
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	Diazinon (Qualitative)	ND	ug/L	0.1	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	Dibenz(a,h)Anthracene	ND	ug/L	0.05	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	Dichlorvos (DDVP)	ND	ug/L	0.05	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	Dieldrin	ND	ug/L	0.2	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	Diethylphthalate	ND	ug/L	0.5	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	Dimethoate	ND (LE,R7,LK)	ug/L	0.1	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	Dimethylphthalate	ND	ug/L	0.5	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	Di-n-Butylphthalate	ND	ug/L	1	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	Di-N-octylphthalate	ND	ug/L	0.1	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	Endosulfan I (Alpha)	ND	ug/L	0.1	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	Endosulfan II (Beta)	ND	ug/L	0.1	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	Endosulfan Sulfate	ND	ug/L	0.1	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	Endrin	ND	ug/L	0.2	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	Endrin Aldehyde	ND	ug/L	0.1	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	EPTC	ND	ug/L	0.1	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	Fluoranthene	ND	ug/L	0.1	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	Fluorene	ND	ug/L	0.05	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	gamma-Chlordane	ND	ug/L	0.05	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	Heptachlor	ND	ug/L	0.04	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	Heptachlor Epoxide (isomer B)	ND	ug/L	0.05	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	Hexachlorobenzene	ND	ug/L	0.05	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	Hexachlorocyclopentadiene	ND	ug/L	0.05	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	Indeno(1,2,3,c,d)Pyrene	ND	ug/L	0.05	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	Isophorone	ND	ug/L	0.5	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	Lindane	ND	ug/L	0.04	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	Malathion	ND	ug/L	0.1	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	Methoxychlor	ND	ug/L	0.1	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	Metolachlor	ND	ug/L	0.05	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	Metribuzin	ND	ug/L	0.05	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	Molinate	ND	ug/L	0.1	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	Naphthalene	ND	ug/L	0.3	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	Parathion	ND	ug/L	0.1	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	Pendimethalin	ND	ug/L	0.1	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	Pentachlorophenol	ND (VC,LE,LK)	ug/L	1	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	Permethrin (mixed isomers)	ND	ug/L	0.2	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	Phenanthrene	ND	ug/L	0.04	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	Propachlor	ND	ug/L	0.05	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	Pyrene	ND	ug/L	0.05	1

Rounding on totals after summation.
(c) - indicates calculated results

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Tel: (626) 386-1100
Fax: (866) 988-3757
1 800 566 LABS (1 800 566 5227)

Laboratory Data

Report: 737065
Project: QUARTERLY
Group: Quarterly 2018

U.S. Army Corps of Engineers
Mike Chicoine
Washington Aqueduct
5900 MacArthur Blvd. NW
Washington, DC 20016

Samples Received on:
05/09/2018 1732

Prepped	Analyzed	Prep Batch	Analytical Batch	Method	Analyte	Result	Units	MRL	Dilution
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	Simazine	ND	ug/L	0.05	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	Terbacil	ND	ug/L	0.1	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	Terbuthylazine	ND	ug/L	0.1	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	Thiobencarb (ELAP)	ND	ug/L	0.2	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	trans-Nonachlor	ND	ug/L	0.05	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	Trifluralin	ND	ug/L	0.1	1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	1,3-Dimethyl-2-nitrobenzene	102	%		1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	Acenaphthene-d10	109	%		1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	Chrysene-d12	117	%		1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	Perylene-d12	89	%		1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	Phenanthrene-d10	117	%		1
05/17/18	05/25/18 16:27	1091538	1094817	(EPA 525.2)	Triphenylphosphate	111	%		1

Rounding on totals after summation.
(c) - indicates calculated results

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Laboratory Comments

Report: 737065
Project: QUARTERLY
Group: Quarterly 2018

U.S. Army Corps of Engineers
Mike Chicoine
Washington Aqueduct
5900 MacArthur Blvd. NW
Washington, DC 20016

Flags Legend:

LE - MRL Check recovery was above laboratory acceptance limits.

LK - The associated blank spike recovery was above method acceptance limits. This target analyte was not detected in the sample.

R7 - LFB/LFBD RPD exceeded the laboratory acceptance limit. Recovery met acceptance criteria.

VC - CCV is high biased, ND data are reportable as per TNI V1M4 1.7.2.e).i.

The Comments Report may be blank if there are no comments for this report.

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Laboratory Data

Report: 743696
Project: CRYPTO-GIARDIA
Group: GF-EPA 1623

U.S. Army Corps of Engineers
Mike Chicoine
Washington Aqueduct
5900 MacArthur Blvd. NW
Washington, DC 20016

Samples Received on:
06/13/2018 09:30

Prepped	Analyzed	Prep Batch	Analytical Batch	Method	Analyte	Result	Units	MRL	Dilution
GF (201806130343)							**Sampled on 06/12/2018 1040**		
		EPA 1623 - Giardia and Cryptosporidium							
	06/19/18 15:30			(EPA 1623)	Giardia and Cryptosporidium	See Attached	None		1

Rounding on totals after summation.
(c) - indicates calculated results

Client Name: Eurofins Eaton Analytical

Report #: 419136

Sampling Point: 201806130343

PWS ID: Not Supplied

Microbiology									
Analyte ID #	**Analyte**	**Method**	**Reg Limit**	**MRL†**	**Result**	**Units**	**Preparation Date**	**Analyzed Date**	**EEA ID #**
---	Giardia	1623	---	0.093	**0.186**	cysts/L	06/14/18 09:30	06/19/18 15:30	3959531
---	Cryptosporidium	1623	---	0.093	**0.186**	oocysts/L	06/14/18 09:30	06/19/18 15:30	3959531

For method 1623: The calculated MRL value is dependant on the volume filtered and the volume analyzed for each sample.

† EEA has demonstrated it can achieve these report limits in reagent water, but can not document them in all sample matrices.

Reg Limit Type:	MCL	SMCL	AL
Symbol:	*	^	!

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Laboratory Hits

Report: 738415
Project: UCMR4
Group: DC0000002 DC WSA AM1 AM2

U.S. Army Corps of Engineers
Mike Chicoine
Washington Aqueduct
5900 MacArthur Blvd. NW
Washington, DC 20016

Samples Received on:
05/16/2018 1922

Analyzed	Analyte	Sample ID	Result	Federal MCL	Units	MRL
	201805161193	**00010-EPD-Dale 18**				
06/11/2018 10:01	Manganese Total ICAP/MS		0.88		ug/L	0.4
	201805161195	**Source-SR**				
05/25/2018 03:21	Bromide		26		ug/L	5
06/02/2018 03:40	Total Organic Carbon		3.5		mg/L	0.3

SUMMARY OF POSITIVE DATA ONLY

eurofins | Eaton Analytical

Tel: (626) 386-1100
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1 800 566 LABS (1 800 566 5227)

Laboratory Data

Report: 738415
Project: UCMR4
Group: DC0000002 DC WSA AM1 AM2

U.S. Army Corps of Engineers
Mike Chicoine
Washington Aqueduct
5900 MacArthur Blvd. NW
Washington, DC 20016

Samples Received on:
05/16/2018 1922

00010-EPD-Dale 18 (201805161193) **Sampled on 05/14/2018 1145**

Sample Type: EP
Sample Event: SEA2
Facility ID: 00010
Sample Point ID: EPD
PWSID: DC0000002
Static ID: EP

Prepped	Analyzed	Prep Batch	Analytical Batch	Method	Analyte	Result	Units	MRL	Dilution
		UCMR4 200.8 - UCMR4 Metals							
	06/11/18 10:01	1092330	1095003	(UCMR4 200.8)	Germanium Total ICAP/MS	ND	ug/L	0.3	1
	06/11/18 10:01	1092330	1095003	(UCMR4 200.8)	Manganese Total ICAP/MS	0.88	ug/L	0.4	1
	06/11/18 10:01	1092330	1095003	(UCMR4 200.8)	Indium (115)	114	%		1
	06/11/18 10:01	1092330	1095003	(UCMR4 200.8)	Yttrium (89)	117	%		1
		EPA 525.3 - UCMR4 525.3							
05/24/18	05/29/18 15:19	1093264	1094440	(EPA 525.3)	alpha-HCH	ND	ug/L	0.01	1
05/24/18	05/29/18 15:19	1093264	1094440	(EPA 525.3)	Chlorpyrifos	ND	ug/L	0.03	1
05/24/18	05/29/18 15:19	1093264	1094440	(EPA 525.3)	Dimethipin	ND	ug/L	0.2	1
05/24/18	05/29/18 15:19	1093264	1094440	(EPA 525.3)	Ethoprop	ND	ug/L	0.03	1
05/24/18	05/29/18 15:19	1093264	1094440	(EPA 525.3)	Oxyfluorfen	ND	ug/L	0.05	1
05/24/18	05/29/18 15:19	1093264	1094440	(EPA 525.3)	Profenofos	ND	ug/L	0.3	1
05/24/18	05/29/18 15:19	1093264	1094440	(EPA 525.3)	Tebuconazole	ND	ug/L	0.2	1
05/24/18	05/29/18 15:19	1093264	1094440	(EPA 525.3)	Total Permethrin (trans & cis)	ND	ug/L	0.04	1
05/24/18	05/29/18 15:19	1093264	1094440	(EPA 525.3)	Tribufos	ND	ug/L	0.07	1
05/24/18	05/29/18 15:19	1093264	1094440	(EPA 525.3)	1,3-Dimethyl-2-nitrobenzene	78	%		1
05/24/18	05/29/18 15:19	1093264	1094440	(EPA 525.3)	acenaphthene-d10	104	%		1
05/24/18	05/29/18 15:19	1093264	1094440	(EPA 525.3)	Benzo[a]pyrene-d12	87	%		1
05/24/18	05/29/18 15:19	1093264	1094440	(EPA 525.3)	chrysene-d12	125	%		1
05/24/18	05/29/18 15:19	1093264	1094440	(EPA 525.3)	phenanthrene-d10	109	%		1
05/24/18	05/29/18 15:19	1093264	1094440	(EPA 525.3)	Triphenyl Phosphate	71	%		1
		EPA 530 - UCMR4 530							
05/25/18	06/05/18 3:27	1093432	1095501	(EPA 530)	Butylated hydroxyanisole	ND	ug/L	0.03	1
05/25/18	06/05/18 3:27	1093432	1095501	(EPA 530)	O-Toluidine	ND	ug/L	0.007	1
05/25/18	06/05/18 3:27	1093432	1095501	(EPA 530)	Quinoline	ND	ug/L	0.02	1
05/25/18	06/05/18 3:27	1093432	1095501	(EPA 530)	acenaphthene-d10	106	%		1
05/25/18	06/05/18 3:27	1093432	1095501	(EPA 530)	o-Toluidine–d9	80	%		1
05/25/18	06/05/18 3:27	1093432	1095501	(EPA 530)	phenanthrene-d10	106	%		1
05/25/18	06/05/18 3:27	1093432	1095501	(EPA 530)	Quinoline–d7	97	%		1
		EPA 541 - UCMR SOCs by EPA 541							
06/06/18	06/06/18 22:18			(EPA 541)	1-Butanol	ND	ug/L	2	1
06/06/18	06/06/18 22:18			(EPA 541)	2-Methoxyethanol	ND	ug/L	0.4	1

Rounding on totals after summation.
(c) - indicates calculated results

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Laboratory Data

Report: 738415
Project: UCMR4
Group: DC0000002 DC WSA AM1 AM2

U.S. Army Corps of Engineers
Mike Chicoine
Washington Aqueduct
5900 MacArthur Blvd. NW
Washington, DC 20016

Samples Received on:
05/16/2018 1922

Prepped	Analyzed	Prep Batch	Analytical Batch	Method	Analyte	Result	Units	MRL	Dilution
06/06/18	06/06/18 22:18			(EPA 541)	2-Propen-1-ol	ND	ug/L	0.5	1
06/06/18	06/06/18 22:18			(EPA 541)	1-Butanol-d10	98	%		1
06/06/18	06/06/18 22:18			(EPA 541)	2-Propen-1-ol-d6	86	%		1
06/06/18	06/06/18 22:18			(EPA 541)	Chlorobenzene-d5	103	%		1

00020-EPM-McMillian J South (201805161194) **Sampled on 05/14/2018 1035**

Sample Type: EP
Sample Event: SEA2
Facility ID: 00020
Sample Point ID: EPM
PWSID: DC0000002
Static ID: EP

UCMR4 200.8 - UCMR4 Metals

	06/11/18 10:02	1092330	1095003	(UCMR4 200.8)	Germanium Total ICAP/MS	ND	ug/L	0.3	1
	06/11/18 10:02	1092330	1095003	(UCMR4 200.8)	Manganese Total ICAP/MS	ND	ug/L	0.4	1
	06/11/18 10:02	1092330	1095003	(UCMR4 200.8)	Indium (115)	112	%		1
	06/11/18 10:02	1092330	1095003	(UCMR4 200.8)	Yttrium (89)	117	%		1

EPA 525.3 - UCMR4 525.3

05/24/18	05/29/18 19:40	1093264	1094440	(EPA 525.3)	alpha-HCH	ND	ug/L	0.01	1
05/24/18	05/29/18 19:40	1093264	1094440	(EPA 525.3)	Chlorpyrifos	ND	ug/L	0.03	1
05/24/18	05/29/18 19:40	1093264	1094440	(EPA 525.3)	Dimethipin	ND	ug/L	0.2	1
05/24/18	05/29/18 19:40	1093264	1094440	(EPA 525.3)	Ethoprop	ND	ug/L	0.03	1
05/24/18	05/29/18 19:40	1093264	1094440	(EPA 525.3)	Oxyfluorfen	ND	ug/L	0.05	1
05/24/18	05/29/18 19:40	1093264	1094440	(EPA 525.3)	Profenofos	ND	ug/L	0.3	1
05/24/18	05/29/18 19:40	1093264	1094440	(EPA 525.3)	Tebuconazole	ND	ug/L	0.2	1
05/24/18	05/29/18 19:40	1093264	1094440	(EPA 525.3)	Total Permethrin (trans & cis)	ND	ug/L	0.04	1
05/24/18	05/29/18 19:40	1093264	1094440	(EPA 525.3)	Tribufos	ND	ug/L	0.07	1
05/24/18	05/29/18 19:40	1093264	1094440	(EPA 525.3)	1,3-Dimethyl-2-nitrobenzene	83	%		1
05/24/18	05/29/18 19:40	1093264	1094440	(EPA 525.3)	acenaphthene-d10	105	%		1
05/24/18	05/29/18 19:40	1093264	1094440	(EPA 525.3)	Benzo[a]pyrene-d12	72	%		1
05/24/18	05/29/18 19:40	1093264	1094440	(EPA 525.3)	chrysene-d12	107	%		1
05/24/18	05/29/18 19:40	1093264	1094440	(EPA 525.3)	phenanthrene-d10	107	%		1
05/24/18	05/29/18 19:40	1093264	1094440	(EPA 525.3)	Triphenyl Phosphate	71	%		1

EPA 530 - UCMR4 530

05/25/18	06/05/18 3:55	1093432	1095501	(EPA 530)	Butylated hydroxyanisole	ND	ug/L	0.03	1
05/25/18	06/05/18 3:55	1093432	1095501	(EPA 530)	O-Toluidine	ND	ug/L	0.007	1
05/25/18	06/05/18 3:55	1093432	1095501	(EPA 530)	Quinoline	ND	ug/L	0.02	1
05/25/18	06/05/18 3:55	1093432	1095501	(EPA 530)	acenaphthene-d10	111	%		1
05/25/18	06/05/18 3:55	1093432	1095501	(EPA 530)	o-Toluidine–d9	58	%		1
05/25/18	06/05/18 3:55	1093432	1095501	(EPA 530)	phenanthrene-d10	112	%		1
05/25/18	06/05/18 3:55	1093432	1095501	(EPA 530)	Quinoline–d7	100	%		1

Rounding on totals after summation.
(c) - indicates calculated results

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Laboratory Data

Report: 738415
Project: UCMR4
Group: DC0000002 DC WSA AM1 AM2

U.S. Army Corps of Engineers
Mike Chicoine
Washington Aqueduct
5900 MacArthur Blvd. NW
Washington, DC 20016

Samples Received on:
05/16/2018 1922

Prepped	Analyzed	Prep Batch	Analytical Batch	Method	Analyte	Result	Units	MRL	Dilution
		EPA 541 - UCMR SOCs by EPA 541							
06/06/18	06/06/18 22:50			(EPA 541)	1-Butanol	ND	ug/L	2	1
06/06/18	06/06/18 22:50			(EPA 541)	2-Methoxyethanol	ND	ug/L	0.4	1
06/06/18	06/06/18 22:50			(EPA 541)	2-Propen-1-ol	ND	ug/L	0.5	1
06/06/18	06/06/18 22:50			(EPA 541)	1-Butanol-d10	97	%		1
06/06/18	06/06/18 22:50			(EPA 541)	2-Propen-1-ol-d6	84	%		1
06/06/18	06/06/18 22:50			(EPA 541)	Chlorobenzene-d5	104	%		1

Source-SR (201805161195) **Sampled on 05/14/2018 1035**

Sample Type: SR
Sample Event: SE2
Facility ID: Source
Sample Point ID: SR
PWSID: DC0000002
Static ID: SR

		SM 5310C - Total Organic Carbon							
	06/02/18 03:40		1095171	(SM 5310C)	Total Organic Carbon	3.5	mg/L	0.3	1
		EPA 300.0 - Disinfection ByProducts by 300.0							
	05/25/18 03:21		1093408	(EPA 300.0)	Bromide	26	ug/L	5	1

Rounding on totals after summation.
(c) - indicates calculated results

110 South Hill Street
South Bend, IN 46617
Tel: (574) 233-4777
Fax: (574) 233-8207
1 800 332 4345

Laboratory Report

Client:	Eurofins Eaton Analytical	Report:	417956
Attn:	Jackie Contreras 750 Royal Oaks Drive Suite 100 Monrovia, CA 91016	Priority:	Standard Written
		Status:	Final
		Lab ID Code:	IN00035
PWS Facility ID:	00010	PWS ID:	DC0000002
Sampling Point ID:	EPD		
Sample Event Code:	SE2		

Sample Information

EEA ID #	Client ID	Method	Collected Date / Time	Collected By:	Received Date / Time
3949595	201805161193	541	05/14/18 11:45	Client	05/31/18 08:30

Report Summary

Note: Sample container was provided by the client.

Detailed quantitative results are presented on the following pages. The results presented relate only to the samples provided for analysis.

We appreciate the opportunity to provide you with this analysis. If you have any questions concerning this report, please do not hesitate to call James Van Fleit at (574) 233-4777.

Note: This report may not be reproduced, except in full, without written approval from EEA.

Jim Van Fleit ASM

Authorized Signature | Title | 06/20/2018 Date

Client Name: Eurofins Eaton Analytical
Report #: 417956

Client Name: Eurofins Eaton Analytical

Report #: 417956

Sampling Point ID: EPD

PWS ID: DC0000002

UCMR Result Summary								
Analyte ID #	Analyte	Method	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
2084	1-Butanol	541	2.00	< 2.00	ug/L	06/06/18 08:00	06/06/18 22:18	3949595
2431	2-Methoxyethanol	541	0.400	< 0.400	ug/L	06/06/18 08:00	06/06/18 22:18	3949595
2432	2-Propen-1-ol	541	0.500	< 0.500	ug/L	06/06/18 08:00	06/06/18 22:18	3949595

† EEA has demonstrated it can achieve these report limits in reagent water, but can not document them in all sample matrices.

110 South Hill Street
South Bend, IN 46617
Tel: (574) 233-4777
Fax: (574) 233-8207
1 800 332 4345

Laboratory Report

Client:	Eurofins Eaton Analytical	Report:	417956
Attn:	Jackie Contreras 750 Royal Oaks Drive Suite 100 Monrovia, CA 91016	Priority:	Standard Written
		Status:	Final
		Lab ID Code:	IN00035
PWS Facility ID:	00020	PWS ID:	DC0000002
Sampling Point ID:	EPM		
Sample Event Code:	SE2		

Sample Information

EEA ID #	Client ID	Method	Collected Date / Time	Collected By:	Received Date / Time
3949596	201805161194	541	05/14/18 10:35	Client	05/31/18 08:30

Report Summary

Note: Sample container was provided by the client.

Detailed quantitative results are presented on the following pages. The results presented relate only to the samples provided for analysis.

We appreciate the opportunity to provide you with this analysis. If you have any questions concerning this report, please do not hesitate to call James Van Fleit at (574) 233-4777.

Note: This report may not be reproduced, except in full, without written approval from EEA.

Jim Van Fleit ASM

Authorized Signature | Title | 06/20/2018 Date

Client Name: Eurofins Eaton Analytical
Report #: 417956

Client Name: Eurofins Eaton Analytical

Report #: 417956

Sampling Point ID: EPM

PWS ID: DC0000002

UCMR Result Summary								
Analyte ID #	Analyte	Method	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
2084	1-Butanol	541	2.00	< 2.00	ug/L	06/06/18 08:00	06/06/18 22:50	3949596
2431	2-Methoxyethanol	541	0.400	< 0.400	ug/L	06/06/18 08:00	06/06/18 22:50	3949596
2432	2-Propen-1-ol	541	0.500	< 0.500	ug/L	06/06/18 08:00	06/06/18 22:50	3949596

† EEA has demonstrated it can achieve these report limits in reagent water, but can not document them in all sample matrices.

Lab Definitions

Continuing Calibration Check Standard (CCC) / Continuing Calibration Verification (CCV) / Initial Calibration Verification Standard (ICV) / Initial Performance Check (IPC) - is a standard containing one or more of the target analytes that is prepared from the same standards used to calibrate the instrument. This standard is used to verify the calibration curve at the beginning of each analytical sequence, and may also be analyzed throughout and at the end of the sequence. The concentration of continuing standards may be varied, when prescribed by the reference method, so that the range of the calibration curve is verified on a regular basis. CCL, CCM, and CCH are the CCC standards at low, mid, and high concentration levels, respectively.

Internal Standards (IS) - are pure compounds with properties similar to the analytes of interest, which are added to field samples or extracts, calibration standards, and quality control standards at a known concentration. They are used to measure the relative responses of the analytes of interest and surrogates in the sample, calibration standard or quality control standard.

Laboratory Duplicate (LD) - is a field sample aliquot taken from the same sample container in the laboratory and analyzed separately using identical procedures. Analysis of laboratory duplicates provides a measure of the precision of the laboratory procedures.

Laboratory Fortified Blank (LFB) / Laboratory Control Sample (LCS) - is an aliquot of reagent water to which known concentrations of the analytes of interest are added. The LFB is analyzed exactly the same as the field samples. LFBs are used to determine whether the method is in control. FBL, FBM, and FBH are the LFB samples at low, mid, and high concentration levels, respectively.

Laboratory Method Blank (LMB) / Laboratory Reagent Blank (LRB) - is a sample of reagent water included in the sample batch analyzed in the same way as the associated field samples. The LMB is used to determine if method analytes or other background contamination have been introduced during the preparation or analytical procedure. The LMB is analyzed exactly the same as the field samples.

Laboratory Trip Blank (LTB) / Field Reagent Blank (FRB) - is a sample of laboratory reagent water placed in a sample container in the laboratory and treated as a field sample, including storage, preservation, and all analytical procedures. The FRB/LTB container follows the collection bottles to and from the collection site, but the FRB/LTB is not opened at any time during the trip. The FRB/LTB is primarily a travel blank used to verify that the samples were not contaminated during shipment.

Matrix Spike Duplicate Sample (MSD) / Laboratory Fortified Sample Matrix Duplicate (LFSMD) - is a sample aliquot taken from the same field sample source as the Matrix Spike Sample to which known quantities of the analytes of interest are added in the laboratory. The MSD is analyzed exactly the same as the field samples. Analysis of the MSD provides a measure of the precision of the laboratory procedures in a specific matrix. SDL, SDM, and SDH / LFSMDL, LFSMDM, and LFSMDH are the MSD or LFSMD at low, mid, and high concentration levels, respectively.

Matrix Spike Sample (MS) / Laboratory Fortified Sample Matrix (LFSM) - is a sample aliquot taken from field sample source to which known quantities of the analytes of interest are added in the laboratory. The MS is analyzed exactly the same as the field samples. The purpose is to demonstrate recovery of the analytes from a sample matrix to determine if the specific matrix contributes bias to the analytical results. MSL, MSM, and MSH / LFSML, LFSMM, and LFSMH are the MS or LFSM at low, mid, and high concentration levels, respectively.

Quality Control Standard (QCS) / Second Source Calibration Verification (SSCV) - is a solution containing known concentrations of the analytes of interest prepared from a source different from the source of the calibration standards. The solution is obtained from a second manufacturer or lot if the lot can be demonstrated by the manufacturer as prepared independently from other lots. The QCS sample is analyzed using the same procedures as field samples. The QCS is used as a check on the calibration standards used in the method on a routine basis.

Reporting Limit Check (RLC) / Initial Calibration Check Standard (ICCS) - is a procedural standard that is analyzed each day to evaluate instrument performance at or below the minimum reporting limit (MRL).

Surrogate Standard (SS) / Surrogate Analyte (SUR) - is a pure compound with properties similar to the analytes of interest, which is highly unlikely to be found in any field sample, that is added to the field samples, calibration standards, blanks and quality control standards before sample preparation. The SS is used to evaluate the efficiency of the sample preparation process.

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Ship To:
Eurofins Eaton Analytical
110 South Hill Street

South Bend, IN 46617-2702

Phone: 800-332-4345 Fax: 574-233-8207

Folder #:	Report Due:	Sub PO #:
738415	06/06/2018	99-58866

Submittal Form & Purchase Order 99-58866

345724 **Date: 5/29/2018**

***REPORTING REQUIRMENTS:** *Do Not Combine Reports with any other samples submitted under different Folder Numbers!*
Report & Invoice must have the Folder # **738415** Sub PO# **99-58866** and Job # **1000014** 417956

Report all quality control data according to Method. Include dates analyzed. Date extracted (if extracted) and Method reference on the report.
Results must have Complete data & QC with Approval Signature.

Reports: Jackie Contreras Sub-Contracting Administrator
EMAIL TO: us20_subcontract@eurofinsus.com
Eurofins Eaton Analytical, LLC 750 Royal Oaks Drive, Suite 100, Monrovia, CA 91016
Phone (626) 386-1165 Fax (626) 386-1122
Invoices to: Eurofins Eaton Analytical, LLC

Provide in each Report the Specified State Certification # & Exp Date for requested tests + matrix.

Samples from: **DISTRICT OF COLUMBIA**

JLS	Use Lab Order # for ID	Client Sample ID for reference only	Analysis Requested	Sample Date & Time	Matrix	PWS Systemcode	PWSID
	201805161193	00010-EPD-Dale 18		05/14/18 1145	DW		
	Sample type: EP	**Sample Event:** SEA2	**Facility ID:** 00010	**Sample Point ID:** {CL_SAMPLEPOINTID}		**Static ID:** EP	3949595
EPA 541	UCMR4 541_Subbed		UCMR SOCs by EPA 541 4.8°C				
	201805161194	00020-EPM-McMillian J South		05/14/18 1035	DW		596
	Sample type: EP	**Sample Event:** SEA2	**Facility ID:** 00020	**Sample Point ID:** {CL_SAMPLEPOINTID}		**Static ID:** EP	
EPA 541	UCMR4 541_Subbed		UCMR SOCs by EPA 541 0.6°c				

Cl = A on both bottles
pH < 3

Client Provided Sample Container

Relinquished by: Paul Sample Control Date 5/29/18 Time 1148
Received by: amastis Date 5/31/18 Time 0830
Relinquished by: Sample Control Date _____ Time _____
Received by: _____ Date _____ Time _____

NOTIFICATION REQUIRED IF RECEIVED OUTSIDE OF 0-6 CELSIUS

An Acknowledgement of Receipt is requested to attn: Jackie Contreras

eurofins | Eaton Analytical

Tel: (626) 386-1100
Fax: (866) 988-3757
1 800 566 LABS (1 800 566 5227)

Laboratory Hits

Report: 738019
Project: UCMR4
Group: VA6013010 Arlington County AM1 AM2

U.S. Army Corps of Engineers
Mike Chicoine
Washington Aqueduct
5900 MacArthur Blvd. NW
Washington, DC 20016

Samples Received on:
05/15/2018 1507

Analyzed	Analyte	Sample ID	Result	Federal MCL	Units	MRL
	201805150399	**31097-EP001-Entry Point to Dist. System**				
05/23/2018 10:32	Manganese Total ICAP/MS		0.83		ug/L	0.4
	201805150400	**00001-G314-Water Control Center**				
05/20/2018 03:30	Bromochloroacetic acid		4.1		ug/L	0.3
05/20/2018 03:30	Bromodichloroacetic acid		4.6		ug/L	0.5
05/20/2018 03:30	Chlorodibromoacetic acid		0.60		ug/L	0.3
05/20/2018 03:30	Dibromoacetic acid		0.39		ug/L	0.3
05/20/2018 03:30	Dichloroacetic acid		19		ug/L	0.2
05/20/2018 03:30	Monochloroacetic acid		2.6		ug/L	2
05/20/2018 03:30	Total HAA5		40		ug/L	0.2
05/20/2018 03:30	Total HAA6Br		9.7		ug/L	0.2
05/20/2018 03:30	Total HAA9		49		ug/L	0.2
05/20/2018 03:30	Trichloroacetic acid		18		ug/L	0.5
	201805150401	**00002-G232-Firehouse Number One**				
05/20/2018 04:07	Bromochloroacetic acid		4.8		ug/L	0.3
05/20/2018 04:07	Bromodichloroacetic acid		4.9		ug/L	0.5
05/20/2018 04:07	Chlorodibromoacetic acid		0.60		ug/L	0.3
05/20/2018 04:07	Dibromoacetic acid		0.46		ug/L	0.3
05/20/2018 04:07	Dichloroacetic acid		25		ug/L	0.2
05/20/2018 04:07	Monochloroacetic acid		3.2		ug/L	2
05/20/2018 04:07	Total HAA5		48		ug/L	0.2
05/20/2018 04:07	Total HAA6Br		11		ug/L	0.2
05/20/2018 04:07	Total HAA9		58		ug/L	0.2
05/20/2018 04:07	Trichloroacetic acid		19		ug/L	0.5
	201805150402	**00003-LM59-Arlington Hospital**				
05/20/2018 05:21	Bromochloroacetic acid		4.1		ug/L	0.3
05/20/2018 05:21	Bromodichloroacetic acid		4.6		ug/L	0.5
05/20/2018 05:21	Chlorodibromoacetic acid		0.58		ug/L	0.3
05/20/2018 05:21	Dibromoacetic acid		0.41		ug/L	0.3
05/20/2018 05:21	Dichloroacetic acid		18		ug/L	0.2
05/20/2018 05:21	Monochloroacetic acid		2.4		ug/L	2
05/20/2018 05:21	Total HAA5		38		ug/L	0.2
05/20/2018 05:21	Total HAA6Br		9.7		ug/L	0.2
05/20/2018 05:21	Total HAA9		47		ug/L	0.2
05/20/2018 05:21	Trichloroacetic acid		17		ug/L	0.5

SUMMARY OF POSITIVE DATA ONLY

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Laboratory Hits

Report: 738019
Project: UCMR4
Group: VA6013010 Arlington County AM1 AM2

U.S. Army Corps of Engineers
Mike Chicoine
Washington Aqueduct
5900 MacArthur Blvd. NW
Washington, DC 20016

Samples Received on:
05/15/2018 1507

Analyzed	Analyte	Sample ID	Result	Federal MCL	Units	MRL
	201805150403	**00004-G151-Arlington Science Focus**				
05/20/2018 05:58	Bromochloroacetic acid		3.9		ug/L	0.3
05/20/2018 05:58	Bromodichloroacetic acid		4.6		ug/L	0.5
05/20/2018 05:58	Chlorodibromoacetic acid		0.57		ug/L	0.3
05/20/2018 05:58	Dibromoacetic acid		0.38		ug/L	0.3
05/20/2018 05:58	Dichloroacetic acid		20		ug/L	0.2
05/20/2018 05:58	Monochloroacetic acid		2.6		ug/L	2
05/20/2018 05:58	Total HAA5		39		ug/L	0.2
05/20/2018 05:58	Total HAA6Br		9.4		ug/L	0.2
05/20/2018 05:58	Total HAA9		48		ug/L	0.2
05/20/2018 05:58	Trichloroacetic acid		16		ug/L	0.5
	201805150404	**00005-P2-Minor Hill**				
05/20/2018 06:35	Bromochloroacetic acid		4.1		ug/L	0.3
05/20/2018 06:35	Bromodichloroacetic acid		4.6		ug/L	0.5
05/20/2018 06:35	Chlorodibromoacetic acid		0.60		ug/L	0.3
05/20/2018 06:35	Dibromoacetic acid		0.43		ug/L	0.3
05/20/2018 06:35	Dichloroacetic acid		19		ug/L	0.2
05/20/2018 06:35	Monochloroacetic acid		2.4		ug/L	2
05/20/2018 06:35	Total HAA5		39		ug/L	0.2
05/20/2018 06:35	Total HAA6Br		9.7		ug/L	0.2
05/20/2018 06:35	Total HAA9		48		ug/L	0.2
05/20/2018 06:35	Trichloroacetic acid		17		ug/L	0.5
	201805150405	**00006-NR83-Jamestown Elem**				
05/20/2018 07:12	Bromochloroacetic acid		4.1		ug/L	0.3
05/20/2018 07:12	Bromodichloroacetic acid		4.7		ug/L	0.5
05/20/2018 07:12	Chlorodibromoacetic acid		0.64		ug/L	0.3
05/20/2018 07:12	Dibromoacetic acid		0.42		ug/L	0.3
05/20/2018 07:12	Dichloroacetic acid		19		ug/L	0.2
05/20/2018 07:12	Monochloroacetic acid		2.4		ug/L	2
05/20/2018 07:12	Total HAA5		39		ug/L	0.2
05/20/2018 07:12	Total HAA6Br		9.9		ug/L	0.2
05/20/2018 07:12	Total HAA9		48		ug/L	0.2
05/20/2018 07:12	Trichloroacetic acid		17		ug/L	0.5
	201805150406	**00007-NR84-Madison Center**				
05/20/2018 07:50	Bromochloroacetic acid		4.2		ug/L	0.3
05/20/2018 07:50	Bromodichloroacetic acid		4.6		ug/L	0.5

SUMMARY OF POSITIVE DATA ONLY

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Laboratory Hits

Report: 738019
Project: UCMR4
Group: VA6013010 Arlington County AM1 AM2

U.S. Army Corps of Engineers
Mike Chicoine
Washington Aqueduct
5900 MacArthur Blvd. NW
Washington, DC 20016

Samples Received on:
05/15/2018 1507

Analyzed	Analyte	Sample ID	Result	Federal MCL	Units	MRL
05/20/2018 07:50	Chlorodibromoacetic acid		0.60		ug/L	0.3
05/20/2018 07:50	Dibromoacetic acid		0.42		ug/L	0.3
05/20/2018 07:50	Dichloroacetic acid		19		ug/L	0.2
05/20/2018 07:50	Monochloroacetic acid		2.4		ug/L	2
05/20/2018 07:50	Total HAA5		39		ug/L	0.2
05/20/2018 07:50	Total HAA6Br		9.8		ug/L	0.2
05/20/2018 07:50	Total HAA9		48		ug/L	0.2
05/20/2018 07:50	Trichloroacetic acid		17		ug/L	0.5
	201805150407	**00008-WR63-Walter Reed School**				
05/20/2018 08:27	Bromochloroacetic acid		4.2		ug/L	0.3
05/20/2018 08:27	Bromodichloroacetic acid		4.7		ug/L	0.5
05/20/2018 08:27	Chlorodibromoacetic acid		0.53		ug/L	0.3
05/20/2018 08:27	Dibromoacetic acid		0.43		ug/L	0.3
05/20/2018 08:27	Dichloroacetic acid		19		ug/L	0.2
05/20/2018 08:27	Monochloroacetic acid		2.4		ug/L	2
05/20/2018 08:27	Total HAA5		40		ug/L	0.2
05/20/2018 08:27	Total HAA6Br		9.9		ug/L	0.2
05/20/2018 08:27	Total HAA9		49		ug/L	0.2
05/20/2018 08:27	Trichloroacetic acid		18		ug/L	0.5

SUMMARY OF POSITIVE DATA ONLY

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Laboratory Data

Report: 738019
Project: UCMR4
Group: VA6013010 Arlington County AM1 AM2

U.S. Army Corps of Engineers
Mike Chicoine
Washington Aqueduct
5900 MacArthur Blvd. NW
Washington, DC 20016

Samples Received on:
05/15/2018 1507

Prepped	Analyzed	Prep Batch	Analytical Batch	Method	Analyte	Result	Units	MRL	Dilution
31097-EP001-Entry Point to Dist. System (201805150399)						**Sampled on 05/14/2018 1200**			
Sample Type: EP									
Sample Event: SEA2									
Facility ID: 31097									
Sample Point ID: EP001									
PWSID: VA6013010									
Static ID: EP									
UCMR4 200.8 - UCMR4 Metals									
	05/23/18 10:32	1091927	1092759	(UCMR4 200.8)	Germanium Total ICAP/MS	ND	ug/L	0.3	1
	05/23/18 10:32	1091927	1092759	(UCMR4 200.8)	Manganese Total ICAP/MS	0.83	ug/L	0.4	1
	05/23/18 10:32	1091927	1092759	(UCMR4 200.8)	Indium (115)	98	%		1
	05/23/18 10:32	1091927	1092759	(UCMR4 200.8)	Yttrium (89)	102	%		1
EPA 525.3 - UCMR4 525.3									
05/17/18	05/22/18 10:46	1091446	1092621	(EPA 525.3)	alpha-HCH	ND	ug/L	0.01	1
05/17/18	05/22/18 10:46	1091446	1092621	(EPA 525.3)	Chlorpyrifos	ND	ug/L	0.03	1
05/17/18	05/22/18 10:46	1091446	1092621	(EPA 525.3)	Dimethipin	ND	ug/L	0.2	1
05/17/18	05/22/18 10:46	1091446	1092621	(EPA 525.3)	Ethoprop	ND	ug/L	0.03	1
05/17/18	05/22/18 10:46	1091446	1092621	(EPA 525.3)	Oxyfluorfen	ND	ug/L	0.05	1
05/17/18	05/22/18 10:46	1091446	1092621	(EPA 525.3)	Profenofos	ND	ug/L	0.3	1
05/17/18	05/22/18 10:46	1091446	1092621	(EPA 525.3)	Tebuconazole	ND	ug/L	0.2	1
05/17/18	05/22/18 10:46	1091446	1092621	(EPA 525.3)	Total Permethrin (trans & cis)	ND	ug/L	0.04	1
05/17/18	05/22/18 10:46	1091446	1092621	(EPA 525.3)	Tribufos	ND	ug/L	0.07	1
05/17/18	05/22/18 10:46	1091446	1092621	(EPA 525.3)	1,3-Dimethyl-2-nitrobenzene	81	%		1
05/17/18	05/22/18 10:46	1091446	1092621	(EPA 525.3)	acenaphthene-d10	105	%		1
05/17/18	05/22/18 10:46	1091446	1092621	(EPA 525.3)	Benzo[a]pyrene-d12	87	%		1
05/17/18	05/22/18 10:46	1091446	1092621	(EPA 525.3)	chrysene-d12	115	%		1
05/17/18	05/22/18 10:46	1091446	1092621	(EPA 525.3)	phenanthrene-d10	107	%		1
05/17/18	05/22/18 10:46	1091446	1092621	(EPA 525.3)	Triphenyl Phosphate	78	%		1
EPA 530 - UCMR4 530									
05/25/18	06/04/18 18:46	1093432	1095501	(EPA 530)	Butylated hydroxyanisole	ND	ug/L	0.03	1
05/25/18	06/04/18 18:46	1093432	1095501	(EPA 530)	O-Toluidine	ND	ug/L	0.007	1
05/25/18	06/04/18 18:46	1093432	1095501	(EPA 530)	Quinoline	ND	ug/L	0.02	1
05/25/18	06/04/18 18:46	1093432	1095501	(EPA 530)	acenaphthene-d10	119	%		1
05/25/18	06/04/18 18:46	1093432	1095501	(EPA 530)	o-Toluidine–d9	59	%		1
05/25/18	06/04/18 18:46	1093432	1095501	(EPA 530)	phenanthrene-d10	121	%		1
05/25/18	06/04/18 18:46	1093432	1095501	(EPA 530)	Quinoline–d7	102	%		1
EPA 541 - UCMR SOCs by EPA 541									
06/06/18	06/06/18 21:47			(EPA 541)	1-Butanol	ND	ug/L	2	1
06/06/18	06/06/18 21:47			(EPA 541)	2-Methoxyethanol	ND	ug/L	0.4	1

Rounding on totals after summation.
(c) - indicates calculated results

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Laboratory Data

Report: 738019
Project: UCMR4
Group: VA6013010 Arlington County AM1 AM2

U.S. Army Corps of Engineers
Mike Chicoine
Washington Aqueduct
5900 MacArthur Blvd. NW
Washington, DC 20016

Samples Received on:
05/15/2018 1507

Prepped	Analyzed	Prep Batch	Analytical Batch	Method	Analyte	Result	Units	MRL	Dilution
06/06/18	06/06/18 21:47			(EPA 541)	2-Propen-1-ol	ND	ug/L	0.5	1
06/06/18	06/06/18 21:47			(EPA 541)	1-Butanol-d10	99	%		1
06/06/18	06/06/18 21:47			(EPA 541)	2-Propen-1-ol-d6	88	%		1
06/06/18	06/06/18 21:47			(EPA 541)	Chlorobenzene-d5	105	%		1

00001-G314-Water Control Center (201805150400) **Sampled on 05/14/2018 0700**

Sample Type: DS
Sample Event: SEH2
Facility ID: 00001
Sample Point ID: G314
PWSID: VA6013010
Static ID: DS

EPA 552.3 - UCMR4 552.3

05/19/18	05/20/18 03:30	1092001	1092321	(EPA 552.3)	Bromochloroacetic acid	4.1	ug/L	0.3	1
05/19/18	05/20/18 03:30	1092001	1092321	(EPA 552.3)	Bromodichloroacetic acid	4.6	ug/L	0.5	1
05/19/18	05/20/18 03:30	1092001	1092321	(EPA 552.3)	Chlorodibromoacetic acid	0.60	ug/L	0.3	1
05/19/18	05/20/18 03:30	1092001	1092321	(EPA 552.3)	Dibromoacetic acid	0.39	ug/L	0.3	1
05/19/18	05/20/18 03:30	1092001	1092321	(EPA 552.3)	Dichloroacetic acid	19	ug/L	0.2	1
05/19/18	05/20/18 03:30	1092001	1092321	(EPA 552.3)	Monobromoacetic acid	ND	ug/L	0.3	1
05/19/18	05/20/18 03:30	1092001	1092321	(EPA 552.3)	Monochloroacetic acid	2.6	ug/L	2	1
05/19/18	05/20/18 03:30	1092001	1092321	(EPA 552.3)	Total HAA5	40	ug/L	0.2	1
05/19/18	05/20/18 03:30	1092001	1092321	(EPA 552.3)	Total HAA6Br	9.7	ug/L	0.2	1
05/19/18	05/20/18 03:30	1092001	1092321	(EPA 552.3)	Total HAA9	49	ug/L	0.2	1
05/19/18	05/20/18 03:30	1092001	1092321	(EPA 552.3)	Tribromoacetic acid	ND	ug/L	2	1
05/19/18	05/20/18 03:30	1092001	1092321	(EPA 552.3)	Trichloroacetic acid	18	ug/L	0.5	1
05/19/18	05/20/18 03:30	1092001	1092321	(EPA 552.3)	1,2,3-Trichloropropane	102	%		1
05/19/18	05/20/18 03:30	1092001	1092321	(EPA 552.3)	2,3-Dibromopropionic acid	103	%		1

00002-G232-Firehouse Number One (201805150401) **Sampled on 05/14/2018 0730**

Sample Type: DS
Sample Event: SEH2
Facility ID: 00002
Sample Point ID: G232
PWSID: VA6013010
Static ID: DS

EPA 552.3 - UCMR4 552.3

05/19/18	05/20/18 04:07	1092001	1092321	(EPA 552.3)	Bromochloroacetic acid	4.8	ug/L	0.3	1
05/19/18	05/20/18 04:07	1092001	1092321	(EPA 552.3)	Bromodichloroacetic acid	4.9	ug/L	0.5	1
05/19/18	05/20/18 04:07	1092001	1092321	(EPA 552.3)	Chlorodibromoacetic acid	0.60	ug/L	0.3	1
05/19/18	05/20/18 04:07	1092001	1092321	(EPA 552.3)	Dibromoacetic acid	0.46	ug/L	0.3	1
05/19/18	05/20/18 04:07	1092001	1092321	(EPA 552.3)	Dichloroacetic acid	25	ug/L	0.2	1
05/19/18	05/20/18 04:07	1092001	1092321	(EPA 552.3)	Monobromoacetic acid	ND	ug/L	0.3	1
05/19/18	05/20/18 04:07	1092001	1092321	(EPA 552.3)	Monochloroacetic acid	3.2	ug/L	2	1

Rounding on totals after summation.
(c) - indicates calculated results

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1 800 566 LABS (1 800 566 5227)

Laboratory Data

Report: 738019
Project: UCMR4
Group: VA6013010 Arlington County AM1 AM2

U.S. Army Corps of Engineers
Mike Chicoine
Washington Aqueduct
5900 MacArthur Blvd. NW
Washington, DC 20016

Samples Received on:
05/15/2018 1507

Prepped	Analyzed	Prep Batch	Analytical Batch	Method	Analyte	Result	Units	MRL	Dilution
05/19/18	05/20/18 04:07	1092001	1092321	(EPA 552.3)	Total HAA5	48	ug/L	0.2	1
05/19/18	05/20/18 04:07	1092001	1092321	(EPA 552.3)	Total HAA6Br	11	ug/L	0.2	1
05/19/18	05/20/18 04:07	1092001	1092321	(EPA 552.3)	Total HAA9	58	ug/L	0.2	1
05/19/18	05/20/18 04:07	1092001	1092321	(EPA 552.3)	Tribromoacetic acid	ND	ug/L	2	1
05/19/18	05/20/18 04:07	1092001	1092321	(EPA 552.3)	Trichloroacetic acid	19	ug/L	0.5	1
05/19/18	05/20/18 04:07	1092001	1092321	(EPA 552.3)	1,2,3-Trichloropropane	100	%		1
05/19/18	05/20/18 04:07	1092001	1092321	(EPA 552.3)	2,3-Dibromopropionic acid	104	%		1

00003-LM59-Arlington Hospital (201805150402) **Sampled on 05/14/2018 0800**

Sample Type: DS
Sample Event: SEH2
Facility ID: 00003
Sample Point ID: LM59
PWSID: VA6013010
Static ID: DS

EPA 552.3 - UCMR4 552.3

05/19/18	05/20/18 05:21	1092001	1092321	(EPA 552.3)	Bromochloroacetic acid	4.1	ug/L	0.3	1
05/19/18	05/20/18 05:21	1092001	1092321	(EPA 552.3)	Bromodichloroacetic acid	4.6	ug/L	0.5	1
05/19/18	05/20/18 05:21	1092001	1092321	(EPA 552.3)	Chlorodibromoacetic acid	0.58	ug/L	0.3	1
05/19/18	05/20/18 05:21	1092001	1092321	(EPA 552.3)	Dibromoacetic acid	0.41	ug/L	0.3	1
05/19/18	05/20/18 05:21	1092001	1092321	(EPA 552.3)	Dichloroacetic acid	18	ug/L	0.2	1
05/19/18	05/20/18 05:21	1092001	1092321	(EPA 552.3)	Monobromoacetic acid	ND	ug/L	0.3	1
05/19/18	05/20/18 05:21	1092001	1092321	(EPA 552.3)	Monochloroacetic acid	2.4	ug/L	2	1
05/19/18	05/20/18 05:21	1092001	1092321	(EPA 552.3)	Total HAA5	38	ug/L	0.2	1
05/19/18	05/20/18 05:21	1092001	1092321	(EPA 552.3)	Total HAA6Br	9.7	ug/L	0.2	1
05/19/18	05/20/18 05:21	1092001	1092321	(EPA 552.3)	Total HAA9	47	ug/L	0.2	1
05/19/18	05/20/18 05:21	1092001	1092321	(EPA 552.3)	Tribromoacetic acid	ND	ug/L	2	1
05/19/18	05/20/18 05:21	1092001	1092321	(EPA 552.3)	Trichloroacetic acid	17	ug/L	0.5	1
05/19/18	05/20/18 05:21	1092001	1092321	(EPA 552.3)	1,2,3-Trichloropropane	101	%		1
05/19/18	05/20/18 05:21	1092001	1092321	(EPA 552.3)	2,3-Dibromopropionic acid	107	%		1

00004-G151-Arlington Science Focus (201805150403) **Sampled on 05/14/2018 0820**

Sample Type: DS
Sample Event: SEH2
Facility ID: 00004
Sample Point ID: G151
PWSID: VA6013010
Static ID: DS

EPA 552.3 - UCMR4 552.3

05/19/18	05/20/18 05:58	1092001	1092321	(EPA 552.3)	Bromochloroacetic acid	3.9	ug/L	0.3	1
05/19/18	05/20/18 05:58	1092001	1092321	(EPA 552.3)	Bromodichloroacetic acid	4.6	ug/L	0.5	1
05/19/18	05/20/18 05:58	1092001	1092321	(EPA 552.3)	Chlorodibromoacetic acid	0.57	ug/L	0.3	1
05/19/18	05/20/18 05:58	1092001	1092321	(EPA 552.3)	Dibromoacetic acid	0.38	ug/L	0.3	1

Rounding on totals after summation.
(c) - indicates calculated results

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Laboratory Data

Report: 738019
Project: UCMR4
Group: VA6013010 Arlington County AM1 AM2

U.S. Army Corps of Engineers
Mike Chicoine
Washington Aqueduct
5900 MacArthur Blvd. NW
Washington, DC 20016

Samples Received on:
05/15/2018 1507

Prepped	Analyzed	Prep Batch	Analytical Batch	Method	Analyte	Result	Units	MRL	Dilution
05/19/18	05/20/18 05:58	1092001	1092321	(EPA 552.3)	Dichloroacetic acid	20	ug/L	0.2	1
05/19/18	05/20/18 05:58	1092001	1092321	(EPA 552.3)	Monobromoacetic acid	ND	ug/L	0.3	1
05/19/18	05/20/18 05:58	1092001	1092321	(EPA 552.3)	Monochloroacetic acid	2.6	ug/L	2	1
05/19/18	05/20/18 05:58	1092001	1092321	(EPA 552.3)	Total HAA5	39	ug/L	0.2	1
05/19/18	05/20/18 05:58	1092001	1092321	(EPA 552.3)	Total HAA6Br	9.4	ug/L	0.2	1
05/19/18	05/20/18 05:58	1092001	1092321	(EPA 552.3)	Total HAA9	48	ug/L	0.2	1
05/19/18	05/20/18 05:58	1092001	1092321	(EPA 552.3)	Tribromoacetic acid	ND	ug/L	2	1
05/19/18	05/20/18 05:58	1092001	1092321	(EPA 552.3)	Trichloroacetic acid	16	ug/L	0.5	1
05/19/18	05/20/18 05:58	1092001	1092321	(EPA 552.3)	1,2,3-Trichloropropane	103	%		1
05/19/18	05/20/18 05:58	1092001	1092321	(EPA 552.3)	2,3-Dibromopropionic acid	104	%		1

00005-P2-Minor Hill (201805150404) **Sampled on 05/14/2018 1010**

Sample Type: DS
Sample Event: SEH2
Facility ID: 00005
Sample Point ID: P2
PWSID: VA6013010
Static ID: DS

EPA 552.3 - UCMR4 552.3

05/19/18	05/20/18 06:35	1092001	1092321	(EPA 552.3)	Bromochloroacetic acid	4.1	ug/L	0.3	1
05/19/18	05/20/18 06:35	1092001	1092321	(EPA 552.3)	Bromodichloroacetic acid	4.6	ug/L	0.5	1
05/19/18	05/20/18 06:35	1092001	1092321	(EPA 552.3)	Chlorodibromoacetic acid	0.60	ug/L	0.3	1
05/19/18	05/20/18 06:35	1092001	1092321	(EPA 552.3)	Dibromoacetic acid	0.43	ug/L	0.3	1
05/19/18	05/20/18 06:35	1092001	1092321	(EPA 552.3)	Dichloroacetic acid	19	ug/L	0.2	1
05/19/18	05/20/18 06:35	1092001	1092321	(EPA 552.3)	Monobromoacetic acid	ND	ug/L	0.3	1
05/19/18	05/20/18 06:35	1092001	1092321	(EPA 552.3)	Monochloroacetic acid	2.4	ug/L	2	1
05/19/18	05/20/18 06:35	1092001	1092321	(EPA 552.3)	Total HAA5	39	ug/L	0.2	1
05/19/18	05/20/18 06:35	1092001	1092321	(EPA 552.3)	Total HAA6Br	9.7	ug/L	0.2	1
05/19/18	05/20/18 06:35	1092001	1092321	(EPA 552.3)	Total HAA9	48	ug/L	0.2	1
05/19/18	05/20/18 06:35	1092001	1092321	(EPA 552.3)	Tribromoacetic acid	ND	ug/L	2	1
05/19/18	05/20/18 06:35	1092001	1092321	(EPA 552.3)	Trichloroacetic acid	17	ug/L	0.5	1
05/19/18	05/20/18 06:35	1092001	1092321	(EPA 552.3)	1,2,3-Trichloropropane	100	%		1
05/19/18	05/20/18 06:35	1092001	1092321	(EPA 552.3)	2,3-Dibromopropionic acid	104	%		1

00006-NR83-Jamestown Elem (201805150405) **Sampled on 05/14/2018 1035**

Sample Type: DS
Sample Event: SEH2
Facility ID: 00006
Sample Point ID: NR83
PWSID: VA6013010
Static ID: DS

EPA 552.3 - UCMR4 552.3

05/19/18	05/20/18 07:12	1092001	1092321	(EPA 552.3)	Bromochloroacetic acid	4.1	ug/L	0.3	1

Rounding on totals after summation.
(c) - indicates calculated results

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Laboratory Data

Report: 738019
Project: UCMR4
Group: VA6013010 Arlington County AM1 AM2

U.S. Army Corps of Engineers
Mike Chicoine
Washington Aqueduct
5900 MacArthur Blvd. NW
Washington, DC 20016

Samples Received on:
05/15/2018 1507

Prepped	Analyzed	Prep Batch	Analytical Batch	Method	Analyte	Result	Units	MRL	Dilution
05/19/18	05/20/18 07:12	1092001	1092321	(EPA 552.3)	Bromodichloroacetic acid	4.7	ug/L	0.5	1
05/19/18	05/20/18 07:12	1092001	1092321	(EPA 552.3)	Chlorodibromoacetic acid	0.64	ug/L	0.3	1
05/19/18	05/20/18 07:12	1092001	1092321	(EPA 552.3)	Dibromoacetic acid	0.42	ug/L	0.3	1
05/19/18	05/20/18 07:12	1092001	1092321	(EPA 552.3)	Dichloroacetic acid	19	ug/L	0.2	1
05/19/18	05/20/18 07:12	1092001	1092321	(EPA 552.3)	Monobromoacetic acid	ND	ug/L	0.3	1
05/19/18	05/20/18 07:12	1092001	1092321	(EPA 552.3)	Monochloroacetic acid	2.4	ug/L	2	1
05/19/18	05/20/18 07:12	1092001	1092321	(EPA 552.3)	Total HAA5	39	ug/L	0.2	1
05/19/18	05/20/18 07:12	1092001	1092321	(EPA 552.3)	Total HAA6Br	9.9	ug/L	0.2	1
05/19/18	05/20/18 07:12	1092001	1092321	(EPA 552.3)	Total HAA9	48	ug/L	0.2	1
05/19/18	05/20/18 07:12	1092001	1092321	(EPA 552.3)	Tribromoacetic acid	ND	ug/L	2	1
05/19/18	05/20/18 07:12	1092001	1092321	(EPA 552.3)	Trichloroacetic acid	17	ug/L	0.5	1
05/19/18	05/20/18 07:12	1092001	1092321	(EPA 552.3)	1,2,3-Trichloropropane	101	%		1
05/19/18	05/20/18 07:12	1092001	1092321	(EPA 552.3)	2,3-Dibromopropionic acid	101	%		1

00007-NR84-Madison Center (201805150406) **Sampled on 05/14/2018 1100**

Sample Type: DS
Sample Event: SEH2
Facility ID: 00007
Sample Point ID: NR84
PWSID: VA6013010
Static ID: DS

EPA 552.3 - UCMR4 552.3

05/19/18	05/20/18 07:50	1092001	1092321	(EPA 552.3)	Bromochloroacetic acid	4.2	ug/L	0.3	1
05/19/18	05/20/18 07:50	1092001	1092321	(EPA 552.3)	Bromodichloroacetic acid	4.6	ug/L	0.5	1
05/19/18	05/20/18 07:50	1092001	1092321	(EPA 552.3)	Chlorodibromoacetic acid	0.60	ug/L	0.3	1
05/19/18	05/20/18 07:50	1092001	1092321	(EPA 552.3)	Dibromoacetic acid	0.42	ug/L	0.3	1
05/19/18	05/20/18 07:50	1092001	1092321	(EPA 552.3)	Dichloroacetic acid	19	ug/L	0.2	1
05/19/18	05/20/18 07:50	1092001	1092321	(EPA 552.3)	Monobromoacetic acid	ND	ug/L	0.3	1
05/19/18	05/20/18 07:50	1092001	1092321	(EPA 552.3)	Monochloroacetic acid	2.4	ug/L	2	1
05/19/18	05/20/18 07:50	1092001	1092321	(EPA 552.3)	Total HAA5	39	ug/L	0.2	1
05/19/18	05/20/18 07:50	1092001	1092321	(EPA 552.3)	Total HAA6Br	9.8	ug/L	0.2	1
05/19/18	05/20/18 07:50	1092001	1092321	(EPA 552.3)	Total HAA9	48	ug/L	0.2	1
05/19/18	05/20/18 07:50	1092001	1092321	(EPA 552.3)	Tribromoacetic acid	ND	ug/L	2	1
05/19/18	05/20/18 07:50	1092001	1092321	(EPA 552.3)	Trichloroacetic acid	17	ug/L	0.5	1
05/19/18	05/20/18 07:50	1092001	1092321	(EPA 552.3)	1,2,3-Trichloropropane	101	%		1
05/19/18	05/20/18 07:50	1092001	1092321	(EPA 552.3)	2,3-Dibromopropionic acid	103	%		1

00008-WR63-Walter Reed School (201805150407) **Sampled on 05/14/2018 0850**

Rounding on totals after summation.
(c) - indicates calculated results

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Laboratory Data

Report: 738019
Project: UCMR4
Group: VA6013010 Arlington County AM1 AM2

U.S. Army Corps of Engineers
Mike Chicoine
Washington Aqueduct
5900 MacArthur Blvd. NW
Washington, DC 20016

Samples Received on:
05/15/2018 1507

Sample Type: DS
Sample Event: SEH2
Facility ID: 00008
Sample Point ID: WR63
PWSID: VA6013010
Static ID: DS

EPA 552.3 - UCMR4 552.3

Prepped	Analyzed	Prep Batch	Analytical Batch	Method	Analyte	Result	Units	MRL	Dilution
05/19/18	05/20/18 08:27	1092001	1092321	(EPA 552.3)	Bromochloroacetic acid	4.2	ug/L	0.3	1
05/19/18	05/20/18 08:27	1092001	1092321	(EPA 552.3)	Bromodichloroacetic acid	4.7	ug/L	0.5	1
05/19/18	05/20/18 08:27	1092001	1092321	(EPA 552.3)	Chlorodibromoacetic acid	0.53	ug/L	0.3	1
05/19/18	05/20/18 08:27	1092001	1092321	(EPA 552.3)	Dibromoacetic acid	0.43	ug/L	0.3	1
05/19/18	05/20/18 08:27	1092001	1092321	(EPA 552.3)	Dichloroacetic acid	19	ug/L	0.2	1
05/19/18	05/20/18 08:27	1092001	1092321	(EPA 552.3)	Monobromoacetic acid	ND	ug/L	0.3	1
05/19/18	05/20/18 08:27	1092001	1092321	(EPA 552.3)	Monochloroacetic acid	2.4	ug/L	2	1
05/19/18	05/20/18 08:27	1092001	1092321	(EPA 552.3)	Total HAA5	40	ug/L	0.2	1
05/19/18	05/20/18 08:27	1092001	1092321	(EPA 552.3)	Total HAA6Br	9.9	ug/L	0.2	1
05/19/18	05/20/18 08:27	1092001	1092321	(EPA 552.3)	Total HAA9	49	ug/L	0.2	1
05/19/18	05/20/18 08:27	1092001	1092321	(EPA 552.3)	Tribromoacetic acid	ND	ug/L	2	1
05/19/18	05/20/18 08:27	1092001	1092321	(EPA 552.3)	Trichloroacetic acid	18	ug/L	0.5	1
05/19/18	05/20/18 08:27	1092001	1092321	(EPA 552.3)	1,2,3-Trichloropropane	102	%		1
05/19/18	05/20/18 08:27	1092001	1092321	(EPA 552.3)	2,3-Dibromopropionic acid	98	%		1

Rounding on totals after summation.
(c) - indicates calculated results

Client Name: Eurofins Eaton Analytical

Report #: 417926

Sampling Point ID: EP001

PWS ID: VA6013010

UCMR Result Summary								
Analyte ID #	Analyte	Method	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
2084	1-Butanol	541	2.00	< 2.00	ug/L	06/06/18 08:00	06/06/18 21:47	3949475
2431	2-Methoxyethanol	541	0.400	< 0.400	ug/L	06/06/18 08:00	06/06/18 21:47	3949475
2432	2-Propen-1-ol	541	0.500	< 0.500	ug/L	06/06/18 08:00	06/06/18 21:47	3949475

† EEA has demonstrated it can achieve these report limits in reagent water, but can not document them in all sample matrices.

Lab Definitions

Continuing Calibration Check Standard (CCC) / Continuing Calibration Verification (CCV) / Initial Calibration Verification Standard (ICV) / Initial Performance Check (IPC) - is a standard containing one or more of the target analytes that is prepared from the same standards used to calibrate the instrument. This standard is used to verify the calibration curve at the beginning of each analytical sequence, and may also be analyzed throughout and at the end of the sequence. The concentration of continuing standards may be varied, when prescribed by the reference method, so that the range of the calibration curve is verified on a regular basis. CCL, CCM, and CCH are the CCC standards at low, mid, and high concentration levels, respectively.

Internal Standards (IS) - are pure compounds with properties similar to the analytes of interest, which are added to field samples or extracts, calibration standards, and quality control standards at a known concentration. They are used to measure the relative responses of the analytes of interest and surrogates in the sample, calibration standard or quality control standard.

Laboratory Duplicate (LD) - is a field sample aliquot taken from the same sample container in the laboratory and analyzed separately using identical procedures. Analysis of laboratory duplicates provides a measure of the precision of the laboratory procedures.

Laboratory Fortified Blank (LFB) / Laboratory Control Sample (LCS) - is an aliquot of reagent water to which known concentrations of the analytes of interest are added. The LFB is analyzed exactly the same as the field samples. LFBs are used to determine whether the method is in control. FBL, FBM, and FBH are the LFB samples at low, mid, and high concentration levels, respectively.

Laboratory Method Blank (LMB) / Laboratory Reagent Blank (LRB) - is a sample of reagent water included in the sample batch analyzed in the same way as the associated field samples. The LMB is used to determine if method analytes or other background contamination have been introduced during the preparation or analytical procedure. The LMB is analyzed exactly the same as the field samples.

Laboratory Trip Blank (LTB) / Field Reagent Blank (FRB) - is a sample of laboratory reagent water placed in a sample container in the laboratory and treated as a field sample, including storage, preservation, and all analytical procedures. The FRB/LTB container follows the collection bottles to and from the collection site, but the FRB/LTB is not opened at any time during the trip. The FRB/LTB is primarily a travel blank used to verify that the samples were not contaminated during shipment.

Matrix Spike Duplicate Sample (MSD) / Laboratory Fortified Sample Matrix Duplicate (LFSMD) - is a sample aliquot taken from the same field sample source as the Matrix Spike Sample to which known quantities of the analytes of interest are added in the laboratory. The MSD is analyzed exactly the same as the field samples. Analysis of the MSD provides a measure of the precision of the laboratory procedures in a specific matrix. SDL, SDM, and SDH / LFSMDL, LFSMDM, and LFSMDH are the MSD or LFSMD at low, mid, and high concentration levels, respectively.

Matrix Spike Sample (MS) / Laboratory Fortified Sample Matrix (LFSM) - is a sample aliquot taken from field sample source to which known quantities of the analytes of interest are added in the laboratory. The MS is analyzed exactly the same as the field samples. The purpose is to demonstrate recovery of the analytes from a sample matrix to determine if the specific matrix contributes bias to the analytical results. MSL, MSM, and MSH / LFSML, LFSMM, and LFSMH are the MS or LFSM at low, mid, and high concentration levels, respectively.

Quality Control Standard (QCS) / Second Source Calibration Verification (SSCV) - is a solution containing known concentrations of the analytes of interest prepared from a source different from the source of the calibration standards. The solution is obtained from a second manufacturer or lot if the lot can be demonstrated by the manufacturer as prepared independently from other lots. The QCS sample is analyzed using the same procedures as field samples. The QCS is used as a check on the calibration standards used in the method on a routine basis.

Reporting Limit Check (RLC) / Initial Calibration Check Standard (ICCS) - is a procedural standard that is analyzed each day to evaluate instrument performance at or below the minimum reporting limit (MRL).

Surrogate Standard (SS) / Surrogate Analyte (SUR) - is a pure compound with properties similar to the analytes of interest, which is highly unlikely to be found in any field sample, that is added to the field samples, calibration standards, blanks and quality control standards before sample preparation. The SS is used to evaluate the efficiency of the sample preparation process.

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Ship To:
Eurofins Eaton Analytical
110 South Hill Street

South Bend, IN 46617-2702

Phone: 800-332-4345 Fax: 574-233-8207

Folder #:	Report Due:	Sub PO #:
738019	06/05/2018	99-58853

Submittal Form & Purchase Order 99-58853

345724

Date: 5/29/2018

*REPORTING REQUIRMENTS: ***Do Not Combine Reports with any other samples submitted under different Folder Numbers!***
Report & Invoice must have the Folder # **738019** Sub PO# **99-58853** and Job # **1000014**

417926

Report all quality control data according to Method. Include dates analyzed. Date extracted (if extracted) and Method reference on the report.
Results must have Complete data & QC with Approval Signature.

Reports: Jackie Contreras Sub-Contracting Administrator
EMAIL TO: us20_subcontract@eurofinsus.com
Eurofins Eaton Analytical, LLC 750 Royal Oaks Drive, Suite 100, Monrovia, CA 91016
Phone (626) 386-1165 Fax (626) 386-1122
Invoices to: Eurofins Eaton Analytical, LLC

Provide in each Report the Specified State Certification # & Exp Date for requested tests + matrix.

Samples from: **DISTRICT OF COLUMBIA**

JLS	Use Lab Order # for ID	*Client Sample ID for reference only*	Analysis Requested	Sample Date & Time	Matrix	PWS Systemcode	PWSID
	201805150399	31097-EP001-Entry Point to Dist. System		05/14/18 1200	DW		
	Sample type: EP	**Sample Event:** SEA2	**Facility ID:** 31097	**Sample Point ID:** {CL_SAMPLEPOINTID}		**Static ID:** EP	
EPA 541	UCMR4 541_Subbed		UCMR SOCs by EPA 541				

3949475 2.0°C

Cl=A
pH<3

Client Provided Sample Container

Relinquished by: Sample Control Date 5/29/18 Time 1148

Received by: dmastis Date 5/31/18 Time 0830

Relinquished by: Sample Control Date _____ Time _____

Received by: _____ Date _____ Time _____

NOTIFICATION REQUIRED IF RECEIVED OUTSIDE OF 0-6 CELSIUS

An Acknowledgement of Receipt is requested to attn: Jackie Contreras

eurofins | Eaton Analytical

Tel: (626) 386-1100
Fax: (866) 988-3757
1 800 566 LABS (1 800 566 5227)

Laboratory Data

Report: 742042
Project: UCMR4
Group: VA6013010 Arlington County AM3

U.S. Army Corps of Engineers
Mike Chicoine
Washington Aqueduct
5900 MacArthur Blvd. NW
Washington, DC 20016

Samples Received on:
06/05/2018 1141

31097-EP001-Entry Point to Dist. System (201806050641) **Sampled on 06/04/2018 0945**

Sample Type: EP
Sample Event: SEC5
Facility ID: 31097
Sample Point ID: EP001
PWSID: VA6013010
Static ID: EP

Prepped	Analyzed	Prep Batch	Analytical Batch	Method	Analyte	Result	Units	MRL	Dilution
EPA 546 - UCMR4 546									
	06/06/18 18:04		1096392	(EPA 546)	Total Microcystins	ND	ug/L	0.3	1
06/06/18	06/06/18 18:04	1096107	1096392	(EPA 546)	Total Microcystins	ND	ug/L	0.3	1
	06/06/18 18:04		1096392	(EPA 546)	%CV	1.20	%		1
06/06/18	06/06/18 18:04	1096107	1096392	(EPA 546)	%CV	1.20	%		1
EPA 545 - UCMR4 545									
	06/12/18 1:08		1097544	(EPA 545)	Anatoxin-a	ND	ug/L	0.03	1
	06/12/18 1:08		1097544	(EPA 545)	Cylindrospermopsin	ND	ug/L	0.09	1
	06/12/18 1:08		1097544	(EPA 545)	L-Phenylalanine-d5	101	%		1
	06/12/18 1:08		1097544	(EPA 545)	Uracil-d4	101	%		1

Rounding on totals after summation.
(c) - indicates calculated results

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Tel: (626) 386-1100
Fax: (866) 988-3757
1 800 566 LABS (1 800 566 5227)

Laboratory Data

Report: 742044
Project: UCMR4
Group: Arlington County McMillan JS

U.S. Army Corps of Engineers
Mike Chicoine
Washington Aqueduct
5900 MacArthur Blvd. NW
Washington, DC 20016

Samples Received on:
06/05/2018 1141

Prepped	Analyzed	Prep Batch	Analytical Batch	Method	Analyte	Result	Units	MRL	Dilution
McMillan JS-EPDS (201806050645)						**Sampled on 06/04/2018 1143**			
Sample Event: SEC5									
PWSID: VA6013010									
Static ID: EP									
EPA 546 - UCMR4 546									
	06/06/18 18:04		1096392	(EPA 546)	Total Microcystins	ND	ug/L	0.3	1
06/06/18	06/06/18 18:04	1096107	1096392	(EPA 546)	Total Microcystins	ND	ug/L	0.3	1
	06/06/18 18:04		1096392	(EPA 546)	%CV	0.900	%		1
06/06/18	06/06/18 18:04	1096107	1096392	(EPA 546)	%CV	0.900	%		1
EPA 545 - UCMR4 545									
	06/11/18 23:16		1097544	(EPA 545)	Anatoxin-a	ND	ug/L	0.03	1
	06/11/18 23:16		1097544	(EPA 545)	Cylindrospermopsin	ND	ug/L	0.09	1
	06/11/18 23:16		1097544	(EPA 545)	L-Phenylalanine-d5	91	%		1
	06/11/18 23:16		1097544	(EPA 545)	Uracil-d4	96	%		1

Rounding on totals after summation.
(c) - indicates calculated results

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Tel: (626) 386-1100
Fax: (866) 988-3757
1 800 566 LABS (1 800 566 5227)

Laboratory Data

Report: 745409
Project: UCMR4
Group: VA6013010 Arlington County AM3

U.S. Army Corps of Engineers
Mike Chicoine
Washington Aqueduct
5900 MacArthur Blvd. NW
Washington, DC 20016

Samples Received on:
06/20/2018 1518

31097-EP001-Entry Point to Dist. System (201806200544) **Sampled on 06/18/2018 0845**

Sample Type: EP
Sample Event: SEC6
Facility ID: 31097
Sample Point ID: EP001
PWSID: VA6013010
Static ID: EP

Prepped	Analyzed	Prep Batch	Analytical Batch	Method	Analyte	Result	Units	MRL	Dilution
	EPA 546 - UCMR4 546								
06/21/18	06/28/18 17:18	1101255	1102009	(EPA 546)	Total Microcystins	ND	ug/L	0.3	1
06/21/18	06/28/18 17:18	1101255	1102009	(EPA 546)	%CV	4.30	%		1
	EPA 545 - UCMR4 545								
	06/26/18 20:39		1100056	(EPA 545)	Anatoxin-a	ND	ug/L	0.03	1
	06/26/18 20:39		1100056	(EPA 545)	Cylindrospermopsin	ND	ug/L	0.09	1
	06/26/18 20:39		1100056	(EPA 545)	L-Phenylalanine-d5	102	%		1
	06/26/18 20:39		1100056	(EPA 545)	Uracil-d4	95	%		1

Rounding on totals after summation.
(c) - indicates calculated results

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Tel: (626) 386-1100
Fax: (866) 988-3757
1 800 566 LABS (1 800 566 5227)

Laboratory Comments

Report: 745407
Project: UCMR4
Group: Arlington County McMillan JS

U.S. Army Corps of Engineers
Mike Chicoine
Washington Aqueduct
5900 MacArthur Blvd. NW
Washington, DC 20016

Flags Legend:

BH - Target analyte detected in Method Blank is at or above the acceptance limits of 1/2 MRL. Non-Detect results are valid as per EPA Method 546 and UCMR4.

The Comments Report may be blank if there are no comments for this report.

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Tel: (626) 386-1100
Fax: (866) 988-3757
1 800 566 LABS (1 800 566 5227)

Laboratory Data

Report: 745407
Project: UCMR4
Group: Arlington County McMillan JS

U.S. Army Corps of Engineers
Mike Chicoine
Washington Aqueduct
5900 MacArthur Blvd. NW
Washington, DC 20016

Samples Received on:
06/20/2018 1518

Prepped	Analyzed	Prep Batch	Analytical Batch	Method	Analyte	Result	Units	MRL	Dilution
McMillan JS-EPDS (201806200540)						**Sampled on 06/18/2018 1252**			
	Sample Type: EP								
	Sample Event: SEC6								
	Facility ID: 31097								
	Sample Point ID: McMillanJS								
	PWSID: VA6013010								
	Static ID: EP								
	EPA 546 - UCMR4 546								
06/21/18	06/27/18 15:07	1100571	1101033	(EPA 546)	Total Microcystins	ND (BH)	ug/L	0.3	1
06/21/18	06/27/18 15:07	1100571	1101033	(EPA 546)	%CV	4.70	%		1
	EPA 545 - UCMR4 545								
	06/26/18 20:52		1100056	(EPA 545)	Anatoxin-a	ND	ug/L	0.03	1
	06/26/18 20:52		1100056	(EPA 545)	Cylindrospermopsin	ND	ug/L	0.09	1
	06/26/18 20:52		1100056	(EPA 545)	L-Phenylalanine-d5	105	%		1
	06/26/18 20:52		1100056	(EPA 545)	Uracil-d4	94	%		1

Rounding on totals after summation.
(c) - indicates calculated results

Washington Aqueduct Daily Orthophosphate Data
01 June, 2018 To: 30 June, 2018

Date	Dalecarlia PO4 Dose mg/L	18 PO4 Residual mg/L	McMillan PO4 Dose mg/L	J PO4 Residual mg/L
06/01/18	2.70	2.40	2.52	2.54
06/02/18	2.70	2.44	2.60	2.58
06/03/18	2.70	2.41	2.60	2.64
06/04/18	2.70	2.42	2.55	2.59
06/05/18	2.69	2.36	2.55	2.48
06/06/18	2.65	2.35	2.55	2.45
06/07/18	2.65	2.22	2.55	2.51
06/08/18	2.65	2.32	2.55	2.54
06/09/18	2.65	2.21	2.55	2.44
06/10/18	2.65	2.18	2.55	2.48
06/11/18	2.65	2.30	2.55	2.44
06/12/18	2.65	2.36	2.55	2.48
06/13/18	2.65	2.37	2.55	2.51
06/14/18	2.65	2.39	2.55	2.53
06/15/18	2.65	2.40	2.55	2.52
06/16/18	2.62	2.27	2.55	2.49
06/17/18	2.60	2.22	2.55	2.48
06/18/18	2.60	2.29	2.55	2.48
06/19/18	2.60	2.39	2.55	2.56
06/20/18	2.60	2.34	2.55	2.52
06/21/18	2.60	2.26	2.55	2.48
06/22/18	2.60	2.38	2.55	2.48
06/23/18	2.60	2.23	2.55	2.46
06/24/18	2.60	2.22	2.55	2.43
06/25/18	2.60	2.28	2.55	2.45
06/26/18	2.60	2.41	2.55	2.54
06/27/18	2.60	2.34	2.55	2.48
06/28/18	2.63	2.40	2.55	2.61
06/29/18	2.65	2.38	2.55	2.66
06/30/18	2.71	2.38	2.55	2.55
Average	2.64	2.33	2.55	2.51
Maximum	2.71	2.44	2.60	2.66
Minimum	2.60	2.18	2.52	2.43

Finished water residuals (entry point to distribution system) are from daily grab samples analyzed for total orthophosphate by Washington Aqueduct Laboratory.

Washington Aqueduct Daily Turbidity, pH and Chlorine Data

01 June, 2018 To: 30 June, 2018

Date	#1 Avg. Turbidity	#15 Avg. Turbidity	#15 Max. Turbidity	#18 Avg. Turbidity	G Avg. Turbidity	G Max. Turbidity	J Avg. Turbidity	#18 Avg. pH	J Avg. pH	#18 Avg. Cl2	J Avg. Cl2
06/01/18	12	0.02	0.02	0.18	0.02	0.02	0.04	7.70	7.70	3.69	3.72
06/02/18	31	0.02	0.02	0.19	0.02	0.02	0.04	7.75	7.70	3.71	3.66
06/03/18	31	0.02	0.02	0.14	0.02	0.02	0.04	7.67	7.72	3.63	3.60
06/04/18	45	0.02	0.02	0.06	0.02	0.03	0.04	7.72	7.74	3.72	3.65
06/05/18	125	0.02	0.03	0.11	0.02	0.02	0.03	7.71	7.71	3.77	3.66
06/06/18	111	0.03	0.03	0.15	0.02	0.03	0.04	7.63	7.71	3.74	3.77
06/07/18	59	0.02	0.02	0.11	0.03	0.04	0.05	7.68	7.69	3.76	3.66
06/08/18	48	0.02	0.02	0.15	0.03	0.04	0.06	7.69	7.68	3.80	3.75
06/09/18	37	0.02	0.02	0.16	0.03	0.04	0.06	7.73	7.65	3.75	3.70
06/10/18	32	0.02	0.02	0.16	0.02	0.03	0.06	7.75	7.65	3.81	3.71
06/11/18	28	0.02	0.02	0.16	0.02	0.02	0.05	7.72	7.67	3.74	3.71
06/12/18	30	0.02	0.02	0.17	0.02	0.02	0.05	7.75	7.73	3.70	3.68
06/13/18	42	0.02	0.02	0.15	0.02	0.02	0.05	7.74	7.70	3.74	3.67
06/14/18	31	0.02	0.02	0.16	0.03	0.03	0.05	7.61	7.74	3.64	3.79
06/15/18	23	0.02	0.02	0.16	0.03	0.03	0.05	7.67	7.70	3.58	3.86
06/16/18	16	0.02	0.02	0.16	0.03	0.03	0.06	7.75	7.73	3.54	3.78
06/17/18	14	0.02	0.02	0.20	0.03	0.03	0.06	7.77	7.71	3.61	3.68
06/18/18	13	0.02	0.02	0.23	0.03	0.03	0.05	7.78	7.70	3.57	3.63
06/19/18	12	0.02	0.02	0.21	0.03	0.03	0.05	7.71	7.69	3.44	3.62
06/20/18	10	0.02	0.03	0.28	0.03	0.03	0.05	7.71	7.75	3.62	3.65
06/21/18	11	0.02	0.03	0.24	0.02	0.02	0.05	7.70	7.74	3.65	3.65
06/22/18	14	0.02	0.02	0.29	0.02	0.03	0.05	7.71	7.68	3.68	3.65
06/23/18	21	0.02	0.02	0.24	0.06	0.06	0.06	7.67	7.76	3.67	3.60
06/24/18	23	0.02	0.02	0.37	0.03	0.03	0.05	7.65	7.75	3.63	3.53
06/25/18	38	0.02	0.02	0.26	0.03	0.03	0.06	7.62	7.73	3.83	3.66
06/26/18	42	0.02	0.04	0.15	0.03	0.03	0.05	7.64	7.70	3.73	3.60
06/27/18	38	0.02	0.03	0.16	0.03	0.03	0.05	7.70	7.67	3.76	3.64
06/28/18	35	0.02	0.02	0.20	0.03	0.04	0.06	7.69	7.72	3.74	3.65
06/29/18	20	0.02	0.02	0.25	0.04	0.05	0.07	7.71	7.73	3.77	3.72
06/30/18	10	0.02	0.02	0.34	0.03	0.04	0.08	7.77	7.68	3.76	3.59
Average	33	0.02	0.02	0.19	0.03	0.03	0.05	7.70	7.71	3.69	3.67
Maximum	125	0.03	0.04	0.37	0.06	0.06	0.08	7.78	7.76	3.83	3.86
Minimum	10	0.02	0.02	0.06	0.02	0.02	0.03	7.61	7.65	3.44	3.53

Data are from on-line analyzers except for pH. pH data are from grab samples analyzed a minumum of every 4 hours.

1=Raw water, 15= Dalecarlia Filtered, 18= Dalecarlia Finished, G=McMillan Filtered, J=McMillan Finished

Units: Turbidity (NTU), Cl2 - Chlorine Residual (mg/L)

Average turbidity is calculated from the hourly turbidity readings for each day.

Maximum turbidity is the maximum of the hourly turbidimeter readings for each day.

Optimal Corrosion Control Treatment

Point-of-Entry pH Requirements

Month	Required pH	Dalecarlia Days Out of Range	McMillan Days Out of Range	Total # of Days with Excursions
Jan-18	7.7 ± 0.3	0	0	0
Feb-18	7.7 ± 0.3	0	0	0
Mar-18	7.7 ± 0.3	0	0	0
Apr-18	7.7 ± 0.3	0	0	0
May-18	7.7 ± 0.3	0	0	0
Jun-18	7.7 ± 0.3	0	0	0
Compliance Period Totals		0	0	0

Month	Required pH	Dalecarlia Days Out of Range	McMillan Days Out of Range	Total # of Days with Excursions
Jul-18	7.7 ± 0.3			
Aug-18	7.7 ± 0.3			
Sep-18	7.7 ± 0.3			
Oct-18	7.7 ± 0.3			
Nov-18	7.7 ± 0.3			
Dec-18	7.7 ± 0.3			
Compliance Period Totals				

Point-of-Entry Orthophosphate Requirements

Month	Required orthophosphate	Dalecarlia Days Out of Range	McMillan Days Out of Range	Total # of Days with Excursions
Jan-18	0.5 - 5.0 mg/L	1	0	1
Feb-18	0.5 - 5.0 mg/L	0	0	0
Mar-18	0.5 - 5.0 mg/L	0	0	0
Apr-18	0.5 - 5.0 mg/L	0	0	0
May-18	0.5 - 5.0 mg/L	0	0	0
Jun-18	0.5 - 5.0 mg/L	0	0	0
Compliance Period Totals		0	0	0

Month	Required orthophosphate	Dalecarlia Days Out of Range	McMillan Days Out of Range	Total # of Days with Excursions
Jul-18	0.5 - 5.0 mg/L			
Aug-18	0.5 - 5.0 mg/L			
Sep-18	0.5 - 5.0 mg/L			
Oct-18	0.5 - 5.0 mg/L			
Nov-18	0.5 - 5.0 mg/L			
Dec-18	0.5 - 5.0 mg/L			
Compliance Period Totals				

Note: An interruption of phosphate feed at Dalecarlia WTP due to feed system failure from approximately 0800 hours on 1/19/18 thru approximately 1600 hours on 1/20/18.

Treatment Techniques for Acrylamide and Epichlorohydrin

Washington Aqueduct certifies that when acrylamide and/or epichlorohydrin are used in drinking water treatment, the combination (or product) of dose and monomer level does not exceed the levels specified in 40 CFR 141.111.

Dalecarlia 95th Percentile Combined Filter Effluent Turbidity = 0.03 NTU

Dalecarlia Maximum Individual Filter Effluent Turbidity

Filter	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18
1	0.07	0.06	0.03	0.04	0.04	0.05
2	0.10	0.07	0.07	0.07	0.08	0.09
3	0.09	0.06	0.03	0.04	0.07	0.05
4	0.10	0.06	0.05	0.05	0.05	0.07
5	0.10	0.08	0.04	O/S	0.04	0.05
6	0.13	0.05	0.05	0.06	0.06	0.05
7	0.08	0.04	0.05	0.04	0.03	0.04
8	0.08	0.05	0.05	0.04	0.04	0.06
9	0.08	0.04	0.04	0.04	0.03	0.07
10	0.09	0.05	0.06	0.04	0.05	0.06
11	0.10	0.06	0.04	0.06	0.06	0.07
12	0.09	0.04	0.05	0.07	0.06	0.06
13	0.10	0.07	0.06	0.07	0.07	0.07
14	0.12	0.07	0.05	0.07	0.06	0.05
15	0.09	0.06	0.05	0.06	0.05	0.05
16	0.10	0.07	0.05	0.06	0.09	0.07
17	0.09	0.07	0.05	0.06	0.05	0.05
18	0.09	0.08	0.08	0.07	0.08	0.08
19	0.07	0.06	0.04	0.03	0.05	0.03
20	0.09	0.04	0.07	0.06	0.06	0.06
21	0.10	0.05	0.05	0.06	0.05	0.06
22	0.09	0.05	0.04	0.04	0.04	0.03
23	0.10	0.08	0.07	0.06	0.07	0.05
24	0.09	0.06	0.05	0.05	0.04	0.05
25	0.08	0.08	0.06	0.03	0.08	0.09
26	0.10	0.05	0.04	0.06	0.10	0.05
27	0.07	0.11	0.04	0.07	0.08	0.07
28	0.10	0.08	0.05	0.13	0.09	0.07
29	0.11	0.06	0.06	0.06	0.08	0.03
30	0.11	0.11	0.07	0.05	0.07	O/S
31	0.10	0.05	0.02	0.04	O/S	O/S
32	0.11	0.09	0.03	0.06	0.07	0.07
33	O/S	O/S	O/S	O/S	O/S	0.05
34	O/S	O/S	O/S	O/S	O/S	O/S
35	0.16	0.08	0.04	O/S	0.06	0.09
36	0.12	0.09	0.07	0.02	0.06	0.06

O/S indicates filter out of service

Note: This information is used for operational process control and is not for compliance determinations.

Monthly Report to Primacy Agency for Compliance Determination - Filtered Systems
01 June 2018 To: 30 June 2018

System/Treatment Plant: Washington Aqueduct - Dalecarlia
Type of Filtration: Conventional Treatment
Turbidity Limit: 0.3 NTU
PWSID: DC0000001

Combined Filter Effluent (CFE) Turbidity Performance Criteria:
A.Combined filter effluent monitoring has been conducted in accordance with the IESWTR except as noted:
No Exceptions

B. Minimum number of CFE turbidity measurements required for compliance (6 per day x no. days in operation):	180
Number of Hours in Month	720
Number of Hours in Month that WTP is Off Line	0
Total number of CFE turbidity measurements used for compliance:	720
Total number of CFE turbidity measurements that are less than or equal to 0.3 NTU:	720
Percentage of turbidity measurements meeting the specified limits:	100

C. Record the date and turbidity value for any CFE turbidity measurement exceeding 1 NTU:

Date	Turbidity, NTU

Individual Filter Effluent (IFE) Turbidity Performance Criteria
A. Individual filter effluent monitoring has been conducted in accordance with the IESWTR except as noted:
No Exceptions

B. Report the date, filter number, and turbidity value for any measurement exceeding 0.5 NTU for two consecutive 15 minute measurements after the first four hours after backwash:

Filter No.	Date	Time	Turbidity, NTU

C. Report the date, filter number, and turbidity value for any measurement exceeding 1.0 NTU for two consecutive 15 minute measurements:

Filter No.	Date	Time	Turbidity, NTU

D. Report the date of any failure to collect grab samples if continuous turbidity monitoring equipment is out of service more than 4 hours

E. Report the date of any failure to resume continuous turbidity monitoring more than 5 days after equipment failure

Additional Voluntary Information

Date	*Time*	*Duration*

Monthly Report to Primacy Agency for Compliance Determination - Filtered Systems
01 June 2018 To: 30 June 2018

System/Treatment Plant: Washington Aqueduct - Dalecarlia
Type of Filtration: Conventional Treatment
PWSID: DC0000001

Disinfection Performance Criteria

A. Point-of-Entry Minimum Disinfectant Residual Criteria

Date	Residual (mg/L)	Date	Residual (mg/L)	Date	Residual (mg/L)
6/1/18	3.50	6/12/18	3.58	6/23/18	3.35
6/2/18	3.44	6/13/18	3.54	6/24/18	3.46
6/3/18	3.45	6/14/18	3.48	6/25/18	3.66
6/4/18	3.61	6/15/18	3.50	6/26/18	3.60
6/5/18	3.55	6/16/18	3.39	6/27/18	3.58
6/6/18	3.46	6/17/18	3.50	6/28/18	3.63
6/7/18	3.51	6/18/18	3.41	6/29/18	3.61
6/8/18	3.50	6/19/18	3.19	6/30/18	3.64
6/9/18	3.44	6/20/18	3.47		
6/10/18	3.61	6/21/18	3.40		
6/11/18	3.57	6/22/18	3.51		

Days the Residual was < 0.2 mg/L: None

Date	Duration of Low Residual	Date Reported to Primacy Agency

Monthly Report to Primacy Agency for Compliance Determination - Filtered Systems
01 June 2018 To: 30 June 2018

System/Treatment Plant: Washington Aqueduct - McMillan
Type of Filtration: Conventional Treatment
Turbidity Limit: 0.3 NTU
PWSID: DC0000001

Combined Filter Effluent (CFE) Turbidity Performance Criteria:
A.Combined filter effluent monitoring has been conducted in accordance with the IESWTR except as noted:
No Exceptions

B. Minimum number of CFE turbidity measurements required for compliance (6 per day x no. days in operation):	180
Number of Hours in Month	720
Number of Hours in Month that WTP is Off Line	0
Total number of CFE turbidity measurements used for compliance:	720
Total number of CFE turbidity measurements that are less than or equal to 0.3 NTU:	720
Percentage of turbidity measurements meeting the specified limits:	100

C. Record the date and turbidity value for any CFE turbidity measurement exceeding 1 NTU:

Date	Turbidity, NTU

Individual Filter Effluent (IFE) Turbidity Performance Criteria
A. Individual filter effluent monitoring has been conducted in accordance with the IESWTR except as noted:
No Exceptions

B. Report the date, filter number, and turbidity value for any measurement exceeding 0.5 NTU for two consecutive 15 minute measurements after the first four hours after backwash:

C. Report the date, filter number, and turbidity value for any measurement exceeding 1.0 NTU for two consecutive 15 minute measurements:

D. Report the date of any failure to collect grab samples if continuous turbidity monitoring equipment is out of service more than 4 hours

E. Report the date of any failure to resume continuous turbidity monitoring more than 5 days after equipment failure

Additional Voluntary Information

Date	*Time*	*Duration*

Monthly Report to Primacy Agency for Compliance Determination - Filtered Systems
01 June 2018 To: 30 June 2018

System/Treatment Plant: Washington Aqueduct - McMillan

Type of Filtration: Conventional Treatment
PWSID: DC0000001

Disinfection Performance Criteria
A. Point-of-Entry Minimum Disinfectant Residual Criteria

Date	Residual (mg/L)	Date	Residual (mg/L)	Date	Residual (mg/L)
6/1/18	3.65	6/12/18	3.59	6/23/18	3.45
6/2/18	3.50	6/13/18	3.63	6/24/18	3.39
6/3/18	3.52	6/14/18	3.70	6/25/18	3.54
6/4/18	3.54	6/15/18	3.82	6/26/18	3.50
6/5/18	3.55	6/16/18	3.74	6/27/18	3.54
6/6/18	3.51	6/17/18	3.63	6/28/18	3.56
6/7/18	3.57	6/18/18	3.54	6/29/18	3.59
6/8/18	3.63	6/19/18	3.56	6/30/18	3.41
6/9/18	3.61	6/20/18	3.53		
6/10/18	3.63	6/21/18	3.57		
6/11/18	3.67	6/22/18	3.52		

Days the Residual was < 0.2 mg/L: None

Date	Duration of Low Residual	Date Reported to Primacy Agency

Washington Aqueduct
McMillan Water Treatment Plant

Summary of Routine Monthly Monitoring Tests Results for June 2018

Optimization Assessment Software (OAS) Results

Settled Water Turbidity:

The settled water turbidity goal was not met for the month. The raw water turbidity was over 100 NTU for five days from June 3rd to June 7th, as high as 422 NTU on June 5th. This resulted in elevated settled water turbidity. Turbidities entering the McMillan Reservoir at East Shaft were higher than the turbidities leaving the McMillan Reservoir at Sample Point F, demonstrating turbidity reduction across the reservoir. Therefore, a requirement for Tier-2 monitoring was not triggered.

Individual Filter Turbidity:

The individual filter turbidity optimization goal was met for all filters. Therefore, a requirement for Tier-2 monitoring was not triggered.

Monthly Tier-1 Sample Test Results

The results of the Tier-1 monitoring conducted on June 12th are attached. Turbidity and concentrations of manganese increased between Sample Points E and F for all three samples. These increases are due to the addition of sodium permanganate, which precipitates causing elevated turbidity. Therefore, a requirement for Tier-2 monitoring was not triggered.

McMillan Filter Backwash Rule
Tier-1 Monitoring Report

Collection Date:	6/12/2018					
				1st Low Rate	2nd Low Rate	High Rate
	Location E	Location F	Location G	Backwash	Back Wash	Backwash
Collect Time	0:01	6:00	6:30	10:19	10:31	10:25
pH	7.00	7.05	7.04			
TOC (mg/L)	2.37	2.44	2.25	20.2	2.51	3.68
Turbidity (NTU)	0.85	0.90	0.03	130	2.8	13.0
Aluminum (mg/L)	0.140	0.121	0.017	37.5	0.519	2.86
Copper (mg/L)	0.012	0.023	0.014	1.66	0.063	0.182
Manganese (mg/L)	0.042	0.116	0.0004	8.03	0.335	1.09

	Location E	Location F	Location G
Collect Time	8:00	14:00	14:30
pH	7.07	7.10	7.11
TOC (mg/L)	2.24	2.44	2.32
Turbidity (NTU)	0.80	1.3	0.02
Aluminum (mg/L)	0.134	0.107	0.017
Copper (mg/L)	0.019	0.021	0.014
Manganese (mg/L)	0.044	0.132	0.0003

	Location E	Location F	Location G
Collect Time	16:00	22:00	22:30
pH	6.98	7.08	7.11
TOC (mg/L)	2.35	2.59	2.47
Turbidity (NTU)	0.85	0.95	0.02
Aluminum (mg/L)	0.134	0.114	0.019
Copper (mg/L)	0.036	0.023	0.013
Manganese (mg/L)	0.047	0.103	0.0004

Washington Aqueduct

McMillan Water Treatment Plant

95th Percentile of Monthly Turbidity Data*

Filter -->	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	Combined
Jun-18	**0.045**	**0.033**	**0.045**	**0.045**	**0.044**	**0.042**	**0.042**	**0.038**	**0.041**	**0.032**	**0.036**	**0.029**	**0.040**
May-18	0.040	0.035	0.047	0.044	0.041	0.045	0.042	0.043	0.044	0.035	0.040	0.032	0.042
Apr-18	0.030	0.037	0.040	0.033	0.032	0.036	0.029	0.029	0.030	0.025	0.025	0.024	0.028
Mar-18	0.023	0.020	0.024	0.022	0.021	0.024	0.020	0.023	0.020	0.017	0.021	0.018	0.021
Feb-18	0.034	0.017	0.020	0.018	0.021	0.033	0.018	0.029	0.019	0.023	0.020	0.021	0.023
Jan-18	0.030	0.033	0.037	0.032	0.028	0.032	0.029	0.039	0.028	0.028	0.030	0.024	0.029
Dec-17	0.027	0.025	0.031	0.023	0.024	0.025	0.027	0.022	0.023	0.020	0.022	0.019	0.023
Nov-17	0.031	0.034	0.036	0.034	0.036	0.036	0.038	0.037	0.033	0.028	0.038	0.029	0.025
Oct-17	0.040	0.043	0.050	0.045	0.042	0.043	0.046	0.045	0.039	0.039	0.040	0.034	0.037
Sep-17	0.042	0.045	0.047	0.046	0.044	0.043	0.047	0.046	0.040	0.041	0.039	0.033	0.037
Aug-17	0.054	0.041	0.046	0.051	0.050	0.048	0.057	0.049	0.045	0.044	0.044	0.036	0.046
Jul-17	0.065	0.048	0.063	0.058	0.066	0.064	0.072	0.065	0.060	0.051	0.061	0.051	0.061
Jun-17	0.053	0.042	0.063	0.057	0.062	0.061	0.072	0.066	0.049	0.043	0.060	0.057	0.058
May-17	0.046	0.038	0.038	0.037	0.044	0.042	0.045	0.041	0.037	0.030	0.045	0.040	0.042

* *Above 95th Percentile numbers were computed using all 15 minute turbidity data of the month.*

Plant Name	**Washington Aqueduct - McMillan WTP**
PWS #	
Max. settled water turbidity goal	**2.0**
Filtered water turbidity optimization goal	**0.10**
Filtered water turbidity regulation	**0.30**

Click on this Button to **CLEAR** the Database

Instruction to users: Input plant name and turbidity goals above. Input start date and turbidity data below. The database will hold 366 days of data. The turbidity data entry cells will turn yellow if the value exceeds the process goal. Following data input, develop the reports by clicking the UPDATE button.

Click on this Button to **UPDATE** the Reports

Data Entry Area

	Raw	Sed 1	Sed 2	Sed 3	Sed 4	Filter 1	Filter 2	Filter 3	Filter 4	Filter 5	Filter 6	Filter 7	Filter 8	Filter 9	Filter 10	Filter 11	Filter 12	Combined
1/1/2018																		
1/2/2018																		
1/3/2018																		
1/4/2018	2				1.05	0.04	0.03	0.05	0.03	0.03	0.04	0.08	0.07	0.04	0.02	0.06	0.02	0.03
1/5/2018	2				0.96	0.02	0.03	0.04	0.03	0.04	0.03	0.02	0.03	0.02	0.04	0.02	0.04	0.02
1/6/2018	2				0.89	0.03	0.03	0.03	0.07	0.02	0.03	0.06	0.06	0.02	0.02	0.04	0.02	0.03
1/7/2018	1				0.64	0.03	0.03	0.05	0.03	0.02	0.06	0.03	0.04	0.04	0.04	0.04	0.02	0.03
1/8/2018	2				0.59	0.03	0.05	0.04	0.04	0.06	0.03	0.03	0.04	0.02	0.03	0.03	0.04	0.03
1/9/2018	2				0.48	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.05	0.04	0.02	0.03	0.02	0.03
1/10/2018	2				0.59	0.02	0.05	0.06	0.02	0.04	0.03	0.02	0.03	0.03	0.04	0.03	0.02	0.02
1/11/2018	4				0.43	0.03	0.03	0.02	0.03	0.02	0.02	0.02	0.03	0.02	0.02	0.02	0.03	0.02
1/12/2018	3				0.39	0.03	0.02	0.03	0.02	0.02	0.03	0.02	0.03	0.03	0.03	0.04	0.02	0.02
1/13/2018	3				0.42	0.02	0.03	0.03	0.03	0.04	0.02	0.02	0.02	0.02	0.02	0.03	0.02	0.02
1/14/2018	127				0.39	0.03	0.02	0.03	0.03	0.02	0.03	0.03	0.03	0.02	0.02	0.03	0.02	0.02
1/15/2018	142				0.42	0.02	0.03	0.03	0.02	0.02	0.03	0.02	0.02	0.03	0.03	0.03	0.02	0.02
1/16/2018																		
1/17/2018																		
1/18/2018																		
1/19/2018	26					0.03	0.04	0.05	0.02	0.03	0.03	0.02	0.02	0.02	0.03	0.03	0.02	0.02
1/20/2018	24				0.62	0.02	0.04	0.03	0.03	0.02	0.02	0.02	0.03	0.02	0.02	0.02	0.03	0.02
1/21/2018	17				0.56	0.03	0.02	0.03	0.03	0.02	0.03	0.02	0.04	0.02	0.02	0.03	0.02	0.02
1/22/2018	20				0.34	0.03	0.03	0.03	0.02	0.02	0.03	0.02	0.02	0.03	0.04	0.03	0.02	0.02
1/23/2018	12				0.54	0.03	0.03	0.02	0.03	0.03	0.03	0.02	0.04	0.02	0.02	0.03	0.03	0.02
1/24/2018	10				0.37	0.03	0.02	0.03	0.02	0.02	0.04	0.04	0.02	0.03	0.02	0.04	0.02	0.02
1/25/2018	147				0.46	0.02	0.04	0.05	0.02	0.03	0.05	0.02	0.02	0.02	0.05	0.02	0.02	0.02
1/26/2018	122				0.36	0.03	0.02	0.02	0.04	0.03	0.03	0.02	0.04	0.02	0.02	0.03	0.02	0.02
1/27/2018	46				0.30	0.03	0.02	0.03	0.02	0.02	0.04	0.03	0.02	0.03	0.02	0.03	0.02	0.02
1/28/2018	16				0.28	0.02	0.03	0.03	0.02	0.02	0.04	0.02	0.03	0.02	0.05	0.02	0.02	0.02
1/29/2018	15				0.35	0.03	0.03	0.02	0.03	0.02	0.02	0.02	0.05	0.02	0.02	0.02	0.03	0.02
1/30/2018	12				0.33	0.02	0.02	0.02	0.02	0.02	0.03	0.02	0.02	0.02	0.02	0.03	0.02	0.02
1/31/2018																		
2/1/2018	8																	
2/2/2018	10																	
2/3/2018	8																	
2/4/2018	9																	
2/5/2018	61																	
2/6/2018	31				0.55	0.03	0.03	0.02	0.02	0.04	0.07	0.06	0.02	0.05	0.03	0.04	0.03	0.03
2/7/2018	16				0.40	0.03	0.04	0.04	0.02	0.03	0.05	0.02	0.05	0.02	0.05	0.02	0.02	0.03
2/8/2018	30				0.41	0.05	0.03	0.02	0.04	0.05	0.02	0.02	0.09	0.02	0.02	0.02	0.04	0.03
2/9/2018	41				0.39	0.04	0.01	0.02	0.02	0.02	0.03	0.03	0.02	0.02	0.02	0.04	0.02	0.02

2/10/2018	48				0.39	0.02	0.01	0.02	0.01	0.02	0.03	0.02	0.04	0.02	0.03	0.02	0.02	0.02
2/11/2018	46				0.68	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.05	0.02	0.02	0.02	0.02	0.02
2/12/2018	88				0.60	0.03	0.01	0.02	0.02	0.02	0.03	0.02	0.02	0.02	0.01	0.02	0.02	0.02
2/13/2018	131				0.62	0.02	0.01	0.02	0.01	0.02	0.04	0.01	0.02	0.02	0.02	0.02	0.02	0.02
2/14/2018	83				0.36	0.03	0.02	0.01	0.02	0.02	0.02	0.01	0.03	0.01	0.02	0.02	0.02	0.02
2/15/2018	49				0.39	0.05	0.01	0.02	0.02	0.02	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02
2/16/2018	37				0.42	0.07	0.02	0.03	0.01	0.02	0.04	0.02	0.03	0.02	0.03	0.02	0.02	0.02
2/17/2018	25				0.38	0.04	0.04	0.02	0.02	0.04	0.02	0.02	0.04	0.01	0.04	0.02	0.02	0.02
2/18/2018	34				0.44	0.07	0.01	0.02	0.04	0.03	0.04	0.04	0.02	0.03	0.02	0.03	0.03	0.02
2/19/2018	67				0.33	0.02	0.01	0.02	0.01	0.02	0.05	0.02	0.03	0.02	0.04	0.02	0.02	0.02
2/20/2018	55				0.32	0.03	0.02	0.02	0.01	0.02	0.02	0.01	0.04	0.01	0.03	0.02	0.02	0.02
2/21/2018	41				0.48	0.12	0.01	0.01	0.05	0.02	0.05	0.03	0.02	0.02	0.01	0.03	0.08	0.03
2/22/2018	23				0.44	0.02	0.01	0.02	0.01	0.02	0.05	0.02	0.02	0.03	0.02	0.02	0.02	0.02
2/23/2018	23				0.39	0.02	0.01	0.02	0.01	0.02	0.02	0.01	0.03	0.02	0.02	0.01	0.02	0.02
2/24/2018	20				0.28	0.03	0.01	0.01	0.01	0.02	0.03	0.02	0.02	0.01	0.01	0.02	0.02	0.02
2/25/2018	22				0.25	0.02	0.01	0.02	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
2/26/2018	26				0.34	0.02	0.01	0.02	0.01	0.01	0.02	0.01	0.03	0.01	0.02	0.02	0.02	0.01
2/27/2018	56				0.32	0.02	0.02	0.01	0.02	0.02	0.02	0.01	0.02	0.01	0.01	0.01	0.02	0.02
2/28/2018	72				0.75	0.02	0.01	0.01	0.01	0.02	0.03	0.02	0.02	0.02	0.01	0.03	0.02	0.02
3/1/2018	41				0.25	0.02	0.01	0.02	0.01	0.02	0.02	0.01	0.02	0.01	0.02	0.02	0.01	0.02
3/2/2018	36				1.16	0.04	0.02	0.02	0.01	0.02	0.03	0.02	0.02	0.02	0.02	0.03	0.02	0.02
3/3/2018	54				0.84	0.05	0.02	0.07	0.05	0.02	0.05	0.06	0.03	0.06	0.05	0.06	0.03	0.04
3/4/2018	53				0.59	0.02	0.01	0.03	0.01	0.02	0.02	0.02	0.03	0.02	0.03	0.02	0.02	0.03
3/5/2018	27				0.34	0.02	0.02	0.02	0.01	0.02	0.02	0.02	0.03	0.02	0.02	0.02	0.02	0.02
3/6/2018	22				0.26	0.03	0.02	0.02	0.01	0.02	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02
3/7/2018	11				0.54	0.03	0.01	0.02	0.02	0.02	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02
3/8/2018	11				0.28	0.02	0.01	0.03	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
3/9/2018	10				0.26	0.02	0.02	0.02	0.01	0.02	0.02	0.02	0.02	0.01	0.02	0.02	0.02	0.02
3/10/2018	10				0.30	0.02	0.01	0.02	0.02	0.02	0.03	0.02	0.02	0.01	0.01	0.02	0.02	0.02
3/11/2018	11				0.29	0.02	0.01	0.02	0.02	0.02	0.03	0.02	0.02	0.02	0.02	0.02	0.03	0.02
3/12/2018	7				0.24	0.02	0.02	0.02	0.01	0.02	0.02	0.01	0.03	0.01	0.02	0.02	0.02	0.02
3/13/2018	5				0.29	0.02	0.01	0.01	0.01	0.02	0.02	0.01	0.02	0.01	0.02	0.01	0.01	0.02
3/14/2018	6				0.24	0.02	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.02	0.02	0.02
3/15/2018	11				0.35	0.02	0.01	0.03	0.01	0.02	0.02	0.01	0.02	0.02	0.02	0.02	0.03	0.02
3/16/2018	17				0.35	0.02	0.01	0.02	0.01	0.01	0.02	0.01	0.02	0.01	0.02	0.02	0.02	0.02
3/17/2018	6				0.25	0.02	0.01	0.01	0.01	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.02
3/18/2018	4				0.17	0.02	0.01	0.01	0.03	0.02	0.02	0.01	0.01	0.01	0.01	0.02	0.02	0.02
3/19/2018	3				0.21	0.02	0.01	0.02	0.01	0.02	0.02	0.01	0.02	0.02	0.02	0.02	0.02	0.02
3/20/2018	4				0.20	0.02	0.02	0.02	0.01	0.02	0.02	0.01	0.02	0.01	0.02	0.02	0.01	0.02
3/21/2018	4				0.21	0.02	0.01	0.01	0.02	0.02	0.02	0.01	0.02	0.01	0.01	0.01	0.01	0.02
3/22/2018	5				0.20	0.02	0.01	0.01	0.01	0.02	0.03	0.03	0.01	0.01	0.01	0.01	0.03	0.02
3/23/2018	4				0.19	0.02	0.01	0.04	0.01	0.02	0.02	0.01	0.01	0.04	0.02	0.04	0.02	0.02
3/24/2018	4				0.24	0.02	0.02	0.02	0.01	0.02	0.02	0.01	0.04	0.01	0.02	0.01	0.02	0.02
3/25/2018	5				0.18	0.04	0.01	0.01	0.02	0.02	0.04	0.01	0.02	0.01	0.01	0.01	0.02	0.02
3/26/2018	5				0.22	0.02	0.01	0.01	0.01	0.02	0.02	0.03	0.02	0.01	0.01	0.03	0.02	0.02
3/27/2018	7				0.30	0.02	0.01	0.02	0.01	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.02	0.02
3/28/2018	6				0.27	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.06	0.02	0.02	0.02	0.02	0.02
3/29/2018	6				0.26	0.04	0.02	0.02	0.03	0.02	0.03	0.02	0.02	0.02	0.02	0.01	0.01	0.02
3/30/2018	10				0.27	0.02	0.02	0.03	0.02	0.02	0.03	0.02	0.02	0.02	0.02	0.03	0.02	0.02
3/31/2018	14				0.34	0.02	0.02	0.03	0.02	0.02	0.02	0.02	0.02	0.03	0.04	0.02	0.02	0.02
4/1/2018	17				0.27	0.02	0.03	0.03	0.02	0.03	0.03	0.02	0.03	0.03	0.02	0.02	0.02	0.03
4/2/2018	19				0.33	0.03	0.03	0.03	0.04	0.03	0.04	0.19	0.03	0.03	0.02	0.02	0.02	0.03
4/3/2018	15				0.35	0.03	0.03	0.06	0.03	0.03	0.04	0.03	0.03	0.03	0.02	0.03	0.03	0.03
4/4/2018	14				0.45	0.03	0.05	0.05	0.03	0.03	0.03	0.03	0.08	0.03	0.03	0.02	0.02	0.06

4/5/2018	38				0.55	0.04	0.04	0.04	0.04	0.03	0.05	0.02	0.03	0.03	0.02	0.02	0.02	0.03
4/6/2018	40				0.41	0.03	0.03	0.04	0.03	0.03	0.05	0.04	0.04	0.04	0.02	0.04	0.04	0.03
4/7/2018	32				0.38	0.03	0.04	0.06	0.03	0.05	0.03	0.03	0.04	0.04	0.04	0.03	0.02	0.03
4/8/2018	26				0.32	0.03	0.04	0.04	0.04	0.03	0.03	0.02	0.03	0.03	0.02	0.02	0.02	0.03
4/9/2018	21				0.32	0.02	0.03	0.03	0.03	0.03	0.03	0.05	0.02	0.02	0.02	0.02	0.03	0.03
4/10/2018	4				0.44	0.02	0.03	0.03	0.02	0.02	0.03	0.02	0.03	0.04	0.02	0.02	0.02	0.03
4/11/2018	11				0.31	0.02	0.03	0.03	0.02	0.04	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.04
4/12/2018	11				0.28	0.02	0.03	0.02	0.03	0.02	0.05	0.03	0.02	0.02	0.02	0.02	0.03	0.02
4/13/2018	15				0.29	0.02	0.02	0.03	0.03	0.02	0.02	0.02	0.06	0.03	0.02	0.03	0.02	0.02
4/14/2018	10				0.30	0.02	0.03	0.03	0.05	0.03	0.02	0.02	0.02	0.02	0.02	0.01	0.02	0.03
4/15/2018	8				0.30	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.02	0.02	0.02	0.01	0.02	0.02
4/16/2018	233				0.28	0.02	0.02	0.03	0.02	0.02	0.02	0.02	0.02	0.03	0.02	0.03	0.02	0.02
4/17/2018	183				0.31	0.03	0.04	0.04	0.03	0.04	0.03	0.02	0.02	0.03	0.03	0.02	0.02	0.03
4/18/2018	181				0.32	0.03	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02
4/19/2018	398				0.44	0.03	0.03	0.03	0.03	0.02	0.03	0.02	0.02	0.03	0.02	0.02	0.04	0.02
4/20/2018	161				0.56	0.03	0.04	0.05	0.03	0.03	0.03	0.03	0.02	0.03	0.03	0.02	0.02	0.03
4/21/2018	91				0.58	0.04	0.04	0.04	0.04	0.03	0.04	0.02	0.03	0.03	0.02	0.02	0.02	0.03
4/22/2018	24				0.65	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.02	0.03	0.02	0.03	0.03	0.03
4/23/2018	20				0.64	0.03	0.03	0.04	0.03	0.03	0.03	0.03	0.02	0.04	0.03	0.03	0.02	0.03
4/24/2018	17				0.61	0.03	0.03	0.03	0.03	0.04	0.03	0.03	0.03	0.03	0.02	0.02	0.02	0.03
4/25/2018	22				0.59	0.03	0.03	0.03	0.03	0.03	0.04	0.03	0.02	0.02	0.02	0.03	0.03	0.02
4/26/2018	22				0.48	0.02	0.04	0.03	0.03	0.02	0.03	0.02	0.02	0.03	0.02	0.03	0.02	0.02
4/27/2018	22				0.48	0.02	0.03	0.03	0.04	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
4/28/2018	31				0.39	0.02	0.02	0.02	0.03	0.02	0.03	0.02	0.02	0.02	0.02	0.05	0.02	0.02
4/29/2018	21				0.44	0.02	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.03	0.02	0.02	0.02	0.02
4/30/2018	26				0.38	0.03	0.04	0.03	0.02	0.03	0.03	0.02	0.03	0.03	0.02	0.02	0.02	0.03
5/1/2018	16				0.42	0.03	0.04	0.05	0.05	0.03	0.04	0.04	0.03	0.04	0.03	0.04	0.04	0.03
5/2/2018	11				0.44	0.03	0.03	0.04	0.03	0.02	0.03	0.02	0.03	0.03	0.02	0.03	0.02	0.02
5/3/2018	12				0.39	0.03	0.14	0.04	0.04	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.02	0.02
5/4/2018	13				0.38	0.03	0.03	0.02	0.05	0.03	0.03	0.03	0.02	0.02	0.02	0.07	0.02	0.02
5/5/2018	10				0.39	0.03	0.02	0.03	0.04	0.02	0.03	0.02	0.02	0.03	0.02	0.03	0.02	0.02
5/6/2018	7				0.35	0.02	0.03	0.03	0.03	0.02	0.02	0.02	0.03	0.02	0.02	0.04	0.02	0.02
5/7/2018	10				0.32	0.03	0.03	0.02	0.03	0.02	0.03	0.02	0.03	0.02	0.02	0.12	0.02	0.02
5/8/2018	12				0.37	0.03	0.03	0.04	0.03	0.02	0.03	0.02	0.02	0.03	0.02	0.17	0.02	0.02
5/9/2018	26				0.33	0.03	0.04	0.04	0.03	0.04	0.03	0.03	0.05	0.03	0.03	0.03	0.03	0.03
5/10/2018	31				0.55	0.04	0.04	0.04	0.10	0.04	0.04	0.04	0.04	0.03	0.03	0.03	0.04	0.12
5/11/2018	23				0.42	0.04	0.02	0.02	0.03	0.04	0.05	0.03	0.03	0.03	0.02	0.03	0.03	0.03
5/12/2018	25				0.42	0.03	0.03	0.04	0.03	0.03	0.03	0.03	0.04	0.03	0.03	0.03	0.02	0.03
5/13/2018	28				0.44	0.04	0.03	0.03	0.04	0.03	0.04	0.04	0.03	0.03	0.03	0.03	0.03	0.03
5/14/2018	10				0.43	0.04	0.03	0.06	0.04	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.03	0.04
5/15/2018	16				0.47	0.05	0.03	0.03	0.06	0.04	0.04	0.03	0.03	0.03	0.03	0.03	0.04	0.03
5/16/2018	640				0.45	0.04	0.04	0.04	0.04	0.03	0.04	0.03	0.05	0.04	0.04	0.03	0.03	0.03
5/17/2018	198				0.71	0.04	0.03	0.03	0.04	0.04	0.03	0.03	0.04	0.03	0.03	0.04	0.03	0.03
5/18/2018	227				1.01	0.04	0.03	0.02	0.04	0.03	0.05	0.06	0.03	0.05	0.04	0.03	0.04	0.03
5/19/2018	191				1.52	0.03	0.07	0.04	0.04	0.05	0.04	0.04	0.06	0.03	0.04	0.05	0.02	0.04
5/20/2018	184				2.17	0.04	0.03	0.04	0.06	0.03	0.06	0.05	0.04	0.07	0.03	0.03	0.04	0.04
5/21/2018	118				1.90	0.04	0.05	0.06	0.06	0.06	0.05	0.06	0.05	0.05	0.05	0.04	0.03	0.05
5/22/2018	67				2.28	0.06	0.04	0.05	0.08	0.06	0.05	0.05	0.08	0.07	0.04	0.04	0.05	0.05
5/23/2018	72				2.18	0.04	0.03	0.06	0.05	0.05	0.06	0.05	0.06	0.05	0.04	0.06	0.03	0.05
5/24/2018	72				2.10	0.05	0.03	0.05	0.04	0.06	0.04	0.04	0.04	0.05	0.03	0.06	0.04	0.04
5/25/2018	42				1.72	0.03	0.03	0.06	0.02	0.03	0.05	0.06	0.03	0.05	0.07	0.03	0.03	0.04
5/26/2018	40				1.63	0.04	0.04	0.03	0.03	0.03	0.03	0.02	0.04	0.04	0.02	0.04	0.03	0.03
5/27/2018	35				1.21	0.03	0.02	0.04	0.02	0.03	0.04	0.03	0.02	0.04	0.02	0.03	0.03	0.03
5/28/2018	30				1.05	0.02	0.02	0.03	0.02	0.02	0.03	0.02	0.03	0.03	0.02	0.03	0.02	0.02

5/29/2018	31				1.48	0.02	0.01	0.03	0.02	0.02	0.03	0.02	0.02	0.03	0.02	0.02	0.03	0.02
5/30/2018	34				0.74	0.02	0.02	0.03	0.01	0.02	0.03	0.02	0.02	0.02	0.02	0.03	0.02	0.02
5/31/2018	28				0.61	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.02	0.03	0.02	0.02
6/1/2018	27				0.46	0.02	0.01	0.03	0.01	0.02	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02
6/2/2018	41				0.47	0.02	0.02	0.03	0.02	0.02	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02
6/3/2018	170				0.48	0.03	0.02	0.03	0.02	0.03	0.03	0.02	0.02	0.04	0.02	0.03	0.05	0.02
6/4/2018	333				0.56	0.02	0.02	0.03	0.02	0.02	0.04	0.03	0.03	0.03	0.03	0.02	0.02	0.02
6/5/2018	422				0.57	0.03	0.02	0.03	0.02	0.02	0.03	0.02	0.02	0.03	0.02	0.02	0.02	0.02
6/6/2018	180				0.63	0.03	0.02	0.04	0.02	0.03	0.04	0.03	0.04	0.04	0.02	0.03	0.03	0.03
6/7/2018	158				1.59	0.04	0.04	0.07	0.05	0.06	0.04	0.04	0.04	0.05	0.04	0.04	0.03	0.04
6/8/2018	53				1.74	0.06	0.03	0.06	0.04	0.04	0.04	0.03	0.04	0.05	0.03	0.05	0.05	0.05
6/9/2018	43				2.27	0.03	0.04	0.06	0.03	0.05	0.06	0.06	0.04	0.05	0.03	0.03	0.03	0.04
6/10/2018	30				1.77	0.04	0.03	0.06	0.03	0.04	0.03	0.03	0.03	0.04	0.03	0.03	0.02	0.03
6/11/2018	28				1.22	0.02	0.02	0.03	0.02	0.03	0.03	0.03	0.03	0.04	0.03	0.03	0.02	0.03
6/12/2018	126				0.91	0.03	0.02	0.03	0.02	0.03	0.03	0.03	0.02	0.03	0.02	0.02	0.02	0.03
6/13/2018	141				0.92	0.03	0.02	0.03	0.02	0.03	0.03	0.02	0.03	0.03	0.02	0.03	0.03	0.03
6/14/2018	99				0.76	0.03	0.03	0.04	0.03	0.03	0.04	0.03	0.03	0.03	0.03	0.03	0.02	0.03
6/15/2018	99				0.75	0.03	0.02	0.04	0.03	0.03	0.03	0.03	0.03	0.04	0.03	0.03	0.02	0.03
6/16/2018	41				0.81	0.03	0.03	0.04	0.03	0.04	0.05	0.05	0.02	0.04	0.03	0.03	0.03	0.03
6/17/2018	25				0.89	0.03	0.04	0.05	0.03	0.04	0.04	0.04	0.02	0.04	0.03	0.03	0.02	0.03
6/18/2018	26				1.06	0.03	0.02	0.03	0.02	0.03	0.03	0.02	0.03	0.04	0.02	0.03	0.03	0.03
6/19/2018	20				0.99	0.02	0.03	0.04	0.02	0.03	0.04	0.03	0.02	0.03	0.02	0.03	0.02	0.03
6/20/2018	19				0.84	0.03	0.02	0.03	0.02	0.03	0.03	0.03	0.02	0.03	0.03	0.03	0.02	0.03
6/21/2018	19				0.79	0.02	0.02	0.03	0.02	0.03	0.04	0.03	0.02	0.04	0.02	0.03	0.03	0.03
6/22/2018	20				0.86	0.02	0.02	0.04	0.03	0.03	0.03	0.03	0.02	0.03	0.03	0.02	0.02	0.03
6/23/2018	19				0.79	0.03	0.02	0.03	0.03	0.03	0.03	0.02	0.03	0.03	0.02	0.03	0.02	0.03
6/24/2018	19				0.65	0.02	0.02	0.03	0.06	0.03	0.03	0.03	0.03	0.04	0.02	0.03	0.03	0.03
6/25/2018	121				0.67	0.03	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.02	0.03	0.02	0.03
6/26/2018	111				0.81	0.03	0.02	0.03	0.02	0.03	0.03	0.03	0.04	0.03	0.02	0.04	0.03	0.03
6/27/2018	89				1.04	0.04	0.04	0.04	0.04	0.04	0.04	0.03	0.03	0.03	0.02	0.03	0.02	0.04
6/28/2018	37				1.23	0.05	0.04	0.04	0.05	0.05	0.04	0.04	0.04	0.03	0.04	0.04	0.03	0.04
6/29/2018	23				1.16	0.05	0.04	0.06	0.05	0.06	0.06	0.06	0.04	0.04	0.03	0.04	0.03	0.05
6/30/2018	17				1.30	0.05	0.03	0.04	0.05	0.06	0.04	0.05	0.04	0.03	0.03	0.03	0.03	0.04
7/1/2018																		
7/2/2018																		
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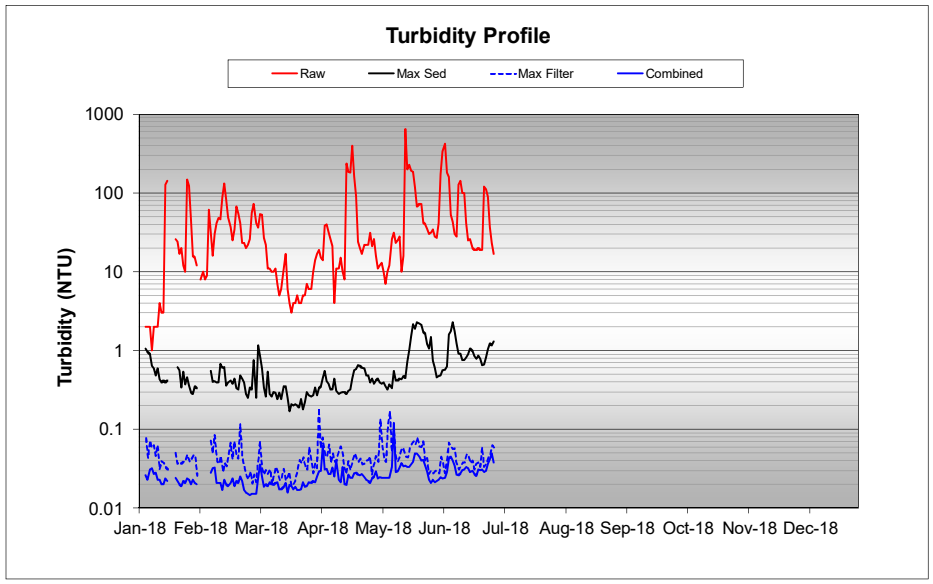
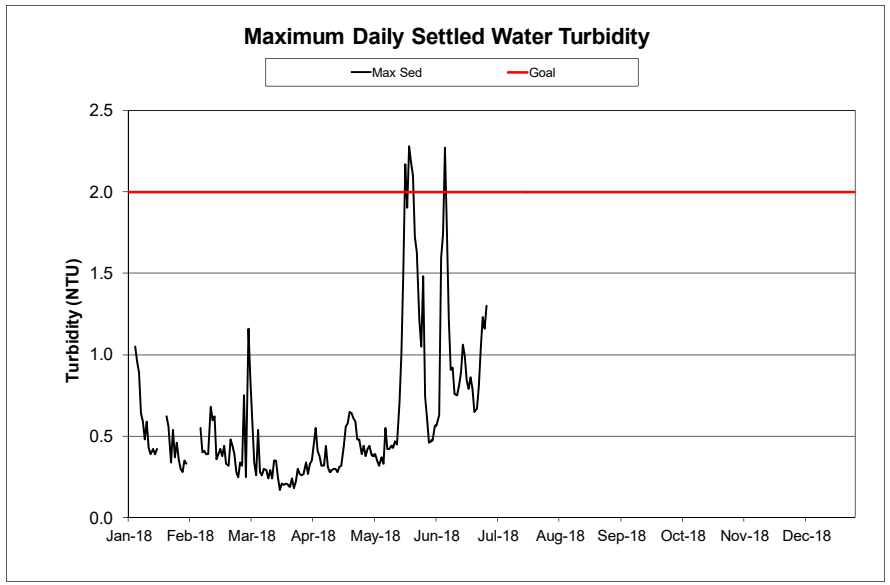




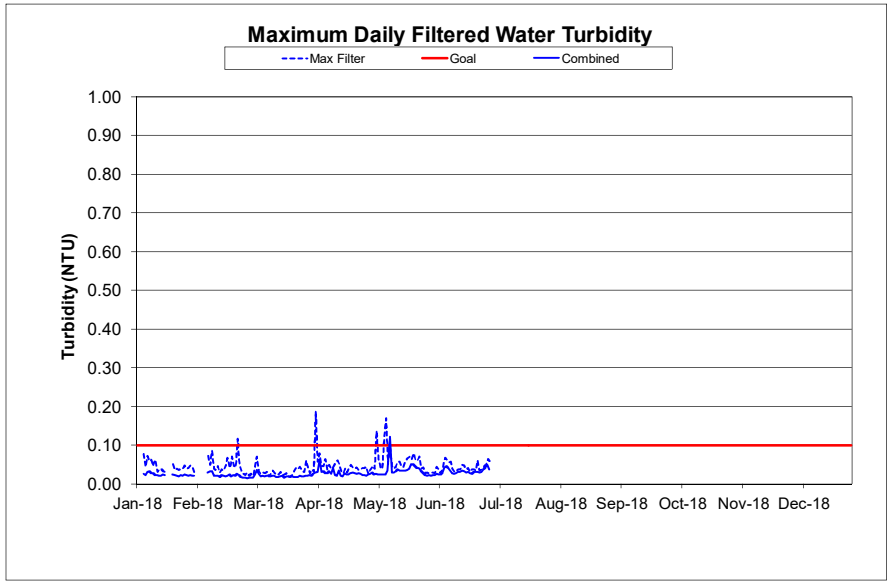
ANNUAL DATA	Avg	Min	Max	RSQ	95%	Opt. Goal	Reg.
	NTU	NTU	NTU		NTU	%Values	%Values
Raw Turbidity	51.1	1.0	640.0	n/a	183.4	n/a	n/a
Max. Settled Turbidity	0.6	0.2	2.3	0.02	1.7	97.0	n/a
Max. Filtered Turbidity	0.05	0.02	0.19	0.04	0.08	96.4	n/a
Combined Filtered Turbidity	0.03	0.01	0.12	0.22	0.04	99.4	100.0

RSQ = Correlation Coefficient for two selected data sets

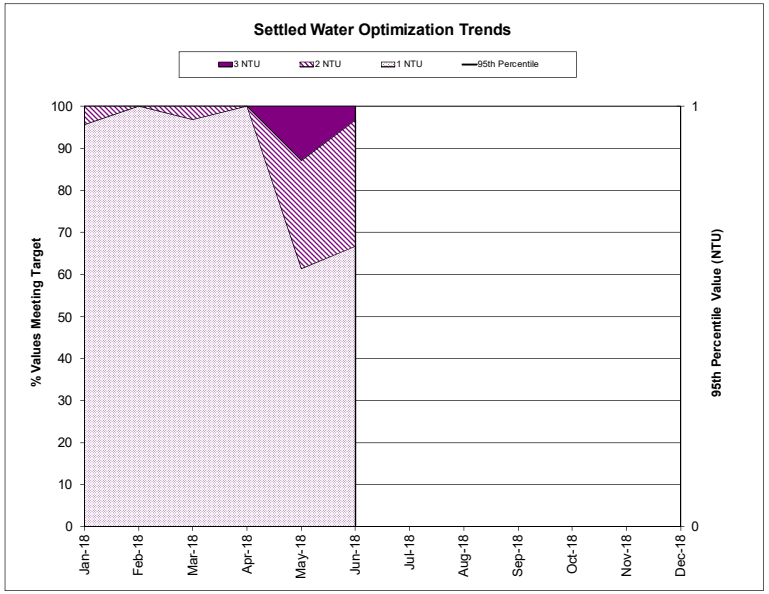
95% = 95th Percentile value for data set

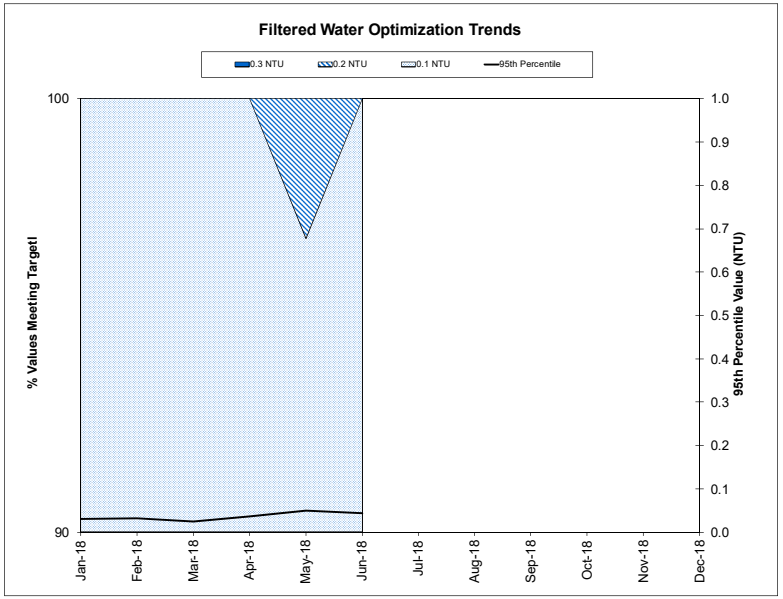
Opt. Goal = % of values in data set that are less than or equal to the selected optimization turbidity goal

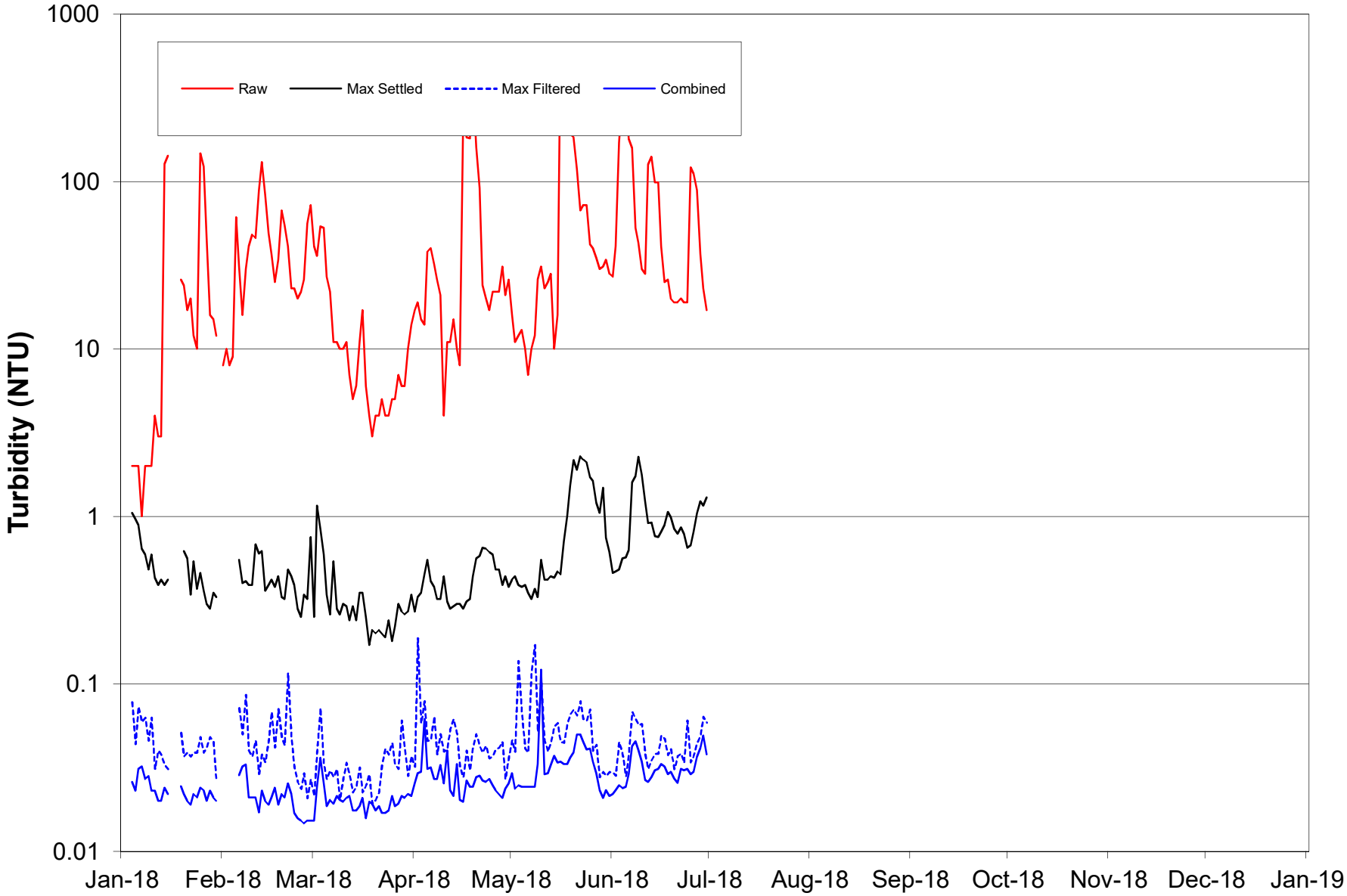
Reg. = % of values in data set that are less than or equal to the regulated turbidity requirement

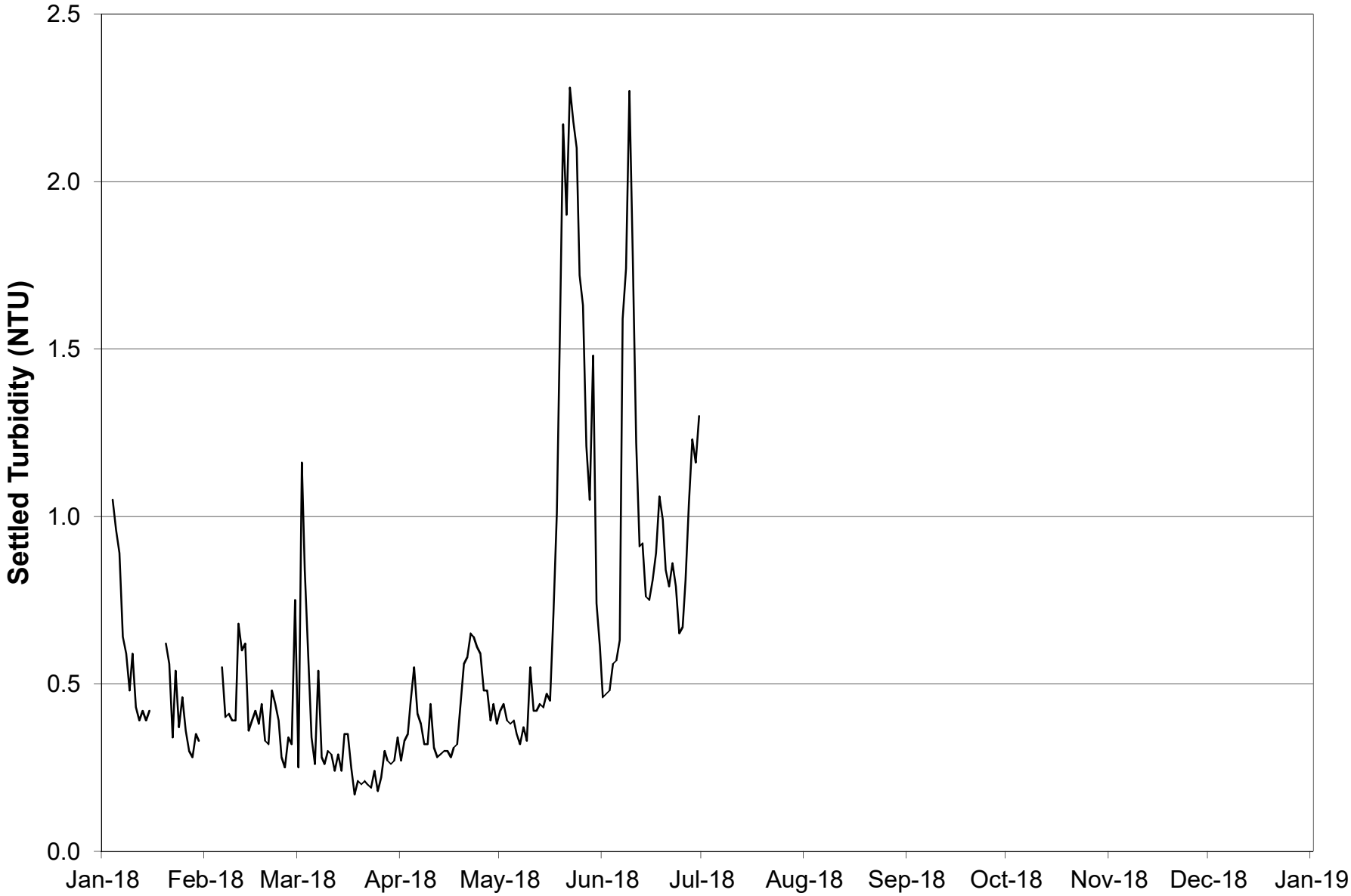


	Settled Water Turbidity							Filtered Water Turbidity															
	95th Percentile Values (NTU)				% Values Meeting Goal			95th Percentile Values (NTU)													% Values Meeting Goal		
	Sed 1	Sed 2	Sed 3	Sed 4	3 NTU	2 NTU	1 NTU	Filter 1	Filter 2	Filter 3	Filter 4	Filter 5	Filter 6	Filter 7	Filter 8	Filter 9	Filter 10	Filter 11	Filter 12	Combined	0.3	0.2	0.1
Jan-18				0.95	100.00	100.00	95.7	0.04	0.04	0.05	0.04	0.04	0.05	0.06	0.05	0.04	0.04	0.04	0.04	0.03	100.00	100.00	100.0
Feb-18				0.67	100.00	100.00	100.0	0.07	0.04	0.02	0.04	0.04	0.05	0.04	0.05	0.03	0.04	0.03	0.04	0.03	100.00	100.00	100.0
Mar-18				0.72	100.00	100.00	96.8	0.04	0.02	0.04	0.03	0.02	0.04	0.03	0.04	0.04	0.04	0.04	0.03	0.02	100.00	100.00	100.0
Apr-18				0.63	100.00	100.00	100.0	0.04	0.04	0.05	0.04	0.04	0.05	0.04	0.05	0.04	0.03	0.03	0.04	0.04	100.00	100.00	100.0
May-18				2.18	100.00	87.10	61.3	0.05	0.06	0.06	0.07	0.06	0.06	0.06	0.06	0.06	0.05	0.09	0.04	0.05	100.00	100.00	96.8
Jun-18				1.76	100.00	96.67	66.7	0.05	0.04	0.06	0.05	0.06	0.05	0.05	0.04	0.05	0.03	0.04	0.04	0.04	100.00	100.00	100.0
Jul-18					#N/A	#N/A	#N/A														#N/A	#N/A	#N/A
Aug-18					#N/A	#N/A	#N/A														#N/A	#N/A	#N/A
Sep-18					#N/A	#N/A	#N/A														#N/A	#N/A	#N/A
Oct-18					#N/A	#N/A	#N/A														#N/A	#N/A	#N/A
Nov-18					#N/A	#N/A	#N/A														#N/A	#N/A	#N/A
Dec-18					#N/A	#N/A	#N/A														#N/A	#N/A	#N/A
Yr. 95%				1.69				0.05	0.04	0.06	0.05	0.05	0.05	0.06	0.05	0.05	0.04	0.05	0.04	0.04			
Yr. Goal				97.0%				99.4%	99.4%	100.0%	99.4%	100.0%	100.0%	99.4%	100.0%	100.0%	100.0%	98.8%	100.0%	99.4%			

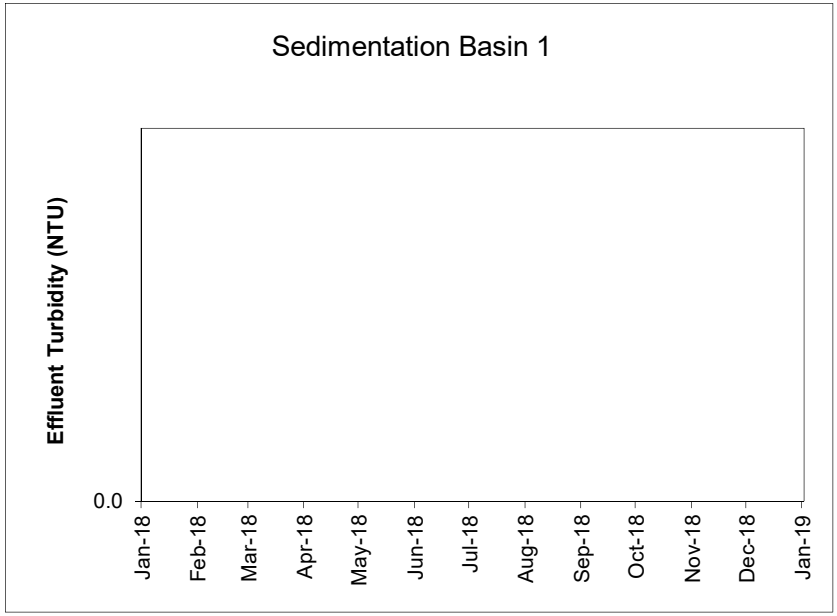


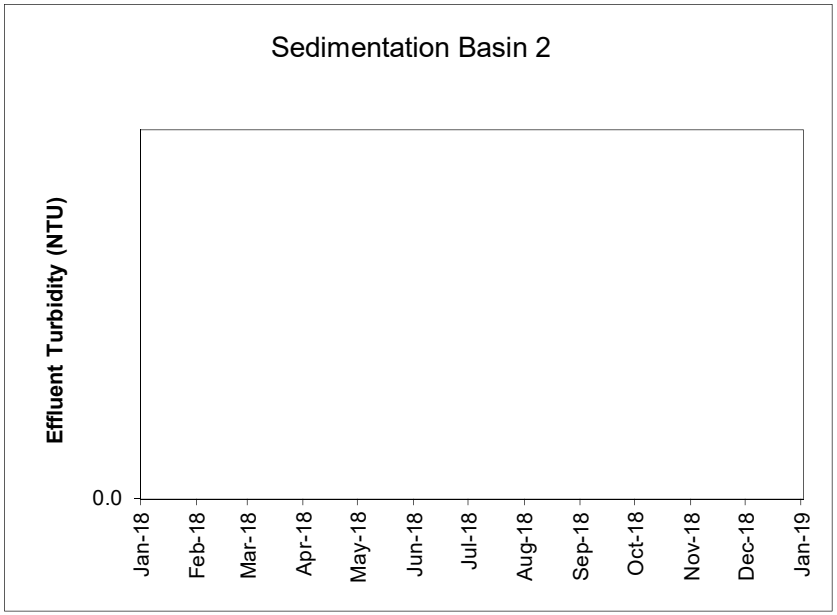


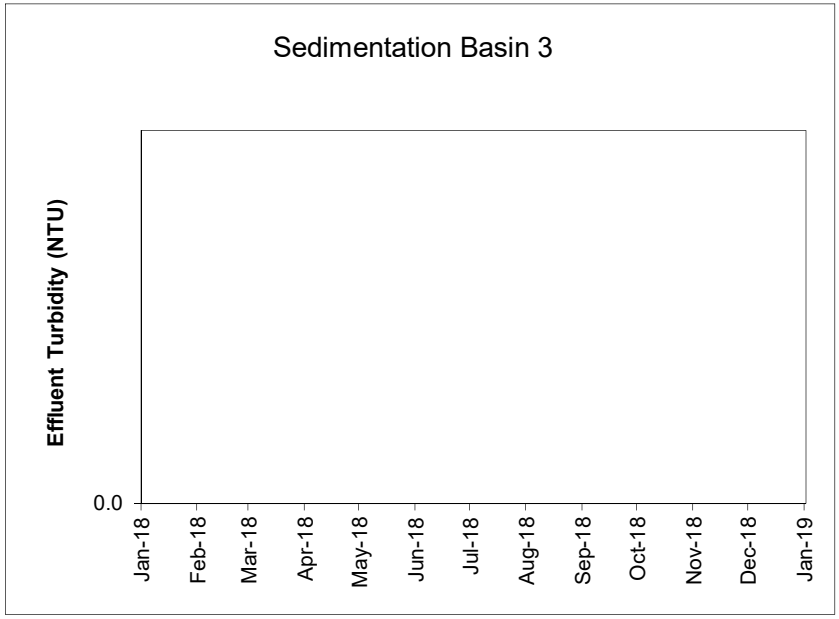

Raw
Max Settled
Max Filtered
Combined
Turbidity (NTU)
1000
100
10
1
0.1
0.01
Jan-18
Feb-18
Mar-18
Apr-18
May-18
Jun-18
Jul-18
Aug-18
Sep-18
Oct-18
Nov-18
Dec-18
Jan-19

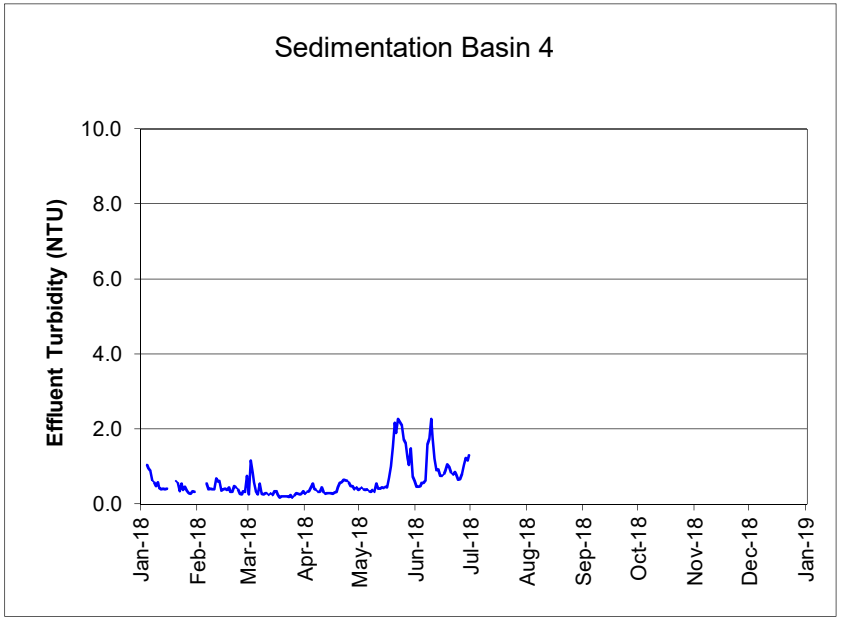

Settled Turbidity (NTU)
2.5
2.0
1.5
1.0
0.5
0.0
Jan-18
Feb-18
Mar-18
Apr-18
May-18
Jun-18
Jul-18
Aug-18
Sep-18
Oct-18
Nov-18
Dec-18
Jan-19

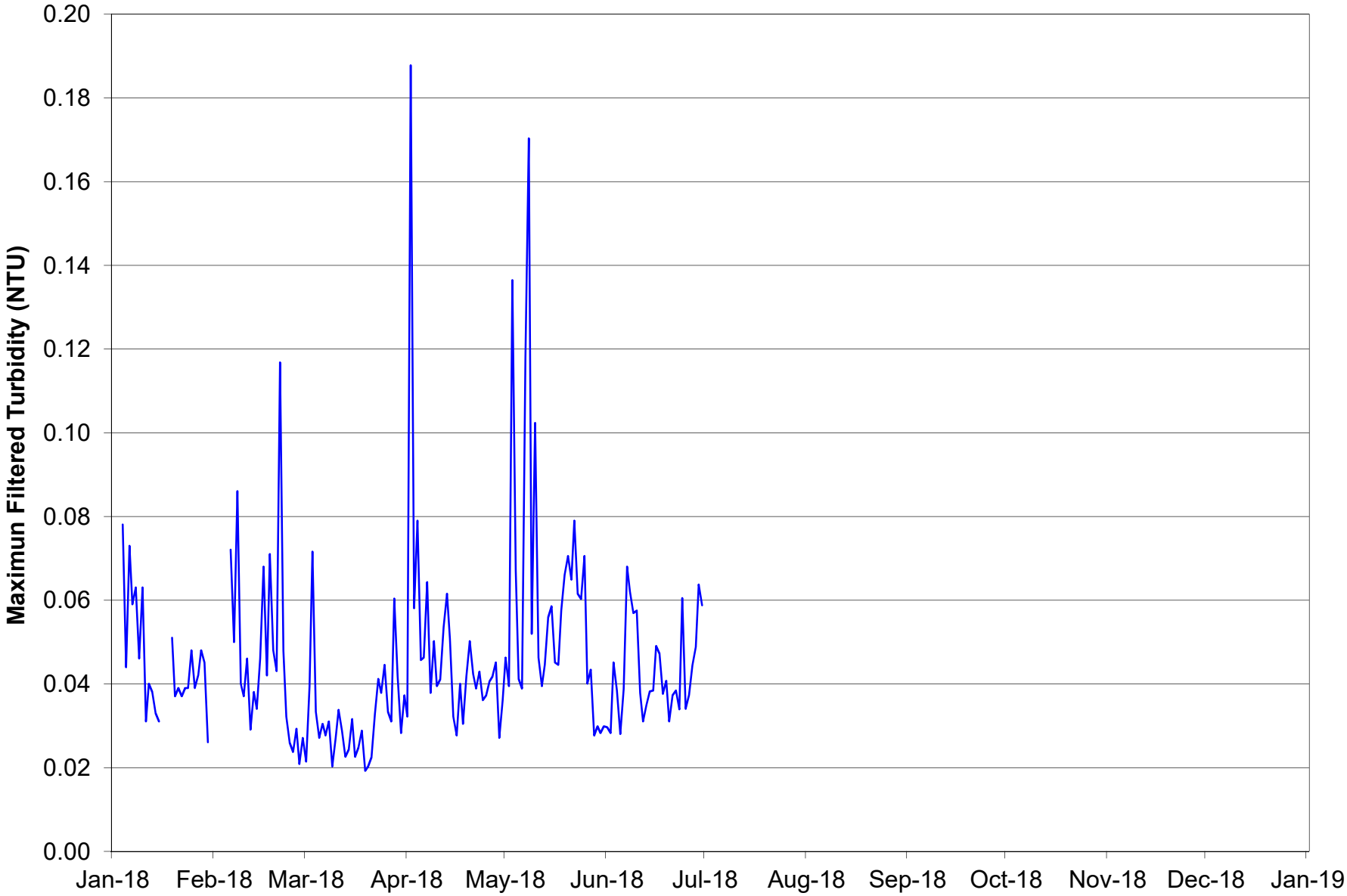
Sedimentation Performance Summary



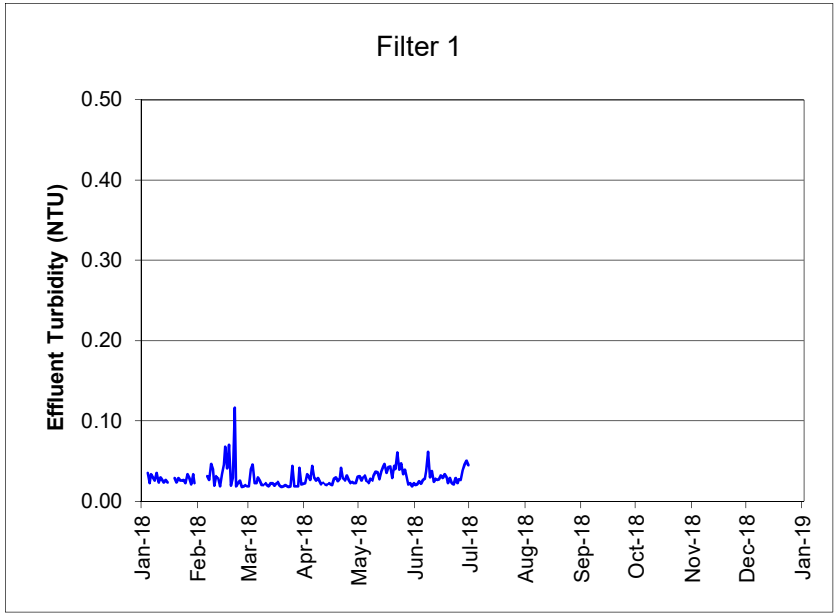


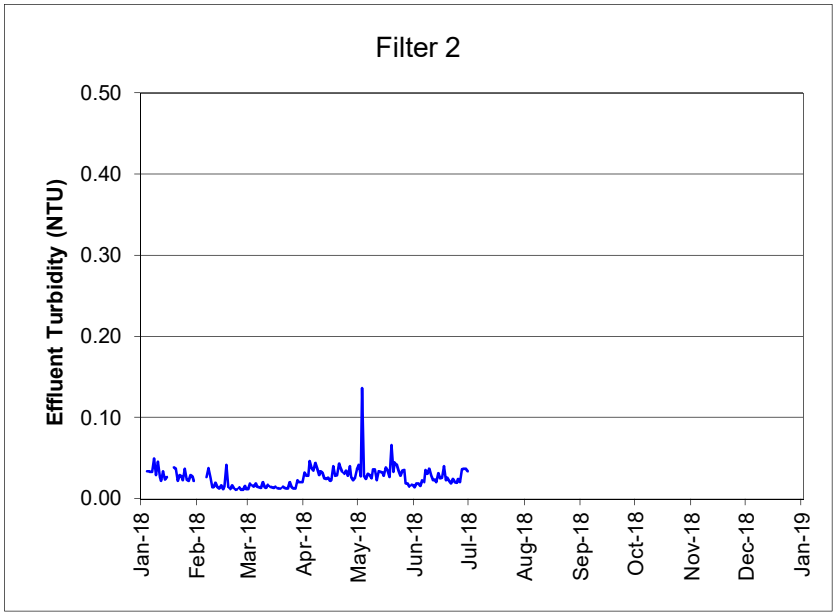


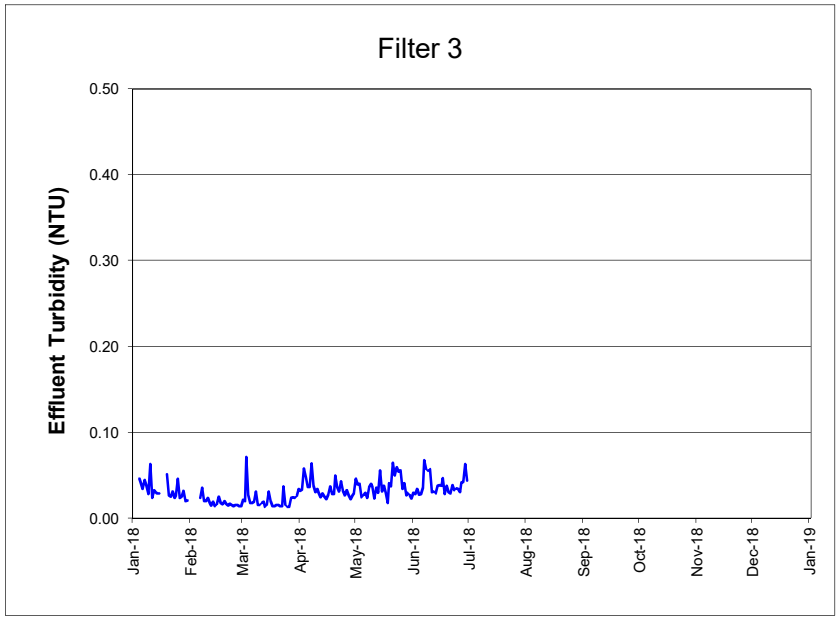


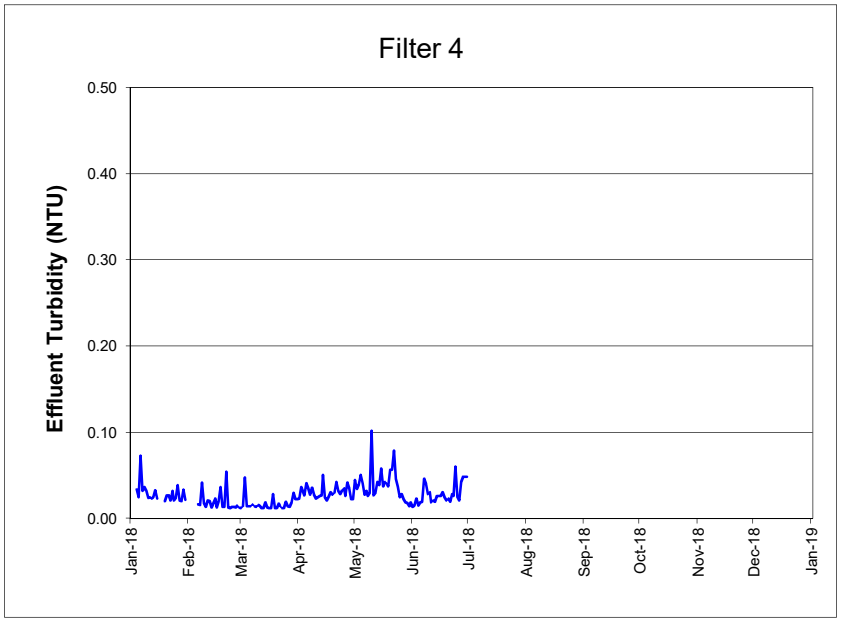

Maximun Filtered Turbidity (NTU)
0.20
0.18
0.16
0.14
0.12
0.10
0.08
0.06
0.04
0.02
0.00
Jan-18
Feb-18
Mar-18
Apr-18
May-18
Jun-18
Jul-18
Aug-18
Sep-18
Oct-18
Nov-18
Dec-18
Jan-19

Filtration Performance Summary (Filters 1 - 4)

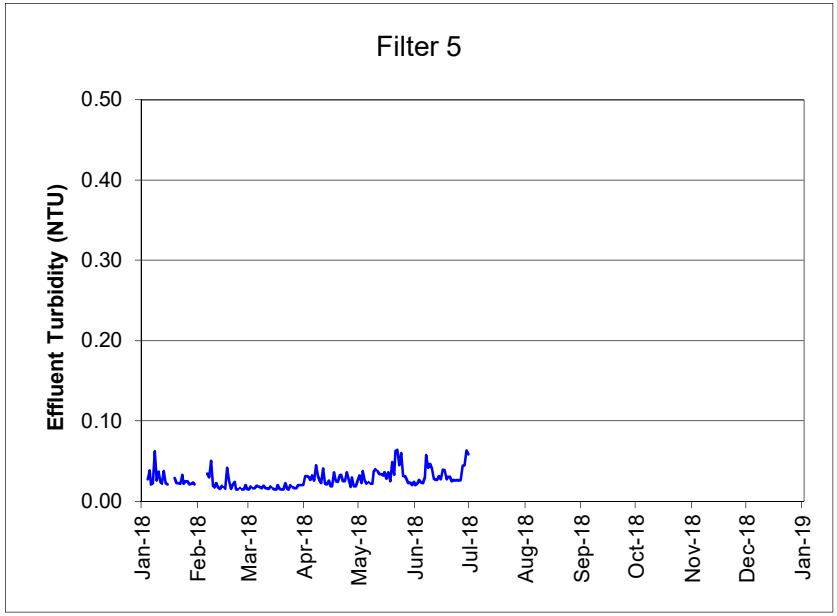


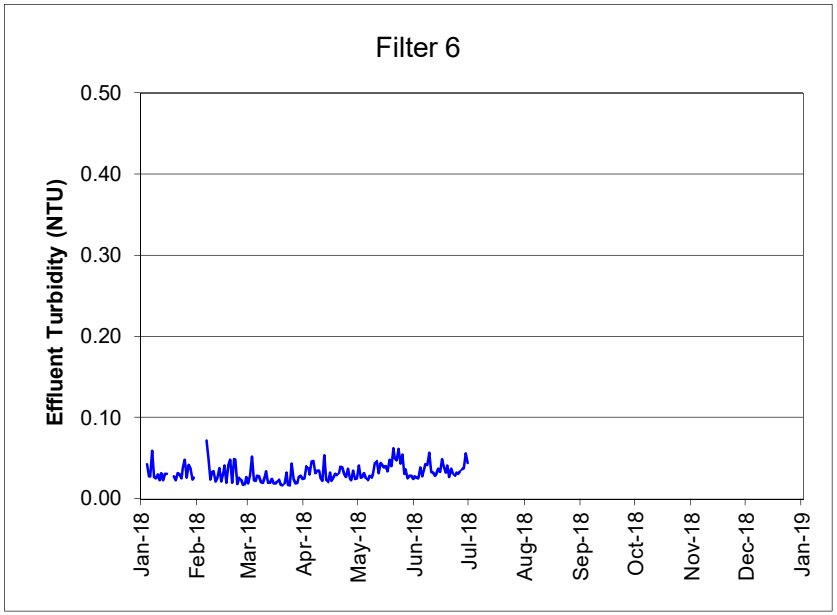


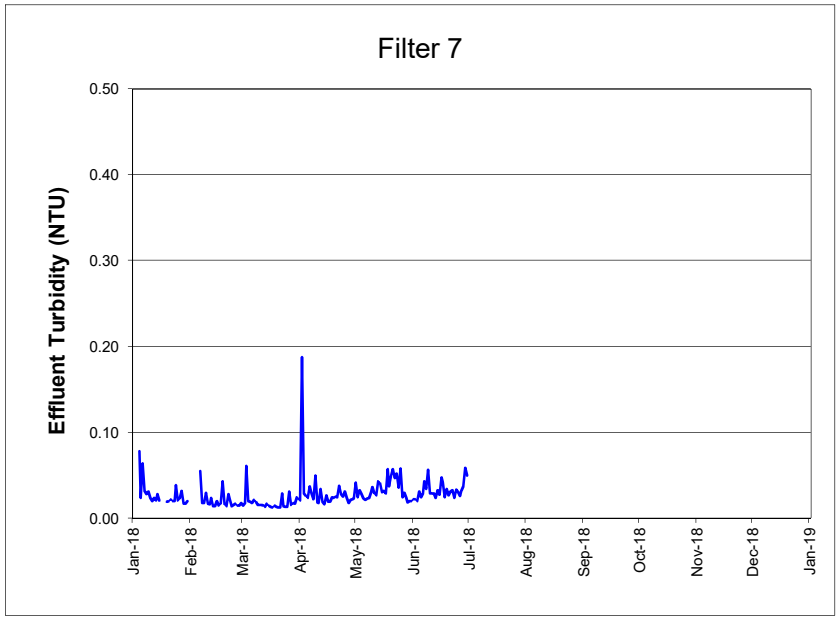


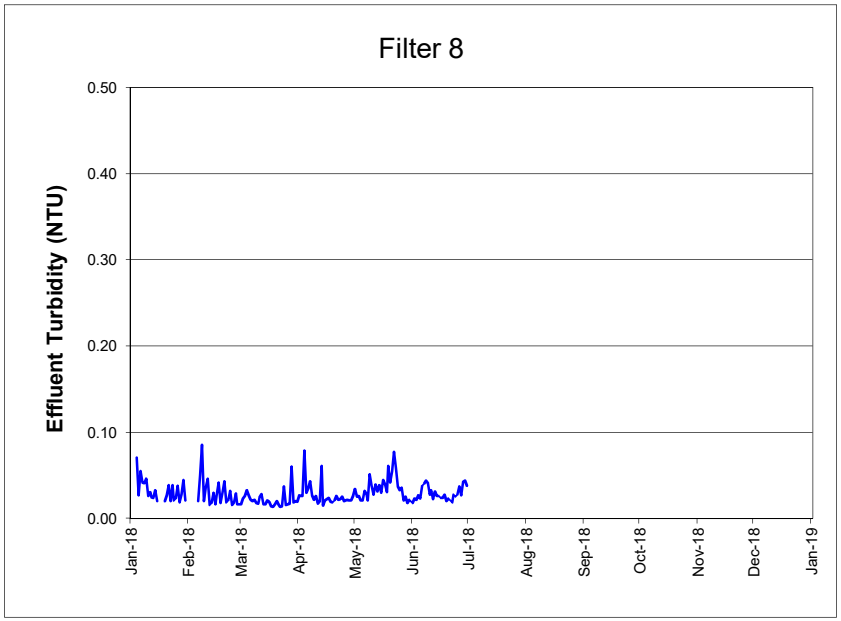


Filtration Performance Summary (Filters 5 - 8)

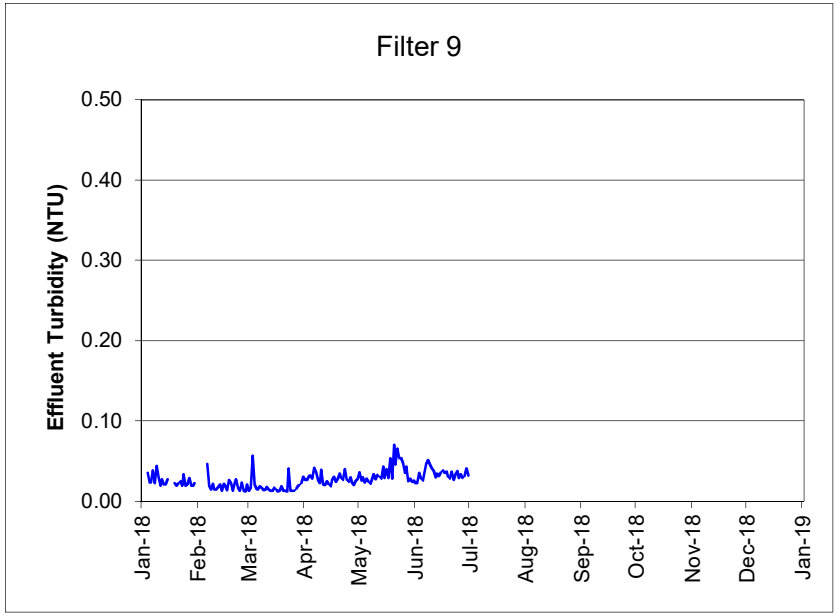


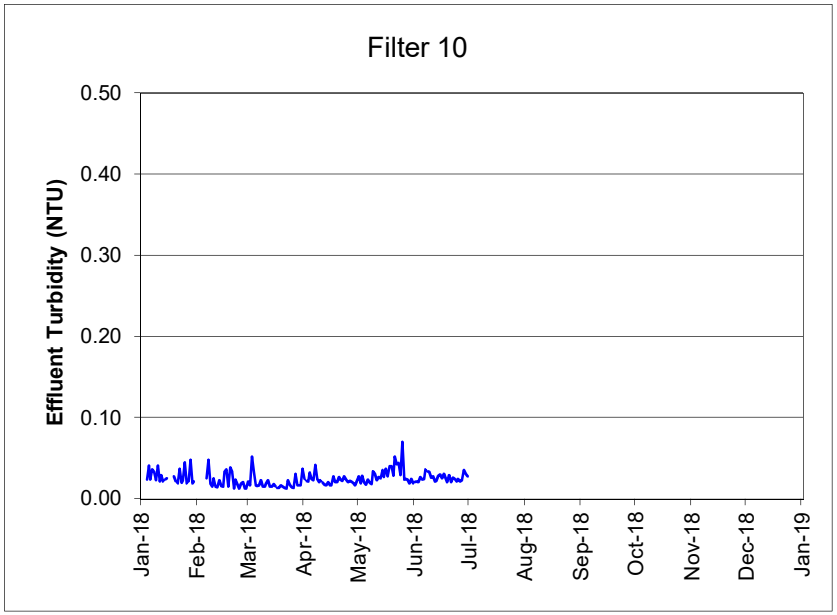


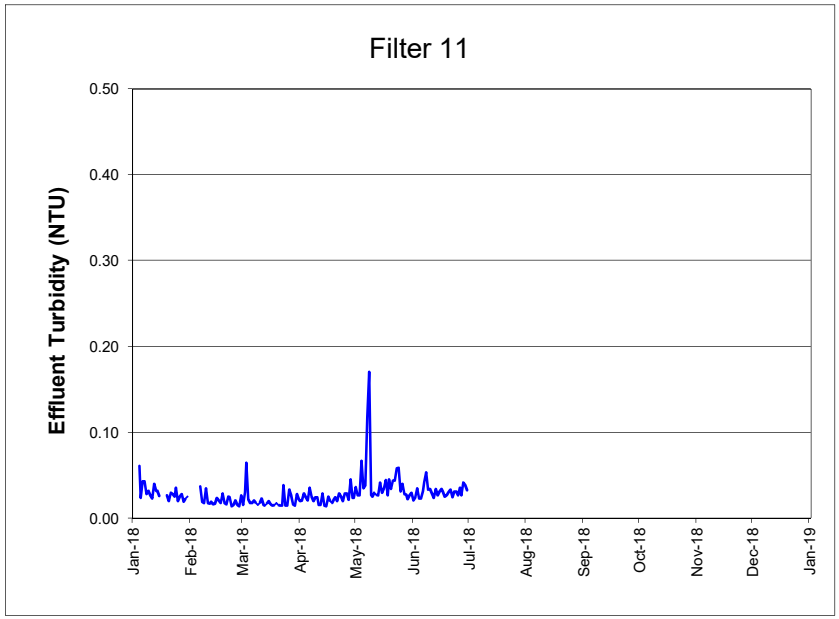


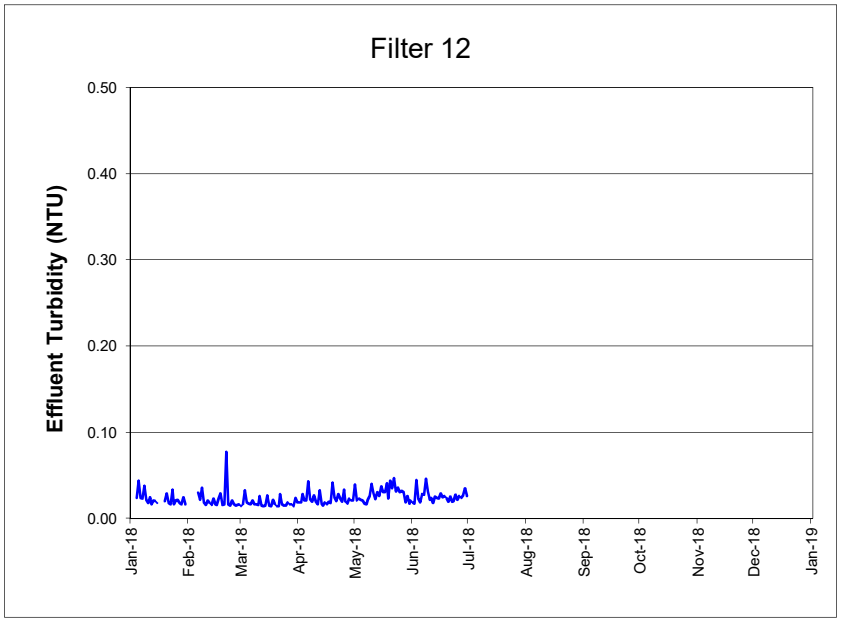


Filtration Performance Summary (Filters 9 - 12)









	Settled Water				Combined Filtered Water			
	95th %	% Values Meeting Goal			95th %	% Values Meeting Goal		
Month/Yr	Sed 1	3 NTU	2 NTU	1 NTU		0.3 NTU	0.2 NTU	0.1 NTU
Jan-18		100.0	100.0	95.7	0.03	100.0	100.0	100.0
Feb-18		100.0	100.0	100.0	0.03	100.0	100.0	100.0
Mar-18		100.0	100.0	96.8	0.02	100.0	100.0	100.0
Apr-18		100.0	100.0	100.0	0.04	100.0	100.0	100.0
May-18		100.0	87.1	61.3	0.05	100.0	100.0	96.8
Jun-18		100.0	96.7	66.7	0.04	100.0	100.0	100.0
Jul-18		#N/A	#N/A	#N/A		#N/A	#N/A	#N/A
Aug-18		#N/A	#N/A	#N/A		#N/A	#N/A	#N/A
Sep-18		#N/A	#N/A	#N/A		#N/A	#N/A	#N/A
Oct-18		#N/A	#N/A	#N/A		#N/A	#N/A	#N/A
Nov-18		#N/A	#N/A	#N/A		#N/A	#N/A	#N/A
Dec-18		#N/A	#N/A	#N/A		#N/A	#N/A	#N/A

The area in blue can be copied to the long-term trend spreadsheet (LT_trend.xls) to develop up to three years of performance trends.