Fact Sheet

1. Facility Name and Address: Washington Navy Yard
1014 N. Street, SE Suite 320
Washington, DC 20374

2. NPDES No. DC0000141

3. Receiving Stream: Lower Anacostia River

4. Receiving Stream Classification:

According to the District of Columbia Water Quality Standards §1101.2, the Anacostia River is designated for the following beneficial water uses:

Class A - Primary Contact Recreation
Class B - Secondary Contact Recreation and Aesthetic Enjoyment
Class C - Protection and propagation fish, shellfish and wildlife
Class D - Protection of human health related to consumption of fish and shellfish
Class E - Navigation

The current water beneficial uses for this stream are:

Class B - Secondary Contact Recreation and Aesthetic Enjoyment
Class C - Protection and propagation fish, shellfish and wildlife
Class D - Protection of human health related to consumption of fish and shellfish
Class E - Navigation

5. SIC Code: 8744 - Facility Support Management Services

6. Description

The Naval District Washington, formerly the Washington Navy Yard (WNY), was established on October 2, 1799, and served as a major shipbuilding facility during the first part of the 19th century. During the latter part of the 19th century, shipbuilding operations ceased and the WNY became the Naval Gun Factory in 1886. During World War II the Naval Gun Factory employed 25,000 people and was the largest gun factory in the world. In 1961 gun production ceased and the facility was converted to administrative and supply use. During the public comment period the WNY brought to our attention that the area that this facility occupies is 80.2 acres on the banks of the Lower Anacostia River and borders the eastern boundary of the Southeast Federal Center.

Storm water that accumulates at the site is collected in a subsurface storm water drainage system which discharges directly into the Lower Anacostia River, the District of Columbia Combined Sewer System and to the District Separate Storm Sewer System (MS4). The WNY has use

permeable pavers at various sites of its facility. This facility has rehabilitated and cleaned its entire storm sewer system. As of 2005, 21,040 linear feet of storm sewer system were cleaned, 9,100 linear feet has been lined using cure-in-place liner, and 11,400 linear feet was replaced or newly installed.

In April 2007, the Naval District Washington submitted a revised Storm Water Pollution Prevention Plan (SWPPP) to EPA Region III as part of NPDES permit requirement. The revised SWPPP updated the 2000 SWPPP. This SWPPP makes special emphasis on the use of low impact development (LID) technology and keeps the core SWPPP best management practices, i.e., good housekeeping, preventive maintenance, spill prevention, inspections, employee training, eliminating storm water discharges, record keeping, sediment and erosion control and management of runoff. Some of the LID recommended technologies are: vegetated swales, permeable pavers, reuse of collected storm water, infiltration devices, etc.

7. Discharge Location:

Outfall No.	Latitude			Longitude			Receiving Stream
	Degree	Minute	Second	Degree	Minute	Second	
001	38	52	19	76	59	29	Lower Anacostia River
005	38	52	18	76	59	41	Lower Anacostia River
006	38	52	18	76	59	43	Lower Anacostia River
007	38	52	18	76	59	45	Lower Anacostia River
008	38	52	20	76	59	49	Lower Anacostia River
009	38	52	21	76	59	53	Lower Anacostia River
013	38	52	16	76	59	34	Lower Anacostia River
014	38	52	22	76	59	39	Lower Anacostia River
CSO-14F	38	52	29	76	59	57	Lower Anacostia River
CSO-	38	52	23	76	59	37	Lower Anacostia

15G							River
CSO-15H	38	52	28	76	59	37	Lower Anacostia River
MS4-01E	38	52	23	76	59	53	Lower Anacostia River

8. Effluent Characterization

Outfall No. 001- Storm Water Runoff				
Parameter	Maximum	Average	Number of Storm Water Events	Data Source
BOD5	190 mg/l	16.4 mg/l	38	WNY Spreadsheet
TSS	3100 mg/l	122.24 mg/l	38	WNY Spreadsheet
Total Kjeldahl Nitrogen	12.0 mg/l	1.45 mg/l	37	WNY Spreadsheet
Nitratre Plus Nitrite Nitrogen	4.3 mg/l	0.89 mg/l	37	WNY Spreadsheet
Total Phosphorus	3.50 mg/l	0.25 mg/l	38	WNY Spreadsheet
Lead	2400 ug/l	93.4 ug/l	37	WNY Spreadsheet
Chromium	480 ug/l	21.8 ug/l	37	WNY Spreadsheet
Copper	210 ug/l	41.8 ug/l	36	WNY Spreadsheet
Zinc	4300 ug/l	304 ug/l	37	WNY Spreadsheet
Arsenic	470 ug/l	14 ug/l	37	WNY Spreadsheet
Fecal Coliform	11,000 Org/100ml	1763 org/100 ml	38	WNY Spreadsheet
Total Nitrogen	12.0 mg/l	2.15 mg/l	32	WNY Spreadsheet
Mercury	5.9 ug/l	0.22 ug/l	37	WNY Spreadsheet
PCB-1242	ND	ND	41	WNY Spreadsheet
PCB-1016	ND	ND	41	WNY Spreadsheet
PCB-1254	ND	ND	41	WNY Spreadsheet
PCB-1221	ND	ND	41	WNY Spreadsheet
PCB-1232	ND	ND	41	WNY Spreadsheet
PCB-1248	ND	ND	37	WNY Spreadsheet
PCB-1260	ND	ND	41	WNY Spreadsheet

PCB-1262	ND	ND	15	WNY Spreadsheet

Parameter	Maximum Daily	Average Monthly	No Data Points	Data Source
Total PCB	ND	ND	13	WNY Spreadsheet
4,4'-DDD	ND	ND	2	WNY Spreadsheet
4,4'-DDE	ND	ND	4	WNY Spreadsheet
a-BHC	ND	ND	2	WNY Spreadsheet
Aldrin	ND	ND	2	WNY Spreadsheet
b-BHC	ND	ND	2	WNY Spreadsheet
Chlordane	ND	ND	2	WNY Spreadsheet
d-BHC	ND	ND	2	WNY Spreadsheet
Dieldrin	ND	ND	2	WNY Spreadsheet
Endosulfan I	ND	ND	2	WNY Spreadsheet
Endosulfan II	ND	ND	2	WNY Spreadsheet
Endosulfan Sulfate	ND	ND	2	WNY Spreadsheet
Endrin	ND	ND	2	WNY Spreadsheet
Endrin Aldehyde	ND	ND	2	WNY Spreadsheet
g-BHC (Lindane)	ND	ND	2	WNY Spreadsheet
Heptachlor	ND	ND	2	WNY Spreadsheet
Heptachlor Epoxide	ND	ND	2	WNY Spreadsheet
Toxaphene	ND	ND	2	WNY Spreadsheet

Outfall No. 005- Storm Water Runoff				
Parameter	Maximum Daily	Average Monthly	Number of Storm Water Events	Data Source
BOD5	26 mg/l	9.47 mg/l	34	WNY Spreadsheet
TSS	480 mg/l	123.38 mg/l	34	WNY Spreadsheet
Total Kjeldahl Nitrogen	3.6 mg/l	1.42 mg/l	33	WNY Spreadsheet

Nitrate Plus Nitrite Nitrogen	3.1 mg/l	0.70 mg/l	33	WNY Spreadsheet
Total Phosphorus	1.5 mg/l	0.38 mg/l	33	WNY Spreadsheet
Lead	4740 ug/l	632.03 ug/l	34	WNY Spreadsheet
Copper	1600.0 ug/l	335.24 ug/l	33	WNY Spreadsheet
Zinc	1400 ug/l	398.29 ug/l	34	WNY Spreadsheet
Arsenic	7.0 ug/l	1.36 ug/l	34	WNY Spreadsheet
Fecal Coliform	11,000 Org/100ml	954.18 org/100 ml	34	WNY Spreadsheet
Total Nitrogen	4.7 mg/l	1.78 mg/l	28	WNY Spreadsheet
Mercury	1.6 ug/l	0.11 ug/l	34	WNY Spreadsheet
PCB-1242	ND	ND	38	WNY Spreadsheet
PCB-1254	ND	ND	39	WNY Spreadsheet
PCB-1221	ND	ND	38	WNY Spreadsheet
PCB-1232	ND	ND	38	WNY Spreadsheet
PCB-1260	ND	ND	38	WNY Spreadsheet
PCB-1016	ND	ND	38	WNY Spreadsheet
PCB-1248	ND	ND	34	WNY Spreadsheet
PCB-1262	ND	ND	13	WNY Spreadsheet
Total PCB	ND	ND	10	WNY Spreadsheet
4-DDD	ND	ND	3	WNY Spreadsheet
4-DDE	ND	ND	6	WNY Spreadsheet
a-BHC	ND	ND	3	WNY Spreadsheet
Aldrin	ND	ND	3	WNY Spreadsheet
b-BHC	ND	ND	3	WNY Spreadsheet
Chlordane	ND	ND	3	WNY Spreadsheet
d-BHC	ND	ND	3	WNY Spreadsheet
Dieldrin	ND	ND	3	WNY Spreadsheet
Endosulfan I	ND	ND	3	WNY Spreadsheet
Endosulfan II	ND	ND	3	WNY Spreadsheet

Endosulfan Sulfate	ND	ND	3	WNY Spreadsheet
Endrin	ND	ND	3	WNY Spreadsheet
Endrin Aldehyde	ND	ND	3	WNY Spreadsheet
g-BHC (Lindane)	ND	ND	3	WNY Spreadsheet
Heptachlor	ND	ND	3	WNY Spreadsheet
Heptachlor Epoxide	ND	ND	3	WNY Spreadsheet
Toxaphene	ND	ND	3	WNY Spreadsheet

Outfall No. 006- Storm Water Runoff				
Parameter	Maximum Daily	Average Monthly	Number of Storm Water Events	Data Source
BOD5	23 mg/l	3.06 mg/l	41	WNY Spreadsheet
TSS	44 mg/l	15.38 mg/l	13	WNY Spreadsheet
Total Kjeldahl Nitrogen	3.8 mg/l	0.83 mg/l	40	WNY Spreadsheet
Nitrate Plus Nitrite Nitrogen	19 mg/l	1.76 mg/l	40	WNY Spreadsheet
Total Phosphorus	1.1 mg/l	0.28mg/l	41	WNY Spreadsheet
Copper	293.0 ug/l	65.41 ug/l	40	WNY Spreadsheet
Zinc	1800 ug/l	85.27 ug/l	41	WNY Spreadsheet
Arsenic	5.0 ug/l	1.02 ug/l	41	WNY Spreadsheet
Fecal Coliform	4600 Org/100ml	608.4 org/100 ml	40	WNY Spreadsheet
Total Nitrogen	21.5 mg/l	2.66 mg/l	35	WNY Spreadsheet
Mercury	ND	ND	41	WNY Spreadsheet
PCB-1242	ND	ND	43	WNY Spreadsheet
PCB-1254	ND	ND	43	WNY Spreadsheet
PCB-1221	ND	ND	43	WNY Spreadsheet
PCB-1232	ND	ND	43	WNY Spreadsheet
PCB-1260	ND	ND	43	WNY Spreadsheet
PCB-1262	ND	ND	15	WNY Spreadsheet

PCB-1016	ND	ND	43	WNY Spreadsheet
PCB-1248	ND	ND	40	WNY Spreadsheet
Total PCB	ND	ND	14	WNY Spreadsheet
44-DDD	ND	ND	3	WNY Spreadsheet
44-DDE	ND	ND	3	WNY Spreadsheet
a-BHC	ND	ND	3	WNY Spreadsheet
Aldrin	ND	ND	3	WNY Spreadsheet
b-BHC	ND	ND	3	WNY Spreadsheet
Chlordane	ND	ND	3	WNY Spreadsheet
d-BHC	ND	ND	3	WNY Spreadsheet
Dieldrin	ND	ND	3	WNY Spreadsheet
Endosulfan I	ND	ND	3	WNY Spreadsheet
Endosulfan II	ND	ND	3	WNY Spreadsheet
Endosulfan Sulfate	ND	ND	3	WNY Spreadsheet
Endrin	ND	ND	3	WNY Spreadsheet
Endrin Aldehyde	ND	ND	3	WNY Spreadsheet
g-BHC (Lindane)	ND	ND	3	WNY Spreadsheet
Heptachlor	ND	ND	3	WNY Spreadsheet
Heptachlor Epoxide	ND	ND	3	WNY Spreadsheet
Lead	120 ug/l	23.12 ug/l	41	WNY Spreadsheet
Toxaphene	ND	ND	3	WNY Spreadsheet
Outfall No. 007- Storm Water Runoff				
Parameter	Maximum Daily	Average Monthly	Number of Storm Water Events	Data Source
BOD5	26 mg/l	3.58 mg/l	41	WNY Spreadsheet
TSS	47.0 mg/l	12.12 mg/l	41	WNY Spreadsheet
Total Kjeldahl Nitrogen	2.9 mg/l	0.35 mg/l	40	WNY Spreadsheet
Nitrate Plus Nitrite Nitrogen	4.4 mg/l	1.37 mg/l	40	WNY Spreadsheet
Total Phosphorus	0.42 mg/l	0.13 mg/l	41	WNY Spreadsheet

Copper	760.0 ug/l	56.95 ug/l	40	WNY Spreadsheet
Zinc	294.0 ug/l	46.26 ug/l	41	WNY Spreadsheet
Nickel	2300 ug/l	60.63 ug/l	40	WNY Spreadsheet
Arsenic	11.0 ug/l	1.40 ug/l	41	WNY Spreadsheet
Fecal Coliform	11,000 Org/100ml	731.33 org/100 ml	33	WNY Spreadsheet
Total Nitrogen	5.1 mg/l	1.51 mg/l	35	WNY Spreadsheet
Mercury	0.8 ug/l	0.02 ug/l	41	WNY Spreadsheet
PCB-1242	ND	ND	44	WNY Spreadsheet
PCB-1254	ND	ND	40	WNY Spreadsheet
PCB-1221	ND	ND	44	WNY Spreadsheet
PCB-1232	ND	ND	43	WNY Spreadsheet
PCB-1260	ND	ND	44	WNY Spreadsheet
PCB-1262	ND	ND	14	WNY Spreadsheet
PCB-1016	ND	ND	45	WNY Spreadsheet
PCB-1248	ND	ND	40	WNY Spreadsheet
Total PCB	ND	ND	15	WNY Spreadsheet
4,4-DDD	ND	ND	3	WNY Spreadsheet
4,4-DDE	ND	ND	6	WNY Spreadsheet
a-BHC	ND	ND	3	WNY Spreadsheet
Aldrin	ND	ND	3	WNY Spreadsheet
b-BHC	ND	ND	3	WNY Spreadsheet
Chlordane	ND	ND	3	WNY Spreadsheet
d-BHC	ND	ND	3	WNY Spreadsheet
Dieldrin	ND	ND	3	WNY Spreadsheet
Endosulfan I	ND	ND	3	WNY Spreadsheet
Endosulfan II	ND	ND	3	WNY Spreadsheet
Endosulfan Sulfate	ND	ND	3	WNY Spreadsheet
Endrin	ND	ND	3	WNY Spreadsheet
			3	WNY Spreadsheet

Endrin Aldehyde	ND	ND		
g-BHC (Lindane)	ND	ND	3	WNY Spreadsheet
Heptachlor	ND	ND	3	WNY Spreadsheet
Heptachlor Epoxide	ND	ND	3	WNY Spreadsheet
Toxaphene	ND	ND	3	WNY Spreadsheet
Beryllium	0.9 ug/l	0.4 ug/l	40	WNY Spreadsheet
Cadmium	0.6 ug/l	0.03 ug/l	40	WNY Spreadsheet

Outfall No. 008- Storm Water Runoff				
Parameter	Maximum Daily	Average Monthly	Number of Storm Water Events	Data Source
BOD5	130 mg/l	15.15 mg/l	34	WNY Spreadsheet
TSS	1800 mg/l	154.75 mg/l	34	WNY Spreadsheet
Total Kjeldahl Nitrogen	9.4 mg/l	1.9 mg/l	33	WNY Spreadsheet
Nitrate Plus Nitrite Nitrogen	2.6 mg/l	0.72 mg/l	33	WNY Spreadsheet
Total Phosphorus	2.8 mg/l	0.38 mg/l	34	WNY Spreadsheet
Lead	460.0 ug/l	116.16 ug/l	34	WNY Spreadsheet
Copper	570.00 ug/l	244.79 ug/l	33	WNY Spreadsheet
Zinc	1200.0 ug/l	172.11 ug/l	34	WNY Spreadsheet
Arsenic	3.0 ug/l	0.39 ug/l	34	WNY Spreadsheet
Cadmium	ND	ND	34	WNY Spreadsheet
Silver	3.8 ug/l	0.15 ug/l	34	WNY Spreadsheet
Fecal Coliform	46,000 Org/100ml	2991.88 org/100 ml	34	WNY Spreadsheet
Total Nitrogen	9.7 mg/l	2.55 mg/l	30	WNY Spreadsheet
Mercury	ND	ND	33	WNY Spreadsheet
PCB-1242	ND	ND	35	WNY Spreadsheet
PCB-1254	ND	ND	35	WNY Spreadsheet
PCB-1221	ND	ND	35	WNY Spreadsheet
PCB-1232	ND	ND	35	WNY Spreadsheet
				WNY Spreadsheet

PCB-1248	ND	ND	33	
PCB-1260	ND	ND	35	WNY Spreadsheet
PCB-1262	ND	ND	15	WNY Spreadsheet
PCB-1016	ND	ND	35	WNY Spreadsheet
Total PCB	ND	ND	7	WNY Spreadsheet
4,4-DDD	ND	ND	4	WNY Spreadsheet
4,4-DDE	ND	ND	5	WNY Spreadsheet
a-BHC	ND	ND	3	WNY Spreadsheet
Aldrin	ND	ND	3	WNY Spreadsheet
b-BHC	ND	ND	3	WNY Spreadsheet
Chlordane	ND	ND	3	WNY Spreadsheet
d-BHC	ND	ND	3	WNY Spreadsheet
Dieldrin	ND	ND	3	WNY Spreadsheet
Endosulfan I	ND	ND	3	WNY Spreadsheet
Endosulfan II	ND	ND	3	WNY Spreadsheet
Endosulfan Sulfate	ND	ND	3	WNY Spreadsheet
Endrin	ND	ND	3	WNY Spreadsheet
Endrin Aldehyde	ND	ND	3	WNY Spreadsheet
g-BHC (Lindane)	ND	ND	3	WNY Spreadsheet
Heptachlor	ND	ND	3	WNY Spreadsheet
Heptachlor Epoxide	ND	ND	3	WNY Spreadsheet
Toxaphene	ND	ND	3	WNY Spreadsheet

Outfall No. 009 Storm Water Runoff				
Parameter	Maximum Daily	Average Monthly	Number of Storm Water Events	Data Source
Oil and Grease	10.0 mg/l	1.99 mg/l	39	WNY Spreadsheet

BOD5	74.0 mg/l	20.95 mg/l	40	WNY Spreadsheet
TSS	510 mg/l	88.10 mg/l	40	WNY Spreadsheet
Total Kjeldahl Nitrogen	6.2 mg/l	1.33 mg/l	39	WNY Spreadsheet
Nitrate Plus Nitrite Nitrogen	2.2 mg/l	0.15 mg/l	39	WNY Spreadsheet
Total Phosphorus	1.1 mg/l	0.22 mg/l	40	WNY Spreadsheet
Lead	37 ug/l	5.55 ug/l	40	WNY Spreadsheet
Chromium	47.0 ug/l	3.14 ug/l	40	WNY Spreadsheet
Copper	180.0 ug/l	8.96 ug/l	39	WNY Spreadsheet
Zinc	200 ug/l	29.81 ug/l	40	WNY Spreadsheet
Nickel	63.0 ug/l	5.33 ug/l	40	WNY Spreadsheet
Antimony	13.0 ug/l	0.45 ug/l	40	WNY Spreadsheet
Arsenic	2.2 ug/l	0.06 ug/l	40	WNY Spreadsheet
Beryllium	1.0 ug/l	0.025 ug/l	40	WNY Spreadsheet
Cadmium	ND	ND	39	WNY Spreadsheet
Silver	3.2 ug/l	0.11 ug/l	40	WNY Spreadsheet
Fecal Coliform	500 Org/100ml	25.05 Org/100 ml	40	WNY Spreadsheet
Total Nitrogen	5.4 mg/l	1.42 mg/l	35	WNY Spreadsheet
Mercury	ND	ND	40	WNY Spreadsheet
PCB-1242	ND	ND	42	WNY Spreadsheet
PCB-1254	ND	ND	42	WNY Spreadsheet
PCB-1221	ND	ND	42	WNY Spreadsheet
PCB-1232	ND	ND	42	WNY Spreadsheet
PCB-1248	ND	ND	39	WNY Spreadsheet
PCB-1260	ND	ND	42	WNY Spreadsheet
PCB-1262	ND	ND	15	WNY Spreadsheet
PCB-1016	ND	ND	42	WNY Spreadsheet
Total PCB	ND	ND	13	WNY Spreadsheet
4,4-DDD	ND	ND	3	WNY Spreadsheet

4,4-DDE	ND	ND	6	WNY Spreadsheet
a-BHC	ND	ND	3	WNY Spreadsheet
Aldrin	ND	ND	3	WNY Spreadsheet
b-BHC	ND	ND	3	WNY Spreadsheet
Chlordane	ND	ND	3	WNY Spreadsheet
d-BHC	ND	ND	3	WNY Spreadsheet
Dieldrin	ND	ND	3	WNY Spreadsheet
Endosulfan I	ND	ND	3	WNY Spreadsheet
Endosulfan II	ND	ND	3	WNY Spreadsheet
Endosulfan Sulfate	ND	ND	3	WNY Spreadsheet
Endrin	ND	ND	3	WNY Spreadsheet
Endrin Aldehyde	ND	ND	3	WNY Spreadsheet
g-BHC (Lindane)	ND	ND	3	WNY Spreadsheet
Heptachlor	ND	ND	3	WNY Spreadsheet
Heptachlor Epoxide	ND	ND	3	WNY Spreadsheet
Toxaphene	ND	ND	3	WNY Spreadsheet

Outfall No. 013 Storm Water Runoff				
Parameter	Maximum Daily	Average Monthly	Number of Storm Water Events	Data Source
BOD5	64.0 mg/l	13.26 mg/l	40	WNY Spreadsheet
TSS	12,000 mg/l	615.01 mg/l	40	WNY Spreadsheet
Total Kjeldahl Nitrogen	9.0 mg/l	1.62 mg/l	39	WNY Spreadsheet
Nitrate Plus Nitrite Nitrogen	2.7 mg/l	0.74 mg/l	39	WNY Spreadsheet
Total Phosphorus	4.6 mg/l	0.72 mg/l	40	WNY Spreadsheet
Lead	4700 ug/l	293.19 ug/l	40	WNY Spreadsheet
Chromium	420.0 ug/l	30.94 ug/l	40	WNY Spreadsheet
Copper	1400 ug/l	118.39 ug/l	39	WNY Spreadsheet
Zinc	7300 ug/l	701.29 ug/l	40	WNY Spreadsheet
Arsenic	20.0 ug/l	1.68 ug/l	40	WNY Spreadsheet

Fecal Coliform	110,000 Org/100ml	3973.80 Org/100 ml	40	WNY Spreadsheet
Total Nitrogen	11.3 mg/l	2.08 mg/l	34	WNY Spreadsheet
Mercury	5.5 ug/l	0.61 ug/l	36	WNY Spreadsheet
PCB-1242	ND	ND	43	WNY Spreadsheet
PCB-1254	ND	ND	43	WNY Spreadsheet
PCB-1221	ND	ND	43	WNY Spreadsheet
PCB-1232	ND	ND	43	WNY Spreadsheet
PCB-1248	ND	ND	39	WNY Spreadsheet
PCB-1260	ND	ND	43	WNY Spreadsheet
PCB-1262	ND	ND	15	WNY Spreadsheet
PCB-1016	ND	ND	43	WNY Spreadsheet
Total PCB	ND	ND	13	WNY Spreadsheet
4,4-DDD	ND	ND	3	WNY Spreadsheet
4,4-DDE	ND	ND	6	WNY Spreadsheet
a-BHC	ND	ND	3	WNY Spreadsheet
Aldrin	ND	ND	3	WNY Spreadsheet
b-BHC	ND	ND	3	WNY Spreadsheet
Chlordane	ND	ND	3	WNY Spreadsheet
d-BHC	ND	ND	3	WNY Spreadsheet
Dieldrin	ND	ND	3	WNY Spreadsheet
Endosulfan I	ND	ND	3	WNY Spreadsheet
Endosulfan II	ND	ND	3	WNY Spreadsheet
Endosulfan Sulfate	ND	ND	3	WNY Spreadsheet
Endrin	ND	ND	3	WNY Spreadsheet
Endrin Aldehyde	ND	ND	3	WNY Spreadsheet
g-BHC (Lindane)	ND	ND	3	WNY Spreadsheet
Heptachlor	ND	ND	3	WNY Spreadsheet
Heptachlor Epoxide	ND	ND	3	WNY Spreadsheet
Toxaphene	ND	ND	3	WNY Spreadsheet

Outfall No. 014 Storm Water Runoff				
Parameter	Maximum Daily	Average Monthly	Number of Storm Water Events	Data Source
Oil and Grease	41.0 mg/l	2.85 mg/l	42	WNY Spreadsheet
BOD5	87.0 mg/l	10.77 mg/l	43	WNY Spreadsheet
TSS	160 mg/l	25.52 mg/l	43	WNY Spreadsheet
Total Kjeldahl Nitrogen	5.3 mg/l	1.05 mg/l	42	WNY Spreadsheet
Nitrate Plus Nitrite Nitrogen	1.8 mg/l	0.81 mg/l	42	WNY Spreadsheet
Total Phosphorus	0.47 mg/l	0.18 mg/l	43	WNY Spreadsheet
Lead	390 ug/l	63.70 ug/l	43	WNY Spreadsheet
Copper	1500 ug/l	323.92 ug/l	42	WNY Spreadsheet
Zinc	750 ug/l	207.81 ug/l	43	WNY Spreadsheet
Nickel	330.0 ug/l	9.13 ug/l	42	WNY Spreadsheet
Arsenic	ND	ND	43	WNY Spreadsheet
Beryllium	0.98 ug/l	0.02 ug/l	42	WNY Spreadsheet
Cadmium	0.74 ug/l	0.04 ug/l	42	WNY Spreadsheet
Fecal Coliform	46,000 Org/100ml	3476.58 Org/100 ml	43	WNY Spreadsheet
Total Nitrogen	6.3 mg/l	1.66 mg/l	37	WNY Spreadsheet
Mercury	ND	ND	43	WNY Spreadsheet
PCB-1242	ND	ND	46	WNY Spreadsheet
PCB-1254	ND	ND	46	WNY Spreadsheet
PCB-1221	ND	ND	46	WNY Spreadsheet
PCB-1232	ND	ND	46	WNY Spreadsheet
PCB-1248	ND	ND	42	WNY Spreadsheet
PCB-1260	ND	ND	46	WNY Spreadsheet
PCB-1262	ND	ND	15	WNY Spreadsheet
PCB-1016	ND	ND	46	WNY Spreadsheet
Total PCB	ND	ND	15	WNY Spreadsheet

4,4-DDD	ND	ND	3	WNY Spreadsheet
4,4-DDE	ND	ND	6	WNY Spreadsheet
a-BHC	ND	ND	3	WNY Spreadsheet
Aldrin	ND	ND	3	WNY Spreadsheet
b-BHC	ND	ND	3	WNY Spreadsheet
Chlordane	ND	ND	3	WNY Spreadsheet
d-BHC	ND	ND	3	WNY Spreadsheet
Dieldrin	ND	ND	3	WNY Spreadsheet
Endosulfan I	ND	ND	3	WNY Spreadsheet
Endosulfan II	ND	ND	3	WNY Spreadsheet
Endosulfan Sulfate	ND	ND	3	WNY Spreadsheet
Endrin	ND	ND	3	WNY Spreadsheet
Endrin Aldehyde	ND	ND	3	WNY Spreadsheet
g-BHC (Lindane)	ND	ND	3	WNY Spreadsheet
Heptachlor	ND	ND	3	WNY Spreadsheet
Heptachlor Epoxide	ND	ND	3	WNY Spreadsheet
Toxaphene	ND	ND	3	WNY Spreadsheet

Outfall No. 001E Storm Water Runoff				
Parameter	Maximum Daily	Average Monthly	Number of Storm Water Events	Data Source
BOD5	24.0 mg/l	3.84 mg/l	42	WNY Spreadsheet
TSS	45.0 mg/l	10.28 mg/l	18	WNY Spreadsheet
Total Kjeldahl Nitrogen	3.80 mg/l	0.81 mg/l	41	WNY Spreadsheet
Nitrate Plus Nitrite Nitrogen	2.3 mg/l	0.74 mg/l	41	WNY Spreadsheet

Total Phosphorus	0.89 mg/l	0.26 mg/l	42	WNY Spreadsheet
Lead	100.0 ug/l	6 ug/l	42	WNY Spreadsheet
Copper	400.00 ug/l	24.22 ug/l	41	WNY Spreadsheet
Zinc	640.0 ug/l	46.82ug/l	42	WNY Spreadsheet
Arsenic	ND	ND	41	WNY Spreadsheet
Chromium	28 ug/l	14 ug/l	2	WNY Spreadsheet
Fecal Coliform	110,000 Org/100ml	4128.52 org/100 ml	42	WNY Spreadsheet
Total Nitrogen	4.6 mg/l	1.39 mg/l	35	WNY Spreadsheet
Mercury	ND	ND	40	WNY Spreadsheet
PCB-1242	ND	ND	45	WNY Spreadsheet
PCB-1254	ND	ND	45	WNY Spreadsheet
PCB-1221	ND	ND	45	WNY Spreadsheet
PCB-1232	ND	ND	45	WNY Spreadsheet
PCB-1248	ND	ND	41	WNY Spreadsheet
PCB-1260	ND	ND	46	WNY Spreadsheet
PCB-1262	ND	ND	14	WNY Spreadsheet
PCB-1016	ND	ND	45	WNY Spreadsheet
Total PCB	ND	ND	15	WNY Spreadsheet
4,4-DDD	ND	ND	3	WNY Spreadsheet
4,4-DDE	ND	ND	6	WNY Spreadsheet
a-BHC	ND	ND	3	WNY Spreadsheet
Aldrin	ND	ND	3	WNY Spreadsheet
b-BHC	ND	ND	3	WNY Spreadsheet
Chlordane	ND	ND	3	WNY Spreadsheet
d-BHC	ND	ND	3	WNY Spreadsheet
Dieldrin	ND	ND	3	WNY Spreadsheet
Endosulfan I	ND	ND	3	WNY Spreadsheet
Endosulfan II	ND	ND	3	WNY Spreadsheet
Endosulfan Sulfate	ND	ND	3	WNY Spreadsheet

Endrin	ND	ND	3	WNY Spreadsheet
Endrin Aldehyde	ND	ND	3	WNY Spreadsheet
g-BHC (Lindane)	ND	ND	3	WNY Spreadsheet
Heptachlor	ND	ND	3	WNY Spreadsheet
Heptachlor Epoxide	ND	ND	3	WNY Spreadsheet
Toxaphene	ND	ND	3	WNY Spreadsheet

Outfall No. 014F- Storm Water Runoff				
Parameter	Maximum Daily	Average Monthly	Number of Storm Water Events	Data Source
BOD5	17.0 mg/l	3.82 mg/l	20	WNY Spreadsheet
TSS	740.0 mg/l	63.05 mg/l	19	WNY Spreadsheet
Total Kjeldahl Nitrogen	4.40 mg/l	1.11 mg/l	19	WNY Spreadsheet
Nitrate Plus Nitrite Nitrogen	1.10 mg/l	0.37 mg/l	19	WNY Spreadsheet
Total Phosphorus	4.9 mg/l	0.55 mg/l	20	WNY Spreadsheet
Copper	89.00 ug/l	19.67 ug/l	19	WNY Spreadsheet
Zinc	260.0 ug/l	45.04 ug/l	20	WNY Spreadsheet
Lead	220.0 ug/l	45.05 ug/l	17	WNY Spreadsheet
Mercury	ND	ND	3	WNY Spreadsheet
Arsenic	2.5 ug/l	0.47 ug/l	20	WNY Spreadsheet
Fecal Coliform	930 org/100ml	121.4 Org/100 ml	20	WNY Spreadsheet
Total Nitrogen	4.56 mg/l	1.35 mg/l	17	WNY Spreadsheet
PCB-1242	ND	ND	22	WNY Spreadsheet
PCB-1254	ND	ND	22	WNY Spreadsheet
PCB-1221	ND	ND	22	WNY Spreadsheet
PCB-1232	ND	ND	22	WNY Spreadsheet
PCB-1248	ND	ND	22	WNY Spreadsheet
PCB-1260	ND	ND	22	WNY Spreadsheet
PCB-1262	ND	ND	10	WNY Spreadsheet

PCB-1016	ND	ND	22	WNY Spreadsheet
Total PCB	ND	ND	2	WNY Spreadsheet
4,4-DDD	ND	ND	2	WNY Spreadsheet
4,4-DDE	ND	ND	4	WNY Spreadsheet
a-BHC	ND	ND	2	WNY Spreadsheet
Aldrin	ND	ND	2	WNY Spreadsheet
b-BHC	ND	ND	2	WNY Spreadsheet
Chlordane	ND	ND	2	WNY Spreadsheet
d-BHC	ND	ND	2	WNY Spreadsheet
Dieldrin	ND	ND	2	WNY Spreadsheet
Endosulfan I	ND	ND	2	WNY Spreadsheet
Endosulfan II	ND	ND	2	WNY Spreadsheet
Endosulfan Sulfate	ND	ND	2	WNY Spreadsheet
Endrin	ND	ND	2	WNY Spreadsheet
Endrin Aldehyde	ND	ND	2	WNY Spreadsheet
g-BHC (Lindane)	ND	ND	2	WNY Spreadsheet
Heptachlor	ND	ND	2	WNY Spreadsheet
Heptachlor Epoxide	ND	ND	2	WNY Spreadsheet
Toxaphene	ND	ND	2	WNY Spreadsheet

Outfall No. 015G- Storm Water Runoff				
Parameter	Maximum Daily	Average Monthly	Number of Storm Water Events	Data Source
BOD5	83.0 mg/l	10.37 mg/l	41	WNY Spreadsheet
TSS	110 mg/l	21.14 mg/l	41	WNY Spreadsheet
Total Kjeldahl Nitrogen	11.0 mg/l	1.0 mg/l	40	WNY Spreadsheet
Nitrate Plus Nitrite Nitrogen	6.7 mg/l	1.21 mg/l	40	WNY Spreadsheet
Total Phosphorus	0.50 mg/l	0.18 mg/l	41	WNY Spreadsheet
Lead	130.0 ug/l	26.41 ug/l	41	WNY Spreadsheet
Copper	270.00 ug/l	31.42 ug/l	40	WNY Spreadsheet

Chromium	31 ug/l	16.6 ug/l	2	WNY Spreadsheet
Zinc	210.0 ug/l	88.80 ug/l	41	WNY Spreadsheet
Arsenic	28.00 ug/l	2.63 ug/l	41	WNY Spreadsheet
Mercury	0.70 ug/l	0.02 ug/l	3	WNY Spreadsheet
Fecal Coliform	70,000 Org/100ml	5958.22 org/100 ml	41	WNY Spreadsheet
Total Nitrogen	18.0 mg/l	2.00 mg/l	35	WNY Spreadsheet
PCB-1242	ND	ND	43	WNY Spreadsheet
PCB-1254	ND	ND	43	WNY Spreadsheet
PCB-1221	ND	ND	43	WNY Spreadsheet
PCB-1232	ND	ND	43	WNY Spreadsheet
PCB-1248	ND	ND	40	WNY Spreadsheet
PCB-1260	ND	ND	43	WNY Spreadsheet
PCB-1262	ND	ND	15	WNY Spreadsheet
PCB-1016	ND	ND	43	WNY Spreadsheet
Total PCB	ND	ND	14	WNY Spreadsheet
4,4-DDD	ND	ND	3	WNY Spreadsheet
4,4-DDE	ND	ND	6	WNY Spreadsheet
a-BHC	ND	ND	3	WNY Spreadsheet
Aldrin	ND	ND	3	WNY Spreadsheet
b-BHC	ND	ND	3	WNY Spreadsheet
Chlordane	ND	ND	3	WNY Spreadsheet
d-BHC	ND	ND	3	WNY Spreadsheet
Dieldrin	ND	ND	3	WNY Spreadsheet
Endosulfan I	ND	ND	3	WNY Spreadsheet
Endosulfan II	ND	ND	3	WNY Spreadsheet
Endosulfan Sulfate	ND	ND	3	WNY Spreadsheet
Endrin	ND	ND	3	WNY Spreadsheet
Endrin Aldehyde	ND	ND	3	WNY Spreadsheet
g-BHC (Lindane)	ND	ND	3	WNY Spreadsheet

Heptachlor	ND	ND	3	WNY Spreadsheet
Heptachlor Epoxide	ND	ND	3	WNY Spreadsheet
Toxaphene	ND	ND	3	WNY Spreadsheet

Outfall No. 015H- Storm Water Runoff				
Parameter	Maximum Daily	Average Monthly	Number of Storm Water Events	Data Source
Oil and Grease	120.0 mg/l	5.62 mg/l	40	WNY Spreadsheet
BOD5	80.0 mg/l	9.88 mg/l	40	WNY Spreadsheet
TSS	550 mg/l	48.0 mg/l	40	WNY Spreadsheet
Total Kjeldahl Nitrogen	3.10 mg/l	0.80 mg/l	40	WNY Spreadsheet
Nitrate Plus Nitrite Nitrogen	2.5 mg/l	0.86 mg/l	40	WNY Spreadsheet
Total Phosphorus	1.10 mg/l	0.22 mg/l	41	WNY Spreadsheet
Total Nitrogen	4.20 ug/l	1.34 ug/l	34	WNY Spreadsheet
Lead	93.20 ug/l	23.52 ug/l	22	WNY Spreadsheet
Chromium	13.00 ug/l	4.61 ug/l	22	WNY Spreadsheet
Copper	382.00 ug/l	96.42 ug/l	40	WNY Spreadsheet
Zinc	960.0 ug/l	246.00 ug/l	41	WNY Spreadsheet
Nickel	990.0 ug/l	26.05 ug/l	41	WNY Spreadsheet
Antimony	11.0 ug/l	0.80 ug/l	41	WNY Spreadsheet
Arsenic	3.7 ug/l	0.09 ug/l	41	WNY Spreadsheet
Beryllium	ND	ND	41	WNY Spreadsheet
Cadmium	1.90 ug/l	0.13 ug/l	40	WNY Spreadsheet
Silver	3.10 ug/l	0.17 ug/l	41	WNY Spreadsheet
Fecal Coliform	50,000 Org/100ml	2662.70 org/100 ml	40	WNY Spreadsheet
Mercury	ND	ND	24	WNY Spreadsheet
PCB-1242	ND	ND	44	WNY Spreadsheet
PCB-1254	ND	ND	44	WNY Spreadsheet
PCB-1221	ND	ND	44	WNY Spreadsheet

PCB-1232	ND	ND	44	WNY Spreadsheet
PCB-1248	ND	ND	40	WNY Spreadsheet
PCB-1260	ND	ND	44	WNY Spreadsheet
PCB-1262	ND	ND	15	WNY Spreadsheet
PCB-1016	ND	ND	44	WNY Spreadsheet
Total PCB	ND	ND	16	WNY Spreadsheet
4,4-DDD	ND	ND	3	WNY Spreadsheet
4,4-DDE	ND	ND	6	WNY Spreadsheet
a-BHC	ND	ND	3	WNY Spreadsheet
Aldrin	ND	ND	3	WNY Spreadsheet
b-BHC	ND	ND	3	WNY Spreadsheet
Chlordane	ND	ND	3	WNY Spreadsheet
d-BHC	ND	ND	3	WNY Spreadsheet
Dieldrin	ND	ND	3	WNY Spreadsheet
Endosulfan I	ND	ND	3	WNY Spreadsheet
Endosulfan II	ND	ND	3	WNY Spreadsheet
Endosulfan Sulfate	ND	ND	3	WNY Spreadsheet
Endrin	ND	ND	3	WNY Spreadsheet
Endrin Aldehyde	ND	ND	3	WNY Spreadsheet
g-BHC (Lindane)	ND	ND	3	WNY Spreadsheet
Heptachlor	ND	ND	3	WNY Spreadsheet
Heptachlor Epoxide	ND	ND	3	WNY Spreadsheet
Toxaphene	ND	ND	3	WNY Spreadsheet

9. NPDES Effluent Limits Rationale

Background Concentration values based on the Velinsky Report:

Parameter	**Background Concentration**
Arsenic+3	0.04 ug/l
Arsenic +3+4	0.34 ug/l

Cadmium	0.01 ug/l
Chromium +3	0.35 ug/l
Chromium +6	0.10 ug/l
Copper	1.34 ug/l
Nickel	1.75 ug/l
Lead	0.58 ug/l
Zinc	3.21 ug/l

Mixing Zone - Dilution Factors

Outfall No.	**Dilution Factor**
001	22.1
005	11.8
006	12.5
007	8.8
008	8.4
009	6.7
013	9.6
014	27.0

Acute Water Quality Criteria based on 110 mg/l hardness value.

Parameter	**Acute Criterion**
Dissolved Antimony	640 ug/l (30 day criteria)
Dissolved Arsenic	340 ug/l
Beryllium	No Criterion
Dissolved Cadmium	2.21 ug/l
Dissolved Hexavalent Chromium	16 ug/l
Dissolved Trivalent Chromium	616 ug/l

Total Chromium	100 ug/l (EPA MCL)
Dissolved Copper	14.7 ug/l
Dissolved Lead	71.63 ug/l
Total Recoverable Mercury	1.4 ug/l
Dissolved Nickel	508 ug/l
Dissolved Silver	110 ug/l
Dissolved Zinc	127 ug/l
Oil and Grease	10 mg/l
PCBs	0.000064 ug/l - Human Health
E. Coli	410 MPN/100ml
Chlordane	2. 4 ug/l
DDE	1.1 ug/l
DDD	1.1 ug/l
DDT	1.1 ug/l
Diedrin	2.5 ug/l
Heptachlor Epoxide	0.52 ug/l
PAH1 (naphthalene, 2-methyl naphthalene, acenaphylene, acenaphthene, fluorine, phenanthrene)	50 ug/l (chronic)
PAH2 (fluoranthene, pyrene, benz(a)anthracene, chrysene)	400 ug/l (chronic)
PAH3 (benzo(k)fluoranthene, benzo(a)pyrene, perylene, indeno (1,2,3-c,d)perylene, dibenzo(a,h+ac)anthracene)	0.031 ug/l (human health)
C C	

Reasonable Potential Analysis

Chapter 3 of the Technical Support Document for Water Quality-based Toxics Controls (TSD) explains the procedure used to determine if an effluent discharge has reasonable potential to exceed instream water quality criteria. For those parameters that reasonable potential values exceed the District of Columbia water quality criteria,

then water quality-based effluent limits must be calculated as required in 40 CFR 122.44(d). Since storm water discharges are intermittent, we are using the acute water quality criteria for the parameters of concern in order to assess the effluent for reasonable potential. We are using the acute criteria because a shorter exposure time representative of the storm water discharges.

According to the TSD, these are the steps for the determining excursions above the ambient water quality criteria; see Box 3-2 of the TSD.

- Determine the total of number of effluent data for a particular parameter (n) and identify highest value of the dataset for that parameter.
- Determine the coefficient of variation (CV) of the data set. The CV is equal to the standard deviation divided by the long term average.
- Determine the confidence level that you want to use for the reasonable potential multiplier. For this permit analysis, we are going to use the 95th confidence level.
- Calculate the percentile representing by the highest effluent concentration of the dataset for the parameter of concern. $Pn = (1- .95)^{1/n}$
- Determine the reasonable potential multiplier

  $C95th/Cpn = e^{(1.645* \sigma - 0.5 \sigma^2)}/e^{(z* \sigma - 0.5 \sigma^2)}$

  $\sigma^2 = \ln(CV^2+1)$
  σ = square root of σ^2

  Example:

  Arsenic Outfall 001
  Total samples = 37

  Highest effluent concentration = 470 ug/l
  CV = 5.54
  Confidence Interval = 95th
  $Pn = (1-0.95)^{1/n}$
  $= 0.05^{1/37} = 0.9222$
  Z score = 1.420
  $\sigma^2 = \ln(5.54^2+1) = 3.456$
  $\sigma = 1.859$

  $RPMF = C_{95th}/C_{92.2th} = e^{(1.645 * 1.859 - 0.5 * 3.456)}/e^{(1.420 * 1.859- 0.5 *3.456)}$

  RPMF = 1.52

  Adjusted effluent concentration (AEC) = 470 ug/l * 1.52 = 714 ug/l

- Maximum Receiving Waste Concentration (MRWC)

MRWC = (AEC –Cb)/DF + Cb
Cb – Background concentration
DF – Dilution Factor
MRWC = (714ug/l – 0.34 ug/l)/22.1 + 0.34 ug/l = 32.65 ug/l

Acute criterion = 340 ug/l

Since the MRRWC is less than the instream acute water quality criterion for arsenic, we can conclude that there is not reasonable potential.

Parameter	Max. Concentration	Number of Samples	CV	RPMF	Adjusted Effluent Value	RWMC	Acute WQS	WQBEL (Y/N)
Outfall 001								
Arsenic	470 ug/l	37	5.54	1.52	714 ug/l	32.65	340 ug/l	N
Chromium	480 ug/l	37	3.73	1.45	696 ug/l	31.6 ug/l	100 ug/l	N
Copper	210 ug/l	36	1.07	1.23	258.3 ug/l	12.97 ug/l	14.7 ug/l	N
Lead	2400 ug/l	37	4.27	1.47	3528 ug/l	160.2 ug/l	71.63 ug/l	Y
Mercury	5.90 ug/l	37	4.65	1.49	8.79 ug/l	0.4 ug/l	1.4 ug/l	N
Zinc	4300 ug/l	37	2.34	1.36	5848 ug/l	268 ug/l	127 ug/l	Y

Parameter	Max. Concentration	Number of Samples	CV	RPMF	Adjusted Effluent Value	RWMC	Acute WQS	WQBEL (Y/N)
Outfall 005								
Arsenic	7 ug/l	34	1.43	1.33	9.3 ug/l	1.1 ug/l	340 ug/l	N
Copper	1600 ug/l	33	0.89	1.24	1984 ug/l	169 ug/l	14.7 ug/l	Y
Lead	4740 ug/l	34	1.47	1.33	6304 ug/l	535 ug/l	71.93 ug/l	Y
Mercury	1.6 ug/l	34	3.37	1.53	2.4 ug/l	0.2 ug/l	1.4 ug/l	N
Zinc	1400 ug/l	34	0.90	1.23	1722 ug/l	149 ug/l	127 ug/l	Y

Parameter	Max. Concentration	Number of Samples	CV	RPMF	Adjusted Effluent Value	RWMC	Acute WQS	WQBEL (Y/N)
Outfall 006								
Arsenic	5.0 ug/l	41	1.53	1.21	6.1 ug/l	0.8 ug/l	340 ug/l	N
Copper	293 ug/l	40	1.14	1.18	346 ug/l	29 ug/l	14.7 ug/l	Y
Lead	120 ug/l	41	1.06	1.16	139.2 ug/l	11.67 ug/l	71.93 ug/l	N
Zinc	1800 ug/l	41	3.24	1.31	2358 ug/l	192 ug/l	127 ug/l	Y

Parameter	Max. Concentration	Number of Samples	CV	RPMF	Adjusted Effluent Value	RWMC	Acute WQS	WQBEL (Y/N)
Outfall 007								
Arsenic	11 ug/l	41	1.66	1.22	13.42 ug/l	1.83 ug/l	340 ug/l	N
Cadmium	0.60 ug/l	40	4.43	1.38	0.84 ug/l	0.1 ug/l	2.21 ug/l	N
Copper	760 ug/l	40	2.32	1.29	980 ug/l	113 ug/l	14.7 ug/l	Y
Beryllium	0.90 ug/l	40	4.44	1.38	1.24 ug/l	0.14 ug/l	130 ug/l (EPA)	N
Nickel	2300 ug/l	40	5.99	1.42	3266 ug/l	373 ug/l	508 ug/l	N
Mercury	0.8 ug/l	41	6.40	1.4	1.12 ug/l	0.13	1.4 ug/l	N
Zinc	294 ug/l	41	1.13	1.27	373 ug/l	45 ug/l	127 ug/l	N

Parameter	Max. Concentration	Number of Samples	CV	RPMF	Adjusted Effluent Value	RWMC	Acute WQS	WQBEL (Y/N)
Outfall 008								
Arsenic	3.0 ug/l	34	2.47	1.45	4.35 ug/l	0.82 ug/l	340 ug/l	N
Copper	570 ug/l	33	0.55	1.16	661	80 ug/l	14.7 ug/l	Y
Lead	460 ug/l	34	0.82	1.21	557 ug/l	67 ug/l	71.6 ug/l	N

Silver	3.8 ug/l	34	4.61	1.59	6.0 ug/l	0.71 ug/l	110ug/l	N
Zinc	1200 ug/l	34	1.30	1.30	1560 ug/l	189 ug/l	127 ug/l	Y

Parameter	Max. Concentration	Number of Samples	CV	RPMF	Adjusted Effluent Value	RWMC	Acute WQS	WQBEL (Y/N)
Outfall 009								
Antimony	13 ug/l	40	4.85	1.39	18.07 ug/l	2.7 ug/l	640 ug/l	N
Arsenic	2.2 ug/l	40	6.32	1.43	3.15 ug/l	0.76 ug/l	340 ug/l	N
Beryllium	1 ug/l	40	6.32	1.43	1.43 ug/l	0.22 ug/l	130 ug/l	N
Chromium	47 ug/l	40	2.68	1.31	61.6 ug/l	9.5 ug/l	100 ug/l	N
Copper	180 ug/l	39	3.21	1.35	243 ug/l	37.4 ug/l	14.7 ug/l	Y
Lead	37 ug/l	40	1.51	1.22	45.14 ug/l	8.2 ug/l	71.6 ug/l	N
Nickel	63 ug/l	40	2.39	1.29	81.3 ug/l	14.1 ug/l	508 ug/l	N
Silver	3.20 ug/l	40	4.94	1.29	4.4 ug/l	0.7 ug/l	2.21 ug/l	N
Zinc	200 ug/l	40	1.44	1.22	244 ug/l	39.1 ug/l	127 ug/l	N

Parameter	Max. Concentration	Number of Samples	CV	RPMF	Adjusted Effluent Value	RWMC	Acute WQS	WQBEL (Y/N)
Outfall 013								
Arsenic	20 ug/l	40	2.59	1.30	26 ug/l	3.0 ug/l	340 ug/l	N
Chromium	420 ug/l	40	2.67	1.31	550 ug/l	57.6 ug/l	100 ug/l	N
Copper	1400 ug/l	39	2.27	1.3	1820 ug/l	190.8 ug/l	14.7 ug/l	Y
Lead	4700 ug/l	40	2.85	1.32	6204 ug/l	647 ug/l	71.6 ug/l	Y
Mercury	5.5 ug/l	36	2.24	1.37	7.54 ug/l	0.79 ug/l	1.4 ug/l	N
Zinc	7300 ug/l	40	2.09	1.27	9271	969 ug/l	127	Y

					ug/l		ug/l	

Parameter	Max. Concentration	Number of Samples	CV	RPMF	Adjusted Effluent Value	RWMC	Acute WQS	WQBEL (Y/N)
Outfall 014								
Beryllium	0.98 ug/l	42	6.48	1.38	1.35 ug/l	0.05 ug/l	130 ug/l	N
Cadmium	0.74 ug/l	42	3.70	1.31	0.97 ug/l	0.05 ug/l	2.21 ug/l	N
Copper	1500 ug/l	42	0.98	1.14	1710 ug/l	63.7 ug/l	14.7 ug/l	Y
Lead	390 ug/l	43	1.18	1.15	449 ug/l	17.2 ug/l	71.6 ug/l	N
Nickel	330 ug/l	42	5.56	1.36	448.8 ug/l	18.3 ug/l	508 ug/l	N
Zinc	750 ug/l	43	0.62	1.09	817.5 ug/l	33.4 ug/l	127 ug/l	N

The reasonable potential analyses for outfalls 001E and 014F will be based on the mixing zone for outfall 009, since these outfalls are close to outfall 009. We decided to use the average dilution of outfalls 013 and 005 for the reasonable potential analyses at outfalls 015G and 015 H.

Parameter	Max. Concentration	Number of Samples	CV	RPMF	Adjusted Effluent Value	RWMC	Acute WQS	WQBEL (Y/N)
Outfall 014 F								
Total Arsenic	2.5 ug/l	20	2.0	2.05	5.13 ug/l	1,05 ug/l	340 ug/l	N
Copper	89 ug/l	19	1.13	1.72	153.9 ug/l	24.1 ug/l	14.7 ug/l	Y
Lead	220 ug/l	17	1.52	2.05	451 ug/l	67.8 ug/l	71.6 ug/l	N
Zinc	260 ug/l	20	1.19	1.7	442 ug/l	68.7 ug/l	127 ug/l	N

Parameter	Max. Concentration	Number of Samples	CV	RPMF	Adjusted Effluent Value	RWMC	Acute WQS	WQBEL (Y/N)
Outfall 001E								
Total Arsenic	2.80ug/l	41	3.58	1.1	3.08 ug/l	0.75 ug/l	340 ug/l	N

Copper	400 ug/l	41	2.89	1.29	516 ug/l	78.2 ug/l	14.7 ug/l	Y
Lead	100 ug/l	42	3.56	1.31	131 ug/l	20.0 ug/l	71.6 ug/l	N
Mercury	0.5 ug/l	22	1.5	5.2	2.6 ug/l	0.39 ug/l	1.4 ug/l	N
Zinc	640 ug/l	42	2.53	1.26	806.4 ug/l	123 ug/l	127 ug/l	N

Parameter	Max. Concentration	Number of Samples	CV	RPMF	Adjusted Effluent Value	RWMC	Acute WQS	WQBEL (Y/N)
Outfall 015G								
Total Arsenic	28 ug/l	41	2.02	1.25	35 ug/l	3.6 ug/l	340 ug/l	N
Copper	270 ug/l	40	1.4	1.21	327 ug/l	31.8 ug/l	14.7 ug/l	Y
Lead	47 ug/l	41	0.93	1.15	54.1	5.6 ug/l	71.6 ug/l	N
Zinc	210 ug/l	41	0.53	1.09	228.9 ug/l	24.3	127 ug/l	N

Parameter	Max. Concentration	Number of Samples	CV	RPMF	Adjusted Effluent Value	RWMC	Acute WQS	WQBEL (Y/N)
Outfall 015H								
Total Antimony	11 ug/l	41	3.12	1.31	14.4 ug/l	1.3 ug/l	640 ug/l	N
Total Arsenic	3.7 ug/l	41	6.32	1.4	5.2 ug/l	0.8 ug/l	340 ug/l	N
Mercury	0.7 ug/l	41	6.4	1.4	1.0 ug/l	0.1	1.4 ug/l	N
Nickel	990 ug/l	41	5.92	1.39	1376 ug/l	130 ug/l	508 ug/l	N
Silver	3.1 ug/l	41	3.81	1.34	4.2 ug/l	0.4 ug/l	110 ug/l	N
Zinc	960 ug/l	41	0.75	1.12	1075 ug/l	103.4 ug/l	127 ug/l	N
Total Lead	130	41	1.19	1.18	153 ug/l	5.5	71.63 ug/l	N
Total Cadmium	1.9 ug/l	40	3.03	1.33	2.5	0.2	2.21 ug/l	N
Total	100 ug/l	41	2.38	1.27	127	12.2	100	N

Chromium						ug/l	ug/l	
Total Copper	382 ug/l	40	1.0	1.17	447 ug/l	42 ug/l	14.7 ug/l	Y

Water quality-effluent limits calculations
For those parameters that we found reasonable potential, the next step is to calculate the water quality-based effluent limits (WQBELs) using the procedure specified in the TSD, see Section 5.4 of the TSD.

- The first step on the calculation of the WQBEL is to compute the wasteload allocation.

WLA = (WQC – Cb)*DF + Cb

WLA – Wasteload allocation
WQC – Water quality criterion for the pollutant of concern
Cb – background concentration for the pollutant of concern
DF – Dilution Factor

Here is an example:
Outfall 001
Parameter: Lead
Water quality Criterion (WQC) – 71.6 ug/l
Background Concentration – 0.58 ug/l
Coefficient of Variation – 4.27
Dilution Factor – 22.1

WLA = (71.6 ug/l – 0.58 ug/l)*22.1 + 0.58ug/l = 1570 ug/l

- Calculate the long term average value

LTA = WLA* $e^{(0.5 \text{ sigma square} - 2.326 \text{ sigma})}$
The long term average calculation is based on the 99th confidence level as reflected with the z score value of 2.326.

Sigma square = $\ln(CV^2 + 1)$
= $\ln(4.27^2 + 1) = 2.957$

Sigma = square root of Sigma square = 1.719

LTA = 1570 ug/l * $e^{(0.5 * 2.957 - 2.326 * 1.719)}$ = 126 ug/l

Maximum Daily Limits (MDL) = LTA*e(2.326*sigma – 0.5 * sigma square)

The maximum daily limits is based on the

MDL = 126 ug/l * e^(2.326 * 1.719 – 0.5 * 2.957) = 1570 ug/l

Since the stormwater discharges are intermittent events, the permit writer considers that the monthly average limits for this type of discharge are not appropriate.

Water Quality-based Effluent Limits Summary

Outfall	**Parameter**	**WLA (ug/l)**	**Maximum Daily Limit (ug/l)**
001	Lead	1570.1	1570
001	Zinc	2739	2739
005	Copper	159	159
005	Lead	838.6	839
005	Zinc	1463.9	1464
006	Copper	168.3	168
006	Zinc	1550.6	1551
007	Copper	118.9	119
008	Copper	113.6	114
008	Zinc	1043	1043
Outfall	**Parameter**	**WLA (ug/l)**	**Maximum Daily Limit (ug/l)**
009	Copper	90.9	91
013	Copper	129.6	130
013	Lead	682.4	682
013	Zinc	1191.6	1192
014	Copper	362.1	362
014F	Copper	90.9	91
001E	Copper	90.9	91
015G	Copper	144.3	144
015H	Copper	144.3	144

10. Section 303(d) and TMDLs

The District of Columbia has developed several Total Maximum Daily Loads (TMDLs) to address water quality impairments to the Anacostia River.

Lower Anacostia River TMDL	TMDL Developed	EPA Approved	WLA
Fecal Coliform Bacteria	June 2003	August 28, 2003	97% Reduction from Direct Storm water discharges
Oil and Grease TMDL for the Anacostia River	October 2003	October 31, 2003	Stream is presently not impaired for oil and grease.
Organics and Metals	August 2003	October 23, 2003	Arsenic – 85% reduction Copper – 1% Reduction Lead – 1% Reduction Zinc – 1% Reduction DDD – 90% Reduction

			DDE – 90% Reduction DDT – 90% Reduction Dieldrin - 30% Reduction Chlordane – 90% Reduction Heptachlor Epoxide – 80% Reduction PAH1 – 98% Reduction PAH2 – 98% Reduction PAH3 – 98% Reduction
Total Suspended Solids	June 2007	June 15, 2008	TSS – 85% Reduction Total Nitrogen – 50% Reduction Total Phosphorus – 50% Reduction
BOD, total nitrogen, and Total Phosphorus	May 2001	February 27, 2008	BOD – 50% Reduction Total Nitrogen – 30% Reduction Total Phosphorus – 30% reduction

Based on the approved TMDLs listed above the following baseline loadings have been established for the WNY using the 80.2 acres. The WLA values presented in this table are equal to the percent reduction levels established in the TMDLs times the baseline loads. See Attachment I for the basis of the baseline loadings calculations, Memo from Ross Mandel to Francisco Cruz.

Parameter	TMDL	WNY Baseline loading (lbs/year)	WLA (lb/year)
Arsenic	Organics and Metals (2003)	0.498	0.0747
Copper	Organics and Metals (2003)	19.8	19.602
Lead	Organics and Metals (2003)	99.8	98.802
Zinc	Organics and Metals (2003)	59.9	59.301
Chlordane	Organics and Metals (2003)	0.00345	0.000345
DDD	Organics and Metals (2003)	0.00145	0.000145
DDE	Organics and Metals (2003)	0.00491	0.000491

DDT	Organics and Metals (2003)	0.0129	0.00129
Dieldrin	Organics and Metals (2003)	0.000158	0.0000158
PAH	Organics and Metals (2003)	2.6	0.052
PAH1	Organics and Metals (2003)	0.233	0.00466
PAH2	Organics and Metals (2003)	1.44	0.0288
PAH3	Organics and Metals (2003)	9.28	0.1856
Heptachlor Epoxide	Organics and Metals (2003)	0.000387	0.0000774
PCB	PCB (2007)	0.0793	
Total Suspended Solids	Total Suspended Solids (2007)	42,800	6420
BOD	BOD/TN/TP (2008)	16000	8000
TN	BOD/TN/TP (2008)	1390	695
TP	BOD/TN/TP (2008)	181	90.5

Based on our reasonable potential analysis, the WNY does not has reasonable potential to exceed the arsenic criteria in any of its outfalls, therefore this permit will not require water quality-based effluent limits for this parameter. The permit will require compliance with total copper, lead, and zinc water quality-based effluent limits to ensure compliance the TMDL. The permit will not require limits for DDD, DDE, DDT, Dieldrin, Aldrin, Heptachlor Epoxide, since all the effluent data for these parameters are below detection level.

Since the District of Columbia has adopted e. coli water quality criterion, this permit will require monitoring for this parameter.

The oil and grease TMDL does not require any reduction for this parameter.

The WNY has shown reasonable potential to exceed the copper water quality criteria at outfalls 005, 006, 007, 008, 009, 013, 001E, 014, 014F, 015G and 015H. The permit contains water quality-based effluent limits for copper at these outfalls consistent with the TMDL.

EPA has developed water quality-based effluent limits for total lead at outfall 001 and 005, consistent with the TMDL requirements and our reasonable potential analysis.

EPA has developed water quality-based effluent limits for total zinc at outfalls 001, 005, 006, 008 and 013 consistent with the TMDL and our reasonable potential analysis.

The previous permit required no discharge of PCBs. Therefore, this permit will maintain this limit to comply with the TMDL wasteload allocation and the antibacksliding requirements. For the purpose of this permit, samples will be analyzed using both method 608 and 1668B, for compliance purposes only those results determined using method 608 will be used. The PCBs special condition in Part III.A.19.b, has been revised to specify that in the event that the analytical results of the samples using method 1618B are below the detection limit of the test, monitoring may be discontinued after two years of monitoring data. Furthermore, if the results of this testing are at or above the detection limit of method 1668B, the monitoring shall continue during the life of the permit and the permittee shall submit a pollutant minimization plan to address the PCBs contamination.

The effluent limits for total suspended solids, BOD5, total nitrogen, total phosphorus, PAH, PAH1, PAH2, and PAH3 are expressed as aggregated loads based on the percent reduction levels specified on the approved TMDLs and the WNY baseline loadings indicated on the above table.

Since the TSS TMDL specifies a total nitrogen and total phosphorus reductions of 50% from the existing loads. These WLAs are more stringent than the one specified in the BOD TMDL. Therefore, the total nitrogen and total phosphorus limits will be based on the TSS TMDL, which are is more stringent than the 30% reduction specified in the BOD TMDL

As shown in the effluent characterization tables above, the Washington Navy Yard discharges high levels of fecal coliform at outfalls 001, 005, 006, 007, 008, 013, 015G and 015H. The District of Columbia 2006 Water Quality Standards discontinued the fecal coliform criteria on December 31, 2007. The District of Columbia replaced the fecal coliform water quality criteria with the E. Coli criteria. Monitoring only will be required in this permit to assess if the facility has the reasonable potential to exceed the E. Coli criteria. After one year of monitoring requirement for E. Coli bacteria, EPA will evaluate the data and make a determination if this permit should be modified to require a water quality-based effluent limit for this parameter. Also, the permit will require the permittee to assess the sources of fecal coliform to determine if the sources of this parameter are to human, wildlife sources or other sources. If the fecal coliform sources are anthropogenic, the permittee shall submit a correction plan to address them.

Within twelve months of the effective date of this permit, the permittee shall submit a report identifying which Best Management Practices that the WNY is implementing and what is the percent reduction achieved by them with respect of the baseline loads identified on the above table.

10. Proposed Effluent Limits
Outfall 001

Parameter	Mass Limits	Other Units	Frequency	Sample Type
	Daily Maximum	Daily Maximum		
Flow	N/L	N/L	Bimonthly	Estimate

Total Suspended Solids	(1)	N/L	Bimonthly	Grab
BOD5	(2)	N/L	Bimonthly	Grab
Total Nitrogen	(3)	N/L	Bimonthly	Grab
Total Phosphorus	(4)	N/L	Bimonthly	Grab
E. Coli	N/L	N/L	Bimonthly	Grab
Total Lead	N/L	1570 ug/l	Bimonthly	Grab
Total Zinc	N/L	2739 ug/l	Bimonthly	Grab
PCBs	N/L	N/L	Semiannual	Grab
PHAs	(6)	N/L	Bimonthly	Grab

Outfall 005

Parameter	Mass Limits	Other Units	Frequency	Sample Type
	Daily Maximum	Daily Maximum		
Flow	N/L	N/L	Bimonthly	Estimate
Total Suspended Solids	(1)	N/L	Bimonthly	Grab
BOD5	(2)	N/L	Bimonthly	Grab
Total Nitrogen	(3)	N/L	Bimonthly	Grab
Total Phosphorus	(4)	N/L	Bimonthly	Grab
E. Coli	N/L	N/L	Bimonthly	Grab
Total Copper	N/L	159 ug/l	Bimonthly	Grab
Total Lead	N/L	839 ug/l	Bimonthly	Grab
Total Zinc	N/L	1464 ug/l	Bimonthly	
PCBs	N/L	(5)	Semiannual	Grab
PHAs	(6)	N/L	Bimonthly	Grab

Outfall 006

Parameter	Mass Limits	Other Units	Frequency	Sample Type
	Daily Maximum	Daily Maximum		
Flow	N/L	N/L	Bimonthly	Estimate
Total Suspended Solids	(1)	N/L	Bimonthly	Grab
BOD5	(2)	N/L	Bimonthly	Grab
Total Nitrogen	(3)	N/L	Bimonthly	Grab
Total Phosphorus	(4)	N/L	Bimonthly	Grab
E. Coli	N/L	N/L	Bimonthly	Grab
Total Copper	N/L	168 ug/l	Bimonthly	Grab
Total Zinc	N/L	1551 ug/l	Bimonthly	Grab
PCBs	N/L	(5)	Semiannual	Grab
PHAs	(6)	N/L	Bimonthly	Grab

Outfall 007

Parameter	Mass Limits	Other Units	Frequency	Sample Type
	Daily Maximum	Daily Maximum		
Flow	N/L	N/L	Bimonthly	Estimate
Total Suspended Solids	(1)	N/L	Bimonthly	Grab

BOD5	(2)	N/L	Bimonthly	Grab
Total Nitrogen	(3)	N/L	Bimonthly	Grab
Total Phosphorus	(4)	N/L	Bimonthly	Grab
E. Coli	N/L	N/L	Bimonthly	Grab
Total Copper	N/L	119 ug/l	Bimonthly	Grab
PCBs	N/L	(5)	Semiannual	Grab
PHAs	(6)	N/L	Bimonthly	Grab

Outfall 008

Parameter	Mass Limits	Other Units	Frequency	Sample Type
	Daily Maximum	Daily Maximum		
Flow	N/L	N/L	Bimonthly	Estimate
Total Suspended Solids	(1)	N/L	Bimonthly	Grab
BOD5	(2)	N/L	Bimonthly	Grab
Total Nitrogen	(3)	N/L	Bimonthly	Grab
Total Phosphorus	(4)	N/L	Bimonthly	Grab
E. Coli	N/L	N/L	Bimonthly	Grab
Total Copper	N/L	114 ug/l	Bimonthly	Grab
Total Zinc	N/L	1043 ug/l	Bimonthly	Grab
PCBs	N/L	(5)	Semiannual	Grab
PHAs	(6)	N/L	Bimonthly	Grab

Outfall 009

Parameter	Mass Limits	Other Units	Frequency	Sample Type
	Daily Maximum	Daily Maximum		
Flow	N/L	N/L	Bimonthly	Estimate
Total Suspended Solids	(1)	N/L	Bimonthly	Grab
BOD5	(2)	N/L	Bimonthly	Grab
Total Nitrogen	(3)	N/L	Bimonthly	Grab
Total Phosphorus	(4)	N/L	Bimonthly	Grab
E. Coli	N/L	N/L	Bimonthly	Grab
Total Copper	N/L	91 ug/l	Bimonthly	Grab
Oil and Grease	N/L	15 mg/l	Bimonthly	Grab
PCBs	N/L	(5)	Semiannual	Grab
PHAs	(6)	N/L	Bimonthly	Grab

Outfall 013

Parameter	Mass Limits	Other Units	Frequency	Sample Type
	Daily Maximum	Daily Maximum		
Flow	N/L	N/L	Bimonthly	Estimate
Total Suspended Solids	(1)	N/L	Bimonthly	Grab
BOD5	(2)	N/L	Bimonthly	Grab

Total Nitrogen	(3)	N/L	Bimonthly	Grab
Total Phosphorus	(4)	N/L	Bimonthly	Grab
E. Coli	N/L	N/L	Bimonthly	Grab
Total Copper	N/L	130 ug/l	Bimonthly	Grab
Total Lead	N/L	682 ug/l	Bimonthly	Grab
Total Zinc	N/L	1192 ug/l	Bimonthly	Grab
PCBs	N/L	(5)	Semiannual	Grab
PHAs	(6)	N/L	Bimonthly	Grab

Outfall 014

Parameter	Mass Limits	Other Units	Frequency	Sample Type
	Daily Maximum	Daily Maximum		
Flow	N/L	N/L	Bimonthly	Estimate
Total Suspended Solids	(1)	N/L	Bimonthly	Grab
BOD5	(2)	N/L	Bimonthly	Grab
Total Nitrogen	(3)	N/L	Bimonthly	Grab
Total Phosphorus	(4)	N/L	Bimonthly	Grab
Oil and Grease	N/L	15 mg/l	Bimonthly	Grab
E. Coli	N/L	N/L	Bimonthly	Grab
Total Copper	N/L	362 ug/l	Bimonthly	Grab
PCBs	N/L	(5)	Semiannual	Grab
PHAs	(6)	N/	Bimonthly	Grab

Outfall 001E

Parameter	Mass Limits	Other Units	Frequency	Sample Type
	Daily Maximum	Daily Maximum		
Flow	N/L	N/L	Bimonthly	Estimate
Total Suspended Solids	(1)	N/L	Bimonthly	Grab
BOD5	(2)	N/L	Bimonthly	Grab
Total Nitrogen	(3)	N/L	Bimonthly	Grab
Total Phosphorus	(4)	N/L	Bimonthly	Grab
E. Coli	N/L	N/L	Bimonthly	Grab
Total Copper	N/L	91 ug/l	Bimonthly	Grab
PCBs	N/L	(5)	Semiannual	
PHAs	(6)	N/L	Bimonthly	Grab

Outfall 014F

Parameter	Mass Limits	Other Units	Frequency	Sample Type
	Daily Maximum	Daily Maximum		
Flow	N/L	N/L	Bimonthly	Estimate
Total Suspended Solids	(1)	N/L	Bimonthly	Grab
BOD5	(2)	N/L	Bimonthly	Grab
Total Nitrogen	(3)	N/L	Bimonthly	Grab
Total Phosphorus	(4)	N/L	Bimonthly	Grab

E. Coli	N/L	N/L	Bimonthly	Grab
Total Copper	N/L	91 ug/l	Bimonthly	Grab
PCBs	N/L	(5)	Semiannual	Grab
PHAs	(6)	N/L	Bimonthly	Grab

Outfall 015G

Parameter	Mass Limits	Other Units	Frequency	Sample Type
	Daily Maximum	Daily Maximum		
Flow	N/L	N/L	Bimonthly	Estimate
Total Suspended Solids	(1)	N/L	Bimonthly	Grab
BOD5	(2)	N/L	Bimonthly	Grab
Total Nitrogen	(3)	N/L	Bimonthly	Grab
Total Phosphorus	(4)	N/L	Bimonthly	Grab
E. Coli	N/L	N/L	Bimonthly	Grab
Total Copper	N/L	144 ug/l	Bimonthly	Grab
PCBs	N/L	(5)	Semiannual	Grab
PHAs	(6)	N/L	Bimonthly	Grab

Outfall 015H

Parameter	Mass Limits	Other Units	Frequency	Sample Type
	Daily Maximum	Daily Maximum		
Flow	N/L	N/L	Bimonthly	Estimate
Total Suspended Solids	(1)	N/L	Bimonthly	Grab
BOD5	(2)	N/L	Bimonthly	Grab
Total Nitrogen	(3)	N/L	Bimonthly	Grab
Total Phosphorus	(4)	N/L	Bimonthly	Grab
E. Coli	N/L	N/L	Bimonthly	Grab
Total Copper	N/L	144 ug/l	Bimonthly	Grab
PCBs	N/L	(5)	Semiannual	Grab
PHAs	(6)	N/L	Bimonthly	Grab

(1) The TSS TMDL limits are based on the TMDL and expressed as aggregated loads equal to 6420 lb/year. How to calculate the aggregated TSS load? Flow (mgd) x concentration (mg/l) x 8.34 x Storm events per quarter for all the outfalls. The permittee shall report bimonthly the accumulative load, so at the end of the year the permittee shall not exceed the total annual load of 6420 lb/year.

(2) The BOD_5 limits are based on the TMDL are expressed as aggregated loads equal to 8000 lb/year. How to calculate the aggregated BOD_5 load? Flow (mgd) x concentration (mg/l) x 8.34 x Storm events per quarter for all the outfalls. Bimonthly the permittee shall report the accumulative load, so at the end of the year the permittee shall not exceed the total annual load of 8000 lb/year.

(3) The total nitrogen limits are based on the TMDL are expressed as aggregated loads equal to 695 lb/year. How to calculate the aggregated TN load? Flow (mgd) x

concentration (mg/l) x 8.34 x Storm events per quarter for all the outfalls. Bimonthly the permittee shall report the accumulative load, so at the end of the year the permittee shall not exceed the total annual load of 695 lb/year.

(4) The total phosphorus limits are based on the TMDL are expressed as aggregated loads equal to 90.5 lb/year. How to calculate the aggregated total phosphorus load? Flow (mgd) x concentration (mg/l) x 8.34 x Storm events per quarter for all the outfalls. Bimonthly the permittee shall report the accumulative load, so at the end of the year the permittee shall not exceed the total annual load of 90.5 lb/year.

(5) The permit will require no discharge of PCBs. For the purpose of this permit samples will be analyzed using both Methods 608 and 1668 B, for compliance purposes only those results determined using method 608 will be used.

(6) The total PAHs limits are based on the TMDL are expressed as aggregated loads equal to 0.0466 lb/year. How to calculate the aggregated PAHs load? Flow (mgd) x concentration (mg/l) x 8.34 x Storm events per quarter for all the outfalls. Bimonthly the permittee shall report the accumulative load, so at the end of the year the permittee shall not exceed the total annual load of 0.0466 lb/year.

The PCBs limits are the same as previous permit consistent with the antibacksliding regulations, 40 CFR 122.44(l). The monitoring frequency for PCBs has been changed from bimonthly to semiannual.

The permit allows a three years compliance schedule for the WNY to identify storm water control measures to achieve the water quality-based effluent limits for total suspended solids, BOD5, total nitrogen, total phosphorus, total copper, total zinc, PAHs, and total lead, see Part III.B.1 of the permit. The permit includes monitoring only for these parameters as interim permit requirements, except for total copper at outfalls 006 and 008 and oil and grease at outfalls 009, 014, and 015H, that were imposed at the existing limits specified in the current permit, in order to comply with the antibacksliding regulations.

11. Antidegradation Requirements

The Lower Anacostia River is a Tier 1 protection water. The proposed permit contains water quality-based effluent limits for several pollutants as required by the approved District of Columbia TMDLs. In addition, the permittee has revised its SWPPP including LID technologies implementation. Based on this information, we conclude that the discharges from this facility will not downgrade the water quality of the Lower Anacostia River.

12. Public Notice Date: April 10, 2009
Comment Period: 45 days
Close Comment Period: May 25, 2009

Revised Permit Public Notice: August 5, 2009
Comment period: 30 days

Close Comment Period: September 4, 2009

13. District of Columbia Certification: June 1, 2009

14. Contact

Francisco Cruz
Environmental Engineer
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