

Table D-1.1
Stormwater Analytical Data for Outfall 230 WY2017 - Composite Samples

	Storm 1 10/7/2016	Storm 2 10/15/2016	Storm 3 11/6/2016	Storm 4 Rejected 11/15/2016	Storm 5 12/4/2016	Storm 6 12/19/2016	Storm 7 1/8/2017	Storm 8 1/18/2017	Storm 9 2/4/2017	Storm 10 3/18/2017	Storm 11 4/6/2017	Storm 12 5/4/2017	Storm 13 6/16/2017	Storm 14 9/19/2017
Conventional														
Anionic Surfactants - MBAS (mg/L)	-	51.1	-	25.0 UR	36.7	-	-	-	49.0 J	40.0	58.1	129	-	199
BOD (mg/L)	-	2.6	3.0	2.2 R	2.7	-	-	2.7 J	3.2	2.3	3.9	8.2	-	-
Chloride (mg/L)	-	1.65	-	0.891 R	2.65	-	-	-	30.1	2.09	2.07	2.89	-	8.20
Conductivity (uS/cm)	41.8	28.0	36.8	30.4 R	39.0	617	192	60.0	128	44.7	49.4	45.6	32.5	76.7
Hardness (mg CaCO ₃ /L)	16.7	12.0	14.1	12.1 R	14.1	38.8	21.8	11.3	15.7	13.6	15.5	24.9	12.2	27.5
pH (pH Units)	7.3	6.3	6.9	7.7 R	6.8	7.8	7.0	7.0	7.1	7.2	7.6	7.3	7.1	7.2
Total Suspended Solids (mg/L)	43.4	60.2	40.6	22.0 R	13.9	17.2	46.6	36.4	19.2	18.6	12.2	183	23.1	103
Turbidity (NTU)	-	11.0	-	11.2 R	10.7	-	-	-	15.1 J	10.3	9.05	79.9	-	47.9
Nutrients														
Nitrate+Nitrite as N (mg/L)	-	0.150	0.160 J	0.120 R	0.096	-	0.115	0.113	0.156	0.099	0.172	0.239 J	0.203	0.426
Phosphate, Ortho (mg/L)	-	0.022	0.026	0.021 R	0.016	-	0.047	0.022 J	0.029 J	0.012	0.020	0.027	0.018	0.020
Phosphorus, Total (mg/L)	-	0.106	0.102	0.072 R	0.064	-	0.251	0.081	0.092	0.048	0.055	0.554	0.102	0.418
Total Nitrogen (mg/L)	-	0.33	0.47	0.23 R	0.29	-	1.07	0.31	0.53	0.28	0.48	0.86	0.66	2.10
Metals														
Cadmium (ug/L)	0.104 UJ	0.106 UJ	0.041 UJ	0.048 UJR	0.058 UJ	0.147 UJ	0.148 J	0.079 UJ	0.03 U	0.055 J	0.054 J	0.352 J	0.089 J	0.177 J
Cadmium, Dissolved (ug/L)	0.030 UJ	0.010 J	0.022 J	0.018 JR	0.033 UJ	0.109 UJ	0.040 J	0.024 UJ	0.061 U	0.050 U	0.050 U	0.050 U	0.050 U	0.066 J
Copper (ug/L)	12.3	9.15	5.44	5.41 R	4.51	8.22	13.9	7.35	6.87	7.14	8.46	41.4	12.3	39.6
Copper, Dissolved (ug/L)	5.16	2.49	2.30	1.67 R	2.07	4.62	3.92	2.24	3.77	2.61	5.28	6.24	6.89	18.1
Lead (ug/L)	11.9	12.0	5.90	8.01 R	4.46	5.77	15.7	8.24	4.32	7.39	4.94	64.9	6.81	25.5
Lead, Dissolved (ug/L)	0.604	0.305	0.401	0.299 R	0.280	0.396	0.307	0.244	0.312	0.257	0.475	0.739	0.516	1.30
Mercury (ng/L)	6.4	2.8 J	3.5 J	4.6 JR	3.3 J	3.9 J	5.7	4.2 J	2.4 J	6.0 J	9.0 J	5.5 J	6.5 J	10.1
Mercury, Dissolved (ng/L)	2.0 J	1.8 U	1.8 U	1.8 R	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	9.0 U	9.0 U	9.0 U	9.0 U	3.5 J
Zinc (ug/L)	96.9	75.8	37.2	40.4 R	52.4	102	110	57.3	60.4	48.3	56.7	231	70.8	200
Zinc, Dissolved (ug/L)	49.7	34.2	23.6	20.6 R	38.0	77.3	44.1	29.1	44.8	28.1	41.1	38.7	44.4	97.0
Insecticides														
Carbaryl (ug/L)	-	0.50 U	0.50 U	0.50 UR	0.50 U	-	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Chlorpyrifos (ug/L)	0.017 U	0.017 U	0.006 U	0.006 UJR	0.017 U	0.020 U	0.006 U	0.006 U	0.006 U	0.006 U	0.017 U	0.060 U	0.061 U	0.060 U
LPAHs														
2-Methylnaphthalene (ug/L)	0.008 U	0.009 J	0.005 UJ	0.005 UJR	0.040 J	0.014	0.026	0.014	0.020 J	0.009 J	0.008 U	0.007 J	0.003 U	0.013
Acenaphthene (ug/L)	0.006 U	0.006 U	0.004 U	0.004 UJR	0.006 UJ	0.007 U	0.004 U	0.006 J	0.005 J	0.007 J	0.012	0.005 U	0.005 U	0.005 U
Acenaphthylene (ug/L)	0.006 U	0.006 U	0.005 J	0.004 JR	0.006 U	0.007 U	0.011	0.008 J	0.006 J	0.004 J	0.006 U	0.006 J	0.003 U	0.003 U
Anthracene (ug/L)	0.005 U	0.008 J	0.006 J	0.007 JR	0.006 J	0.006 U	0.007 J	0.007 J	0.008 J	0.005 U	0.005 U	0.015	0.006 U	0.006 U
Fluorene (ug/L)	0.006 U	0.006 U	0.006 J	0.007 JR	0.013 J	0.008 U	0.014	0.010 J	0.009 J	0.006 J	0.006 U	0.010 J	0.006 J	0.005 U
Naphthalene (ug/L)	0.014 J	0.016 J	0.017 UJ	0.014 UJR	0.021 J	0.029	0.072	0.045 UJ	0.026 UJ	0.020 J	0.019	0.017	0.012 UJ	0.023 J
Phenanthrene (ug/L)	0.031	0.055	0.024 J	0.041 JR	0.048 J	0.037	0.064	0.051	0.058 J	0.028 J	0.023	0.099	0.038	0.040
Total LPAHs	0.0565	0.088	0.0515	R	0.094	0.08	0.17	0.1045	0.099	0.0675	0.0625	0.1495	0.057	0.0725
HPAHs														
Benz(a)anthracene (ug/L)	0.019	0.045	0.018	0.038 JR	0.024 J	0.011 J	0.029	0.030	0.028 J	0.020	0.009 J	0.079	0.019	0.016
Benz(a)pyrene (ug/L)	0.028	0.063	0.025	0.052 JR	0.031 J	0.013	0.036	0.039	0.033 J	0.029	0.014	0.107	0.026	0.025
Benz(b,k)fluoranthene (ug/L)	0.081	0.202	0.053	0.108 JR	0.079 J	0.036	0.081	0.085	0.078 J	0.061	0.035	0.256	0.068	0.073
Benz(g,h,i)perylene (ug/L)	0.027	0.050	0.034	0.048 JR	0.027 J	0.019	0.052	0.047	0.047 J	0.055	0.013	0.082	0.018	0.015
Chrysene (ug/L)	0.053	0.104	0.030	0.063 JR	0.051 J	0.026	0.051	0.056	0.057 J	0.042	0.025	0.149	0.024	0.049
Dibenz(a,h)anthracene (ug/L)	0.006 J	0.011	0.008 J	0.014 JR	0.006 J	0.003 U	0.011	0.011	0.010 J	0.012	0.003 U	0.022	0.004 U	0.005 J
Fluoranthene (ug/L)	0.063	0.121	0.043	0.084 JR	0.081 J	0.044	0.093	0.084	0.074 J	0.049	0.030	0.207	0.062	0.059
Indeno(1,2,3-c,d)pyrene (ug/L)	0.021	0.048	0.034	0.051 JR	0.023 J	0.011 J	0.042	0.041	0.035 J	0.044	0.009 J	0.092	0.013	0.015
Pyrene (ug/L)	0.059	0.107	0.043	0.084 JR	0.081 J	0.044	0.093	0.084	0.089 J	0.056	0.039	0.198	0.061	0.058
Total HPAHs	0.357	0.751	0.288	R	0.382	0.1955	0.477	0.475	0.451	0.368	0.1755	1.192	0.293	0.315
TOTAL PAHs	0.4135	0.839	0.3395	R	0.476	0.2755	0.647	0.5795	0.55	0.4355	0.238	1.3415	0.35	0.3875
Phthalates														
Bis(2-ethylhexyl) phthalate (ug/L)	1.88	1.90	2.30	1.96 R	1.89	1.67	2.68	2.24	2.74 J	2.26	2.14	2.75	3.20	2.90
Butyl benzyl phthalate (ug/L)	0.603 U	0.603 U	0.206 J	0.267 JR	0.603 U	0.721 U	0.344 J	0.220 J	0.321 J	0.268 J	0.582 U	0.433 J	0.434 U	0.430 U
Diethyl phthalate (ug/L)	0.520 U	0.520 U	0.546 J	0.344 JR	0.520 U	0.622 U	0.400 J	0.157 U	0.268 J	0.257 J	0.502 U	0.439 J	0.283 U	0.280 U
Dimethyl phthalate (ug/L)	0.455 U	0.455 U	0.077 UJ	0.077 UJR	0.455 U	0.544 U	0.077 U	0.077 U	0.077 U	0.078 UJ	0.439 U	0.270 U	0.273 U	0.270 U
Di-n-butyl phthalate (ug/L)	0.508 U	0.508 U	0.300 J	0.273 JR	0.508 U	0.607 U	0.355 J	0.230 J	0.376 J	0.323 J	0.491 U	0.290 U	0.293 U	0.290 U
Di-n-octyl phthalate (ug/L)	0.501 J	0.464 J	0.468 J	0.406 JR	0.403 J	0.410 U	0.564 J	0.367 J	0.575 J	0.580 J	0.611 J	0.466 J	1.08	1.52
Total Phthalates	2.381	2.364	3.82	R	2.293	1.67	4.343	3.057	4.28	3.688	2.751	4.088	4.28	4.42
Herbicides														
2,4-D (ug/L)	-	0.12	0.069 J	0.17 JR	0.045 J	-	0.036 J	0.018 U	0.10 J	0.023 J	0.60	0.47	0.46	-
Dichlobenil (ug/L)	0.021 J	0.020 U	0.017 J	0.012 JR	0.023 J	0.024 U	0.023 J	0.016 J	0.064 J	0.162 J	0.053 J	0.091 J	0.055 J	0.040 U

Boo - The analyte was present in the sample.

U - The analyte was not detected at or above the reported value.

J - The analyte was not detected at or above the reported estimated value.

R - The analyte was positively identified. The associated value is an estimate.

U - The value is considered unusable.

E - Exceeds value.

Table D-1.2
Stormwater Analytical Data for Outfall 230 WY2017 - Grab Samples

	10/4/2016	10/13/2016	11/5/2016	1/7/2017	2/3/2017	2/15/2017	3/13/2017	4/5/2017	5/11/2017	6/15/2017
TPH										
NWTPH-Diesel (mg/L)	0.13 J	0.10 UJ	0.11	0.10 U	0.10 U	0.10 UJ	0.10 UJ	0.10 U	0.10 U	Unusable R
NWTPH-Gasoline (ug/L)	50.0 U	50.0 U	50.0 U	50.0 U	50.0 U	50.0 U	50.0 U	50.0 U	50.0 U	50.0 U
NWTPH-Heavy Oil (mg/L)	0.76 J	0.54 J	0.78 J	1.4	1.3	0.59 J	0.50 J	0.53	0.67	Unusable R
Bacteria										
Coliform, Fecal (CFU/100mL)	16,000 E	9,200	16,000 E	5,400	2,400	3,500	790	2,800	16,000	3,500
BTEX										
Benzene (ug/L)	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Ethylbenzene (ug/L)	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
m,p-Xylene (ug/L)	0.4 U	0.4 U	0.4 U	0.4 U	0.4 J	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
o-Xylene (ug/L)	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Toluene (ug/L)	0.5 J	0.2 J	0.2 U	0.2 U	0.2 J	0.2 U	0.2 U	0.2 U	0.3 J	0.2 J

Bold – The analyte was present in the sample.

U – The analyte was not detected at or above the reported value.

UJ – The analyte was not detected at or above the reported estimated value.

J – The analyte was positively identified. The associated value is an estimate.

R – The value is considered unusable.

E - Exceeds value.

Table D-2.1
Stormwater Analytical Data for Outfall 235 WY2017 - Composite Samples

	Storm 1 10/15/2016	Storm 2 11/14/2016	Storm 3 12/4/2016	Storm 4 12/19/2016	Storm 5 1/8/2017	Storm 6 1/18/2017	Storm 7 2/4/2017	Storm 8 2/15/2017	Storm 9 3/19/2017	Storm 10 4/5/2017	Storm 11 6/16/2017	Storm 12 9/18/2017
Conventionals												
Anionic Surfactants - MBAS (mg/L)	37.6	45.0	25.0	U	-	-	-	30.8	27.9	28.2	64.7	83.8
BOD (mg/L)	2.0	U	2.0	U	2.1	-	4.4	2.9	2.3	2.0	3.8	4.1
Chloride (mg/L)	2.26	2.48	3.22	-	-	-	-	45.0	46.1	6.92	4.52	2.96
Conductivity (µS/cm)	42.0	69.6	65.0	1590	386	386	158	121	107	77.6	65.0	140
Hardness (mg CaCO ₃ /L)	18.2	28.1	26.2	60.5	31.7	20.3	20.7	18.0	37.4	29.0	26.6	54.8
pH (pH Units)	6.3	7.0	6.9	7.3	7.6	7.0	7.1	6.7	7.5	7.2	6.8	6.5
Total Suspended Solids (mg/L)	15.2	5.60	16.8	33.5	66.5	45.4	21.6	28.6	19.2	16.4	28.8	126
Turbidity (NTU)	7.87	5.13	11.2	-	-	-	21.9	20.6	16.5	15.9	16.8	-
Nutrients												
Nitrate+Nitrite as N (mg/L)	0.313	0.206	0.189	-	0.255	0.212	0.227	0.162	0.270	0.295	0.346	0.661
Phosphate, Ortho (mg/L)	0.025	0.031	J	0.020	0.046	0.047	0.028	0.023	0.019	0.023	0.020	0.021
Phosphorus, Total (mg/L)	0.052	0.063	0.069	-	0.164	0.106	0.096	0.059	0.055	0.073	0.127	0.329
Total Nitrogen (mg/L)	0.46	0.36	0.44	-	0.72	0.52	0.62	0.37	0.50	0.59	0.75	2.77
Metals												
Cadmium (ug/L)	0.042	UJ	0.028	UJ	0.043	UJ	0.263	UJ	0.112	J	0.091	UJ
Cadmium, Dissolved (ug/L)	0.010	U	0.017	J	0.022	UJ	0.180	UJ	0.042	J	0.028	UJ
Copper (ug/L)	12.7	16.0	17.4	-	29.1	-	25.8	20.9	18.3	-	16.6	18.1
Copper, Dissolved (ug/L)	7.11	10.7	8.32	-	15.3	-	10.5	6.35	8.51	-	5.86	6.80
Lead (ug/L)	19.8	20.7	22.6	-	32.2	-	29.9	31.0	20.9	-	27.7	31.2
Lead, Dissolved (ug/L)	3.61	8.83	2.91	-	2.64	-	2.70	2.13	2.01	-	1.96	2.38
Mercury (ng/L)	3.3	J	3.4	J	3.5	J	5.3	5.5	6.0	-	3.1	J
Mercury, Dissolved (ng/L)	1.8	U	2.7	J	1.8	U	1.8	U	1.8	U	9.0	U
Zinc (ug/L)	41.0	36.7	51.2	-	118	-	96.3	79.0	61.9	-	56.7	43.4
Zinc, Dissolved (ug/L)	27.2	27.5	30.4	-	65.6	-	35.2	26.7	32.9	-	23.6	20.6
Insecticides												
Carbaryl (ug/L)	0.50	U	0.50	U	0.50	U	-	0.50	U	0.50	U	0.50
Chlorpyrifos (ug/L)	0.017	U	0.006	UJ	0.017	U	0.007	U	0.006	UJ	0.017	U
LPAHs												
2-Methylnaphthalene (ug/L)	0.008	U	0.005	UJ	0.008	UJ	0.227	0.012	0.008	J	0.006	J
Acenaphthene (ug/L)	0.006	U	0.004	UJ	0.006	UJ	0.019	0.006	J	0.005	J	0.016
Acenaphthylene (ug/L)	0.008	J	0.003	U	0.006	UJ	0.011	0.009	J	0.009	J	0.013
Anthracene (ug/L)	0.017	U	0.005	U	0.005	UJ	0.013	0.010	J	0.018	0.008	J
Fluorene (ug/L)	0.006	U	0.004	U	0.006	UJ	0.035	0.009	J	0.006	J	0.014
Naphthalene (ug/L)	0.008	UJ	0.007	UJ	0.008	UJ	0.094	0.038	UJ	0.025	UJ	0.015
Phenanthrene (ug/L)	0.009	J	0.008	J	0.014	J	0.166	0.064	0.038	0.021	J	0.060
Total LPAHs	0.044	U	0.195	U	0.0295	U	0.338	0.117	0.0885	UJ	0.0495	0.162
HPAHs												
Benzo(a)anthracene (ug/L)	0.017	U	0.007	J	0.013	J	0.060	0.028	0.046	0.019	J	0.026
Benzo(a)pyrene (ug/L)	0.019	U	0.007	UJ	0.015	J	0.064	0.039	0.047	0.020	J	0.027
Benzo(b,k)fluoranthene (ug/L)	0.055	U	0.014	J	0.034	J	0.154	0.088	0.102	0.044	J	0.084
Benzo(g,h,i)perylene (ug/L)	0.012	U	0.009	J	0.017	J	0.047	0.057	0.047	0.027	J	0.028
Chrysene (ug/L)	0.029	U	0.009	J	0.028	J	0.103	0.068	0.076	0.035	J	0.057
Dibenz(a,h)anthracene (ug/L)	0.003	U	0.004	UJ	0.003	U	0.009	J	0.012	0.011	J	0.015
Fluoranthene (ug/L)	0.029	U	0.017	J	0.030	-	0.183	0.119	0.105	0.046	J	0.011
Indeno(1,2,3-c,d)pyrene (ug/L)	0.011	U	0.007	J	0.009	J	0.034	0.038	0.040	0.019	J	0.020
Pyrene (ug/L)	0.033	U	0.026	J	0.054	J	0.231	0.139	0.120	0.069	J	0.097
Total HPAHs	0.2065	U	0.0945	U	0.2015	U	0.885	0.588	0.594	0.292	U	0.436
TOTAL PAHs	0.2505	U	0.114	U	0.231	U	1.223	0.705	0.6825	U	0.3415	U
Phthalates												
Bis(2-ethylhexyl) phthalate (ug/L)	0.783	J	1.21	U	1.63	U	19.3	3.01	2.58	U	1.74	U
Butyl benzyl phthalate (ug/L)	0.603	U	0.342	J	0.597	U	7.93	0.583	J	0.334	J	0.380
Diethyl phthalate (ug/L)	0.520	U	0.156	UJ	0.515	U	0.526	U	0.177	U	0.157	UJ
Dimethyl phthalate (ug/L)	0.455	U	0.077	UJ	0.451	U	0.460	U	0.087	U	0.077	UJ
Di-n-butyl phthalate (ug/L)	0.508	U	0.242	J	0.503	U	0.513	U	0.261	J	0.191	J
Di-n-octyl phthalate (ug/L)	0.343	U	0.349	J	0.339	U	0.420	J	0.525	J	0.307	J
Total Phthalates	0.783	U	2.143	U	1.63	U	27.65	4.379	3.412	U	2.733	U
Herbicides												
2,4-D (ug/L)	0.14	U	0.083	J	0.044	J	0.084	J	0.037	J	0.031	J
Dichlobenil (ug/L)	0.020	U	0.007	UJ	0.020	U	0.020	U	0.009	J	0.069	J

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Table D-2.2
Stormwater Analytical Data for Outfall 235 WY2017 - Grab Samples

	10/4/2016	10/13/2016	11/5/2016	1/7/2017	2/3/2017	2/15/2017	3/13/2017	4/5/2017	5/11/2017	6/15/2017
TPH										
NWTPH-Diesel (mg/L)	0.11 J	0.10 UJ	0.10 U	0.10 U	0.10 U	0.10 U	0.10 UJ	0.10 UJ	0.10 U	0.10 UJ
NWTPH-Gasoline (ug/L)	50.0 U	50.0 U	50.0 U	50.0 U	50.0 U	50.0 U	50.0 U	50.0 U	50.0 U	50.0 U
NWTPH-Heavy Oil (mg/L)	0.62 J	0.66 J	0.39 J	1.1	1.0	0.54	0.54 J	0.32 J	0.54	1.1 J
Bacteria										
Coliform, Fecal (CFU/100mL)	5,400	16,000 E	3,500	3,500	1,700	1,700	1,300	16,000 E	2,400	9,200 J
BTEX										
Benzene (ug/L)	0.7	0.2 U	0.2 U	0.2 U	0.2 J	0.2 U	0.2 U	0.4 J	0.3 J	0.3 J
Ethylbenzene (ug/L)	0.2 U	0.2 U	0.2 U	0.2 U	0.2 J	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
m,p-Xylene (ug/L)	0.4 U	0.4 U	0.4 U	0.4 U	0.6 J	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
o-Xylene (ug/L)	0.2 U	0.2 U	0.2 U	0.2 U	0.2 J	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Toluene (ug/L)	0.7	0.2 U	0.2 U	0.2 U	0.3 J	0.4 J	0.2 U	0.2 U	0.2 U	0.2 J

Bold – The analyte was present in the sample.

U – The analyte was not detected at or above the reported value.

UJ – The analyte was not detected at or above the reported estimated value.

J – The analyte was positively identified. The associated value is an estimate.

R – The value is considered unusable.

E - Exceeds value.

Table D-3.1
Stormwater Analytical Data for Outfall 237A New WY2017 - Composite Samples

	Storm 1 10/7/2016	Storm 2 10/15/2016	Storm 3 11/6/2016	Storm 4 11/15/2016	Storm 5 12/3/2016	Storm 6 12/19/2016	Storm 7 1/18/2017	Storm 8 2/26/2017	Storm 9 3/19/2017	Storm 10 4/6/2017	Storm 11 5/4/2017	Storm 12 6/16/2017	
Conventional													
Anionic Surfactants - MBAS (mg/L)	—	51.9	28.8	27.5	33.8	—	37.1	35.0	30.4	66.7	—	95.4	
BOD (mg/L)	—	2.0	u	2.3	2.0	u	2.6	2.7	2.0	u	5.1	—	6.8
Chloride (mg/L)	—	4.30	3.04	3.79	4.28	—	27.0	39.6	5.40	4.91	—	4.51	
Conductivity (uS/cm)	68.5	48.0	55.0	61.2	73.4	480	129	319	89.6	89.3	49.7	77.0	
Hardness (mg CaCO ₃ /L)	30.3	21.0	22.2	21.0	28.7	47.8	23.9	53.3	31.7	32.7	40.7	27.8	
pH (pH Units)	7.3	6.6	7.2	7.1	7.4	7.3	6.8	7.2	6.9	7.6	7.3	6.8	
Total Suspended Solids (mg/L)	52.0	48.3	19.2	23.7	23.9	26.8	38.0	11.6	20.6	16.6	668	30.0	
Turbidity (NTU)	—	23.0	12.2	14.4	12.7	—	22.1	19.6	13.3	14.6	—	14.4	
Nutrients													
Nitrate+Nitrite as N (mg/L)	0.656	0.295	0.300	0.237	0.396	—	0.268	0.839	0.515	0.558	0.221	J 0.524	
Phosphate, Ortho (mg/L)	—	0.023	0.024	0.022	0.020	—	0.016	0.027	0.015	0.018	0.011	0.026	
Phosphorus, Total (mg/L)	0.117	0.100	0.064	0.075	0.085	—	0.093	0.057	0.049	0.069	1.15	0.081	
Total Nitrogen (mg/L)	0.87	0.43	0.41	0.36	0.61	—	0.50	0.99	0.67	0.84	0.82	0.81	
Metals													
Cadmium (ug/L)	0.103	u	0.079	u	0.039	u	0.057	u	0.049	u	0.147	u	
Cadmium, Dissolved (ug/L)	0.014	u	0.010	u	0.025	J	0.015	J	0.017	u	0.083	u	
Copper (ug/L)	10.6	8.86	5.98	6.38	6.06	9.01	10.7	6.06	5.89	7.53	69.1	10.0	
Copper, Dissolved (ug/L)	3.45	2.74	2.93	2.05	2.32	3.40	2.43	2.94	2.24	3.68	4.16	4.34	
Lead (ug/L)	9.44	7.69	3.86	6.72	4.72	5.98	9.67	3.39	4.71	3.81	80.6	5.33	
Lead, Dissolved (ug/L)	0.411	0.254	0.285	0.250	0.215	u	0.161	u	0.169	0.265	0.298	0.246	
Mercury (ng/L)	4.5	J	4.7	J	3.6	J	6.2	2.7	J	3.9	J	6.1	
Mercury, Dissolved (ng/L)	1.8	u	1.8	u	2.9	J	1.8	u	1.8	u	1.8	u	
Zinc (ug/L)	74.6	62.5	35.0	40.6	52.4	352	70.8	45.2	35.9	81.1	333	56.6	
Zinc, Dissolved (ug/L)	27.6	27.5	21.3	19.8	31.8	289	28.6	29.4	20.4	55.0	23.3	26.8	
Insecticides													
Carbaryl (ug/L)	0.50	u	0.50	u	0.50	u	0.50	u	0.50	u	0.50	u	
Chlorpyrifos (ug/L)	0.017	u	0.017	u	0.006	u	0.006	u	0.017	u	0.006	u	
LPAHs													
2-Methylnaphthalene (ug/L)	0.008	u	0.008	u	0.005	u	0.007	J	0.008	u	0.016	u	
Acenaphthene (ug/L)	0.006	u	0.006	u	0.004	u	0.006	u	0.008	u	0.005	J	
Acenaphthylene (ug/L)	0.006	u	0.006	u	0.003	u	0.004	J	0.006	u	0.006	u	
Anthracene (ug/L)	0.007	J	0.008	J	0.005	u	0.005	u	0.006	u	0.006	u	
Fluorene (ug/L)	0.006	u	0.007	u	0.005	J	0.006	J	0.010	J	0.008	u	
Naphthalene (ug/L)	0.016	J	0.017	J	0.012	u	0.016	u	0.009	J	0.035	u	
Phenanthrene (ug/L)	0.053	0.067	0.016	J	0.031	J	0.021	J	0.050	0.083	0.023	0.030	
Total LPAHs	0.085	0.1015	0.033	0.0535	0.042	0.103	0.126	0.0535	0.0495	0.0475	0.0475	0.0345	
HPAHs													
Benzo(a)anthracene (ug/L)	0.051	0.072	0.013	0.030	J	0.013	J	0.027	0.071	0.016	0.029	0.013	
Benzo(a)pyrene (ug/L)	0.081	0.110	0.018	0.040	J	0.017	J	0.039	0.102	0.021	0.040	0.023	
Benzo(k)fluoranthene (ug/L)	0.279	0.368	0.040	0.094	J	0.048	J	0.115	0.253	0.072	0.094	0.075	
Benzo(g,h,i)perylene (ug/L)	0.069	0.079	0.026	0.041	J	0.019	J	0.041	0.105	0.029	0.069	0.022	
Chrysene (ug/L)	0.149	0.182	0.024	0.053	J	0.032	J	0.076	0.140	0.043	0.059	0.044	
Dibenz(a,h)anthracene (ug/L)	0.016	0.019	0.007	J	0.009	J	0.003	u	0.007	J	0.024	0.016	
Fluoranthene (ug/L)	0.199	0.219	0.034	0.078	J	0.037	0.082	0.209	0.045	0.076	0.049	0.014	
Indeno(1,2,3-c,d)pyrene (ug/L)	0.065	0.082	0.025	0.043	J	0.012	0.033	0.110	0.026	0.065	0.020	0.058	
Pyrene (ug/L)	0.172	0.184	0.033	0.070	J	0.048	J	0.100	0.189	0.055	0.085	0.055	
Total HPAHs	1.081	1.315	0.22	0.458	0.2275	0.52	1.203	0.313	0.532	0.306	9.622	0.348	
TOTAL PAHs	1.166	1.4165	0.253	0.5115	0.2695	0.623	1.329	0.3665	0.5815	0.3535	10.5695	0.3825	
Phthalates													
Bis(2-ethylhexyl) phthalate (ug/L)	1.60	1.84	1.90	1.68	1.50	1.88	2.49	1.76	2.11	1.66	3.04	J 1.94	
Butyl benzyl phthalate (ug/L)	0.597	u	0.609	u	0.183	u	0.182	u	0.609	u	0.246	J	
Diethyl phthalate (ug/L)	0.515	u	0.526	u	0.180	J	0.241	J	0.526	u	0.157	u	
Dimethyl phthalate (ug/L)	0.451	u	0.460	u	0.077	u	0.076	u	0.460	u	0.579	u	
Di-n-butyl phthalate (ug/L)	0.503	u	0.513	u	0.193	J	0.274	J	0.513	u	0.647	u	
Di-n-octyl phthalate (ug/L)	0.339	u	0.379	J	0.517	J	0.334	J	0.346	u	0.326	J	
Total Phthalates	1.6	2.219	2.79	2.529	1.5	1.88	3.315	2.135	3.131	2.002	3.756	2.577	
Herbicides													
2,4-D (ug/L)	—	0.22	0.29	0.081	J	0.065	J	—	0.080	J	0.064	J	
Dichlobenil (ug/L)	0.029	J	0.043	J	0.024	J	0.044	J	0.020	u	0.058	J	

u - The analyte was not detected or above the reported value.

J - The analyte was not detected or above the reported estimated value.

R - The value is considered unusable.

E - Exceeds value.

Table D-3.2
Stormwater Analytical Data for Outfall 237A New WY2017 - Grab Samples

	10/4/2016	10/13/2016	11/5/2016	1/17/2017	2/3/2017	2/15/2017	3/13/2017	4/5/2017	5/11/2017	6/15/2017
TPH										
NWTPH-Diesel (mg/L)	0.14 J	0.10 UJ	0.10 U	0.13	0.10 U	0.10 U	0.10 UJ	0.10 U	0.10 U	0.10 UJ
NWTPH-Gasoline (ug/L)	50.0 U	50.0 U	50.0 U	50.0 U	50.0 U	50.0 U	50.0 U	50.0 U	50.0 U	50.0 U
NWTPH-Heavy Oil (mg/L)	0.92 J	0.48 J	0.30 J	2.1	0.97	0.66	0.53 J	0.63	0.60	0.66 J
Bacteria										
Coliform, Fecal (CFU/100mL)	16000	2200	2200	2400	330	700	1100	16000	5400	5400
BTEX										
Benzene (ug/L)	0.2 U	0.2 U	0.2 U	0.2 U	0.2 J	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Ethylbenzene (ug/L)	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
m,p-Xylene (ug/L)	0.4 U	0.4 U	0.4 U	0.4 U	0.4 J	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
o-Xylene (ug/L)	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Toluene (ug/L)	0.2 U	0.2 J	0.2 U	0.2 U	0.8	0.3 J	0.2 U	0.2 U	0.2 U	0.2 U

Bold – The analyte was present in the sample.

U – The analyte was not detected at or above the reported value.

UJ – The analyte was not detected at or above the reported estimated value.

J – The analyte was positively identified. The associated value is an estimate.

R – The value is considered unusable.

E - Exceeds value.

Table D-4.1
Stormwater Analytical Data for Outfall 237 B WY2017 - Composite Samples

	Rejected 10/14/2016	Storm 1 11/6/2016	Storm 2 11/15/2016	Storm 3 12/4/2016	Storm 4 1/8/2017	Storm 5 1/18/2017	Storm 6 2/4/2017	Storm 7 2/15/2017	Storm 8 3/18/2017	Storm 9 4/5/2017	Storm 10 6/16/2017	Storm 11 9/19/2017
Conventionals												
Anionic Surfactants - MBAS (mg/L)	41.6 R	28.3	32.6	31.3	—	43.0	41.6	25.0 u	—	—	69.7	84.6
BOD (mg/L)	2.8 R	2.2	2.5	2.5	—	3.6	3.0	2.0 u	—	—	—	4.4
Chloride (mg/L)	6.58 R	2.47	1.87	4.26	—	14.6	10.0	7.71	—	—	3.03	8.57
Conductivity (µS/cm)	152 R	81.2	94.6	109	366	126	132	95.0	129	230	91.7	235
Hardness (mg CaCO ₃ /L)	68.8 R	36.5	31.1	46.3	61.4	43.2	52.2	37.0	53.0	55.6	39.4	96.4
pH (pH Units)	7.1 R	7.0	6.9	6.9	7.6	7.0	6.9	6.9	7.3	6.9	7.2	6.6
Total Suspended Solids (mg/L)	21.5 R	19.6	77.8	21.6	—	49.8	31.4	28.2	13.0	15.8	45.7	16.0
Turbidity (NTU)	12.8 R	19.2	40.0	20.2	—	50.2	29.0	21.6	—	—	18.1	11.8
Nutrients												
Nitrate+Nitrite as N (mg/L)	1.70 R	0.791	0.628	0.936	—	0.938	1.12	0.749	1.10	1.35	0.990	2.72
Phosphate, Ortho (mg/L)	0.026 R	0.022	0.027	0.015	—	0.021	0.023	0.016	0.016 J	0.019	0.020	0.031
Phosphorus, Total (mg/L)	0.079 R	0.079	0.150	0.076	—	0.130	0.101	0.071	0.045	0.078	0.097	0.109
Total Nitrogen (mg/L)	1.62 R	0.87	0.76	1.03	—	1.14	1.40	0.96	1.15	1.45	1.23	3.19
Metals												
Cadmium (ug/L)	0.028 UR	0.040 u	0.102 uJ	0.049 uJ	0.138 J	0.092 uJ	0.065 u	0.065 J	0.041 J	0.048 J	0.079 J	0.043 u
Cadmium, Dissolved (ug/L)	0.010 UR	0.018 J	0.015 J	0.012 u	0.051 J	0.019 uJ	0.026 u	0.050 u	0.050 u	0.050 u	0.050 u	0.050 u
Copper (ug/L)	5.30 R	5.07	9.68	5.05	12.5	10.1	7.15	5.90	4.23	5.17	7.91	7.10
Copper, Dissolved (ug/L)	1.84 R	2.43	2.20	1.47	3.67	2.31	2.14	2.09	2.22	2.45	2.50	3.75
Lead (ug/L)	4.26 R	3.19	11.0	4.16	8.00	9.41	5.63	4.97	2.20	2.98	6.09	2.44
Lead, Dissolved (ug/L)	0.092 UR	0.174	0.168	0.137 u	0.162	0.200	0.192 uJ	0.188	0.239	0.246	0.192	0.245
Mercury (ng/L)	4.1 JR	4.4 J	9.9	5.3	5.0	7.7	7.5 J	8.0 J	6.5 J	8.5 J	6.0 J	2.7 J
Mercury, Dissolved (ng/L)	1.8 UR	3.0 J	2.0 J	1.8 u	1.8 u	1.8 u	1.8 u	1.8 u	9.0 u	9.0 u	9.0 u	1.8 u
Zinc (ug/L)	29.4 R	25.0	48.4	32.7	73.7	55.3	40.9	31.7	22.6	285	52.8	35.2
Zinc, Dissolved (ug/L)	11.8 R	13.4	14.0	14.5	25.2	17.8	16.7	15.2	14.1	260	19.7	17.6
Insecticides												
Carbaryl (ug/L)	0.50 UR	0.50 u	0.50 u	0.50 u	—	0.50 u	0.50 u	0.50 u	0.50 u	0.50 u	0.50 u	0.50 u
Chlorpyrifos (ug/L)	0.017 UR	0.006 u	0.006 uJ	0.017 u	0.006 u	0.006 u	0.006 uJ	0.018 u	0.006 u	0.017 u	0.061 u	0.062 u
LPAHs												
2-Methylnaphthalene (ug/L)	0.008 UR	0.005 u	0.008 J	0.013 J	0.013	0.005 u	0.005 uJ	0.019 J	0.007 J	0.008 u	0.003 u	0.007 J
Acenaphthene (ug/L)	0.006 UR	0.004 u	0.004 uJ	0.006 u	0.008 J	0.004 u	0.004 uJ	0.006 u	0.004 u	0.006 u	0.005 u	0.005 u
Acenaphthylene (ug/L)	0.006 UR	0.003 u	0.007 J	0.006 u	0.007 J	0.008 J	0.004 J	0.006 u	0.006 u	0.003 u	0.004 u	0.004 u
Anthracene (ug/L)	0.005 UR	0.005 u	0.011 J	0.005 u	0.007 J	0.006 J	0.005 u	0.005 u	0.005 u	0.005 u	0.006 u	0.006 u
Fluorene (ug/L)	0.006 UR	0.005 J	0.009 J	0.006 u	0.016	0.004 u	0.004 uJ	0.007 u	0.006 J	0.006 u	0.005 u	0.005 u
Naphthalene (ug/L)	0.008 UR	0.013 u	0.013 uJ	0.018 J	0.023 u	0.022 uJ	0.009 uJ	0.035 J	0.014 J	0.013	0.012 uJ	0.012 u
Phenanthrene (ug/L)	0.010 R	0.014 J	0.053 J	0.028 J	0.063	0.045	0.034 J	0.039	0.016 J	0.016	0.011	0.019
Total LPAHs	R	0.0315	0.0885	0.0575	0.1125	0.074	0.049	0.086	0.0425	0.0405	0.0265	0.035
HPAHs												
Benzo(a)anthracene (ug/L)	0.005 UR	0.010 J	0.036 J	0.018 J	0.027	0.023	0.019 J	0.014	0.007 J	0.011	0.007 J	0.010 J
Benzo(a)pyrene (ug/L)	0.007 JR	0.013	0.051 J	0.025 J	0.038	0.031	0.026 J	0.020	0.010 J	0.014	0.013	0.016
Benzo(b,k)fluoranthene (ug/L)	0.019 JR	0.023	0.103 J	0.074 J	0.085	0.074	0.056 J	0.056	0.019 J	0.035	0.036	0.048
Benzo(g,h,i)perylene (ug/L)	0.011 R	0.015	0.045 J	0.024 J	0.052	0.038	0.034 J	0.018	0.020	0.014	0.008 J	0.012 J
Chrysene (ug/L)	0.014 R	0.014	0.064 J	0.051 J	0.059	0.050	0.043 J	0.033	0.016	0.025	0.013	0.028
Dibenz(a,h)anthracene (ug/L)	0.003 UR	0.005 J	0.010 J	0.004 J	0.010	0.009 J	0.007 J	0.005 J	0.005 u	0.002 u	0.004 u	0.004 u
Fluoranthene (ug/L)	0.018 R	0.021	0.094 J	0.057	0.092	0.074	0.060 J	0.048	0.019	0.029	0.026	0.036
Indeno(1,2,3-c,d)pyrene (ug/L)	0.007 JR	0.015	0.046 J	0.019	0.038	0.032	0.028 J	0.015	0.014	0.009 J	0.006 J	0.013
Pyrene (ug/L)	0.018 R	0.023	0.092 J	0.067 J	0.117	0.075	0.071 J	0.052	0.027	0.043	0.033	0.038
Total HPAHs	R	0.139	0.541	0.339	0.518	0.406	0.344	0.261	0.1345	0.181	0.144	0.203
TOTAL PAHs	R	0.1705	0.6295	0.3965	0.6305	0.48	0.393	0.347	0.177	0.2215	0.1705	0.238
Phthalates												
Bis(2-ethylhexyl) phthalate (ug/L)	0.460 UR	1.90	2.30	1.68	2.58	1.47	1.70 J	1.07	1.38	2.95	1.32	2.14
Butyl benzyl phthalate (ug/L)	0.603 UR	0.185 u	0.183 u	0.603 u	0.185 u	0.185 u	0.187 u	0.616 u	0.413 J	0.581 u	0.434 u	0.443 u
Diethyl phthalate (ug/L)	0.520 UR	0.157 uJ	0.159 J	0.520 u	0.209 J	0.157 u	0.159 uJ	0.531 u	0.188 J	0.501 u	0.283 u	0.289 u
Dimethyl phthalate (ug/L)	0.455 UR	0.077 u	0.077 uJ	0.455 u	0.077 u	0.077 u	0.078 u	0.465 u	0.079 u	0.438 u	0.273 u	0.278 u
Di-n-butyl phthalate (ug/L)	0.508 UR	0.210 J	0.231 J	0.508 u	0.356 J	0.220 J	0.168 J	0.519 u	0.349 J	0.489 u	0.293 u	0.299 u
Di-n-octyl phthalate (ug/L)	0.343 UR	0.215 u	0.271 J	0.343 u	0.739 J	0.215 u	0.329 J	0.350 u	0.256 J	0.330 u	0.444 J	1.63
Total Phthalates	R	2.11	2.961	1.68	3.884	1.69	2.197	1.07	2.586	2.95	1.764	3.77
Herbicides												
2,4-D (ug/L)	0.18 R	0.18	0.19 J	0.27 J	—	0.037 J	0.063 J	0.043 J	—	1.6	—	0.42
Dichlobenil (ug/L)	0.020 UR	0.037 J	0.034 J	0.020 u	0.010 J	0.025 J	0.026 J	0.059 J	0.041 J	0.267	0.041 uJ	0.041 u

u - The analyte was not detected or above the reported value.

J - The analyte was not detected or above the reported estimated value.

R - The analyte was positively identified. The associated value is an estimate.

E - The value is considered unusable.

— Exceeds value.

Table D-4.2
Stormwater Analytical Data for Outfall 237 B WY2017 - Grab Samples

	10/4/2016	10/13/2016	11/5/2016	1/8/2017	1/17/2017	2/3/2017	2/15/2017	3/13/2017	4/5/2017	5/11/2017	6/15/2017
TPH											
NWTPH-Diesel (mg/L)	0.14 J	0.10 JJ	0.10 U	0.10 JJ	0.10 JJ	0.10 U	0.10 U	0.10 U	0.10 JJ	0.10	0.10 JJ
NWTPH-Gasoline (ug/L)	50.0 U	50.0 U	50.0 U	50.0 U	50.0 U	50.0 U	50.0 U	50.0 U	50.0 U	50.0 U	50.0 U
NWTPH-Heavy Oil (mg/L)	0.74 J	0.53 J	0.27 J	0.82 J	1.3 J	0.91	0.54	0.42	0.35 J	0.66	0.28 J
Bacteria											
Coliform, Fecal (CFU/100mL)	16,000 E	5,400	5,400	790	790	230	490	490	5,400	2,400	790
BTEX											
Benzene (ug/L)	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Ethylbenzene (ug/L)	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
m,p-Xylene (ug/L)	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
o-Xylene (ug/L)	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Toluene (ug/L)	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

Bold – The analyte was present in the sample.

U – The analyte was not detected at or above the reported value.

JU – The analyte was not detected at or above the reported estimated value.

J – The analyte was positively identified. The associated value is an estimate.

R – The value is considered unusable.

E - Exceeds value.

Table D-5.1
Stormwater Analytical Data for Outfall 243 WY2017 - Composite Samples

	Storm 1 10/7/2016	Storm 2 11/5/2016	Storm 3 11/15/2016	Storm 4 Rejected 12/4/2016	Storm 5 12/19/2016	Storm 6 2/4/2017	Storm 7 3/18/2017
Conventionals							
Anionic Surfactants - MBAS (mg/L)	86.2	32.8	39.9	30.6	—	94.7 J	45.2 J
BOD (mg/L)	2.3	4.7	3.4	2.0 u	—	3.9	2.2
Chloride (mg/L)	25400	741	885	1620	—	3980	1140
Conductivity (µS/cm)	13300	2730	3150	5780	8200	7170	3900
Hardness (mg CaCO ₃ /L)	1250	284	292	547	660	705	380
pH (pH Units)	7.1	7.1	7.2	7.2	7.3	7.0	7.1
Total Suspended Solids (mg/L)	26.2	289	156	37.8	171	29.0	14.8
Turbidity (NTU)	0.21 J	140	53.0	36.1	—	38.6 J	22.4 J
Nutrients							
Nitrate+Nitrite as N (mg/L)	0.799	0.359	0.202	0.134	—	0.302	0.169
Phosphate, Ortho (mg/L)	0.040	0.033	0.030	0.043	—	0.018 J	0.035 J
Phosphorus, Total (mg/L)	0.202	1.36	1.28	0.403	—	0.107	0.096
Total Nitrogen (mg/L)	0.88	0.46	0.51	0.41	—	0.70	0.50
Metals							
Cadmium (ug/L)	0.063 J	1.25	0.476 J	0.232 w	0.457 J	0.189 u	0.143 J
Cadmium, Dissolved (ug/L)	0.064 J	0.101 J	0.118 J	0.105 w	0.249 w	0.137 u	0.083 J
Copper (ug/L)	3.22	110	39.3	25.9	67.5	24.6	14.3
Copper, Dissolved (ug/L)	2.28	3.14	3.04	2.17	3.39	6.88	4.97
Lead (ug/L)	0.116 J	115	46.2	19.7	27.6	6.05	3.70
Lead, Dissolved (ug/L)	0.021 J	0.086 J	0.196	0.026 w	0.005 u	0.031 u	0.102
Mercury (ng/L)	3.2 J	153	41.0	12.5	20.8	5.5	6.0 J
Mercury, Dissolved (ng/L)	1.8	1.9 J	1.8	1.8 u	1.8 u	1.8 u	9.0 u
Zinc (ug/L)	12.3	233	93.9	52.7	117	73.7	44.1
Zinc, Dissolved (ug/L)	10.9	16.4	16.7	15.3	34.1	32.1	23.5
Insecticides							
Carbaryl (ug/L)	0.50 u	0.50 u	0.50 u	0.50 u	0.50 w	0.50 u	0.50 u
Chlorpyrifos (ug/L)	0.017 u	0.006 u	0.006 w	0.017 u	0.018 w	0.006 w	0.006 u
LPAHs							
2-Methylnaphthalene (ug/L)	0.008 u	0.005 w	0.013 J	0.008 w	0.009 w	0.005 w	0.005 w
Acenaphthene (ug/L)	0.012	0.004 w	0.008 J	0.011 J	0.012 J	0.009 J	0.011 J
Acenaphthylene (ug/L)	0.009 J	0.008 J	0.022 J	0.011 J	0.009 J	0.007 J	0.010 J
Anthracene (ug/L)	0.019	0.046 J	0.077 J	0.040 J	0.022 J	0.027 J	0.033 J
Fluorene (ug/L)	0.007 J	0.006 J	0.015 J	0.008 J	0.014 J	0.013 J	0.009 J
Naphthalene (ug/L)	0.016 J	0.010 w	0.033 w	0.011 J	0.018 J	0.008 w	0.011 J
Phenanthrene (ug/L)	0.019	0.014 J	0.074 J	0.037 J	0.064 J	0.027 J	0.013 J
Total LPAHs	0.082	0.081	0.2125	0.118	0.139	0.087	0.087
HPAHs							
Benzo(a)anthracene (ug/L)	0.010 J	0.021	0.615 J	0.047 J	0.033 J	0.018 J	0.013
Benzo(a)pyrene (ug/L)	0.013	0.031	0.654 J	0.065 J	0.043 J	0.022 J	0.015
Benzo(b,k)fluoranthene (ug/L)	0.041	0.058	1.43 J	0.190 J	0.107 J	0.048 J	0.029
Benzo(g,h,i)perylene (ug/L)	0.012	0.031	0.503 J	0.053 J	0.035 J	0.037 J	0.031
Chrysene (ug/L)	0.025	0.030	0.788 J	0.101 J	0.071 J	0.042 J	0.022
Dibenz(a,h)anthracene (ug/L)	0.004 J	0.009 J	0.684 J	0.013	0.006 J	0.006 J	0.007 J
Fluoranthene (ug/L)	0.033	0.038	0.248 J	0.097	0.093 J	0.069 J	0.032
Indeno(1,2,3-c,d)pyrene (ug/L)	0.011	0.037	0.620 J	0.047	0.026 J	0.023 J	0.021
Pyrene (ug/L)	0.036	0.039	0.293 J	0.121 J	0.121 J	0.093 J	0.048
Total HPAHs	0.185	0.294	5.835	0.734	0.535	0.358	0.218
TOTAL PAHs	0.267	0.375	6.0475	0.852	0.674	0.445	0.305
Phthalates							
Bis(2-ethylhexyl) phthalate (ug/L)	0.767 J	1.38	3.95	1.68	1.42 J	2.69 J	2.16
Butyl benzyl phthalate (ug/L)	0.603 u	0.185 u	1.64 J	0.603 u	0.635 w	0.187 u	0.187 u
Diethyl phthalate (ug/L)	0.520 u	0.157 w	0.156 w	0.520 u	0.548 w	0.159 w	0.166 J
Dimethyl phthalate (ug/L)	0.455 u	0.077 w	0.077 w	0.455 u	0.480 w	0.078 w	0.078 w
Di-n-butyl phthalate (ug/L)	0.508 u	0.262 J	0.357 J	0.508 u	0.535 w	0.293 J	0.251 J
Di-n-octyl phthalate (ug/L)	0.343 u	0.223 J	1.28 J	0.343 u	0.361 w	0.448 J	0.466 J
Total Phthalates	0.767	1.865	7.227	1.68	1.42	3.431	3.043
Herbicides							
2,4-D (ug/L)	0.19	0.017 u	0.017 w	0.029 J	—	0.054 J	0.026 J
Dichlobenil (ug/L)	0.020 u	0.007 w	0.008 J	0.020 u	0.021 w	0.016 J	0.025 J

NOTE - The analysis was present in the sample.

U - The analysis was not detected at or above the reported value.

UJ - The analysis was not detected at or above the reported estimated value.

J - The analysis was positively identified. The associated value is an estimate.

R - The value is considered unusable.

E - Exceeds value.

Table D-5.2
Stormwater Analytical Data for Outfall 243 WY2017 - Grab Samples

	10/13/2016	1/17/2017	2/3/2017	2/15/2017	3/13/2017	4/5/2017	5/11/2017	6/15/2017
TPH								
NWTPH-Diesel (mg/L)	0.10 uJ	0.10 uJ	0.1 u	0.10 uJ	0.10 u	0.18	0.10 u	0.10 uJ
NWTPH-Gasoline (ug/L)	50.0 u	50.0 u	50.0 u	50.0 u	50.0 u	50.0 u	50.0 u	50.0 u
NWTPH-Heavy Oil (mg/L)	0.34 J	0.83 J	0.48	0.29 J	0.33	0.57	0.20 u	0.56 J
Bacteria								
Coliform, Fecal (CFU/100mL)	16,000 E	790	330	2,400	310	5,400	9,200	>16,000
BTEX								
Benzene (ug/L)	0.2 u	0.2 u	0.2 u	0.2 u	0.2 u	0.2 u	0.2 u	0.2 u
Ethylbenzene (ug/L)	0.2 u	0.2 u	0.2 u	0.2 u	0.2 u	0.2 u	0.2 u	0.2 u
m,p-Xylene (ug/L)	0.4 J	0.4 u	0.4 u	0.4 u	0.4 u	0.6 J	0.4 u	0.4 u
o-Xylene (ug/L)	0.2 J	0.2 u	0.2 u	0.2 u	0.2 u	0.2 u	0.2 u	0.2 u
Toluene (ug/L)	0.2 J	0.2 u	0.2 u	0.2 u	0.2 u	0.2 u	0.2 u	0.2 J

Bold – The analyte was present in the sample.

U – The analyte was not detected at or above the reported value.

UJ – The analyte was not detected at or above the reported estimated value.

J – The analyte was positively identified. The associated value is an estimate.

R – The value is considered unusable.

E - Exceeds value.

Table D-6.1
Stormwater Analytical Data for Outfall 245 WY2017 - Composite Samples

	Storm 1 10/7/2016	Storm 2 10/20/2016	Storm 3 11/5/2016	Storm 4 11/15/2016	Storm 5 12/4/2016	Storm 6 12/19/2016	Storm 7 1/8/2017	Storm 8 1/18/2017	Storm 9 2/3/2017	Storm 10 3/18/2017	Storm 11 4/5/2017	Storm 12 5/5/2017	Storm 13 6/15/2017													
Conventional																										
Anionic Surfactants - MBAS (mg/L)	—	53.8	54.1	37.9	26.5	—	26.0	J	42.9	65.1	J	36.3	98.0	J	71.1	124										
BOD (mg/L)	—	2.6	2.1	2.0	2.0	u	—	4.3	3.9	4.6	2.2	3.8	5.4	5.7												
Chloride (mg/L)	—	30.0	26.6	122	32.0	—	51.8	79.9	114	16.7	J	85.1	520	121												
Conductivity (uS/cm)	513	243	98.1	475	179	440	232	579	505	104	425	1810	526													
Hardness (mg CaCO ₃ /L)	66.9	28.6	21.2	58.0	35.1	66.8	37.9	45.8	66.8	27.8	75.6	195	71.5													
pH (pH Units)	7.0	7.1	6.8	6.9	7.9	7.3	7.4	7.1	7.0	6.9	7.2	6.8	7.0													
Total Suspended Solids (mg/L)	95.3	27.2	12.4	29.8	18.6	34.8	18.8	50.6	62.8	24.0	45.6	296	49.6													
Turbidity (NTU)	—	28.0	11.6	24.4	38.5	—	21.7	54.0	97.1	J	21.1	34.9	J	95.3	48.4											
Nutrients																										
Nitrate+Nitrite as N (mg/L)	—	0.107	0.094	0.079	0.102	0.297	0.154	0.121	0.216	0.089	0.217	0.210	J	0.271												
Phosphate, Ortho (mg/L)	—	0.027	0.044	J	0.013	0.028	0.147	0.038	0.067	0.039	J	0.019	0.033	J	0.689	0.069										
Phosphorus, Total (mg/L)	—	0.072	0.338	0.071	0.118	—	0.121	0.279	0.246	0.067	0.197	0.151	0.119													
Total Nitrogen (mg/L)	—	0.37	0.48	0.27	0.43	1.11	0.70	0.68	1.02	0.39	1.06	0.71	1.97													
Metals																										
Cadmium (ug/L)	0.491	J	0.107	w	0.127	w	0.137	w	0.118	w	0.718	0.147	J	0.464	J	0.353	J	0.117	J	0.157	J	1.56	0.217	J		
Cadmium, Dissolved (ug/L)	0.091	J	0.036	w	0.075	J	0.068	J	0.056	w	0.426	J	0.069	J	0.179	J	0.122	u	0.051	J	0.059	J	0.964	0.050	u	
Copper (ug/L)	23.8	7.47	4.45	7.47	6.23	12.3	5.62	15.7	17.1	7.89	12.6	42.6	17.5													
Copper, Dissolved (ug/L)	5.26	1.68	2.15	1.07	1.44	4.09	2.42	2.02	4.08	2.07	3.71	6.20	5.45													
Lead (ug/L)	15.6	4.15	1.57	3.81	3.48	4.54	3.15	9.83	9.70	5.67	9.41	33.8	8.34													
Lead, Dissolved (ug/L)	0.194	0.115	w	0.076	J	0.053	J	0.086	w	0.047	w	0.200	0.078	J	0.124	w	0.324	0.403	0.033	u	0.296					
Mercury (ng/L)	8.2	4.4	J	2.2	J	2.5	J	1.6	J	2.4	J	1.6	J	5.7	4.7	J	5.5	J	10.5	J	4.5	J	7.5	J		
Mercury, Dissolved (ng/L)	1.8	u	1.8	u	1.8	u	1.8	u	1.8	u	1.8	u	1.8	u	9.0	u										
Zinc (ug/L)	184	57.7	31.2	52.2	46.9	117	46.4	99.3	101	43.7	71.6	230	99.1													
Zinc, Dissolved (ug/L)	32.8	24.0	22.0	23.9	22.6	64.9	25.8	28.2	34.3	21.0	26.8	81.8	14.9													
Insecticides																										
Carbaryl (ug/L)	—	0.50	u	0.50	u	0.50	u	0.50	w	0.50	u	0.50	u	0.50	u	0.50	u	0.50	u	0.50	u					
Chlorpyrifos (ug/L)	0.031	J	0.017	u	0.006	u	0.006	w	0.017	u	0.018	u	0.006	u	0.006	w	0.006	u	0.017	u	0.060	w	0.060	u		
LPAHs																										
2-Methylnaphthalene (ug/L)	0.008	u	0.011	0.005	w	0.012	J	0.008	w	0.018	0.016	0.023	0.039	J	0.013	J	0.009	J	0.011	J	0.006	J				
Acenaphthene (ug/L)	0.006	u	0.009	J	0.005	J	0.005	J	0.006	w	0.008	J	0.011	0.037	0.082	J	0.030	J	0.012	0.016	J	0.013				
Acenaphthylene (ug/L)	0.006	u	0.006	u	0.004	J	0.006	J	0.006	w	0.010	J	0.009	J	0.012	0.011	J	0.008	J	0.006	u	0.008	J	0.003	u	
Anthracene (ug/L)	0.008	J	0.007	J	0.006	J	0.007	J	0.005	w	0.008	J	0.006	J	0.019	J	0.013	J	0.013	J	0.013	J	0.006	u		
Fluorene (ug/L)	0.007	u	0.007	J	0.006	J	0.009	J	0.006	w	0.015	0.012	0.036	0.072	J	0.021	J	0.009	J	0.013	J	0.007	J			
Naphthalene (ug/L)	0.017	J	0.025	J	0.014	w	0.049	w	0.008	w	0.037	0.036	w	0.061	w	0.072	w	0.029	J	0.031	J	0.031	J	0.017	J	
Phenanthrene (ug/L)	0.031	0.033	0.017	J	0.034	J	0.018	J	0.081	0.045	0.105	0.098	J	0.046	J	0.034	0.057	J	0.033							
Total LPAHs	0.0655	0.084	0.045	0.0855	0.0335	0.159	0.101	0.2395	0.312	0.147	0.102	0.138	0.0745													
HPAHs																										
Benz(a)anthracene (ug/L)	0.013	0.008	J	0.005	J	0.012	J	0.009	J	0.019	0.008	J	0.024	0.015	J	0.012	0.009	J	0.019	J	0.006	J				
Benz(a)pyrene (ug/L)	0.018	0.011	0.007	u	0.016	J	0.009	J	0.021	0.009	J	0.023	0.017	J	0.015	0.016	0.024	J	0.011							
Benz(b,k)fluoranthene (ug/L)	0.055	0.030	0.012	u	0.028	J	0.024	J	0.062	0.020	J	0.045	0.037	J	0.031	0.035	0.057	J	0.028							
Benz(g,h,i)perylene (ug/L)	0.026	0.013	0.008	J	0.024	J	0.011	J	0.022	0.015	0.030	0.022	J	0.031	0.019	J	0.026	J	0.009	J						
Chrysene (ug/L)	0.025	0.014	0.005	u	0.024	J	0.023	J	0.032	0.009	J	0.044	0.039	J	0.030	0.018	0.060	J	0.015							
Dibenz(a,h)anthracene (ug/L)	0.003	u	0.003	u	0.004	u	0.005	J	0.003	u	0.003	u	0.005	J	0.007	J	0.005	J	0.008	J	0.006	u				
Fluoranthene (ug/L)	0.063	0.031	0.015	0.037	J	0.027	0.076	0.028	0.093	0.067	J	0.045	0.038	0.072	J	0.033										
Indeno(1,2,3-c,d)pyrene (ug/L)	0.012	0.007	J	0.006	J	0.015	J	0.006	w	0.012	0.010	J	0.020	0.015	J	0.021	0.012	J	0.019	J	0.006	J				
Pyrene (ug/L)	0.077	0.040	0.018	0.047	J	0.042	J	0.108	0.036	0.098	0.082	J	0.051	0.051	0.087	J	0.039									
Total PAHs	0.2905	0.1555	0.066	0.208	0.1525	0.3535	0.14	0.384	0.299	0.244	0.202	0.37	0.149													
TOTAL PAHs	0.356	0.2395	0.111	0.2935	0.186	0.5125	0.241	0.6235	0.611	0.391	0.304	0.508	0.2235													
Phthalates																										
Bis(2-ethylhexyl) phthalate (ug/L)	3.39	1.22	2.533	2.876	1.51	3.02	1.49	1.63	1.48	J	1.48	1.08	1.90	J	1.34											
Butyl benzyl phthalate (ug/L)	0.609	u	0.597	u	0.187	u	0.196	J	0.603	u	0.616	u	0.187	u	0.227	J	0.313	J	0.187	u	0.588	u	0.430	u		
Diethyl phthalate (ug/L)	0.526	u	0.515	u	0.270	J	0.217	J	0.520	u	0.531	u	0.301	J	0.157	u	0.215	J	0.214	J	0.507	u	0.280	u	0.280	u
Dimethyl phthalate (ug/L)	0.460	u	0.451	u	0.078	w	0.077	w	0.455	u	0.465	u	0.078	w	0.077	w	0.079	J	0.078	w	0.444	u	0.270	w	0.270	u
Di-n-butyl phthalate (ug/L)	0.513	u	0.503	u	0.363	J	0.243	J	0.508	u	0.519	u	0.419	J	0.235	J	0.309	J	0.253	J	0.496	u	0.290	w	0.290	u
Di-n-octyl phthalate (ug/L)	0.346	u	0.339	u	0.218	u	0.214	w	0.343	u	0.350	u	0.218	u	0.215	u	0.215	w	0.218	u	0.334	u	0.350	w	0.350	u
Total Phthalates	3.39	1.22	2.533	2.876	1.51	3.02	1.49	1.63	1.48	J	1.48	1.08	1.90	J	1.34											
Herbicides																										
2,4-D (ug/L)	—	0.017	u	0.017	u	0.017	w	0.022	J	0.043	J	0.017	u	0.018	u	0.018	u	0.048	J	0.017	u	0.14	J	0.061	J	
Dichlobenil (ug/L)	0.020	u	0.020	u	0.009	J	0.007	w	0.020	u	0.021	u	0.007	u	0.008	J	0.050	J	0.032	J	0.027	J	0.040	w	0.040	u

u - The analyte was present at or above the reported value.

UJ - The analyte was not detected at or above the reported estimated value.

J - The analyte was positively identified. The associated value is an estimate.

R - The value is considered unusable.

E - Exceeds value.

Table D-6.2
Stormwater Analytical Data for Outfall 245 WY2017 - Grab Samples

	10/4/2016	10/13/2016	11/5/2016	1/17/2017	2/3/2017	2/15/2017	3/13/2017	4/5/2017	5/11/2017	6/15/2017
TPH										
NWTPH-Diesel (mg/L)	0.13 J	0.10 UJ	0.10 U	0.10 UJ	0.10 U	0.10 UJ	0.10 U	0.10 U	0.11	0.10 U
NWTPH-Gasoline (ug/L)	50.0 U	50.0 U	50.0 U	50.0 U	50.0 U	50.0 U	50.0 U	50.0 U	50.0 U	50.0 U
NWTPH-Heavy Oil (mg/L)	0.68 J	0.47 J	0.29 J	0.84 J	0.55	0.26 J	0.48	0.32	0.46	0.68
Bacteria										
Coliform, Fecal (CFU/100mL)	16,000 E	16,000 E	16,000 E	230	130	790	790	790	5,400	9,200
BTEX										
Benzene (ug/L)	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Ethylbenzene (ug/L)	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
m,p-Xylene (ug/L)	0.4 U	0.4 U	0.4 U	0.4 U	0.4 J	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
o-Xylene (ug/L)	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Toluene (ug/L)	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 J

Bold – The analyte was present in the sample.

U – The analyte was not detected at or above the reported value.

UJ – The analyte was not detected at or above the reported estimated value.

J – The analyte was positively identified. The associated value is an estimate.

R – The value is considered unusable.

E - Exceeds value.

Table D-7.1
Stormwater Analytical Data for Outfall 254 WY2017 - Composite Samples

	Storm 1 10/7/2016	Storm 2 11/5/2016	Storm 3 11/15/2016	Storm 4 12/4/2016	Storm 5 12/9/2016	Storm 6 1/8/2017	Storm 7 2/4/2017	Storm 8 3/18/2017	Storm 9 5/4/2017	Storm 10 6/8/2017										
Conventionals																				
Anionic Surfactants - MBAS (mg/L)	105	54.5	51.6	41.0	—	38.2	J	107	J	57.4	J	169	83.0							
BOD (mg/L)	2.4	2.0	2.0	u	2.0	u	—	2.7	2.7	2.5	—	69.0								
Chloride (mg/L)	3420	760	625	1520	—	5490	4270	493	1260	2160										
Conductivity (µS/cm)	10800	2840	2240	5150	7550	16400	12700	1790	4240	7520										
Hardness (mg CaCO ₃ /L)	1020	266	211	484	690	1650	1370	161	405	792										
pH (pH Units)	7.1	7.0	7.0	7.0	7.2	7.3	7.6	7.1	7.5	6.8										
Total Suspended Solids (mg/L)	31.6	40.0	47.8	33.8	44.9	24.6	88.3	37.6	346	65.6										
Turbidity (NTU)	0.46	J	58.6	47.4	21.0	—	21.2	J	51.3	J	216	63.8								
Nutrients																				
Nitrate+Nitrite as N (mg/L)	0.157	0.073	0.070	0.083	0.285	0.163	0.143	0.096	0.219	J	0.149									
Phosphate, Ortho (mg/L)	0.030	0.013	0.015	0.027	0.039	0.042	0.034	J	0.007	J	0.018	0.019								
Phosphorus, Total (mg/L)	0.120	0.082	0.094	0.115	0.632	0.110	0.162	0.086	1.09	0.161										
Total Nitrogen (mg/L)	0.54	0.24	0.24	0.37	1.08	0.53	0.67	0.44	0.85	1.27										
Metals																				
Cadmium (ug/L)	0.300	u	0.133	u	0.154	u	0.158	u	0.301	J	0.273	J	0.273	u	0.115	J	0.543	0.252	J	
Cadmium, Dissolved (ug/L)	0.161	J	0.088	J	0.040	J	0.084	u	0.045	u	0.183	J	0.157	u	0.077	J	0.052	J	0.181	J
Copper (ug/L)	19.3	9.55	8.99	8.92	13.9	9.38	19.5	9.76	56.3	22.9										
Copper, Dissolved (ug/L)	2.23	1.94	0.909	1.06	1.34	2.69	1.89	2.38	3.35	10.5										
Lead (ug/L)	5.72	4.19	5.12	5.10	6.58	4.02	9.52	4.34	33.8	7.75										
Lead, Dissolved (ug/L)	0.169	0.087	J	0.112	0.050	u	0.042	u	0.315	0.024	u	0.166	0.244	1.03						
Mercury (ng/L)	6.7	4.1	J	3.6	J	4.0	J	7.0	J	3.5	J	7.3	8.0	J	7.0	J	25.0			
Mercury, Dissolved (ng/L)	1.8	1.9	J	1.8	u	1.8	u	1.8	u	1.8	u	9.0	9.0	u	9.0	u	9.0	u		
Zinc (ug/L)	47.9	44.7	49.9	52.5	81.7	51.9	77.3	48.3	213	75.2										
Zinc, Dissolved (ug/L)	20.1	22.4	20.3	30.0	33.8	32.0	27.0	25.5	16.4	38.1										
Insecticides																				
Carbaryl (ug/L)	0.50	u	0.50	u	0.50	u	0.50	u	0.50	u	0.50	u	0.50	u	0.50	u	0.50	u	0.50	
Chlorpyrifos (ug/L)	0.022	J	0.006	u	0.006	u	0.017	u	0.017	u	0.006	u	0.006	u	0.006	u	0.059	u	0.060	
LPAHs																				
2-Methylnaphthalene (ug/L)	0.008	u	0.007	J	0.007	J	0.008	u	0.295	0.012	0.011	J	0.011	J	0.015	J	0.011			
Acenaphthene (ug/L)	0.006	u	0.004	u	0.004	u	0.006	u	0.018	0.006	J	0.009	J	0.009	J	0.005	u	0.005		
Acenaphthylene (ug/L)	0.010	J	0.006	J	0.007	J	0.006	u	0.008	J	0.007	J	0.007	J	0.011	J	0.031			
Anthracene (ug/L)	0.008	J	0.007	J	0.009	J	0.006	J	0.008	J	0.007	J	0.007	J	0.011	J	0.014	J	0.019	
Fluorene (ug/L)	0.006	u	0.004	u	0.007	J	0.006	u	0.029	0.008	J	0.009	J	0.010	J	0.015	J	0.005		
Naphthalene (ug/L)	0.013	J	0.019	u	0.020	u	0.008	u	0.093	0.019	u	0.024	u	0.024	J	0.035	J	0.021		
Phenanthrene (ug/L)	0.020	0.018	J	0.031	J	0.018	J	0.092	0.039	0.044	J	0.027	J	0.091	J	0.030				
Total LPAHs	0.057	0.0445	0.066	0.037	0.248	0.0765	0.088	0.088	0.1685	0.106										
HPAHs																				
Benzo(a)anthracene (ug/L)	0.008	J	0.015	0.027	J	0.014	J	0.011	0.012	0.025	J	0.015	0.042	J	0.010	J				
Benzo(a)pyrene (ug/L)	0.013	0.025	0.041	J	0.020	J	0.014	0.015	0.037	J	0.024	0.051	J	0.018						
Benzo(b,k)fluoranthene (ug/L)	0.035	0.039	0.069	J	0.049	J	0.033	0.029	0.057	J	0.035	0.123	J	0.042						
Benzo(g,h,i)perylene (ug/L)	0.012	0.033	0.037	J	0.012	J	0.011	0.015	0.031	J	0.035	0.034	J	0.012						
Chrysene (ug/L)	0.013	0.018	0.028	J	0.041	J	0.015	0.027	0.028	J	0.019	0.103	J	0.018						
Dibenz(a,h)anthracene (ug/L)	0.003	u	0.011	0.010	J	0.004	J	0.004	J	0.005	J	0.011	0.011	0.010	J	0.004	u			
Dibenzanthracene (ug/L)	0.032	0.033	0.060	J	0.041	0.034	0.042	0.060	J	0.060	J	0.032	0.157	J	0.034					
Indeno(1,2,3-c,d)pyrene (ug/L)	0.009	J	0.021	0.024	J	0.008	J	0.012	0.019	J	0.019	0.030	J	0.007						
Pyrene (ug/L)	0.036	0.042	0.075	J	0.055	J	0.068	0.050	0.079	J	0.047	0.162	J	0.070						
Total HPAHs	0.1595	0.237	0.371	0.244	0.198	0.207	0.347	0.347	0.237	0.712	0.213									
TOTAL PAHs	0.2165	0.2815	0.437	0.281	0.446	0.2835	0.435	0.325	0.8805	0.319										
Phthalates																				
Bis(2-ethylhexyl) phthalate (ug/L)	1.14	2.37	3.46	1.51	1.26	1.59	1.36	J	1.70	7.61	J	1.34								
Butyl benzyl phthalate (ug/L)	0.597	u	0.185	u	0.185	u	0.603	u	0.185	u	0.291	J	0.187	u	0.422	w	0.430	u		
Diethyl phthalate (ug/L)	0.515	u	0.232	J	0.157	u	0.520	u	0.520	u	0.157	u	0.159	u	0.275	w	0.280	u		
Dimethyl phthalate (ug/L)	0.451	u	0.077	u	0.455	u	0.455	u	0.077	u	0.078	u	0.092	J	0.265	w	0.270	u		
Di-n-butyl phthalate (ug/L)	0.503	u	0.328	J	0.320	J	0.508	u	0.508	u	0.354	J	0.378	J	0.341	J	0.478	J	0.421	
Di-n-octyl phthalate (ug/L)	0.427	J	0.215	u	0.258	J	0.343	u	0.343	u	0.215	u	0.218	w	0.218	u	0.343	w	0.350	
Total Phthalates	1.567	2.93	4.038 </td																	

Table D-7.2
Stormwater Analytical Data for Outfall 254 WY2017 - Grab Samples

	10/4/2016	10/13/2016	11/5/2016	1/7/2017	2/3/2017	2/15/2017	3/13/2017	4/5/2017	5/11/2017	6/15/2017
TPH										
NWTPH-Diesel (mg/L)	0.10 J	0.10 UJ	0.10 UJ	0.14 J	0.10 UJ	0.10 UJ	0.11	0.10 J	0.13 J	0.10 J
NWTPH-Gasoline (ug/L)	50.0 U	50.0 U	50.0 U	50.0 U	50.0 U	50.0 U	50.0 U	50.0 U	50.0 U	50.0 U
NWTPH-Heavy Oil (mg/L)	0.34 J	0.37 J	0.49 J	1.0 J	0.55 J	0.25 J	0.66	0.51 J	0.58 J	1.1 J
Bacteria										
Coliform, Fecal (CFU/100mL)	16000 E	1700	3500	1100	490	2400	5400	16000 E	5400	>16000
BTEX										
Benzene (ug/L)	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Ethylbenzene (ug/L)	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
m,p-Xylene (ug/L)	0.4 U	0.4 U	0.4 U	0.4 U	0.4 J	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
o-Xylene (ug/L)	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Toluene (ug/L)	0.2 J	0.2 U	0.2 U	0.2 U	0.2 U	0.2 J	0.2 J	0.2 U	0.2 J	0.2 J

Bold – The analyte was present in the sample.

U – The analyte was not detected at or above the reported value.

UJ – The analyte was not detected at or above the reported estimated value.

J – The analyte was positively identified. The associated value is an estimate.

R – The value is considered unusable.

E - Exceeds value.

Table D-8
Sediment Trap Analytical Data WY2017

Outfall	OF230						OF235						OF237A						OF237B						OF243		OF245		OF248	
	ID#	FD16	FD18	FD18-B	FD3-A	FD3-B	FD3-New	FD6	FD10	FD10-B	FD10-C	FD13	FD13-B	FD13-B New	FD2	FD2-A	FD1	FD31	FD34	FD35	FD23	FD21	MH-390	FD22						
Date Collected	8/23/2017	8/23/2017	8/23/2017	8/23/2017	8/23/2017	8/23/2017	8/23/2017	8/23/2017	8/22/2017	8/22/2017	8/22/2017	8/23/2017	8/23/2017	8/23/2017	8/21/2017	8/21/2017	8/22/2017	8/22/2017	8/22/2017	8/22/2017	8/21/2017	8/21/2017	8/21/2017	8/21/2017	8/21/2017	8/21/2017				
Conventionals																														
Particle/Grain Size, Clay (%)	--	--	--	--	--	--	--	2.6	0.9	--	--	1.8	--	0.8	0.9	--	1.2	--	--	--	3.0	2.0	--	--	--	--	--	--		
Particle/Grain Size, Gravel (%)	--	--	--	--	--	--	--	0.2	0.0	--	--	2.0	--	1.9	0.0	--	0.4	--	--	--	0.7	2.4	--	--	--	--	--	--		
Particle/Grain Size, Sand (%)	--	--	--	--	--	--	--	73.2	82.9	--	--	71.4	--	73.9	78.5	--	81.3	--	--	--	38.7	86.9	--	--	--	--	--	--		
Particle/Grain Size, Silt (%)	--	--	--	--	--	--	--	23.9	16.4	--	--	24.8	--	23.3	20.7	--	17.0	--	--	--	57.7	8.9	--	--	--	--	--	--		
Total Organic Carbon (mg/Kg)	55000	101000	52600	99600	52900	62600	75500	50900	24500	121000	--	136000	114000	77600	89000	20500	61100	77500	88300	72000	105000	36700	118000	--	--	--	--			
Total Solids (%)	29.1	38.6	45.9	23.4	54.8	54.2	56.5	69.8	67.4	46.8	12.2	43.3	28.3	48.6	46.4	74.2	64.1	57.7	50.7	26.2	58.5	60.4	29.7	--	--	--	--			
Total Volatile Solids (%)	--	--	--	--	--	--	11.3	12.7	--	--	--	--	--	--	18.7	--	3.1	--	--	--	17.0	--	13.1	--	--	--	--	--		
Nutrients																														
Phosphorus, Total (mg/Kg)	--	--	--	--	--	--	1560	1180	--	--	--	--	--	--	1880	--	456	--	--	--	10300	--	989	--	--	--	--	--		
Metals																														
Cadmium (mg/Kg dry)	--	--	--	--	--	--	0.448	J	0.593	--	--	--	--	--	0.714	--	0.649	--	--	--	2.47	--	1.77	--	--	--	--	--		
Copper (mg/Kg dry)	--	--	--	--	--	--	87.0	120	--	--	--	--	--	--	100	--	63.5	--	--	--	224	--	93.3	--	--	--	--	--		
Lead (mg/Kg dry)	--	126	171	364	--	--	73.3	155	56.8	74.8	169	--	--	--	103	116	42.7	98.2	--	--	343	177	51.3	236	--	--	--	--		
Mercury (mg/Kg dry)	--	0.108	0.0971	0.0927	--	0.0601	0.224	0.0362	0.0240	0.189	--	0.0715	0.0486	0.0661	0.101	0.0467	--	0.0772	--	0.257	0.0947	0.0636	0.130	--	--	--	--			
Zinc (mg/Kg dry)	--	445	404	885	--	309	466	325	766	--	526	356	473	585	186	229	322	--	647	1120	462	3380	--	--	--	--				
PAHs																														
2-Methylnaphthalene (ug/Kg)	39	72	63	105	24	105	65	41	12	J	107	44	J	66	86	83	64	7	U	41	--	--	88	156	26	375	--			
Acenaphthene (ug/Kg)	22	J	61	56	185	22	62	53	98	51	246	68	J	231	1020	87	38	7	U	185	--	--	50	123	14	J	45			
Acenaphthylene (ug/Kg)	18	J	23	52	68	10	J	52	20	45	16	J	127	37	J	72	166	26	35	9	U	76	--	--	59	71	11	J	47	
Anthracene (ug/Kg)	56	173	106	725	44	115	184	424	180	593	212	1510	5370	319	121	12	J	559	--	--	152	113	21	99	--	--	--	--		
Fluorene (ug/Kg)	38	106	121	328	31	79	74	179	90	365	116	439	1700	151	85	8	U	343	--	--	82	165	18	J	113	--	--	--		
Naphthalene (ug/Kg)	70	94	70	205	50	75	96	61	24	J	173	104	166	163	97	108	8	U	67	--	--	132	253	55	839	--	--	--		
Phenanthrene (ug/Kg)	509	1470	1300	5840	323	1010	966	3250	1950	5420	2520	10100	31800	2360	938	88	7210	--	--	597	988	145	827	--	--	--	--			
Total LPAHs	713	1927	1705	7351	480	1393	1393	4057	2311	6924	3057	12518	40219	3040	1325	116	8440	--	--	1072	1713	264	1970	--	--	--	--			
Benz(a)anthracene (ug/Kg)	237	1320	575	6840	176	770	1050	3010	1720	3770	1990	10700	24500	1840	491	69	4410	--	--	578	307	64	J	231	--	--	--			
Benz(a)pyrene (ug/Kg)	255	1560	666	6310	246	1030	903	3130	2280	4750	2400	10400	23800	2230	546	103	4860	--	--	693	357	64	256	--	--	--	--			
Benz(b,k)fluoranthenes (ug/Kg)	666	5030	1760	16800	517	2240	1790	9630	6350	14300	9230	32600	58500	5640	1															