GOVERNMENT OF THE DISTRICT OF COLUMBIA WASHINGTON, DC



Vincent C. Gray Mayor

Potomac River Discharge Monitoring Report

Municipal Separate Storm Sewer System NPDES Permit No. DC0000221 August 19, 2011

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I. INTRODUCTION

The current District of Columbia Municipal Separate Storm Sewer System (DC MS4) Permit No. DC0000221 (Permit) was issued by the U.S. Environmental Protection Agency (EPA) on August 19, 2004. The Permit was administratively extended by letter on August 14, 2009. This report is prepared in partial fulfillment of the monitoring and reporting requirements set forth in Part IV of the Permit.

The Permit requires that three wet weather and two dry weather samples be taken and analyzed for several monitoring stations as part of the characterization of storm water discharge. The sampling schedule followed a watershed based monitoring approach whereby the representative sites within one of the three watersheds are to be sampled within a given calendar year. Table 1-1 below shows the schedule for the most recent cycle of monitoring and reporting for each of the three DC MS4 watersheds.

Several factors contributed to limit the number of sampled events within the scheduled calendar year. Rainfall conditions that produce qualifying storm events have been fewer than needed. In other instances the nature of rainfall (intensity or duration) did not allow the collection of sample volume required for the full suite of laboratory analyses. Nevertheless, the required three wet weather and two dry weather samples have been collected and analyzed at each of the seven sites in the Potomac River watershed.

This report constitutes the discharge monitoring report scheduled to be submitted to the EPA by August 19, 2011, as required by Part IV of the Permit. The report contains a description of the monitoring sites, the sampled storm characteristics, the sampling activities, the analytical results at the seven sites, and the estimated annual loads for selected parameters. In addition, this reporting cycle also marks the first time DDOE has submitted data electronically through EPA's NetDMR system.

Table 1-1 DC MS4 STORM WATER SAMPLING AND ANALYSIS SCHEDULE

	Watershed	Monitoring Year	No. of	DMR Due Date
			Stations	
1	Anacostia River	Calendar year 2008	9	August 19, 2009*
2	Rock Creek	Calendar year 2009	6	August 19, 2010*
3	Potomac River	Calendar year 2010	7	August 19, 2011**

^{*} Completed and submitted to the EPA

II. MONITORING SITES

Part IV.A.1 of the Permit lists the sampling locations for the Potomac River watershed. Figure 2-1 shows the locations of the monitoring sites. The seven monitoring sites and the associated drainage areas are provided in Table 2-1.

The drainage areas and land use types for each representative monitoring site were revised based on the most recent available Geographic Information System (GIS) data. The monitoring site point-layer and existing GIS dataset of the storm water sewer system supplied by the DC Water and Sewer Authority (DC Water) were used to digitize the drainage area.

The areas drained by all contributing secondary and higher order storm water drains upstream from the monitoring manhole/outfall were delineated. In addition, the 2008 orthophoto and the ground surface elevation GIS data was used to locate the storm water runoff divide to take into account curbs and unsewered areas. The acreage within the perimeter was automatically computed by the geodatabase file system.

The 2004 land use delineation prepared by the DC Office of Planning was used to represent the land use type within each catchment area. The coverage by each land use type within each drainage area was calculated by GIS analysis by intersecting the drainage area polygons

^{**} Current Report

with the Existing Land Use polygon layer and then field calculations were performed. The Potomac River DC MS4 drainage area excludes large federal lands such as the Naval Air Station and Bolling Air Force Base.

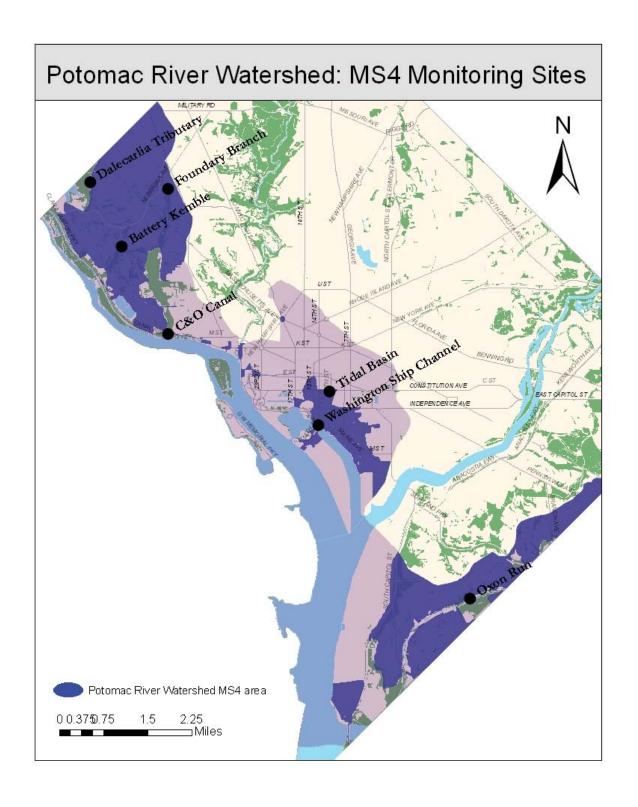
Detailed maps of each of the monitoring sites the associated drainage area and land use types are included in Appendix A.

TABLE 2-1 STORM WATER SAMPLING DRAINAGE AREAS

Site	Sampling Location	Drainage Area
Number		(Acres)
1	Battery Kemble Creek	11
2	Foundary Branch	50
3	Dalecarlia Tributary	24
4	Oxon Run	43
5	Tidal Basin	8
6	Washington Ship Channel	25
7	C and O Canal	1110

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FIGURE 2-1 POTOMAC RIVER WATERSHED STORM WATER SAMPLING SITES



Samples were collected and analyzed in accordance with the Permit and monitoring requirements of 40 CFR 122.26(d)(2)(iii), by the DDOE contractor, Environmental Design and Construction, Inc. At each of the seven Potomac River sites, three wet weather and two dry weather samples were collected. Table 2-2 below lists the sampling event dates for each site.

TABLE 2-2 WET AND DRY WEATHER SAMPLING DATES

		WET 1	WET 2	WET 3	Dry 1	Dry 2
Site No						
1	Battery Kemble	5-11-10	10-14-10	4-5-11	NDF	10-8-10
2	Foundary Branch	7-10-10	10-14-10	11-30-10	7-9-10	11-23-10
3	Dalecarlia	10-14-10	11-30-10	3-6-11	9-21-10	NDF
4	Oxon Run	10-14-10	3-6-11	4-8-11	7-9-10	10-8-10
5	Tidal Basin	7-10-10	10-14-10	11-30-10	7-9-10	NDF
6	Washington Ship Channel	1-26-11	4-5-11	7-8-11	9-20-10	NDF
7	C&O Canal	7-10-10	10-14-10	4-5-11	9-21-10	2-17-11

NDF - No Dry Weather Flow

III. WEATHER INFORMATION

During the monitoring period May 2010 to July 2011, the rainfall patterns were unpredictable, with accumulations generally below the monthly averages of record. As can be seen in Figure 3-1, the months of July 2010, September 2010 and March 2011 exceeded the monthly average rainfall by appreciable amount. These exceedances were due to one or two sizable events. For September, the accumulation from a single rainfall event exceeded the monthly average of record by 23 percent.

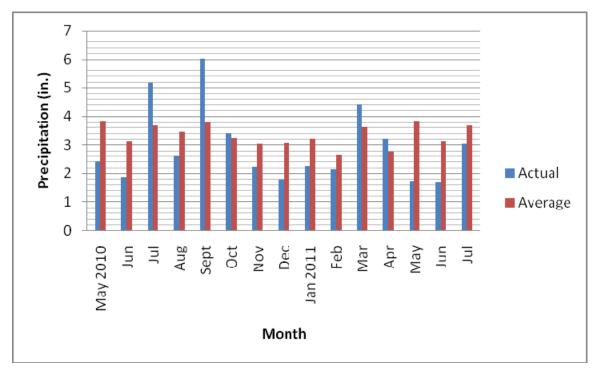


FIGURE 3-1 MONTHLY PRECIPITATION MAY 2010 TO JULY 2011*

* - Actual Values from Gage at Ronald Reagan National Airport

Table 3-1 lists the monthly actual and average precipitation at the Ronald Reagan National Airport. A number of the rainfall events were in the form of short duration thunderstorms followed by a lengthy dry period. The spatial distribution of the rainfall through the region and the city presented special challenges in the collection of qualified samples for analysis.

TABLE 3-1 PRECIPITATION RECORD FOR THE WASHINGTON D.C. AREA

Precipitation					
Month	Actual (in.) ^a	Number of Days in Month with Storms >0.10 in.	Monthly Average (in.)		
2010					
May	2.40	8	3.82		
June	1.87	4	3.13		
July	5.17	6	3.66		
August	2.59	6	3.44		
September	6.02	5	3.79		
October	3.40	4	3.22		
November	2.22	5	3.03		
December	1.78	3	3.05		
2011					
January	2.25	4	3.21		
February	2.12	6	2.63		
March	4.40	7	3.60		
April	3.20	7	2.77		
May	1.70	5	3.82		
June	1.68	4	3.13		
July	3.03	4	3.66		

a – gage at Ronald Reagan National Airport

The following is a narrative description of the qualified rainfall events that were sampled, including the duration of the rainfall, the elapsed time between the sampled rainfall and the prior measurable rainfall event and the sites sampled.

May 11, 2010

Battery Kemble site was sampled during this rainfall event. A total of 0.11 inches of rain fell. The storm event lasted for approximately 3.5 hours. The last measurable rainfall occurred about 7 days earlier.

July 10, 2010

Foundary Branch, Washington Ship Channel, and C&O Canal sites were sampled during this event. A total of 1.17 inches of rain fell. The storm event lasted for approximately 8.5 hours. The last measurable rainfall occurred about 11 days earlier.

October 14, 2010

Samples were collected at six Potomac River sites: Battery Kemble, Foundary Branch, Dalecarlia, Oxon Run, Tidal Basin and C& O Canal. The rainfall event lasted for about 7 hours. A total of 1.26 inches of rain fell during that period. The last measurable rainfall occurred about 9 days prior to this event.

November 30, 2010

The sites sampled during this rainfall event were Foudary Branch, Dalecarlia, and Tidal Basin sites. A total of 0.10 inches of rainfall occurred over a total of 5 hours duration. The last measurable rainfall occurred about 12 days prior to this event.

January 26, 2011

Samples were collected at the Washington Ship Channel site. A total of 1.52 inches of rainfall occurred over a total of 24 hours duration. The last measurable rainfall occurred about 6 days prior to this event.

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March 6, 2011

The sites sampled during this storm event were Oxon Run and Dalecarlia. A total of 1.39 inches of rain fell over a period of approximately 7 hours. The last measurable rainfall occurred about 5 days prior to this event.

April 5, 2011

The sites sampled during this storm event were Battery Kemble, Washington Ship Channel and C&O Canal. A total of 0.42 inches of rain fell over a period of approximately 7 hours. The last measurable rainfall occurred about 5 days prior to this event.

April 8, 2011

The Oxon Run site was sampled during this storm event. A total of 0.35 inches of rain fell over a period of approximately 7 hours. The last measurable rainfall occurred about 3 days prior to this event.

July 8, 2011

The Washington Ship Channel site was sampled during this storm event. A total of 0.60 inches of rain fell over a period of approximately 2 hours. The last measurable rainfall occurred about 5 days prior to this event.

Table 3-2 below lists a summary of the wet weather events.

TABLE 3-2 STORM CHARACTERISTICS

Date	Precipitation (in.)	Duration (hrs)	Time to Previous (days)	Sites Sampled
5-11-10	0.11	3.5	7	1
7-10-10	1.17	8.5	11	2, 5, 7
10-14-10	1.26	7	9	1, 2, 3, 4, 5, 7
11-30-10	0.10	5.0	12	2, 3, 5
1-26-11	1.52	24	6	6
3-6-11	1.39	7	5	4, 3
4-5-11	0.42	7	5	1, 6, 7
4-8-11	0.35	7	3	4
7-8-11	0.60	2	5	6

IV. SAMPLE COLLECTION AND ANALYSIS

The storm water samples were collected based on the requirement of the Permit. The list of analyzed parameters, the detection limits and EPA-approved methods utilized are included in Table 4-1.

TABLE 4-1. SAMPLE ANALYSIS REQUIREMENTS FOR WET AND DRY WEATHER SAMPLING

Bottle Type	Sample Type	Parameter	Method	Units	MDL
1-L Plastic	Composite	Biochemical Oxygen Demand (5d)	SM5210B	mg/L	< 5.0
Unpreserved		Total Dissolved Solids	SM2540C	mg/L	<1.0
		Total Suspended Solids	SM2540D	mg/L	<1.0
500 mL	Composite	Ammonia Nitrogen	SM4500-NH3-	mg/L	<1.0
Plastic H ₂ SO ₄		Phosphorus, Total	E	mg/L	< 0.05
		Nitrite + Nitrate	EPA 365.3	mg/L	< 0.05
		Chemical Oxygen Demand	EPA 353.2	mg/L	<10.0
		Total Kjeldahl Nitrogen	EPA 410.4	mg/L	< 0.5
			EPA 351.3		
250 mL	Composite	Phosphorus, Dissolved	EPA 365.3	mg/L	< 0.5
Plastic,					
Filtered,					
H ₂ SO ₄	G :	II 1 T 1	ED 4 120 2	/T	
1000 mL	Composite	Hardness, Total	EPA 130.2	mg/L	0.21
Plastic HNO ₃		Antimony, Total	EPA 200.8	μg/L	0.21 0.25
		Arsenic, Total	EPA 200.8	μg/L	0.25
		Beryllium, Total Cadmium, Total	EPA 200.8 EPA 200.8	μg/L	0.22
		Chromium, Total	EPA 200.8	μg/L	0.22
		Copper, Total	EPA 200.8	μg/L	1.52
		Lead, Total	EPA 200.8	μg/L	0.23
		Mercury, Total (by cold vapor)	EPA 245.1	μg/L	0.20
		Nickel, Total	EPA 200.8	μg/L	0.46
		Selenium, Total	EPA 200.8	μg/L	0.31
		Silver, Total	EPA 200.8	μg/L	0.35
		Thallium, Total	EPA 200.8	μg/L	0.21
		Zinc, Total	EPA 200.8	μg/L	1.52
(2) 1-L Glass	Grab	Dioxin (2,3,7,8) TCDD	EPA 1613	pg/L	4.4
Amber					
1000 mL	Grab	Fecal Coliform	SM9221E	MPN	
Plastic, Sterile		Fecal Streptococcus	SM9230B	MPN	
250 mL	Grab	Cyanide, Total	EPA 335.2	mg/L	< 0.01
Plastic, NaOH					
(2) 1-L Glass	Composite	BNA Compounds	EPA 625	μg/L	Various
Amber	_	_			
Unpreserved					
(2) 40 mL	Grab	Volatile Organic Compound	EPA 624	μg/L	0.5
Glass Vials					
Teflon Lids					

Bottle Type	Sample Type	Parameter	Method	Units	MDL
1-L Glass Amber H ₂ SO ₄ Teflon Lids	Grab	Phenols, Total	EPA 420.2	mg/L	1.9
1-L Glass Amber H ₂ SO ₄ Teflon Lids	Composite	PCBs / Pesticides	EPA 608	μg/L	0.01-1.7
1-L Glass Amber Teflon Lids	Composite	PCBs	EPA 8082 modified	ng/L	0.25-5.0
1-L Glass Amber 1:1 HCl	Grab	Fats (oil and grease)	EPA 1664	mg/L	1.6
100 mL Plastic	Composite	Chlorophyll-a	SM 10020H2	mg/m ³	2
500 mL Plastic H ₂ SO ₄	Composite	Total Ammonia + Organic Nitrogen (TKN)	EPA 351.3	mg/L	0.2
	Field Test	Dissolved Oxygen	EPA 360.1	mg/L	N/A
500 mL Plastic H ₂ SO ₄	Composite	Organic Nitrogen		mg/L	N/A
500 mL Plastic H ₂ SO ₄	Composite	Total Nitrogen		mg/L	N/A

V. RECORD KEEPING

DDOE WQD maintains the records of monitoring information including:

- Description of Sampling
 - Sampling protocols
 - Location/Collection time
 - Sample collection procedures
 - Field notes
 - Environmental Design & Construction, DC MS4 sampling personnel
- Storm Event Data
 - Date and duration of storm events sampled
 - Rainfall measurements
 - Duration between storm event sampled and the end of the previous measurable storm event
 - Estimate of the total volume of the discharge sampled
- Storm Water Analysis Data
 - Field test results
 - Laboratory results

VI. MONITORING RESULTS

The water quality results are contained in the following sections

- The ambient wet weather flow and dry weather flow analysis are given in Table 6-1 and Table 6-2, respectively.
- The analytical results in Appendix C complete the sampling and analysis results.
- Results from wet weather sampling events for selected parameters are also reported on EPA Form 3320-1 in Appendix B. Data has also been submitted to EPA on-line via NetDMR.
- In this section, a summary of the results for selected parameters (priority pollutants) are presented. The geometric mean of parameters was calculated as an estimate of the average Event Mean Concentration (EMC). A brief discussion of the EMCs for the wet and dry sampling events shown in Table 6-3 and Table 6-4 is presented.

#Table 6-1 Ambient Water Quality Data for Potomac River Sites - Wet Weather Sampling Events

Site ID	Location	Date	Water Temp (°C)	pН	DO (mg/L)	TRC (mg/L)	Conductivity (µS)
		05/11/10	12.4	8.97	6.26	0	651
1	Battery Kemble	10/14/10	17.1	8.1	9.16	0	567
		04/05/11	10.5	7.11	9.11	< 0.03	710
	F 1	07/10/10	24.4	7.9	7.2	< 0.03	570
2	Foundary Branch	10/14/10	18.5	6.4	9.4	0.06	390
	Branch	11/30/10	17.9	7.49	9.76	0	510
		10/14/10	16.1	6.7	7.7	0.03	250
3	Dalecarlia	11/30/10	15.1	8.1	8.6	0	610
		03/06/11	12.0	7.3	8.12	< 0.03	380
	Oxon Run	10/14/10	15.1	8.4	9.87	0.01	815
4		03/06/11	13.0	7.4	8.57	< 0.03	460
		04/08/11	12.4	8.53	8.15	0	290
		07/10/10	19.1	7.1	13	< 0.03	187
5	Tidal Basin	10/14/10	19.5	6.8	8.5	< 0.03	270
		11/30/10	17.4	7.26	9.95	0	560
		01/26/11	14.7	7.63	10.91	0	13000
6	Washington Ship Channel	04/05/11	10.8	6.77	7.99	< 0.03	410
	Ship Chainlei	07/08/11	24.2	7.45	9.5	0	2100
		07/10/10	20.9	7.5	12.7	0.06	642
7	C&O Canal	10/14/10	18.5	6.5	9.4	< 0.03	390
		04/05/11	10.2	6.18	6.91	< 0.03	770

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#Table 6-2 Ambient Water Quality Data for Potomac River Sites - Dry Weather Sampling Events

Site	Location	Date	Water Temp	pН	DO	TRC	Conductivity
ID			(°C)		(mg/L)	(mg/L)	(µS)
20	Battery Kemble	NDF					
20	battery Kemble	10/08/10	20.9	7.41	10.3	0	1400
21	Foundary	07/09/10	23.7	7.8	7.6	< 0.06	736
21	Branch	11/23/10	19.7	7.66	10.1	0	1100
22	Dalamatia	09/21/10	21.5	7.62	8.72	0	1200
22	Dalecarlia	NDF					
22	O D	07/09/10	23.3	7.4	8.9	< 0.03	473
23	Oxon Run	10/08/10	19.7	7.13	9.57	0	540
2.4	T: 1 1 D .	07/09/10	32.5	6.2	0.7	< 0.03	502
24	Tidal Basin	NDF					
25	Washington	09/20/10	21.6	8.76	7.98	0	660
25	Ship Channel	NDF					
26	C 8-O C1	09/21/10	21.9	7.32	9.23	0	970
26	C&O Canal	02/17/11	16.0	7.73	9.11	< 0.03	1300

NDF – No Dry Flow

Wet Weather Events

The geometric mean of the analytical results for each sampled site is provided for twenty priority pollutants in Table 6-3. The highest mean concentration of Total Suspended Solids (TSS) was sampled at the Tidal Basin site (89.0 mg/L), and the lowest was sampled at the C&O Canal site (21.8 mg/L). All other stations had TSS concentrations between 30.0 and 49.5 mg/L. The Foundary Branch site had the highest Biochemical Oxygen Demand (BOD) concentration (30.0 mg/L), while concentrations at all other stations ranged from 10.8 (Battery Kemble) to 29.5 mg/L (Dalecarlia). Concentrations for Total Nitrogen (TN) ranged from 0.27 mg/L (Washington Ship Channel) to 3.85 (Foundary Branch). Total Phosphorus (TP) concentrations ranged from 0.10 mg/L (C&O Canal) to 0.59 (Dalecarlia). The Foundary Branch site had the highest Fecal Coliform (FC) concentration at 7,530 MPN/100 mL. Most of the Potomac stations had moderate FC concentrations ranging from 528 (Washington Ship Channel) to 5,753 MPN/100 ml (Dalecarlia). The highest concentrations of Zinc (Zn) (223.0 μg/L), Copper (Cu) (172.7 μg/L), and Lead (Pb) (86.2 μg/L) were measured at the Washington Ship Channel site. At the remaining sites Zn, Cu and Pb concentrations ranged

from 25.4 to 112.9 µg/L, 29.5 to 77.0 µg/L and non-detect (ND) to 6.3 µg/L, respectively. The highest concentration of Oil and Grease (O&G) was detected at 2.4 mg/L (Foundary Branch). Concentrations of O&G at all other sites ranged from ND to 2.24 mg/L. None of the sites had detectable concentrations of Arsenic (As), Polyaromatic Hydrocarbons (PAHs), Chlordane, Heptachlor, Dieldrin, DDT, DDE, DDD, or PCBs.

Dry Weather Events

The EMC results for dry weather flow samples collected are presented in Table 6-4. It is to be noted that during some dry weather sampling attempts no flow was observed. The concentrations reported for Battery Kemble, Dalecarlia, Tidal Basin and Washington Ship Channel sites are all based on one sample. The highest concentrations of TSS, BOD, TN, TP, FC, O&G and Cu were recorded at the Tidal Basin site. Zn (at190 μg/L) and Pb (at 100 μg/L) were highest at the Washington Ship Channel site. The highest concentration of FC was sampled at Washington Ship Channel (8,000 MPN/100 mL). FC concentrations at all other sites ranged from 456 to1,600 MPN/100 mL. The concentrations of some parameters for the dry weather flow samples at some stations exceeded wet weather concentrations. DDOE will be conducting further investigations into what may be causing this paradox.

None of the Potomac River watershed sites had detectable concentrations of As, PAHs, Chlordane, Heptachlor, Dieldrin, DDT, DDE, DDD, and PCBs.

TABLE 6-3 SUMMARY DATA OF WET WEATHER SAMPLING EVENTS (2010-2011) VALUES REPRESENT GEOMETRIC MEAN FOR EACH SITE.

								F	Paramete	ers (mg/L,	unless oth	erwise not	red)							
Station	TSS	BOD	TN	TP	FC ^a	O&G	Zn ^{bc}	Pb ^{bc}	Cu ^{bc}	As ^{bc}	PAH 1 ^c	PAH 2 ^c	PAH 3 ^c	Chlordane ^c	Heptachlor ^c	Dieldrin ^c	DDT ^c	DDE ^c	DDD ^c	PCBs ^c
Battery Kemble	44.6 (n=3)	10.8 (n=3)	3.18 (n=3)	0.21 (n=3)	678 (n=3)	2.24 ^d (n=3)	25.4 (n=3)	6.3 ^d (n=3)	47.0 (n=3)	ND (n=3)	ND (n=3)	ND (n=3)	ND (n=3)	ND (n=3)	ND (n=3)	ND (n=3)	ND (n=3)	ND (n=3)	ND (n=3)	ND (n=3)
Foundary Branch	45.1 (n=3)	30.0 (n=3)	3.85 (n=3)	0.53 (n=3)	7,530 (n=3)	2.40 ^d (n=3)	112.9 (n=3)	ND (n=3)	47.7 (n=3)	ND (n=3)	ND (n=3)	ND (n=3)	ND (n=3)	ND (n=3)	ND (n=3)	ND (n=3)	ND (n=3)	ND (n=3)	ND (n=3)	ND (n=3)
Dalecarlia	30.0 (n=3)	29.5 (n=3)	0.41 ^d (n=3)	0.59 (n=3)	5,753 (n=3)	2.11 ^d (n=3)	50.1 (n=3)	2.80 ^d (n=3)	77.0 (n=3)	ND (n=3)	ND (n=3)	ND (n=3)	ND (n=3)	ND (n=3)	ND (n=3)	ND (n=3)	ND (n=3)	ND (n=3)	ND (n=3)	ND (n=3)
Oxon Run	42.4 (n=3)	6.11 (n=3)	3.21 (n=3)	0.27 (n=3)	2,736 (n=3)	ND (n=3)	70.2 (n=3)	ND (n=3)	29.5 (n=3)	ND (n=3)	ND (n=3)	ND (n=3)	ND (n=3)	ND (n=3)	ND (n=3)	ND (n=3)	ND (n=3)	ND (n=3)	ND (n=3)	ND (n=3)
Tidal Basin	89.0 (n=3)	28.9 (n=3)	3.73 (n=3)	0.25 (n=3)	4,797 (n=3)	1.98 ^d (n=3)	76.2 (n=3)	ND (n=3)	46.2 (n=3)	ND (n=3)	ND (n=3)	ND (n=3)	ND (n=3)	ND (n=3)	ND (n=3)	ND (n=3)	ND (n=3)	ND (n=3)	ND (n=3)	ND (n=3)
Washington Ship Channel	49.5 (n=3)	25.4 (n=3)	0.27 ^d (n=3)	0.21 (n=3)	528 (n=3)	ND (n=3)	223.0 (n=3)	86.2 (n=3)	172.7 (n=3)	ND (n=3)	ND (n=3)	ND (n=3)	ND (n=3)	ND (n=3)	ND (n=3)	ND (n=3)	ND (n=3)	ND (n=3)	ND (n=3)	ND (n=3)
C&O Canal	21.8 (n=3)	13.7 (n=3)	2.88 (n=3)	0.10 (n=3)	5,241 (n=3)	ND (n=3)	72.2 (n=3)	5.7 ^d (n=3)	36.2 (n=3)	1.8 ^d (n=3)	ND (n=3)	ND (n=3)	ND (n=3)	ND (n=3)	ND (n=3)	ND (n=3)	ND (n=3)	ND (n=3)	ND (n=3)	ND (n=3)

TSS: total suspended solids; BOD: biological oxygen demand; TN: total nitrogen; TP: total phosphorus; FC: fecal coliform bacteria; O&G: oil and grease; PCB: total PCBs

ND: none-detected

^aUnits are in MPN/100mls

^bTotal recoverable metals

^cUnits are in µg/L

^dgeometric mean was calculated using half of detection limit or reporting limit if the analysis results show "none detected" or "below reporting limit"

TABLE 6-4 SUMMARY DATA OF DRY WEATHER SAMPLING EVENTS (2010-2011) VALUES REPRESENT GEOMETRIC MEAN FOR EACH SITE.

								I	Paramete	ers (mg/L,	unless oth	erwise not	ted)							
Station	TSS	BOD	TN	TP	FC ^a	O&G	Zn ^{bc}	Pb ^{bc}	Cu ^{bc}	As ^{bc}	PAH 1 ^c	PAH 2 ^c	PAH 3 ^c	Chlordanec	Heptachlor ^c	Dieldrin ^c	DDT ^c	DDE ^c	DDDc	PCBs ^c
Battery Kemble	31.0 (n=1)	3.30 (n=1)	3.90 (n=1)	0.89 (n=1)	900 (n=1)	ND (n=1)	ND (n=1)	ND (n=1)	1.40 (n=1)	ND (n=1)	ND (n=1)	ND (n=1)	ND (n=1)	ND (n=1)	ND (n=1)	ND (n=1)	ND (n=1)	ND (n=1)	ND (n=1)	ND (n=1)
Foundary Branch	6.69 (n=2)	13.3 (n=2)	3.10 (n=2)	0.53 (n=2)	566 (n=2)	ND (n=2)	60.4 (n=2)	4.73 ^d (n=2)	29.7 (n=2)	ND (n=2)	ND (n=2)	ND (n=2)	ND (n=2)	ND (n=2)	ND (n=2)	ND (n=2)	ND (n=2)	ND (n=2)	ND (n=2)	ND (n=2)
Dalecarlia	ND (n=1)	6.10 (n=1)	17.0 (n=1)	0.13 (n=1)	1,600 (n=1)	ND (n=1)	12.0 (n=1)	ND (n=1)	8.90 (n=1)	ND (n=1)	ND (n=1)	ND (n=1)	ND (n=1)	ND (n=1)	ND (n=1)	ND (n=1)	ND (n=1)	ND (n=1)	ND (n=1)	ND (n=1)
Oxon Run	10.7 (n=2)	2.10 ^d (n=2)	2.61 (n=2)	0.042 (n=2)	456 (n=2)	ND (n=2)	17.3 (n=2)	ND (n=2)	4.25 (n=2)	ND (n=2)	ND (n=2)	ND (n=2)	ND (n=2)	ND (n=2)	ND (n=2)	ND (n=2)	ND (n=2)	ND (n=2)	ND (n=2)	ND (n=2)
Tidal Basin	410 (n=1)	440 (n=1)	37.0 (n=1)	5.2 (n=1)	1,600 (n=1)	14.0 (n=1)	170 (n=1)	15.0 (n=1)	220 (n=1)	ND (n=1)	ND (n=1)	ND (n=1)	ND (n=1)	ND (n=1)	ND (n=1)	ND (n=1)	ND (n=1)	ND (n=1)	ND (n=1)	ND (n=1)
Washington Ship Channel	ND (n=1)	ND (n=1)	8.3 (n=1)	0.44 (n=1)	8,000 (n=1)	ND (n=1)	190 (n=1)	100 (n=1)	160 (n=1)	ND (n=1)	ND (n=1)	ND (n=1)	ND (n=1)	ND (n=1)	ND (n=1)	ND (n=1)	ND (n=1)	ND (n=1)	ND (n=1)	ND (n=1)
C&O Canal	ND (n=2)	1.84 ^d (n=2)	0.09 ^d (n=2)	0.09 (n=2)	693 (n=2)	ND (n=2)	ND (n=2)	ND (n=2)	2.10 (n=2)	ND (n=2)	ND (n=2)	ND (n=2)	ND (n=2)	ND (n=2)	ND (n=2)	ND (n=2)	ND (n=2)	ND (n=2)	ND (n=2)	ND (n=2)

TSS: total suspended solids; BOD: biological oxygen demand; TN: total nitrogen; TP: total phosphorus; FC: fecal coliform bacteria; O&G: oil and grease; PCB: total PCBs

ND: none detected

n/a: not available

^aUnits are in MPN/100mls

^bTotal recoverable metals

^cUnits are in µg/L

dgeometric mean was calculated using half of detection limit or reporting limit if the analysis results show "none detected" or "below reporting limit"

⁻⁻⁻ No data available

VII. ESTIMATES OF CUMMULATIVE POLLUTANT LOADINGS

The annual pollutant loads for each sewershed sampled were calculated by the Simple Method (EPA 1992) utilizing the wet weather event mean concentrations, the total drainage area, and land use distribution within each sewershed. The Simple Method can estimate pollutant loads without extensive rainfall-runoff volume data using the sample analysis results available. Generally, the Simple Method is expected to overestimate pollutant loads as compared to more dynamic models that incorporate pollutant concentration and runoff coefficients as functions of initial conditions and rainfall intensity and duration in estimating total pollutant loads.

The Simple Method is given by the following equation:

$$L = \sum_{i=1}^{\text{No. of landuse types}} \left(\frac{P}{12} \times CF \times Rv_i \times C_i \times A_i \times 2.72 \right)$$
 (Equation 1)

where

L = pollutant loading (lb/year for chemical constituents, MPN/yr for bacteria)

P = average annual rainfall (inches)

CF = Correction factor (0.9) to adjust for storms where no runoff occurs (dimensionless)
(EPA 1992)

Rv_i = runoff coefficient for the land use type (dimensionless)

C_i = average event mean concentration (mg/L for chemical constituents)

 A_i = land use area (acres)

= unit conversion factor for chemical constituents in concentration units of mg/L;
 12,334,885 for bacteria in units of MPN/100 mL.

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The average event mean concentration (EMC) for each monitoring station was calculated as the geometric mean of the measured EMCs (*Urban Stormwater BMP Performance Monitoring: Guidance Manual*, ASCE/EPA, 2002).

C = Geomean of EMCs =
$$\left[\prod_{j=1}^{m} EMC_{j}\right]^{\frac{1}{m}}$$
 (Equation 2)

Where:

 EMC_i = Event Mean Concentration of storm j

m = Number of storms at monitoring location

The annual precipitation of record for the District of Columbia region is 39.35 inches as reported by the National Weather Service (NWS) weather station at Washington National Airport (COOP ID: 448906). The sewershed area was obtained from the DDOE sewershed GIS layer discussed Section II. A key parameter in Equation 1 is the runoff coefficient (Rvi), which is directly related to imperviousness and land use. Surface area for each land use type and the associated runoff coefficients for each sewershed are presented in Appendix D. The pollutant loading was calculated using Equation 1 above. Table 7-1 presents the annual loads for pollutants specified in 40 CFR 122.21(g)(7). Also included are the annual loads for Fecal Coliform Bacteria and Oil and Grease.

Based upon the pollutant loadings calculated for the seven Potomac River watershed monitoring sites, a cumulative load for the entire District of Columbia portion of the Potomac River watershed was estimated. This cumulative load assumes that the seven sampling sites are representative of the watershed. Given this assumption, a simple ratio is used to compute a cumulative load for the Potomac River watershed as follows:

$$L_A = \left(\frac{\sum L_i}{\sum A_i}\right)(A_i)$$
 (Equation 3)

 L_A = Potomac River watershed cumulative pollutant load (lb/year)

 A_t = Potomac River watershed total area (acres)

L_i = Pollutant loading for each monitoring site (lb/year), and

 A_i = Acreage for each monitoring site (acres)

Table 7-2 contains the computed pollutant loads from storm water runoff at each of the contributing sewersheds (sub-watersheds). The monitoring site contributing the highest loads to the Potomac River is the area draining to the C & O Canal monitoring site. This is due in large part to the size of the catchment area (more than 1,000 acres) relative to the area draining to the other monitoring sites (see also Table 2-1

Also included in Table 7-2 are the estimated pollutant loads carried by storm water discharges draining from the DC MS4 area to the Potomac River and not draining to the Anacostia River or Rock Creek.

Table 7-1 Potomac River Watershed Storm Water Pollutant Concentration (2010-2011)

	Ev	ent Mea	n Conc	entratio	ns for D	esignat	ed Para	meters	(mg/L u	nless oth	erwise n	oted)		
Station	BOD	COD	TDS	TSS	TN	TKN	TP	DP	FC ^a	O&G	Cd ^b	Cu ^b	Pb ^b	Zn ^b
Battery Kemble	10.8 (n=3)	61.7 (n=3)	379 (n=3)	44.6 (n=3)	3.18 (n=3)	1.65 ° (n=3)	0.21 (n=3)	0.13 (n=3)	678 (n=3)	2.24 ^c (n=3)	ND (n=3)	0.047 (n=3)	0.0063 ^c (n=3)	0.025 (n=3)
Foundary Branch	30.0 (n=3)	84.3 (n=3)	344 (n=3)	45.1 (n=3)	3.85 (n=3)	2.88 (n=3)	0.53 (n=3)	0.41 (n=3)	7,530 (n=3)	2.40 ^c (n=3)	ND (n=3)	0.048 (n=3)	ND (n=3)	0.11 (n=3)
Dalecarlia	29.5 (n=3)	101 (n=3)	198 (n=3)	30.0 (n=3)	0.41 ^c (n=3)	2.38 ^c (n=3)	0.63 (n=3)	0.37 (n=3)	5,753 (n=3)	2.11 ^c (n=3)	ND (n=3)	0.077 (n=3)	0.0028 ^c (n=3)	0.050 (n=3)
Oxon Run	6.11 (n=3)	14.6 (n=3)	228 (n=3)	42.4 (n=3)	3.21 (n=3)	2.99 (n=3)	0.27 (n=3)	0.067 (n=3)	2,736 (n=3)	ND (n=3)	ND (n=3)	0.030 (n=3)	ND (n=3)	0.070 (n=3)
Tidal Basin	28.9 (n=3)	84.5 (n=3)	259 (n=3)	89.0 (n=3)	3.73 (n=3)	2.60 (n=3)	0.25 (n=3)	0.21 (n=3)	4,797 (n=3)	1.98 ^c (n=3)	ND (n=3)	0.046 (n=3)	ND (n=3)	0.076 (n=3)
Washington Ship Channel	25.4 (n=3)	66.8 (n=3)	540 (n=3)	49.5 (n=3)	0.27 ^c (n=3)	1.57 ^c (n=3)	0.21 (n=3)	0.12 (n=3)	528 (n=3)	ND (n=3)	ND (n=3)	0.17 (n=3)	0.086 (n=3)	0.22 (n=3)
C&O Canal	13.7 (n=3)	37.9 (n=3)	481 (n=3)	21.8 (n=3)	2.88 (n=3)	1.59 ° (n=3)	0.10 (n=3)	0.061 (n=3)	5,241 (n=3)	ND (n=3)	ND (n=3)	0.036 (n=3)	0.006 ^c (n=3)	0.072 (n=3)

^aUnits are in MPN/100mls

ND: none detected

^bTotal Recoverable Metals

^cgeometric mean was calculated using half of detection limit or reporting limit if the analysis results show "none detected" or below reporting limit"

Table 7-2 Potomac River Watershed Storm Water Annual Pollutant Loading (2010-2011)

		Lo	adings for D	Designated	Paramete	rs (Lbs./y	ear unle	ess othe	rwise note	ed)				
Station	BOD	COD	TDS	TSS	TN	TKN	TP	DP	FC ^a	O&G	Cdb	Cu ^b	Pb ^b	Zn ^b
Battery Kemble	6,947	39,691	243,809	28,691	2,045	2,007	135	83.63	2.0E+12	643	ND	30.23	4.05	1.40
Foundary Branch	112,576	316,338	1,290,872	169,239	14,447	13,021	1,988	1,538	1.3E+14	9,006	ND	180	ND	412
Dalecarlia	42,444	6,082	284,884	43,164	589	4,704	848	532	3.8E+13	3,035	ND	110	4.03	71
Oxon Run	20,369	48,673	760,105	141,352	10,701	8,201	900	223	4.1E+13	ND	ND	100	ND	233
Tidal Basin	8,952	26,175	80,231	27,569	1,155	520	77.44	65.05	6.7E+12	613	ND	7.12	ND	23
Washington Ship Channel	52,212	137,261	1,109,599	101,631	554	9,390	431	240	4.9E+12	ND	ND	355	177	458
C&O Canal	940,438	2,601,650	33,018,310	1,496,463	197,697	245,749	6,864	4,187	1.6E+15	ND	ND	2,471	411	4,942
Cumulative Load for all monitoring sites (lbs/yr)	1,183,941	3,175,874	36,787,812	2,008,112	227,192	283,594	11,246	6,871	1.9E+15	13,298	ND	3,254	597	6,143
Potomac Watershed Load Estimates (lbs/yr)	5,284,297	14,174,908	164,195,359	8,962,826	1,014,030	1,265,771	50,194	30,667	8.3E+15	59,355	ND	14,528	2,664	27,421

^aUnits are in MPN/yr ^bTotal Recoverable Metals

ND: none detected

VIII. WATER QUALITY TRENDS

The DC MS4 permit requires that watersheds be sampled on a rotating basis. The Potomac River watershed monitoring sites were sampled for three rounds during this permit cycle. The results of the analyses for the first round (2005-2006) and the second round (2009-2010) are reported in DMRs dated August 19, 2006 and July 22, 2010, respectively. Appendix C of this report contains the results of the 2010-2011 storm water analysis results. The calculated event mean concentration data of selected parameters for the three rounds of sampling are presented in Table 8-1.

Careful consideration is necessary when interpreting these results, as variations in analytical techniques, detection limits, sample size, and computational methods make it difficult to establish a trend from the results from the three rounds.

Several parameters showed spikes in concentration between round 1 and 2. Average rainfall data (measured at Reagan National Airport) during each sampling period was assessed to see if there may have been an effect of rainfall on loads. Average rainfall appeared to decrease over all three rounds. The highest average annual rainfall actually decreased between sampling rounds 1 and 2. It is important to note that variations in rainfall can take place across the District, so readings taken at Reagan National are not completely representative of rainfall received at the various MS4 sampling stations.

Total phosphorous (TP) showed a decrease between rounds 1 and 2, with a slight increase between rounds 2 and 3. Dissolved phosphorous (DP) concentrations decreased between rounds 1 and 2, but stayed the same for rounds 2 and 3. With the exception of COD, which shows a slight increase, all remaining parameters showed consistent decreases during the third round of sampling.

To supplement the data observation, an overview of the sampling and analysis results from sixty three (63) storm water samples collected from 2005 to 2011 at the seven Potomac River

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watershed sites is presented in Table 8-2. The Table contains the range of concentrations for the parameters detected over the three rounds of sampling.

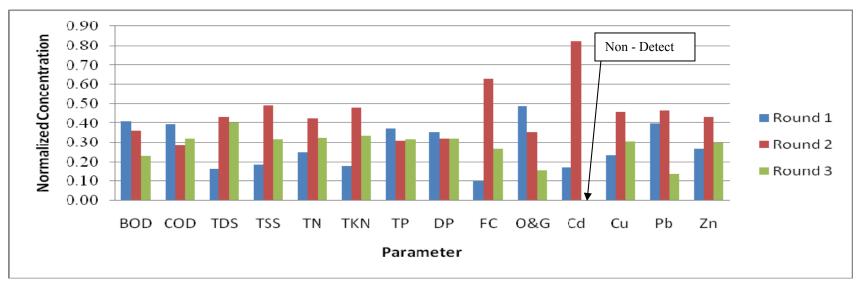
Three compounds each were detected among the volatile organic compounds and base/neutral extractable compounds, Toluene and Bis(2-ethylhexyl)phthalate being the most prevalent in their respective category. No acid extractable compounds were encountered at any of the Potomac River watershed sites. Cyanide, Phenols and eleven metals were detected at varying frequencies and concentrations. Mercury and Selenium were recorded at two locations, the highest recorded at Washington Ship Channel and the C&O Canal sites. Lead, Copper, Nickel and Zinc are relatively ubiquitous. Among the conventional pollutants, fecal coliform is detected at higher frequency and concentration.

TABLE 8-1 COMPARISON OF EVENT MEAN CONCENTRATION

	Average of Event Mean Concentrations for Designated Parameters (mg/L unless otherwise noted)													
Round	BOD	COD	TDS	TSS	TN	TKN	TP	DP	FC ^a	O&G	Cd ^b	Cu ^b	Pb ^b	Zn ^b
1	36.3	78.8	145.3	27.1	1.9	1.2	0.3	0.22	1,468	2.9	0.19	46.0	29.0	80.1
2	32.1	57.5	376.2	70.1	3.3	3.2	0.344	0.20	9,140	2.1	0.9	90.0	34.0	130.0
3	20.6	64.4	347	46.1	2.5	2.2	0.277	0.20	3894	0.93	0	60.0	10.0	90.0

^a Units are in MPN/100 ml

FIGURE 8-3 STORM WATER QUALITY TREND



^b Units are in μg/L

TABLE 8-2. DETECTED PARAMETERS IN THE POTOMAC RIVER WATERSHED (FROM 7 SITES, 63 STORM WATER SAMPLING EVENTS, 2005 THRU 2011)

Parameters	Unit	Concen	tration
rarameters	UIII	From	То
(A) Volatile Organic Compou	ınds		
Bromoform	μg/L	9.4	9.4
Chloroform	$\mu g/L$	0.83	5
Tetrachloroethene	μg/L	1.6	5
Toluene	μg/L	0.78	26
(B) Acid Extractable Compou	ınds – None		
(C) Base/Neutral Extractable (Compounds		
Bis(2-ethylhexyl)phthalate	$\mu g/L$	5.6	77
Butylbenzylphthalate	μg/L	200	200
Di-n-butylphthalate	μg/L	5.9	8.3
(D) Pesticides/PCBs			
4,4'-DDT	μg/L	0.18	0.18
Endosulfan I (Alpha-Endosulfan)	μg/L	0.2	0.2
(E) Metals, Cyanide, and Phe	nols		
Antimony, Total	mg/L	0.00033	0.021
Arsenic, Total	mg/L	0.001	0.027
Cadmium, Total	mg/L	0.00022	0.016
Chromium, Total	mg/L	0.001	0.01
Copper, Total	mg/L	0.0032	0.65
Lead, Total	mg/L	0.0036	0.38
Mercury, Total	mg/L	0.00021	0.008
			ı

TABLE 8-2. DETECTED PARAMETERS IN THE POTOMAC RIVER WATERSHED

(SAMPLING EVENTS 2005 THRU 2011) - Continued

Parameters	Unit	From	То
E) Metals, Cyanide, and Ph	enols (cont'd)		
Nickel, Total	mg/L	0.0024	0.12
Selenium, Total	mg/L	0.0031	0.059
Silver, Total	mg/L	0.0005	0.0023
Zinc, Total	mg/L	0.0095	0.98
Cyanide, Total	mg/L	0.0009	2.4
Phenols, Total	mg/L	0.012	2.5
(F) Conventional Pollutants	S		
Total suspended solids	mg/L	5.2	558
Total dissolved solids	mg/L	56	5700
COD	mg/L	17	460
BOD ₅	mg/L	2.7	980
Oil and Grease	mg/L	2.7	13.5
Fecal Coliform	MPN/100mL	50	>160000
Fecal Streptococcus	MPN/100mL	23	>160000
Total Kjeldahl Nitrogen (TKN)	mg/L	0.84	9.8
Nitrate + Nitrite (NO ₂ + NO ₃)	mg/L	0.061	3.2
Dissolved Phosphorous	mg/L	0.014	1.5
Total Phosphorous (TP)	mg/L	0.039	2.6
Hardness	mg/L	42	800
Total Nitrogen	mg/L	1	9.2

APPENDIX A

POTOMAC RIVER MONITORING SITES

Battery Kemble

Site 1 (M16-A)

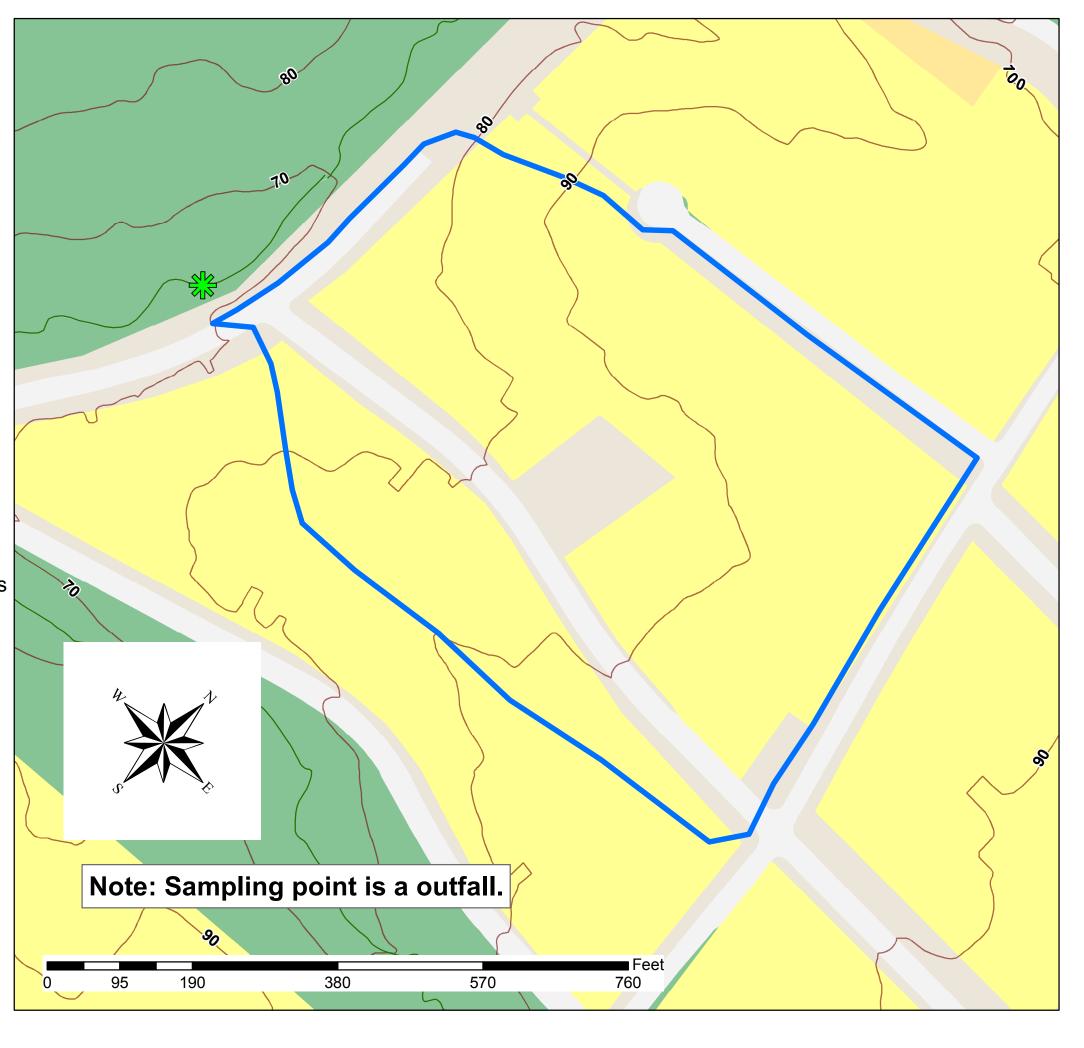
Potomac River Watershed

Legend

- Water Quality Monitoring Sites
- Monitoring Site Drainage Area
 - DC Water Bodies

Existing Land Use

- Low Density Residential
- Low-Medium Density Residential
- Medium Density Residential
- High Density Residential
- Commercial
- Transport, Communication, Utilities
- Industrial
- Mixed Use
- Institutional
- Federal Public
- Local Public
- Public, Quasi-Public, Institutional
- Parks and Open Spaces
- Parking
- Roads; Alleys; Median
- Transportation Right of Way
- Undetermined
- Water



Foundary Branch

Site 2 (M17-A)

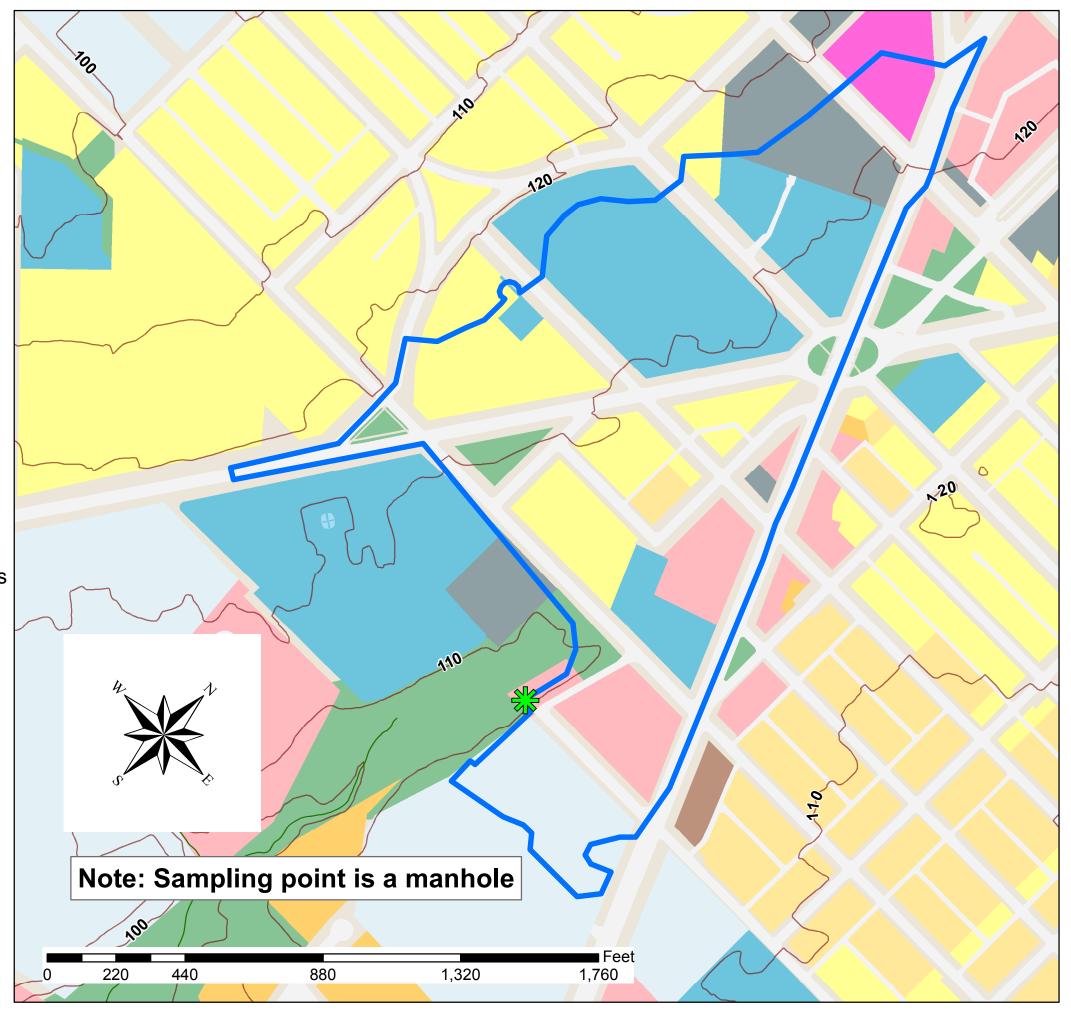
Potomac River Watershed

Legend

- ** Water Quality Monitoring Sites
- Monitoring Site Drainage Area
 - DC Water Bodies

Existing Land Use

- Low Density Residential
- Low-Medium Density Residential
- Medium Density Residential
- High Density Residential
- Commercial
- Transport, Communication, Utilities
- Industrial
- Mixed Use
- Institutional
- Federal Public
- Local Public
- Public, Quasi-Public, Institutional
- Parks and Open Spaces
- Parking
- Roads; Alleys; Median
- Transportation Right of Way
- Undetermined
- Water



Dalecarlia Tributary

Site 3 (M18-A)

Potomac River Watershed

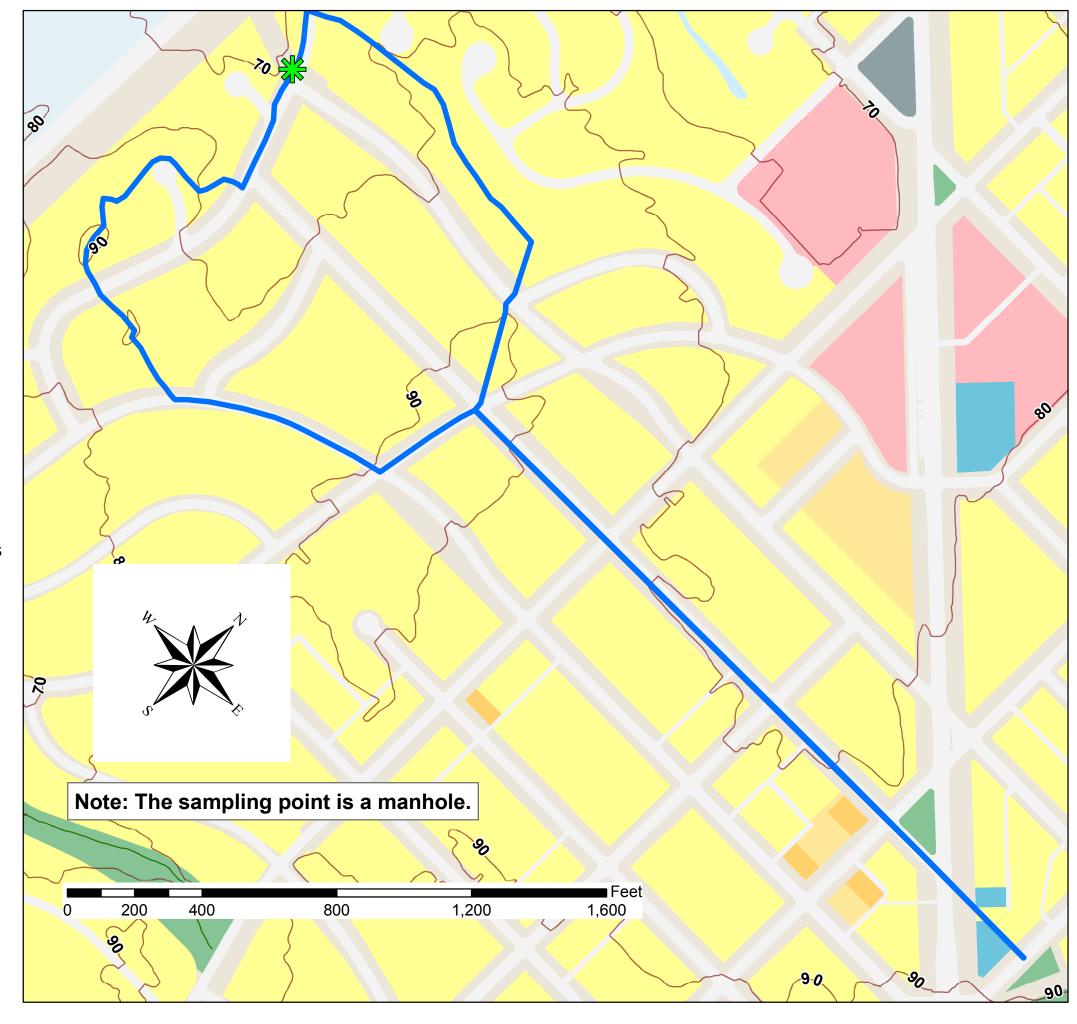
Legend

- Water Quality Monitoring Sites
- Monitoring Site Drainage Area

DC Water Bodies

Existing Land Use

- Low Density Residential
- Low-Medium Density Residential
- Medium Density Residential
- High Density Residential
- Commercial
- Transport, Communication, Utilities
- Industrial
- Mixed Use
- Institutional
- Federal Public
- Local Public
- Public, Quasi-Public, Institutional
- Parks and Open Spaces
- Parking
- Roads; Alleys; Median
- Transportation Right of Way
- Undetermined
- Water



Oxon Run

Site 4 (M19-A)

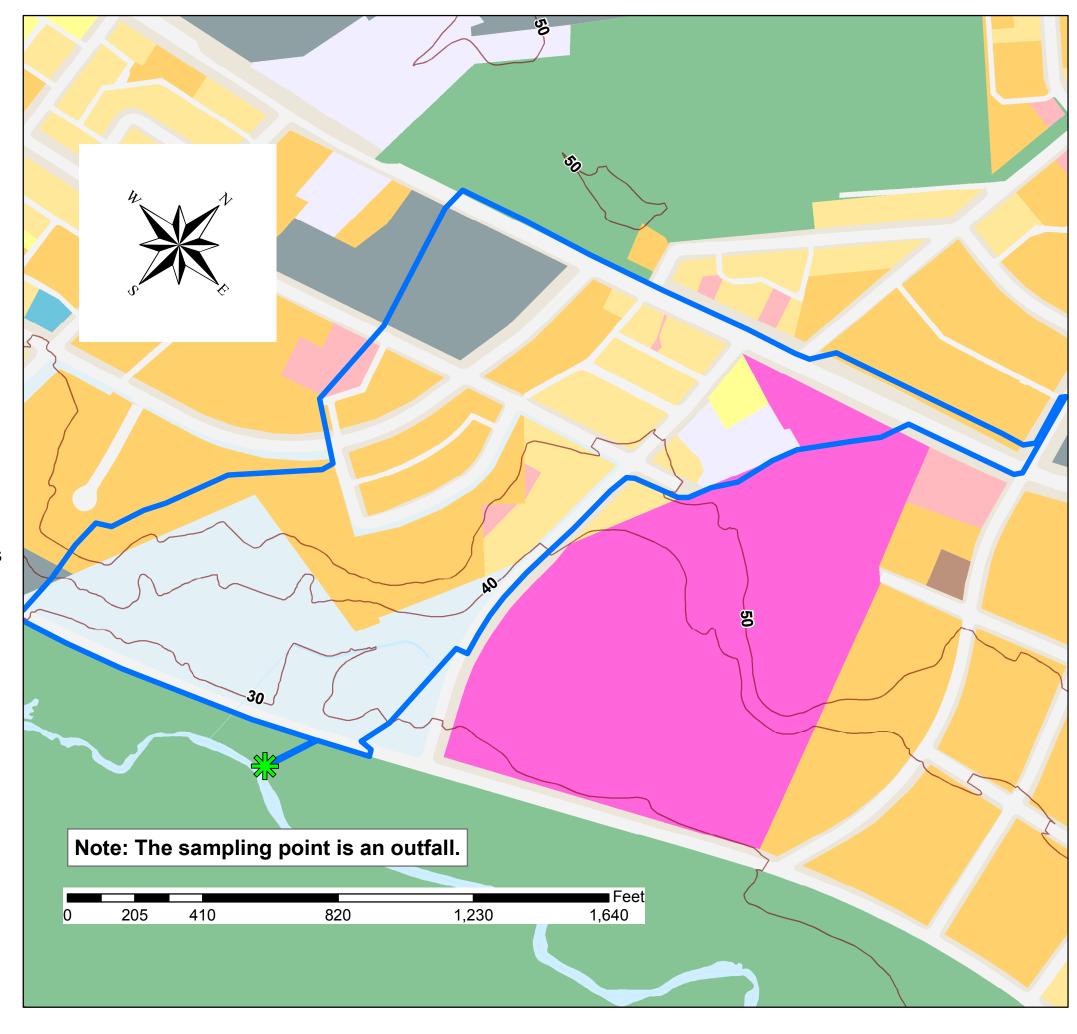
Potomac River Watershed

Legend

- Water Quality Monitoring Sites
- Monitoring Site Drainage Area
 - DC Water Bodies

Existing Land Use

- Low Density Residential
- Low-Medium Density Residential
- Medium Density Residential
- High Density Residential
- Commercial
- Transport, Communication, Utilities
- Industrial
- Mixed Use
- Institutional
- Federal Public
- Local Public
- Public, Quasi-Public, Institutional
- Parks and Open Spaces
- Parking
- Roads; Alleys; Median
- Transportation Right of Way
- Undetermined
- Water



Tidal Basin

Site 5 (M20-A)

Potomac River Watershed

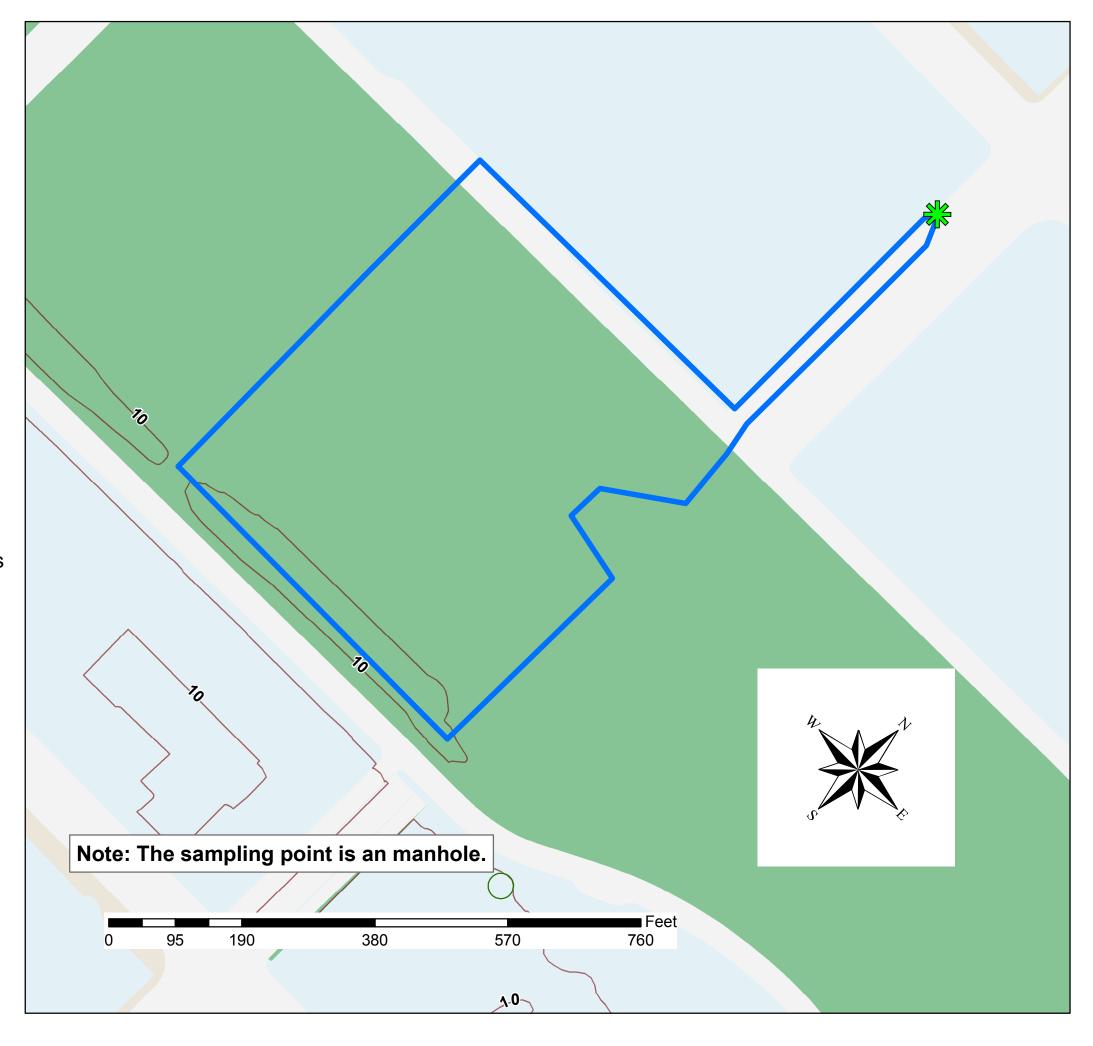
Legend

- Water Quality Monitoring Sites
- Monitoring Site Drainage Area
 - DC Water Bodies

Existing Land Use

Land Use Designation

- Low Density Residential
- Low-Medium Density Residential
- Medium Density Residential
- High Density Residential
- Commercial
- Transport, Communication, Utilities
- Industrial
- Mixed Use
- Institutional
- Federal Public
- Local Public
- Public, Quasi-Public, Institutional
- Parks and Open Spaces
- Parking
- Roads; Alleys; Median
- Transportation Right of Way
- Undetermined
- Water



Washington Ship Channel

Site 6 (M21-A)

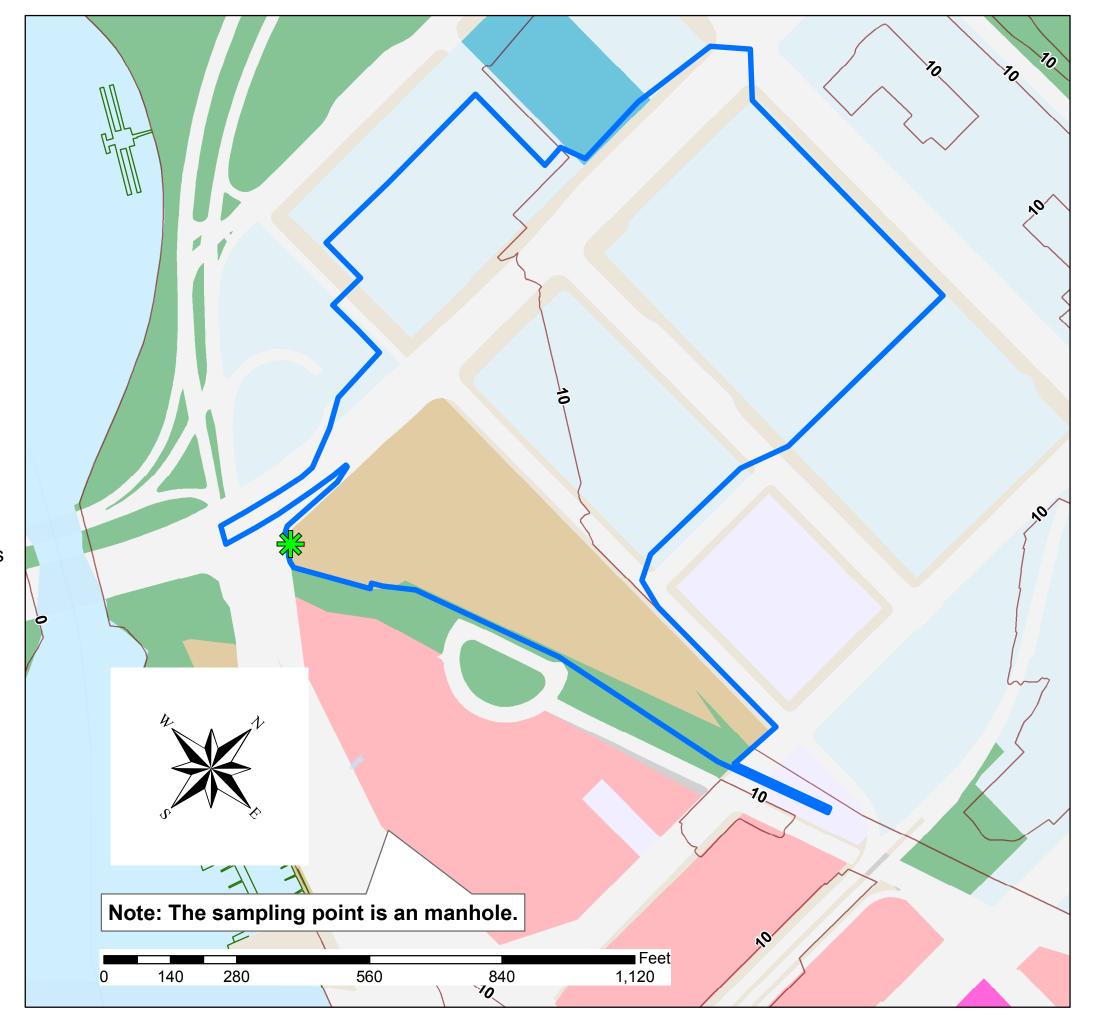
Potomac River Watershed Legend

- Water Quality Monitoring Sites
- Monitoring Site Drainage Area
 - DC Water Bodies

Existing Land Use

Land Use Designation

- Low Density Residential
- Low-Medium Density Residential
- Medium Density Residential
- High Density Residential
- Commercial
- Transport, Communication, Utilities
- Industrial
- Mixed Use
- Institutional
- Federal Public
- Local Public
- Public, Quasi-Public, Institutional
- Parks and Open Spaces
- Parking
- Roads; Alleys; Median
- Transportation Right of Way
- Undetermined
- Water



C & O Canal

Site 7 (M22-A)

Potomac River Watershed

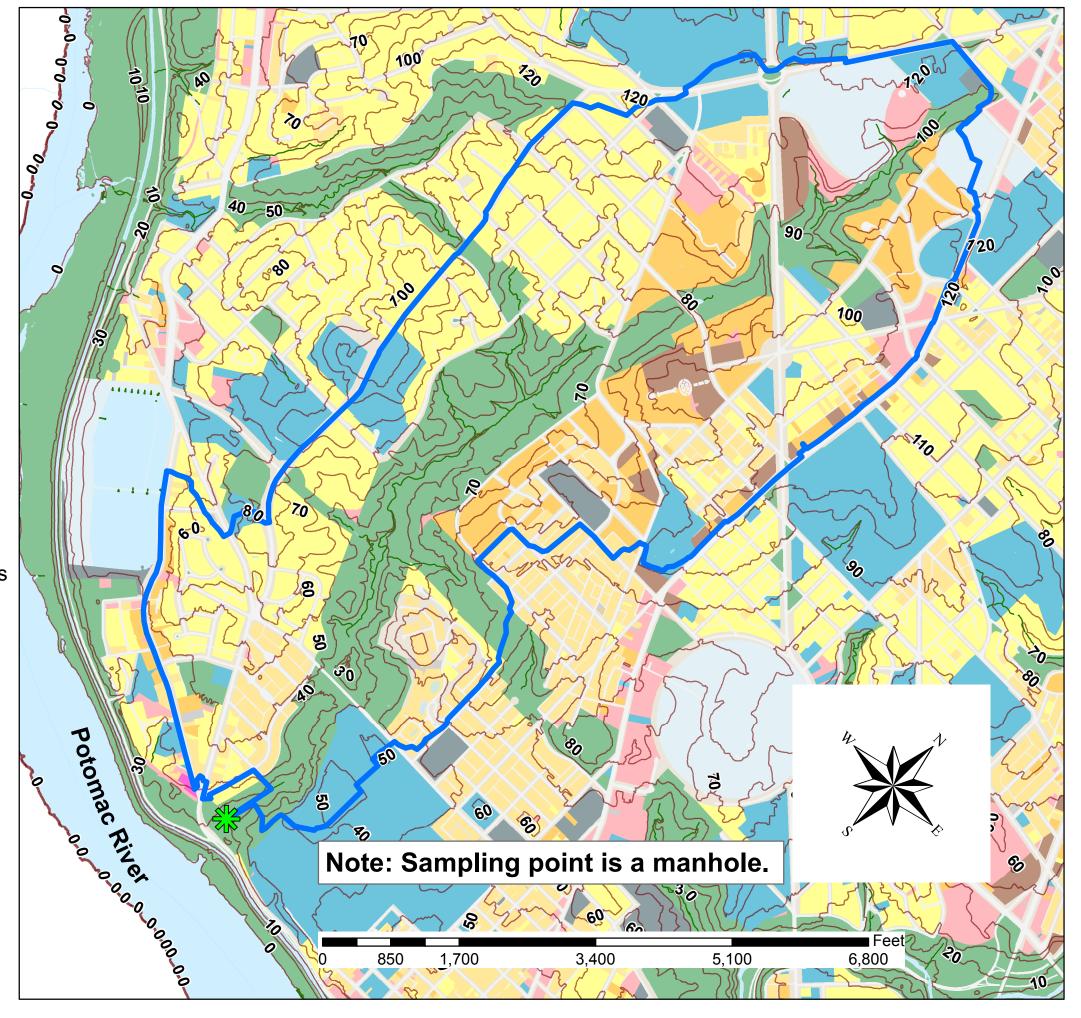
Legend

- Water Quality Monitoring Sites
- Monitoring Site Drainage Area
 - DC Water Bodies

Existing Land Use

Land Use Designation

- Low Density Residential
- Low-Medium Density Residential
- Medium Density Residential
- High Density Residential
- Commercial
- Transport, Communication, Utilities
- Industrial
- Mixed Use
- Institutional
- Federal Public
- Local Public
- Public, Quasi-Public, Institutional
- Parks and Open Spaces
- Parking
- Roads; Alleys; Median
- Transportation Right of Way
- Undetermined
- Water



APPENDIX B

POTOMAC RIVER WATERSHED DISCHARGE MONITORING REPORT

DISCHARGE MONITORING REPORT (DMR)

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

ADDRESS: NAME: The Government of the District of Columbia-DDOE

441 4TH STREET, N.W. WASHINGTON, DC 20001

FACILITY: DISTRICT DEPARTMENT OF THE ENVIRONMENT NA

LOCATION: 51 N. STREET, N.E., 5TH FLOOR WASHINGTON, DC 20001

ATTN: Julia Evans, P.E./Senior Envir

FROM

5

08/31/2010

MW/DD/YYYY 09/01/2009

MM/DD/YYYY

PERMIT NUMBER DC0000221 MONITORING PERIOD

M16-A

DISCHARGE NUMBER

MAJOR DMR Mailing ZIP CODE: 20002

OMB No. 2040-0004 Form Approved

BATTERY KEMBLE CREEK External Outfall

No Discharge

00605 1 0 Effluent Gross 00600 1 0 Effluent Gross 00556 1 0 Effluent Gross 00530 1 0 Effluent Gross 00400 1 0 Effluent Gross 00310 1 0 Effluent Gross 00011 1 0 Effluent Gross Nitrogen, total Oil & Grease Solids, total suspended Nitrogen, organic total (as N) BOD, 5-day, 20 deg. C Temperature, water deg. fahrenheit PARAMETER SAMPLE MEASUREMENT PERMIT REQUIREMENT PERMIT REQUIREMENT PERMIT REQUIREMENT PERMIT REQUIREMENT REQUIREMENT REQUIREMENT PERMIT VALUE **** ***** ***** ***** **** *** ***** **** ***** QUANTITY OR LOADING VALUE ***** **** ***** ***** ***** **** **** **** ***** **** STIND ***** ***** ***** ***** *** *** **** Req. Mon. VALUE ***** ***** ***** ***** ***** ***** **** ***** ***** QUALITY OR CONCENTRATION VALUE ***** **** **** ***** ***** **** *** **** **** ***** 8,97 8.23 Req. Mon. ANNL MAX Req. Mon. Req. Mon. ANNL MAX Req. Mon. ANNL MAX Req. Mon. ANNL MAX Reg. Mon. ANNL MAX 21.0 亥 9,2 VALUE *!*/ 40 STINO mg/L mg/L deg F πg/L mg/L ဗ္ဗ ΜŞ. FREQUENCY OF ANALYSIS Three Per Year Three Per SAMPLE TYPE COMPOS GRAB GRAB GRAB GRAB GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER lettrev

REQUIREMENT

YPED OR PRINTED Se/tzer

I contify under penelty of itse thin this document and all attachments were prepared under my direction or expercision in zerositomes with a system designed to assure that qualified personnil properly guides and evaluate the information atomical. Stated to my impurity of the pressure or persons who namege the system, or those persons of early responsible for gathering the information, the information abouting the to the best of my flowed-tage and bestiff, then, seturate, and complete I am aware that there are applicant postulates for submitting this minimistant, including the possibility of fine and imprantment for homeone to believe to the contract of the most of the contract of the most of the contract of t

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT h

TELEPHONE

Req. Mon. ANNL MAX

mg/Ľ

Three Per Year

COMPOS

AREA Code 202-535=/603 NUMBER 08/19 WW/DD/YYYY DATE

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
POTOMAC RIVER WATERSHED- DO TO ROTATING SCHEDULE OUTFALL BECOMES EFFECT. 08/01/07.MON. IS ORTLY, REPORTED ANNLY. Montorma Joan 2010 ١ Sampling May 2010 -

July 2011

EPA Form 3320-1 (Rev.01/06) Prégious editions may be used

06/15/2011

Page 1

DISCHARGE MONITORING REPORT (DMR)

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: ADDRESS: 441 4TH STREET, N.W. WASHINGTON, DC 20001 The Government of the District of Columbia-DDOE

FACILITY: DISTRICT DEPARTMENT OF THE ENVIRONMENT NA

LOCATION: 51 N. STREET, N.E., 5TH FLOOR WASHINGTON, DC 20001

ATTN: Julia Evans, P.E./Senior Envir

FROM

ď

08/31/2010

MM/DD/YYYY 09/01/2009

PERMIT NUMBER DC0000221

M16-A

DISCHARGE NUMBER

MONITORING PERIOD MM/DD/YYY

MAJOR DMR Mailing ZIP CODE:

20002

OMB No. 2040-0004 Form Approved

External Outfall BATTERY KEMBLE CREEK

No Discharge

						<u> </u>	_	 -	FF -			<u>; </u>								•
	Effluent Gross	00900 1 0	Hardness, total (as CaCO3)	Effluent Gross	00720 1 0	Effluent Gross Cyanide, total (as CN)	00666 1 0	Phosphorus, dissolved	Effluent Gross	TORRE LO	Phosphorus, total (as P)	00630 1 0	man to the contract of the con	Effluent Gross Nitrite plus pitrate total 1 det (as Ni	00625 1 0	Nitrogen, Kjeldahl, total (as N)		Pools (as N)	Vitrogen emmonia total (ac Ni	PARAMETER
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I eartify under possity of they that this descurred und all attachments were prepared under my direction or supervision in accordance with a gestern designed to assess that qualified presonance properly guider under cachine the information schmitted. Based our my artifacy of the person or present with manager the system, are those persons directly responsible for guidering the information, the information submitted is, to the base of my involving the subsidier, they accordance and complete it are worst of that there are significant permitters for admitting false information, including the possibility of fine and improvingent for knowing tolkings.

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
POTOMAC RIVER WATERSHED- DO TO ROTATING SCHEDULE GUTFALL BECOMES EFFECT. 08/01/07.MON. IS QRTLY, REPORTED ANNLY. SIGNATURE OF PRINCIPAL EXECUTIVE OF AUTHORIZED AGENT

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AREA Code	<u> </u>
NUMBER	TELEPHONE
CALADOWW	DATE

EPA Form 3320-1 (Rev.01/06) Previous editions may be used.

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DISCHARGE MONITORING REPORT (DMR)

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: ADDRESS: The Government of the District of Columbia-DDOE

FACILITY: DISTRICT DEPARTMENT OF THE ENVIRONMENT N ℓ 441 4TH STREET, N.W. WASHINGTON, DC 20001

LOCATION: 51 N. STREET, N.E., 5TH FLOOR WASHINGTON, DC 20001

ATTN: Julia Evans, P.E./Senior Envir

PERMIT NUMBER DC0000221

M16-A

DISCHARGE NUMBER

5 MM/DD/YYY 08/31/2010

FROM

MM/DD/YYYY 09/01/2009

MONITORING PERIOD

MAJOR DMR Mailing ZIP CODE: 20002

OMB No. 2040-0004 Form Approved

BATTERY KEMBLE CREEK

External Outfall

No Discharge

PARAMETER		QUANT	QUANTITY OR LOADING		p P	QUALITY OR CONCENTRATION	ENTRATION		ΩŎ.	FREQUENCY OF ANALYSIS	SAMPLE
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Base/neutral compounds	SAMPLE MEASUREMENT	*****	**************************************		***	****	20			Year	<u>6</u>
32015 1 0 Effluent Gross	PERMIT REQUIREMENT	****	***	***	序册的	****	Reg. Mon.	mg/L		Three Per	9
Acid compounds	SAMPLE MEASUREMENT	香物特雷洛水	*****	***	****	******	ND			Year	GKA8
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PCB-1242 bot. dep., dry solid	SAMPLE MEASUREMENT	****	****	*****	****	*****	NO			Year	9
Effluent Gross	PERMIT REQUIREMENT	****	****	****	****	. The second	Req. Mon. ANNL MAX	ηδω		Three Per	GRI AB
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COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
POTOMAC RIVER WATERSHED- DO TO ROTATING SCHEDULE OUTFALL BECOMES EFFECT, 08/01/07,MON, IS QRTLY, REPORTED ANNLY. NAME/TITLE PRINCIPAL EXECUTIVE OFFICER ether Sel TYPED OR PRINTED tront

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I cardly made penalty of het that his document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the automation attended Bessel on my clearly of the personn or persons, who manage the system, or those persons directly responsible for gathering the information, the information abstracts and persons and person and person

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

AREA Code

202-535-/60 TELEPHONE NUMBER 18/19/ MW/DD/YYYY DATE

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: ADDRESS: The Government of the District of Columbia-DDOE

441 4TH STREET, N.W. WASHINGTON, DC 20001

FACILITY: DISTRICT DEPARTMENT OF THE ENVIRONMENT NA

LOCATION: 51 N. STREET, N.E., 5TH FLOOR WASHINGTON, DC 20001

ATTN: Julia Evans, P.E./Senior Envir

FROM

징

MM/DD/YYYY 09/01/2009

MM/DD/YYYY 08/31/2010

MONITORING PERIOD

PERMIT NUMBER DC0000221

M16-A

DISCHARGE NUMBER

MAJOR DMR Mailing ZIP CODE: 20002

OMB No. 2040-0004 Form Approved

BATTERY KEMBLE CREEK External Outfall

No Discharge

Effluent Gross	74055 1 0	Coliform, fecal general	Effluent Gross		Effluent Gross Pesticides, general	70296 1 0	Effluent Gross Solids, total dissolved (TDS)	46000 1 0	Phenois	39508 1 0	PCB-1260	Effluent Gross	39504 1 0	Effluent Gross	39500 1 0	PCB-1248	PARAMETER
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COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
POTOMAC RIVER WATERSHED- DO TO ROTATING SCHEDULE OUTFALL BECOMES EFFECT. 08/01/07.MON. IS ORTLY, REPORTED ANNLY. TYPED OR PRINTED

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

I certify under penalty of law that this document and all matchments were prepared inside my direction or supervision in accordance with a spacen designed to assure that qualified presonated properly gluther and exituate the information atomical. Bosed on my majorny of the persons of persons who manage the system, or those persons directly responsible for gathering the notionation, the information, their information, their information, their information, their information their information that the persons of t

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

202-535-1603 TELEPHONE DATE

AREA Code NUMBER 08/19 AAAAGG/WW

EPA Form 3320-1 (Rev.01/06) Previous editions may be used. See

2000

DISCHARGE MONITORING REPORT (DMR)

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

The Government of the District of Columbia-DDOE

ADDRESS: 441 4TH STREET, N.W. WASHINGTON, DC 20001

FACILITY: DISTRICT DEPARTMENT OF THE ENVIRONMENT NA

LOCATION: 51 N. STREET, N.E., 5TH FLOOR WASHINGTON, DC 20001

ATTN: Julia Evans, P.E./Senior Envir

PERMIT NUMBER DC0000221

M16-A

DISCHARGE NUMBER

DMR Mailing ZIP CODE: MAJOR 20002

OMB No. 2040-0004 Form Approved

BATTERY KEMBLE CREEK

External Outfall

No Discharge

FROM MM/DD/YYYY 09/01/2009 MONITORING PERIOD 5 MM/DD/YYYY 08/31/2010

81017 1 0 Effluent Gross 78732 1 0 Effluent Gross Chemical Oxygen Demand (COD) 78240 1 0 Effluent Gross Volatile compounds, (GC/MS) Metals, total PARAMETER SAMPLE MEASUREMENT SAMPLE MEASUREMENT SAMPLE MEASUREMENT REQUIREMENT PERMIT REQUIREMENT REQUIREMENT PERMIT VALUE ***** ***** QUANTITY OR LOADING VALUE ***** **** **** STIND **** *** VALUE **** QUALITY OR CONCENTRATION VALUE ***** ***** ***** **** 0.00/7 Req. Mon. ANNL MAX Req. Mon. ANNL MAX Req. Mon. ANNL MAX 84.0 VALUE 140 UNITS mg/L ing/L mg/L ΜŞ FREQUENCY OF ANALYSIS Three Per Year Three Per Year Three Per Year SAMPLE GRAB GRAB GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER /TYPED OR PRINTED 1201

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SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

AREA Code 202-535-160 TELEPHONE NUMBER 08/19/11 WW/DD/YYY DATE

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
POTOMAC RIVER WATERSHED-DO TO ROTATING SCHEDULE OUTFALL BECOMES EFFECT, 08/01/07.MON, IS QRTLY, REPORTED ANNLY.

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OMB No. 2040-0004 Form Approved

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: The Government of the District of Columbia-DDOE

ADDRESS: 441 4TH STREET, N.W. WASHINGTON, DC 20001

FACILITY: DISTRICT DEPARTMENT OF THE ENVIRONMENT NA

LOCATION: 51 N. STREET, N.E., 5TH FLOOR WASHINGTON, DC 20001

ATTN: Julia Evans, P.E./Senior Envir

FROM

뒪

08/31/2010

MM/DD/YYYY 09/01/2009

MW/DD/YYYY

MONITORING PERIOD

PERMIT NUMBER DC0000221

M17-A

DISCHARGE NUMBER

MAJOR DMR Mailing ZIP CODE: 20002

External Outfall FOUNDARY BRANCH

No Discharge

00310 1 0 Effluent Gross 00530 1 0 Effluent Gross 00011 1 0 Effluent Gross 00400 1 0 Effluent Gross Oil & Grease Solids, total suspended BOD, 5-day, 20 deg. C Temperature, water deg. fahrenheit PARAMÈTER SAMPLE MEASUREMENT SAMPLE MEASUREMENT SAMPLE MEASUREMENT SAMPLE MEASUREMENT SAMPLE MEASUREMENT PERMIT REQUIREMENT PERMIT REQUIREMENT PERMIT REQUIREMENT PERMIT REQUIREMENT VALUE *** ***** ***** QUANTITY OR LOADING VALUE ***** ***** STINU ***** **** ***** ***** Req. Mon. MINIMUM VALUE ***** ***** ***** *** *** QUALITY OR CONCENTRATION VALUE **** ***** ***** ***** ***** ***** titiztája a Reg. Mon. ANNL MAX Req. Mon. ANNL MAX 15.9 Req. Mon. ANNL MAX Req. Mon. ANNL MAX VALUE X 6.8 1. 0 2 STINU deg F mg/L mg/L ä 只중 FREQUENCY OF ANALYSIS Three Per Year Three Per Year Three Per Year Three Per Year SAMPLE TYPE COMPOS GRAB **GRAB** GRAB

/TYPED OR PRINTED	To front Solton DE	NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
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SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT		7
AREA Code	202	ПЭТ
NUMBER	202-535-1603	ELEPHONE
MM/DD/YYYY	08/19/11	DATE

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here) POTOMAC RIVER WATERSHEDMON, IS QRTLY, REPORTED ANNLY.

00556 1 0 Effluent Gross

PERMIT REQUIREMENT

N. W

Req. Mon. ANNL MAX

mg/L

Three Per Year

GRAB

Reg. Mon. ANNL MAX

πg/L

Three Per Year

GRAB

Nitrogen, total

00600 1 0 Effluent Gross

Nitrogen, organic total (as N)

SAMPLE MEASUREMENT

Ź

Req. Mon. ANNL MAX

mg/L

Three Per Year

COMPOS

REQUIREMENT

PERMIT REQUIREMENT SAMPLE MEASUREMENT

00605 1 0 Effluent Gross

EPA Form 3320-1 (Rev.01/06) Previous editions may be used

Mountaring 2010 - Sempling May 2010 - July 2011

OMB No. 2040-0004 Form Approved

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: The Government of the District of Columbia-DDOE

ADDRESS: 441 4TH STREET, N.W. WASHINGTON, DC 20001

FACILITY: DISTRICT DEPARTMENT OF THE ENVIRONMENT NA

LOCATION: 51 N. STREET, N.E., 5TH FLOOR WASHINGTON, DC 20001

> PERMIT NUMBER DC0000221

DISCHARGE NUMBER M17-A

MAJOR **DMR Mailing ZIP CODE:** 20002

FOUNDARY BRANCH External Outfall

No Discharge

ATTN: Julia Evans, P.E./Senior Envir 09/01/2009 7 08/31/2010

FROM

MM/DD/YYYY

MM/DD/YYYY

MONITORING PERIOD

00900 1 0 Effluent Gross REQUIREMENT	Hardness, total (as CaCO3) SAMPLE MEASUREMENT	00720 1 0 PERMIT Effluent Gross REQUIREMENT	Cyanide, total (as CN) SAMPLE MEASUREMENT	00666 1 0 PERMIT Effluent Gross REQUIREMENT	Phosphorus, dissolved SAMPLE MEASUREMENT	00665 1 0 PERMIT Effluent Gross REQUIREMENT	Phosphorus, total (as P) SAMPLE MEASUREMENT	Effluent Gross REQUIREMENT	Nitrite plus nitrate total 1 det. (as N) SAMPLE MEASUREMENT	00625 1 0 PERMIT Effluent Gross REQUIREMENT	Nitrogen, Kjeldahl, total (as N) SAMPLE MEASUREMENT	Effluent Gross REQUIREMENT	Nitrogen, ammonia total (as N) SAMPLE MEASUREMENT		PARAMETER
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COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here) POTOMAC RIVER WATERSHEDMON. IS QRTLY, REPORTED ANNLY.

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

I confly make penalty of law that this document and all anathems were propared under my direction or appertision to accordance with a system designed to assure that qualified parameted properly guidner duterabase the information assuring all based on my directly of the penant or persons when paralleg the system, or those persons directly responsible for guidning the information about the information about the penant of the penant of

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

AREA Code

NUMBER

MW/DD/YYY

702-535-1603

08/18/1

DATE

TELEPHONE

TYPED OR PRINTED

EPA Form 3320-1 (Rev.01/06) Previous editions may be used.

OMB No. 2040-0004 Form Approved

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: The Government of the District of Columbia-DDOE

ADDRESS: 441 4TH STREET, N.W. WASHINGTON, DC 20001

FACILITY: DISTRICT DEPARTMENT OF THE ENVIRONMENT NA

LOCATION: 51 N. STREET, N.E., 5TH FLOOR WASHINGTON, DC 20001

ATTN: Julia Evans, P.E./Senior Envir

FROM

MM/DD/YYYY 09/01/2009

MM/DD/YYYY

5

08/31/2010

MONITORING PERIOD

PERMIT NUMBER DC0000221

DISCHARGE NUMBER M17-A

MAJOR DMR Mailing ZIP CODE: 20002

External Outfall FOUNDARY BRANCH

No Discharge

39492 1 0 Effluent Gross 34671 1 0 Effluent Gross 32020 1 0 Effluent Gross 32015 1 0 Effluent Gross 31679 1 0 Effluent Gross 39499 1 0 Effluent Gross PCB-1242 bot. dep., dry solid 39488 1 0 Effluent Gross Acid compounds Fecal streptococci, MF m-enterococcus ag PCB-1232 PCB-1221 PCB-1016 Base/neutral compounds PARAMETER SAMPLE MEASUREMENT PERMIT REQUIREMENT SAMPLE MEASUREMENT REQUIREMENT MEASUREMENT SAMPLE MEASUREMENT SAMPLE MEASUREMENT PERMIT REQUIREMENT SAMPLE MEASUREMENT PERMIT REQUIREMENT SAMPLE MEASUREMENT REQUIREMENT PERMIT REQUIREMENT REQUIREMENT SAMPLE PERMIT VALUE *** ***** ***** ***** **** ***** ***** ***** **** QUANTITY OR LOADING VALUE **** ***** **** ***** **** ***** **** **** STIND ***** **** **** ***** ***** **** ***** VALUE ***** ***** **** **** *** ***** ***** ***** QUALITY OR CONCENTRATION VALUE ***** **** ***** ***** **** ***** **** **** ***** **** 90,000 Req. Mon. ANNL MAX Req. Mon. ANNL MAX Reg. Mon. ANNL MAX Reg. Mon. ANNL MAX Req. Mon. ANNL MAX Req. Mon. ANNL MAX Req. Mon. ANNL MAX 5 VALUE 5 Š Š 3 B #/100mL STINU ηg/L mg/L mg/L ∏/gm mg/L mg/L 찟중 FREQUENCY OF ANALYSIS Three Per Year SAMPLE TYPE **GRAB** GRAB GRAB GRAB GRAB GRAB GRAB

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Lather	INCHES IN LEGISLATION
Seltzer	NAME/ III LE FRINCIFAL EXECUTIVE OFFICER
FE	
P SVS	SU.

TYPED OR PRINTED

I certify under penalty of low that this document and all standments were prepared under my direction or supervision in considuous with a system designed to assure that qualify of personned property glother and evaluate this information appointed, allowed on my including of the person or persons with a smaller to gutern, or flows persons describy responsible for gathering the reformation, the attendances where the contraction are the standard to the standard

SIGNATORE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

202535-1603 TELEPHONE 8 DATE

AREA Code NUMBER MWGDWYY 0

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here) POTOMAC RIVER WATERSHEDMON, IS QRTLY, REPORTED ANNLY.

See Dasso d

OMB No. 2040-0004 Form Approved

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: The Government of the District of Columbia-DDOE

ADDRESS: 441 4TH STREET, N.W. WASHINGTON, DC 20001

LOCATION: FACILITY: 51 N. STREET, N.E., 5TH FLOOR WASHINGTON, DC 20001 DISTRICT DEPARTMENT OF THE ENVIRONMENT NA

ATTN: Julia Evans, P.E./Senior Envir

FROM

5

MM/DD/YYYY 09/01/2009

MM/DD/YYYY 08/31/2010

MONITORING PERIOD

DC0000221

PERMIT NUMBER

M17-A

DISCHARGE NUMBER

MAJOR DMR Mailing ZIP CODE: 20002

FOUNDARY BRANCH External Outfall

No Discharge

GRAB	Three Per Year	0mL	#/100mL	Req. Mon. ANNL MAX	*****	*****	*****	***	****	PERMIT REQUIREMENT	74055 1 0 Effluent Gross
				24,000	*****	***	****	*****	****	SAMPLE MEASUREMENT	Coliform, fecal general
GRAB	Three Per Year	t/T	mg/L	Reg. Mon. ANNL MAX	****	******	*****	<i>ት</i> ተቋዋና	*****	PERMIT REQUIREMENT	74053 1 0 Effluent Gross
				ON	不会都不完全	· · · · · · · · · · · · · · · · · · ·	****	*****	为五条营车外	SAMPLE MEASUREMENT	Pesticides, general
GRAB	Three Per Year	1/1	1/gm	Req. Mon. ANNL MAX	*******	清教表演者	*****	*christinin	有种种的物种	PERMIT REQUIREMENT	70296 1 0 Effluent Gross
				390	***	***	*****	***	*****	SAMPLE MEASUREMENT	Solids, total dissolved (TDS)
GRAB	Three Per Year	j/L	mg/L	Req. Mon. ANNL MAX	******	****	*****	****	******	PERMIT REQUIREMENT	46000 1 0 Effluent Gross
		·		0.016	******	****	****	****	* Company	SAMPLE MEASUREMENT	Phenois
GRAB	Three Per Year	J/L	mg/L	Req. Mon. ANNL MAX	*****	*****	*****	******	****	PERMIT REQUIREMENT	39508 1 0 Effluent Gross
				NB	******	****	******	****	****	SAMPLE MEASUREMENT	PCB-1260
GRAB	Three Per Year		mg/L	Red. Mon. ANNL MAX	*****	******	spierske	保持外部市场	*****	PERMIT REQUIREMENT	39504 1 0 Effluent Gross
			,	NO	*****	***	*****	****	****	SAMPLE MEASUREMENT	PCB-1254
GRAB	Three Per Year	j∕L	mg/L	Reg. Mon. ANNL MAX	******	*******	*****	केट-शेक ं टर	28 <i>84\$</i>	PERMIT REQUIREMENT	39500 1 0 Effluent Gross
				ON	****	***	******	*****	****	SAMPLE MEASUREMENT	PCB-1248
		ST	UNITS	VALUE	VALUE	VALUE	UNITS	VALUE	VALUE		
SAMPLE TYPE	FREQUENCY OF ANALYSIS	Ψ.ö.		CENTRATION	QUALITY OR CONCENTRATION	۵		QUANTITY OR LOADING	QUANI		PARAMETER

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER ethey seltzer TYPED OR PRINTED

I certify made penalty of fave that this document and all anathments were proposed under my thereisan or supervision in conceivance with a system of adapted to assure that qualified personnel property gather and evaluate the information administed Bosed on my impuly of the person or pressure who intended assurance and evaluate the information administed Bosed on my impuly of the person or pressure who intended as which person in the information administed is, to the begind for my biometrical state of the person of pressure who intended as a supervision of the person of pressure who intended as a supervision of the person of

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

AREA Code 202-535-TELEPHONE NUMBER 6

DATE

MWDDYYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here) POTOMAC RIVER WATERSHEDMON. IS QRTLY, REPORTED ANNLY.

000

OMB No. 2040-0004 Form Approved

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: ADDRESS: The Government of the District of Columbia-DDOE

441 4TH STREET, N.W. WASHINGTON, DC 20001

FACILITY: LOCATION: 51 N. STREET, N.E., 5TH FLOOR WASHINGTON, DC 20001 DISTRICT DEPARTMENT OF THE ENVIRONMENT NA

ATTN: Julia Evans, P.E./Senior Envir

FROM

5

MM/DD/YYYY 09/01/2009

MM/DD/YYYY 08/31/2010

MONITORING PERIOD

PERMIT NUMBER DC0000221

M17-A

DISCHARGE NUMBER

DMR Mailing ZIP CODE: 20002

MAJOR

External Outfall FOUNDARY BRANCH

No Discharge

		QUANT	QUANTITY OR LOADING		Q	QUALITY OR CONCENTRATION	ENTRATION		₹ <u></u>	FREQUENCY OF ANALYSIS	SAMPLE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	STINU			
Metals, total	SAMPLE MEASUREMENT	*****	***	***		****	0.22				
78240 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*******	*****	*****	*****	Req. Mon. ANNL MAX	mg/L		Three Per Year	GRAB
Volatile compounds, (GC/MS)	SAMPLE MEASUREMENT	****	*****	*****	******	******	0.0094				
78732 1 0 Effluent Gross	PERMIT REQUIREMENT	**************************************	**************************************	******	****		Req. Mon. ANNL MAX	mg/L		Three Per Year	GRAB
Chemical Oxygen Demand (COD)	SAMPLE MEASUREMENT	****	*****	the part of the street	****	***	95				
81017 1 0 Effluent Gross	PERMIT REQUIREMENT	enim e	****	nskinsk	******	*****	Req. Mon. ANNL MAX	mg/L		Three Per Year	GRAB
					• • • • • • • • • • • • • • • • • • • •						

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER TYPED OR PRINTED

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

AREA Code NUMBER

TELEPHONE

DATE

202-535-160 08/191 MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here) POTOMAC RIVER WATERSHEDMON. IS QRTLY, REPORTED ANNLY.

OMB No. 2040-0004 Form Approved

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: The Government of the District of Columbia-DDOE

ADDRESS: 441 4TH STREET, N.W. WASHINGTON, DC 20001

FACILITY: DISTRICT DEPARTMENT OF THE ENVIRONMENT NA

LOCATION: 51 N. STREET, N.E., 5TH FLOOR WASHINGTON, DC 20001

ATTN: Julia Evans, P.E./Senior Envir

FROM

ಠ

MM/DD/YYYY 09/01/2009

MM/DD/YYYY 08/31/2010

PERMIT NUMBER DC0000221 **MONITORING PERIOD**

DISCHARGE NUMBER M18-A

MAJOR DMR Mailing ZIP CODE: 20002

DALECARLIA TRIBUTORY External Outfall

No Discharge

00605 1 0 Effluent Gross	Nitrogen, organic total (as N)	00600 1 0 Effluent Gross	Nitrogen, total	00556 1 0 Effluent Gross	Oil & Grease	00530 1 0 Effluent Gross	Solids, total suspended	00400 1 0 Effluent Gross	pH	00310 1 0 Effluent Gross	BOD, 5-day, 20 deg. C	00011 1 0 Effluent Gross	Temperature, water deg. fahrenheit		PARAMETER
PERMIT REQUIREMENT	SAMPLE MEASUREMENT	PERMIT REQUIREMENT	SAMPLE MEASUREMENT	PERMIT REQUIREMENT	SAMPLE MEASUREMENT	PERMIT REQUIREMENT	SAMPLE MEASUREMENT	PERMIT REQUIREMENT	SAMPLE MEASUREMENT	PERMIT REQUIREMENT	SAMPLE MEASUREMENT	PERMIT REQUIREMENT	SAMPLE MEASUREMENT		
******	***	*****	*****	****	*****	*****	****	*****	****	******	***	Addish	******	VALUE	QUAN
*****	希腊代史斯	法 语对称解决	*****	*****	****	******	****	*****	***	*****	skin ment	*******	****	VALUE	QUANTITY OR LOADING
****	***************************************	****	****	****	****	****	***	*****	******	******	****	*****	******	UNITS	3
****	*****	*****	*****	*****	*****	*****	*****	Req. Mon. MINIMUM	6.7	*****	按照的价格的	*************************************	*****	VALUE	Q
*****	*****	*****	******	******	****	*****	*** 4 6 6 6 4	***	******	******	THE STATE OF THE S	外外安排命者	*****	VALUE	UALITY OR CONCENTRATION
Req. Mon. ANNL MAX	NR	Req. Mon. ANNL MAX	8.5	Req. Mon. ANNL MAX	9.0	Red. Mon. ANNL MAX	1/0	Req. Mon. ANNL MAX	8.1	Req. Mon. ANNL MAX	52	Req. Mon. ANNL MAX	61.0	VALUE	ENTRATION
mg/L		mg/L		mg/Ľ		л⁄6ш		ກຣ		mg/Ľ		deg F		UNITS	
															ДŞ.
Three Per Year	į	Three Per Year		Three Per Year		Three Per Year		Three Per Year		Three Per Year		Three Per Year			FREQUENCY OF ANALYSIS
COMPOS		GRAB	ļ	GRAB		GRAB		GRAB		COMPOS		GRAB			SAMPLE TYPE

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER rey Seltzer

TYPED OR PRINTED

certify under penalty of iran that the document and all attachments were supervision in accordance with a splarant designed to assure that qualified ju-eration is a supervision admitted. Based on my frequity of the person or a system, or these persons directly responsible for gathering the information to the best of my fourwholege and lateril, thu, a constant, and complete I am penaltine for submitting fittes information, including the possibility of fine violations. s prepared under my direction or personnel properly gather and persons who manage the a. the information submitted is.

SIGNATORE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

AREA Code 202535760 TELEPHONE NUMBER AAAAGGWW DATE

06/15/2011

Sampling May 2010 - July 2011

EPA Form 3320-1 (Rev.01/06) Previous editions may be used.

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COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)
POTOMAC RIVER WATERSHEDMON, IS ORTLY, REPORTED ANNLY.

Year 2010 -

Page 1

OMB No. 2040-0004 Form Approved

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

The Government of the District of Columbia-DDOE

ADDRESS: 441 4TH STREET, N.W. WASHINGTON, DC 20001

FACILITY: DISTRICT DEPARTMENT OF THE ENVIRONMENT NA

LOCATION: 51 N. STREET, N.E., 5TH FLOOR WASHINGTON, DC 20001

ATTN: Julia Evans, P.E./Senior Envir

FROM

ð

08/31/2010

MM/DD/YYYY 09/01/2009

MM/DD/YYYY

MONITORING PERIOD

PERMIT NUMBER DC0000221

M18-A

DISCHARGE NUMBER

MAJOR **DMR Mailing ZIP CODE:** 20002

External Outfall DALECARLIA TRIBUTORY

No Discharge

00900 1 0 Effluent Gross 00666 1 0 Effluent Gross 00665 1 0 Effluent Gross 00630 1 0 Effluent Gross 00625 1 0 Effluent Gross Phosphorus, total (as P) 00610 1 0 Effluent Gross Hardness, total (as CaCO3) 00720 1 0 Effluent Gross Nitrite plus nitrate total 1 det. (as N) Nitrogen, Kjeldahl, total (as N) Nitrogen, ammonia total (as N) Cyanide, total (as CN) Phosphorus, dissolved PARAMETER SAMPLE MEASUREMENT REQUIREMENT REQUIREMENT PERMIT REQUIREMENT PERMIT REQUIREMENT REQUIREMENT PERMIT REQUIREMENT PERMIT REQUIREMENT PERMIT PERMIT VALUE **** **** **** ***** **** ***** QUANTITY OR LOADING VALUE *** **** **** **** *** *** *** STIND ***** **** ***** ***** **** VALUE ***** ***** * ***** *** **** ***** QUALITY OR CONCENTRATION VALUE **** **** ***** **** ***** ***** ***** **** Req. Mon. ANNL MAX Req. Mon. ANNL MAX Req. Mon. ANNL MAX Reg. Mon. ANNL MAX j. 6 Req. Mon. ANNL MAX Req. Mon. ANNL MAX Req. Mon. ANNL MAX 5 VALUE 5 140 50 2 STING mg/L mg/L mg/L mg/L mg/L mg/L mg/L 증및 FREQUENCY OF ANALYSIS Three Per Year SAMPLE TYPE GRAB GRAB GRAB GRAB GRAB GRAB GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER leffrey Seltzer アイ

TYPED OR PRINTED

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SIGNATURE OF PANICIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT 1

AREA Code 202-535-1603 TELEPHONE NUMBER 08/19 WW/DD/YYYY DATE

See 90 OC

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here) POTOMAC RIVER WATERSHEDMON, IS QRILY, REPORTED ANNLY.

DISCHARGE MONITORING REPORT (DMR)

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: The Government of the District of Columbia-DDOE

ADDRESS: 441 4TH STREET, N.W. WASHINGTON, DC 20001

LOCATION: FACILITY: DISTRICT DEPARTMENT OF THE ENVIRONMENT NA

51 N. STREET, N.E., 5TH FLOOR WASHINGTON, DC 20001

ATTN: Julia Evans, P.E./Senior Envir

FROM

ТО

08/31/2010

WW/DD/YYYY 09/01/2009

MM/DD/YYYY

PERMIT NUMBER DC0000221 MONITORING PERIOD

M18-A

DISCHARGE NUMBER

DMR Mailing ZIP CODE: 20002

OMB No. 2040-0004 Form Approved

DALECARLIA TRIBUTORY MAJOR

External Outfall

No Discharge

39500 1 0 Effluent Gross 39488 1 0 Effluent Gross 34671 1 0 Effluent Gross 32015 1 0 Effluent Gross 31679 1 0 Effluent Gross PCB-1248 39492 1 0 Effluent Gross 32020 1 0 Effluent Gross Acid compounds recal streptococci, MF PCB-1221 PCB-1016 Base/neutral compounds PCB-1232 PARAMETER SAMPLE MEASUREMENT SAMPLE MEASUREMENT SAMPLE MEASUREMENT SAMPLE MEASUREMENT SAMPLE MEASUREMENT SAMPLE MEASUREMENT PERMIT REQUIREMENT PERMIT REQUIREMENT SAMPLE MEASUREMENT REQUIREMENT PERMIT REQUIREMENT REQUIREMENT PERMIT REQUIREMENT PERMIT REQUIREMENT PERMIT VALUE **** ****** **** ***** ***** *** **** ***** ***** ***** QUANTITY OR LOADING VALUE ***** **** **** ***** **** **** 1 SLINO ***** ***** ***** *** **** * VALUE ***** **** ***** ***** **** ***** **** QUALITY OR CONCENTRATION VALUE 中央安全市 ***** ***** ***** ***** ***** 160,000 0.000 Reg. Mon. ANNL MAX Reg. Mon. ANNL MAX Req. Mon. ANNL MAX Reg. Mon. ANNL MAX Req. Mon. ANNL MAX Reg. Mon. ANNL MAX Req. Mon. ANNL MAX VALUE 3 Ġ, 50 Ś Š #100mL UNITS mg/L mg/L mg/L mg/∟ mg/L ng/L 몆증 FREQUENCY OF ANALYSIS Three Per Year SAMPLE TYPE GRAB GRAB GRAB **GRAB** GRAB GRAB GRAB

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ceción note poculty of las viat this document and all studiments were prepared under my direction or uportision in accordance with a system designed to assure that qualified personnel properly gather and values the information submitted lessed on my inquiry of the person or persons who nothings the system, or those persons thready responsible for gathering the information, the information statistical is the best of my (mayoldage and belief in true accuming and complete in an water that there are supficient than the statistics for submittediage and belief in the possibility of fine and implicionance for knowing.

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

AREA Code 202-535-1605 TELEPHONE

NUMBER 08/19 WW/DD/YYY

DATE

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here) POTOMAC RIVER VIATERSHEDMON. IS QRTLY, REPORTED ANNLY.

OMB No. 2040-0004 Form Approved

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: The Government of the District of Columbia-DDOE

ADDRESS: 441 4TH STREET, N.W. WASHINGTON, DC 20001

FACILITY: DISTRICT DEPARTMENT OF THE ENVIRONMENT NA

LOCATION: 51 N. STREET, N.E., 5TH FLOOR WASHINGTON, DC 20001

ATTN: Julia Evans, P.E./Senior Envir

FROM

5

08/31/2010

MM/DD/YYYY 09/01/2009

MM/DD/YYYY

MONITORING PERIOD

PERMIT NUMBER DC0000221

M18-A

DISCHARGE NUMBER

MAJOR DMR Mailing ZIP CODE: 20002

External Outfall DALECARLIA TRIBUTORY

No Discharge

78240 1 0 Effluent Gross	Metals, total	74055 1 0 Effluent Gross	Coliform, fecal general	74053 1 0 Effluent Gross	Pesticides, general	70296 1 0 Effluent Gross	Solids, total dissolved (TDS)	46000 1 0 Effluent Gross	Phenols	39508 1 0 Effluent Gross	PCB-1260	39504 1 0 Effluent Gross	PCB-1254		PARAMETER
PERMIT REQUIREMENT	SAMPLE MEASUREMENT	PERMIT REQUIREMENT	SAMPLE MEASUREMENT	PERMIT REQUIREMENT	SAMPLE MEASUREMENT	PERMIT REQUIREMENT	SAMPLE MEASUREMENT	PERMIT REQUIREMENT	SAMPLE MEASUREMENT	PERMIT REQUIREMENT	SAMPLE MEASUREMENT	PERMIT REQUIREMENT	SAMPLE MEASUREMENT		
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*****	*****	SHIPSHE	****	****	****	****	नेपारंग्यंत्रं	. +****	*****	****	*****	******	****	VALUE	QUANTITY OR LOADING
doctories	*****	*******	*****	****	****	*****	*****	*****	******	*****		******	****	UNITS	
*****	****	******	***************************************	计会计分析数	****	*****	****	*****	**		****	******	****	VALUE	<u>ي</u>
******	******	******	***	******	李斯尔尔尔森	法律协会条件	****	*****	*****	1	****	*****	*****	VALUE	QUALITY OR CONCENTRATION
Req. Mon. ANNL MAX	0.20	Req. Mon. ANNL MAX	12,000	Reg. Mon. ANNL MAX	2/0	Reg. Mon. ANNL MAX	236	Reg. Mon. ANNL MAX	210.0	Req. Mon. ANNL MAX	ON	Reg. Mon. ANNL MAX	NO	VALUE	ENTRATION
mg/L		#/100mL		mg/L		mg/L		mg/L		mg/L		mg/L		UNITS	
				·											EX.
Three Per Year		Three Per Year		Three Per Year		Three Per Year		Three Per Year		Three Per Year		Three Per Year			FREQUENCY OF ANALYSIS
GRAB		GRAB		GRAB		GRAB		GRAB		GRAB		GRAB			SAMPLE TYPE

TYPED OR PRINTED Se/ Itzer

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

AREA Code 262-585-165 TELEPHONE DATE

NUMBER 06, MM/DD/YYYY 5

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here) POTOMAC RIVER WATERSHEDMON. IS QRTLY, REPORTED ANNLY.

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DISCHARGE MONITORING REPORT (DMR)

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: The Government of the District of Columbia-DDOE

ADDRESS: 441 4TH STREET, N.W. WASHINGTON, DC 20001

FACILITY: DISTRICT DEPARTMENT OF THE ENVIRONMENT NA

LOCATION: 51 N. STREET, N.E., 5TH FLOOR WASHINGTON, DC 20001

ATTN: Julia Evans, P.E./Senior Envir

FROM

5

08/31/2010

MM/DD/YYYY 09/01/2009

MM/DD/YYYY

MONITORING PERIOD

PERMIT NUMBER DC0000221

DISCHARGE NUMBER M18-A

MAJOR DMR Mailing ZIP CODE: 20002

OMB No. 2040-0004 Form Approved

DALECARLIA TRIBUTORY

External Outfall

No Discharge

81017 1 0 Effluent Gross Chemical Oxygen Demand (COD) 78732 1 0 Effluent Gross Volatile compounds, (GC/MS) PARAMETER SAMPLE MEASUREMENT SAMPLE MEASUREMENT REQUIREMENT PERMIT REQUIREMENT VALUE ***** **** QUANTITY OR LOADING VALUE ***** **** SLIND ***** **** VALUE ***** QUALITY OR CONCENTRATION VALUE **** Req. Mon. ANNL MAX Red. Mon. ANNL MAX 240 VALUE 3 SLING mg/L mg/L ΜŸ FREQUENCY OF ANALYSIS Three Per Year Three Per Year SAMPLE TYPE GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER lettrey SeltzerP.F. TYPED OR PRINTED

I cardy must peahly of law hat this document and all attachments were prepared tocket my direction or supervision in executione with a splann change of to season that qualified personnel property guider and extracted the information submitted. Bused on my impury of the person or persons who immage the system, or these persons denoted by responsible for generally the enformation, the information the information there is expiritional to the best of my insortiologic and beliefs, thus, accument, and compilete. I are sower for the there are expiritional personal for submitting false information, including the possibility of line and imprisorment for knowing volutions.

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

202-53-1603 TELEPHONE

AREA Code NUMBER φ **MM/DD/YYYY** 119,

DATE

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here) POTOMAC RIVER WATERSHEDMON. IS QRTLY, REPORTED ANNLY.

Se

OMB No. 2040-0004 **Form Approved**

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: ADDRESS: The Government of the District of Columbia-DDOE

441 4TH STREET, N.W. WASHINGTON, DC 20001

LOCATION: FACILITY: 51 N. STREET, N.E., 5TH FLOOR WASHINGTON, DC 20001 DISTRICT DEPARTMENT OF THE ENVIRONMENT NA

ATTN: Julia Evans, P.E./Senior Envir

FROM

5

MM/DD/YYYY 09/01/2009

MM/DD/YYYY 08/31/2010

MONITORING PERIOD

PERMIT NUMBER DC0000221

M19-X

DISCHARGE NUMBER

MAJOR DMR Mailing ZIP CODE:

20002

OXON RUN External Outfall

No Discharge

PARAMETER		QUANI	QUANTITY OR LOADING		Q.	QUALITY OR CONCENTRATION	ENTRATION		ΠŞ.	FREQUENCY OF ANALYSIS	SAMPLE
		VALUE	BUTVA	STINU	VALUE	ANTA	VALUE	STINU	*****		
Temperature, water deg. fahrenheit	SAMPLE MEASUREMENT	*****	*****	*	**	****	59.2				
00011 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	*****	****	****	****	Req. Mon. ANNL MAX	deg F		Three Per Year	GRAB
BOD, 5-day, 20 deg. C	SAMPLE MEASUREMENT	*****	****	*****	phylicide and a second	专业安全	9.7				
00310 1 0 Effluent Gross	PERMIT	*****	*****	***	*****	*****	Req. Mon. ANNL MAX	mg/L		Three Per Year	COMPOS
рH	SAMPLE MEASUREMENT	******	*****	**	4.4	**	1. N				
00400 1 0 Effluent Gross	PERMIT REQUIREMENT	棒车水岭业车	*****	**	Red Mon MINIMUM	**************************************	Reg. Mon. ANNL MAX	SÚ		Three Per Year	GRAB
Solids, total suspended	SAMPLE MEASUREMENT	****	****	****	*****	****	140				
00530 1 0 Effluent Gross	PERMIT REQUIREMENT	***	*****	******	子斯和米尔尔	华多州州水平	Req. Mon. ANNL MAX	mg/L		Three Per Year	GRAB
Oil & Grease	SAMPLE MEASUREMENT	****	Protectional Committee	******	******	*****	an				
00556 1 0 Effluent Gross	PERMIT REQUIREMENT	****	****	****	大师将金额农	赤沙沙沙沙	Req. Mon. ANNL MAX	Т/6ш		Three Per Year	GRAB
Nitrogen, total	SAMPLE MEASUREMENT	*****	*****	*****	****	· ******	5.6				
00600 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	ተጽተጽተ	典冷安快宴子	*****	李女女女女女	Req. Mon. ANNL MAX	mg/L		Three Per Year	GRAB
Nitrogen, organic total (as N)	SAMPLE MEASUREMENT	*****	***	****	**		47				·
00605 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	******	****	*****	****	Req. Mon. ANNL MAX	mg/L		Three Per Year	COMPOS

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here) POTOMAC RIVER WATERSHEDMON, IS QRTLY, REPORTED ANNLY.

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

lettrey Seltzer

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I centry under presity of law that this document and all autochments were prepared under my direction at supervision in accordance with a system designed to assure that qualificed personned properly gather and evaluate the information attendance. Based on my inquiry of the person or persons who munuage the system or those persons detectly responsible for gathering the minormation. Based my many the minormation should be reformation shoulded it, to the heat of my favor-polege and better three sources and compileted in an water that there are spificiount penalties for a three interpolations for all controlled in the present penalties of the most penalties for the convenience of the convenience of the penalties of the source of the penalties of the convenience of the penalties of the convenience of the penalties o

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

AREA Code

NUMBER

MM/DDYYY

202555

TELEPHONE

DATE

TYPED OR PRINTED

Montorma

EPA Form 3320-1 (Rev.01/06) Previous editions may be used. Year 2010-Sampling May 2010 - July 2011

OMB No. 2040-0004 Form Approved

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

The Government of the District of Columbia-DDOE

ADDRESS: 441 4TH STREET, N.W. WASHINGTON, DC 20001

FACILITY: DISTRICT DEPARTMENT OF THE ENVIRONMENT NA

LOCATION: 51 N. STREET, N.E., 5TH FLOOR WASHINGTON, DC 20001

ATTN: Julia Evans, P.E./Senior Envir

FROM

뒪

08/31/2010

MM/DD/YYYY 09/01/2009

MM/DD/YYYY

MONITORING PERIOD

PERMIT NUMBER DC0000221

DISCHARGE NUMBER M19-A

MAJOR DMR Mailing ZIP CODE:

20002

External Outfall OXON RUN

No Discharge

00666 1 0 Effluent Gross 00900 1 0 Effluent Gross 00720 1 0 Effluent Gross 00630 1 0 Effluent Gross 00665 1 0 Effluent Gross Phosphorus, total (as P) 00625 1 0 Effluent Gross 00610 1 0 Effluent Gross Phosphorus, dissolved Nitrogen, ammonia total (as N) Cyanide, total (as CN) Nitrite plus nitrate total 1 det. (as N) Nitrogen, Kjeldahl, total (as N) Hardness, total (as CaCO3) PARAMETER SAMPLE MEASUREMENT REQUIREMENT PERMIT REQUIREMENT PERMIT REQUIREMENT REQUIREMENT PERMIT REQUIREMENT PERMIT REQUIREMENT PERMIT REQUIREMENT PERMIT PERMIT VALUE **** **** ***** **** ***** **** **** ***** QUANTITY OR LOADING VALUE **** *** **** **** ***** ***** *** **** **** UNITS ***** **** ***** **** ***** **** **** VALUE *** ***** ***** **** *** ***** **** ***** **** QUALITY OR CONCENTRATION VALUE **** ***** ***** ***** **** ***** ***** **** ***** **** Req. Mon. ANNL MAX Req. Mon. ANNL MAX 0.81 Red. Mon. ANNL MAX Req. Mon. ANNL MAX Reg. Mon. ANNL MAX Reg. Mon. ANNL MAX Req. Mon. ANNL MAX 40:04 45.0 M VALUE 0.13 120 Ź STIND mg/L mg/L mg/L ng/L mg/L mg/L <u>m</u>g/L ᆽ FREQUENCY OF ANALYSIS Three Per Year SAMPLE TYPE GRAB GRAB GRAB GRAB GRAB GRAB **GRAB**

Jeffrey Seltzer T.E. NAME/TITLE PRINCIPAL EXECUTIVE OFFICER TYPED OR PRINTED

I cardity touther penulty of Law that this document and all attachments were prepared toucher my detection or supervision in accordinate with a system dissigned to season that qualified personned property gaths and system, or those persons extend the minimal point of the person or pursons who immage the system, or those persons detectly responsible for gathering the information, the information that person or pursons who immage the not be been of my foundsides and belief in two, accurate, and complete in an owner due there are algorithment for the person of the submitting distribution of the person of the submitting distribution, metabuling the possibility of fire and imprisonment for knowing to the possibility of the submitting distributions.

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

202-555-1603 TELEPHONE NUMBER E DATE

AREA Code MM/DD/YYY 13

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here) POTOMAC RIVER WATERSHEDMON. IS QRTLY, REPORTED ANNLY.

OMB No. 2040-0004 Form Approved

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: The Government of the District of Columbia-DDOE

ADDRESS: 441 4TH STREET, N.W. WASHINGTON, DC 20001

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LOCATION: 51 N. STREET, N.E., 5TH FLOOR WASHINGTON, DC 20001

ATTN: Julia Evans, P.E./Senior Envir

FROM

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08/31/2010

MM/DD/YYYY 09/01/2009

MM/DD/YYYY

MONITORING PERIOD

DC0000221

PERMIT NUMBER

M19-A

DISCHARGE NUMBER

MAJOR DMR Mailing ZIP CODE:

20002

External Outfall OXON RUN

No Discharge

34671 1 0 Effluent Gross 32020 1 0 Effluent Gross 39488 1 0 Effluent Gross 39499 1 0 Effluent Gross 31679 1 0 Effluent Gross Acid compounds 32015 1 0 Effluent Gross Fecal streptococci, MF m-enterococcus ag 39492 1 0 Effluent Gross PCB-1016 Base/neutral compounds PCB-1242 bot dep., dry solid PCB-1232 PCB-1221 PARAMETER SAMPLE MEASUREMENT PERMIT REQUIREMENT PERMIT REQUIREMENT PERMIT REQUIREMENT PERMIT REQUIREMENT REQUIREMENT REQUIREMENT REQUIREMENT PERMIT PERMIT VALUE ***** **** ***** ***** ***** **** **** QUANTITY OR LOADING VALUE ***** **** **** **** ***** **** UNITS **** ***** **** **** **** **** VALUE ***** **** **** ***** *** **** **** **** QUALITY OR CONCENTRATION VALUE **** **** **** ***** ***** **** 0.0082 Req. Mon. ANNL MAX Req. Mon. ANNL MAX Req. Mon. ANNL MAX Req. Mon. ANNL MAX Reg. Mon. ANNL MAX Req. Mon. ANNL MAX Reg. Mon. ANNL MAX 1,600 VALUE 20 5 3 É Ş #100mL STINU mg/L mg/L mg/L mg/L J.gm mg/L 꼊 FREQUENCY OF ANALYSIS Three Per Year SAMPLE TYPE GRAB GRAB GRAB GRAB GRAB GRAB GRAB

Jeffrey Se / 12ev NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

I certify under penalty of law that this document and all attuchments were prepared coder my direction or apportion in associations with a system designed to assure that qualified personnel peparty glother and variants this information admirted. Bessel on my mighty of the penson or persons who in image in system, or those persons directly responsible for generally the information, the information about the formation about the responsible for general, and employed in an owner for their or we rightfulunt to the best of my knowledge and belief than accordant, and campled in an owner for their or we rightfulunt to the control of a solutioning false information, methaling the possibility of line and unpresentment for thousand volutions.

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

202-555-168 TELEPHONE 08/19

DATE

AREA Code NUMBER MWDDWYY

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ADDRESS: 441 4TH STREET, N.W. WASHINGTON, DC 20001

LOCATION: FACILITY: DISTRICT DEPARTMENT OF THE ENVIRONMENT NA

51 N. STREET, N.E., 5TH FLOOR WASHINGTON, DC 20001

ATTN: Julia Evans, P.E./Senior Envir

FROM

5

08/31/2010

MM/DD/YYYY 09/01/2009

WW/DD/YYYY

MONITORING PERIOD

PERMIT NUMBER DC0000221

M19-A

DISCHARGE NUMBER

MAJOR DMR Mailing ZIP CODE: 20002

External Outfall OXON RUN

No Discharge

74055 1 0 Effluent Gross 70296 1 0 Effluent Gross 46000 1 0 Effluent Gross 39500 1 0 Effluent Gross 39508 1 0 Effluent Gross 39504 1 0 Effluent Gross 74053 1 0 Effluent Gross Coliform, fecal general PCB-1260 Pesticides, general Solids, total dissolved (TDS) Phenois PCB-1254 PCB-1248 PARAMETER SAMPLE MEASUREMENT REQUIREMENT PERMIT REQUIREMENT PERMIT REQUIREMENT REQUIREMENT REQUIREMENT PERMIT REQUIREMENT PERMIT REQUIREMENT PERMIT PERMIT VALUE ***** *** **** **** ***** **** *** ***** QUANTITY OR LOADING VALUE **** ***** ***** **** ***** **** UNITS ***** **** **** ***** をおおから **** VALUE **** **** ***** ***** ***** ***** **** ***** **** QUALITY OR CONCENTRATION VALUE ***** **** ***** **** *** **** **** **** 0.0002 0,022 0000 Req. Mon. ANNL MAX Reg. Mon. ANNL MAX VALUE 380 20 20 Ş #/100mL SLINA mg/L mg/L mg/L mg/L mg/L mg/L ΠŞ. FREQUENCY OF ANALYSIS Three Per Year ⊺hree Per Year Three Per SAMPLE TYPE GRAB GRAB. GRAB GRAB GRAB GRAB GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Jeffrey Seltzer

F.

TYPED OR PRINTED

I cordy) upday peathy of two that this document and all unachanents were prepared under any discension or suppression in accordance with a special confugition to assure that qualified personnel property gather and evaluate the information submitted. Based for my undary of the person or persons who manage the system, or those persons detectly responsible to gathering the information, the information short information admitted in the control of the person of the formation short are expiritized is, to the based or my homelooking and belief, then account are and complete, I can sware that there are expiritized in Qualifier for solutions of the solution of the and improvement for knowing housing the possibility of the and improvement for knowing violations.

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

2025357603 AREA Code TELEPHONE NUMBER 60 MWWDWYYY DATE 119

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here) POTOMAC RIVER WATERSHEDMON, IS QRTLY, REPORTED ANNLY. orrod

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PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: The Government of the District of Columbia-DDOE

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FACILITY: DISTRICT DEPARTMENT OF THE ENVIRONMENT NA

LOCATION: 51 N. STREET, N.E., 5TH FLOOR WASHINGTON, DC 20001

ATTN: Julia Evans, P.E./Senior Envir

PERMIT NUMBER DC0000221 MM/DD/YYYY MONITORING PERIOD

FROM

09/01/2009

5

MM/DD/YYYY 08/31/2010

DISCHARGE NUMBER M19-A

MAJOR **DMR Mailing ZIP CODE:** 20002

OMB No. 2040-0004 Form Approved

External Outfall OXON RUN

No Discharge

PARAMETER Metals, total 78240 1 0 Effluent Gross Volatile compounds, (GC/MS)	SAMPLE MEASUREMENT PERMIT REQUIREMENT SAMPLE MEASUREMENT PERMIT	VALUE VALUE	QUANTITY OR LOADING E VALUE	UNITS	VALUE	VALUE VALUE VALUE VALUE VALUE Reg, Mon ANNIL MAN Regt, Mon ANNIL MA	VALUE VALUE O. 444 Req. Mon. ANNIL MAX Req. Mon. ANNIL MAX	UNITS mg/L	M.S.	FREQUENCY OF ANALYSIS Three Per Year Three Per
MEAS	AMPLE SUREMENT	*****	****	****	计划表示系统	*****	W			$\sqcup \sqcup$
	PERMIT REQUIREMENT	沈政办法总书	****	Action of the Control	*****	中央市场中 市	Req. Mon. ANNL MAX	mg/L		
	SAMPLE MEASUREMENT	*****	****	*****	*****	*****	777			
	PERMIT REQUIREMENT	***	****	***	安排设计会 数	*****	Req. Mon. ANNL MAX	mg/L		

/ TYPED OR PRINTED	Jeffrey Soltzer 7. E.	NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
	system, or those persons directly responsible for a to the best of my knowledge and belief, true, soon penalties for submitting false information, including	I certify inder penulty of law that this document a supervision in accordance with a system designed evaluate the information submarted. Based on my

and all attachments were prepared under my hirection or not to assure than qualified personnel properly gather and by inquiry of the person or persons who manage the last gathering the information, the information submitted is, quartle, and complete, I am waver to there are supplificant using the possibility of fine and impaisamment for knowing

SIGNATURE OF PENCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE DATE

202-535-AREA Code NUMBER 1643 6 MWDDYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here) POTOMAC RIVER WATERSHEDMON. IS QRTLY, REPORTED ANNLY.

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OMB No. 2040-0004

PERMITTEE NAME/ADDRESS {Include Facility Name/Location if Different}

NAME: The Government of the District of Columbia-DDOE

ADDRESS: 441 4TH STREET, N.W. WASHINGTON, DC 20001

FACILITY: DISTRICT DEPARTMENT OF THE ENVIRONMENT NA

LOCATION: 51 N. STREET, N.E., 5TH FLOOR WASHINGTON, DC 20001

ATTN: Julia Evans, P.E./Senior Envir

PERMIT NUMBER DC0000221 MM/DD/YYYY MONITORING PERIOD

FROM

09/01/2009

5

08/31/2010

MM/DD/YYY

M20-A

DISCHARGE NUMBER

MAJOR DMR Mailing ZIP CODE:

20002

External Outfall TIDAL BASIN

No Discharge

00530 1 0 Effluent Gross Effluent Gross 00556 1 0 Effluent Gross 00600 1 0 Effluent Gross 00400 1 0 Effluent Gross BOD, 5-day, 20 deg. C 00011 1 0 Effluent Gross 00605 1 0 Effluent Gross Oil & Grease Solids, total suspended 오 Nitrogen, organic total (as N) Temperature, water deg. fahrenheit Nitrogen, total PARAMETER SAMPLE MEASUREMENT REQUIREMENT REQUIREMENT PERMIT REQUIREMENT PERMIT REQUIREMENT PERMIT REQUIREMENT PERMIT REQUIREMENT REQUIREMENT PERMIT PERMIT VALUE ***** ***** **** ***** **** ***** QUANTITY OR LOADING VALUE ***** **** **** *** ***** STINU **** ***** **** **** **** **** Reg. Mon. jo V VALUE ***** **** **** ***** **** ***** **** QUALITY OR CONCENTRATION VALUE ***** ***** ***** ***** ***** **** 21,0 Req. Mon. ANNL MAX Req. Mon. ANNL MAX Req. Mon. ANNL MAX Req. Mon. ANNL MAX 5 Req. Mon. ANNL MAX Req. Mon. ANNL MAX Req. Mon. ANNL MAX 220 *(*... 8 VALUE 0.0 X STINO deg F mg/L mg/L mg/L mg/L mg/L S 贝증 FREQUENCY OF ANALYSIS Three Per Year SAMPLE TYPE COMPOS COMPOS GRAB GRAB GRAB GRAB GRAB

I carify maker possily of hay that this document and all intendements were prepared under my direction or supervision in accordance with a system designed to assure that qualified postunate lopedry guither and consider the information submitted. Based on my inquiry of the pressure prepares with manage the constitute the information submitted. Based on my inquiry of the pressure prepares with manage the system, or those persons directly responsible for gathering the information, the information submitted it, and the best of my knowledge and belief, thus, accurate, and complete i am wavef that there are significant premitted for submitting false information, including the possibility of fine and unprisonment for knowing productions.

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

AREA Code 509-125-202 TELEPHONE NUMBER 26 MW/DD/YYYY DATE 175

Men 2010 - July 2011

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here) POTOMAC RIVER VIATERSHEDMON, IS QRTLY, REPORTED ANNLY. Momtoring Year 2010-Sampling

EPA Form 3320-1 (Rev.01/06) Previous editions may be used

DISCHARGE MONITORING REPORT (DMR)

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: The Government of the District of Columbia-DDOE

FACILITY: ADDRESS: 441 4TH STREET, N.W. WASHINGTON, DC 20001

LOCATION: 51 N. STREET, N.E., 5TH FLOOR WASHINGTON, DC 20001 DISTRICT DEPARTMENT OF THE ENVIRONMENT NA

ATTN: Julia Evans, P.E./Senior Envir

FROM

5

MM/DD/YYYY 09/01/2009

MM/DD/YYYY 08/31/2010

MONITORING PERIOD

DC0000221

PERMIT NUMBER

M20-A

DISCHARGE NUMBER

MAJOR **DMR Mailing ZIP CODE:** 20002

OMB No. 2040-0004 Form Approved

External Outfall TIDAL BASIN

No Discharge

PARAMETER		QUANT	QUANTITY OR LOADING		Q	QUALITY OR CONCENTRATION	ENTRATION	:	Ωĕ.	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	STINU	VALUE	VALUE	VALUE	STINU			
Nitrogen, ammonia total (as N)	SAMPLE MEASUREMENT	*****	*******	***	***	*****	NR				
00610 1 0 Effluent Gross	PERMIT REQUIREMENT	· · · · · · · · · · · · · · · · · · ·	冷室布景本學	***	*****	*****	Req. Mon. ANNL MAX	mg/L		Three Per Year	GRAB
Nitrogen, Kjeldahl, total (as N)	SAMPLE MEASUREMENT	*****	*****	*****	*****	***	5.7				
00625 1 0 Effluent Gross	PERMIT REQUIREMENT	*****		*****	****	****	Req. Mon. ANNL MAX	mg/L		Three Per Year	GRAB
Nitrite plus nitrate total 1 det. (as N)	SAMPLE MEASUREMENT	*****	***	*****	*****	****	1.6				
00630 1 0 Effluent Gross	PERMIT REQUIREMENT	*******	******	****	****	****	Reg. Mon. ANNL MAX	тgл		Three Per Year	GRAB
Phosphorus, total (as P)	SAMPLE MEASUREMENT	****	*****	*****	****	****	28.0				
00665 1 0 Effluent Gross	PERMIT REQUIREMENT	法由价格的收	****	****	·	****	Req. Mon. ANNL MAX	mg/L		Three Per Year	GRAB
Phosphorus, dissolved	SAMPLE MEASUREMENT	*****	Hannek	*****	*****	*****	0,82				
00666 1 0 Effluent Gross	PERMIT REQUIREMENT	****	****	****	水外外外外	***	Req. Mon. ANNL MAX	mg/L		Three Per Year	GRAB
Cyanide, total (as CN)	SAMPLE MEASUREMENT	****		****	****	****	an				
00720 1 0 Effluent Gross	PERMIT REQUIREMENT	******	****	李帝举元宗安	***	******	Req. Mon. ANNL MAX	mg/L		Three Per Year	GRAB
Hardness, total (as CaCO3)	SAMPLE MEASUREMENT	******	*****	****	**	****	190				
00900 1 0 Effluent Gross	PERMIT REQUIREMENT	****	***	detected	****	李典本本本	Req. Mon. ANNL MAX	mg/L		Three Per Year	GRAB

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here) POTOMAC RIVER WATERSHEDMON, IS QRTLY, REPORTED ANNLY. TYPED OR PRINTED

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

I cardify under penalty of issy that this document and all anathrents were prepared under my distration or supervision to accordance with a system estigated to same that qualified personar property gather and exclusive the information stamitant. Based on my inquiry of the person or persons who pranego the system, or those persons directly responsible for gathering the entimention, the information table information table. The source is information table in the set of my bowering and belief; thus, contracts, and complete. In an oware that information explicitless, to also best of my bowering persons and belief; thus, contracts, and complete in an oware fast information explicitless of the contraction of the state of the set of the set of my bowering the possibility of first and impresentment for those way.

SIGNATURE OF PENCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

AREA Code

NUMBER

MW/DD/YYYY

202-535-1603

08/19

TELEPHONE

DATE

etrey seltzer

passa

EPA Form 3320-1 (Rev.01/06) Previous editions may be used.

OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

The Government of the District of Columbia-DDOE

ADDRESS: 441 4TH STREET, N.W. WASHINGTON, DC 20001

FACILITY: DISTRICT DEPARTMENT OF THE ENVIRONMENT NA

51 N. STREET, N.E., 5TH FLOOR WASHINGTON, DC 20001

ATTN: Julia Evans, P.E./Senior Envir

PERMIT NUMBER DC0000221

> DISCHARGE NUMBER M20-A

MAJOR DMR Mailing ZIP CODE:

20002

TIDAL BASIN

External Outfall

No Discharge

MM/DD/YYYY 09/01/2009 MONITORING PERIOD 5 MM/DD/YYYY 08/31/2010

FROM

39499 1 0 Effluent Gross 39488 1 0 Effluent Gross 34671 1 0 Effluent Gross 32020 1 0 Effluent Gross 31679 1 0 Effluent Gross PCB-1242 bot. dep., dry solid 39492 1 0 Effluent Gross-Acid compounds 32015 1 0 Effluent Gross Fecal streptococci, MF m-enterococcus ag PCB-1232 PCB-1221 PCB-1016 Base/neutral compounds PARAMETER SAMPLE MEASUREMENT REQUIREMENT SAMPLE MEASUREMENT SAMPLE MEASUREMENT SAMPLE MEASUREMENT PERMIT REQUIREMENT SAMPLE MEASUREMENT PERMIT REQUIREMENT SAMPLE MEASUREMENT REQUIREMENT SAMPLE MEASUREMENT REQUIREMENT PERMIT REQUIREMENT PERMIT REQUIREMENT PERMIT VALUE **** ***** ***** ***** **** *** QUANTITY OR LOADING VALUE *** **** ***** ***** **** **** ***** SLIN **** ****** **** **** **** *** *** VALUE ***** ***** ***** ***** **** ***** **** ***** QUALITY OR CONCENTRATION VALUE ***** **** ***** ***** *** ***** *** ***** 60,000 Req. Mon. ANNL MAX VALUE 5 8 É 0.0/ 3 3 #100mL STIND mg/L mg/L mg/L mg/L mg/L mg/L 쯧충 FREQUENCY OF ANALYSIS Three Per Year SAWPLE GRAB GRAB GRAB GRAB GRAB GRAB GRAB

Teffley NAME/TITLE PRINCIPAL EXECUTIVE OFFICER TYPED OR PRINTED Seltzer P.F.

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SIGNATURE OF PRÍNCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE DATE

AREA Code 202-535-160 NUMBER 00 WWYDDYYY

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OMB No. 2040-0004 Form Approved

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: The Government of the District of Columbia-DDOE

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FACILITY: DISTRICT DEPARTMENT OF THE ENVIRONMENT NA

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ATTN: Julia Evans, P.E./Senior Envir

FROM

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MM/DD/YYYY 09/01/2009

MM/DD/YYYY 08/31/2010

MONITORING PERIOD

PERMIT NUMBER DC0000221

M20-A

DISCHARGE NUMBER

MAJOR DMR Mailing ZIP CODE: 20002

TIDAL BASIN External Outfall

No Discharge

PARAMETER		QUANT	QUANTITY OR LOADING		QI QI	QUALITY OR CONCENTRATION	ENTRATION		₽ĕ	FREQUENCY OF ANALYSIS	SAMPLE
		VALUE	VALUE	STINU	VALUE	∃⊓TVA	VALUE	STINU			
PCB-1248	SAMPLE MEASUREMENT	*****	TO SERVICE STATE	****	*****	*****	No			·	
39500 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	***	******	*****	*****	Req. Mon. ANNL MAX	mg/L		Three Per Year	GRAB
PCB-1254	SAMPLE MEASUREMENT	****	****	****	*****	*****	10				
39504 1:0 Effluent Gross	PERMIT	*****	******	****	***	*****	Req. Mon. ANNL MAX	mg/L		Three Per Year	GRAB
PCB-1260	SAMPLE MEASUREMENT	****	****	***	****	*****	N/O				
39508-1 0 Effluent Gross	PERMIT REQUIREMENT	****	*****	*****	*****	***	Red. Mon. ANNL MAX	mg/L		Three Per Year	GRAB
Phenois	SAMPLE MEASUREMENT	*****	reres	****	***	******	0.045				
46000 1 0 Effluent Gross	PERMIT REQUIREMENT	*****	***	****	*****	董者 安 秦	Req. Mon. ANNL MAX	mg/L		Three Per Year	GRAB
Solids, total dissolved (TDS)	SAMPLE MEASUREMENT	****	****	******	*****	****	380				
70296 1 0 Effluent Gross	PERMIT REQUIREMENT	****	****	*****	本部部外	李安安安安	Req. Mon. ANNL MAX	mg/L		Three Per Year	GRAB
Pesticides, general	SAMPLE MEASUREMENT	****	****	***	****	李斌等者符号	ON				
74053 1 0 Effluent Gross	PERMIT REQUIREMENT	分钟 分離 分析	方式的	**	ችቶችችች	****	Req. Mon. ANNL MAX	mg/L		Three Per Year	GRAB
Coliform, fecal general	SAMPLE MEASUREMENT	*****	******	*****	*****	*****	30,000		·		
74055 1 0 Effluent Gross	PERMIT REQUIREMENT	安办电源水本	李安安安全	***	at the distribution	*******	Reg. Mon. ANNL MAX	#/100mL		Three Per Year	GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

TYPED OR PRINTED

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in anouthance with a system designed to assure that qualified personnel properly guidest sub-evaluate the information pathentical Based on pay implying of the person or persons who immage the system, or those pessess describ responsible for gathering the information, the information abundance is to the best of my homotopic and being fact, two, accurate, and complete; I am rower that there are applificant personal to be submitting this information, turishing the possibility of the and improvement for browing violations.

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202535-1603 AREA Code TELEPHONE NUMBER MM/DD/YYYY DATE

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06/15/2011

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

The Government of the District of Columbia-DDOE

FACILITY: ADDRESS: 441 4TH STREET, N.W. WASHINGTON, DC 20001 DISTRICT DEPARTMENT OF THE ENVIRONMENT NA

LOCATION: 51 N. STREET, N.E., 5TH FLOOR WASHINGTON, DC 20001

ATTN: Julia Evans, P.E./Senior Envir

FROM MM/DD/YYYY 09/01/2009 MONITORING PERIOD

5

08/31/2010

MM/DD/YYYY

PERMIT NUMBER DC0000221

M20-A

DISCHARGE NUMBER

MAJOR **DMR Mailing ZIP CODE:**

20002

OMB No. 2040-0004 Form Approved

TIDAL BASIN

External Outfall

No Discharge

81017 1 0 Effluent Gross 78732 1 0 Effluent Gross 78240 1 0 Effluent Gross Chemical Oxygen Demand (COD) Metals, total Volatile compounds, (GC/MS) PARAMETER SAMPLE MEASUREMENT SAMPLE MEASUREMENT SAMPLE MEASUREMENT PERMIT REQUIREMENT PERMIT REQUIREMENT PERMIT REQUIREMENT VALUE **** QUANTITY OR LOADING VALUE *** SLING **** ***** **** **** VALUE ***** ***** **** *** ***** QUALITY OR CONCENTRATION VALUE **** 0.0043 Req. Mon. ANNL MAX Req. Mon. ANNL MAX Req. Mon. ANNL MAX 0.13 VALUE 140 SLING աջ/Ը mg/L 1/gm 증및 FREQUENCY OF ANALYSIS Three Per Year Three Per Year Three Per Year SAMPLE TYPE GRAB GRAB GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER ethra Seltzer TYPED OR PRINTED

I certify under penilty of law but this locurant and all nunderment were prepared tooker my direction or supervision in accordance with a special conception to use our fast qualified phenoment property gather and evaluate the information abstraction described as my inquiry of the person of persons who manage the special control of the person of persons who manage the special control of the person of the p

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

22-525-1603 AREA Code TELEPHONE NUMBER 08/19 MW/DD/YYYYY DATE

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here) POTOMAC RIVER WATERSHEDMON, IS QRTLY, REPORTED ANNLY.

OMB No. 2040-0004 Form Approved

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

ADDRESS: NAME: The Government of the District of Columbia-DDOE

441 4TH STREET, N.W. WASHINGTON, DC 20001

LOCATION: FACILITY: 51 N. STREET, N.E., 5TH FLOOR WASHINGTON, DC 20001 DISTRICT DEPARTMENT OF THE ENVIRONMENT NA

ATTN: Julia Evans, P.E./Senior Envir

FROM

5

08/31/2010

MM/DD/YYYY 09/01/2009

MM/DD/YYYY

MONITORING PERIOD

PERMIT NUMBER DC0000221

M21-A

DISCHARGE NUMBER

MAJOR **DMR Mailing ZIP CODE:** 20002

WASHINGTON SHIP CHANNEL External Outfall

No Discharge

00605 1 0 Effluent Gross	Nitrogen, organic total (as N)	00600 1 0 Effluent Gross	Nitrogen, total	00556 1 0 Effluent Gross	Oil & Grease	00530 1 0 Effluent Gross	Solids, total suspended	00400 1 0 Effluent Gross	H H	00310 1 0 Effluent Gross	BOD, 5-day, 20 deg. C	00011 1 0 Effluent Gross	Temperature, water deg. fahrenheit		PARAMETER
PERMIT REQUIREMENT	SAMPLE MEASUREMENT	PERMIT REQUIREMENT	SAMPLE MEASUREMENT	PERMIT REQUIREMENT	SAMPLE MEASUREMENT	PERMIT REQUIREMENT	SAMPLE MEASUREMENT	PERMIT REQUIREMENT	SAMPLE MEASUREMENT	PERMIT REQUIREMENT	SAMPLE MEASUREMENT	PERMIT REQUIREMENT	SAMPLE MEASUREMENT		,
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******	******	*****	****	************	****	*****	***	****	*****	*****	安安安安安安	****	*********	VALUE	QUALITY OR CONCENTRATION
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															Ψ.ŏ
⊺hree Per Year		Three Per Year		Three Per Year		Three Per Year		Three Per Year		Three Per Year		Three Per Year			FREQUENCY OF ANALYSIS
COMPOS		GRAB		GRAB		GRAB		GRAB		COMPOS		GRAB			SAMPLE TYPE

lettley seltzer TYPED OR PRINTED

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

SIGNANDEE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

AREA Code 202-535-1603 TELEPHONE DATE

0

NUMBER

MWIDDAYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here) POTOMAC RIVER VIATERSHEDMON. IS QRTLY, REPORTED ANNLY. Montarma Year 2010 -Sempling May 2010 - July 2011

EPA Form 3320-1 (Rev.01/06) Previous editions may be used.

OMB No. 2040-0004 Form Approved

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: The Government of the District of Columbia-DDOE

ADDRESS: 441 4TH STREET, N.W. WASHINGTON, DC 20001

FACILITY: DISTRICT DEPARTMENT OF THE ENVIRONMENT NA

LOCATION: 51 N. STREET, N.E., 5TH FLOOR WASHINGTON, DC 20001

> PERMIT NUMBER DC0000221

> > M21-A

DISCHARGE NUMBER

MAJOR DMR Mailing ZIP CODE: 20002

WASHINGTON SHIP CHANNEL External Outfall

No Discharge

ATTN: Julia Evans, P.E./Senior Envir FROM MM/DD/YYYY 09/01/2009 MONITORING PERIOD 컹 MM/DD/YYYY 08/31/2010

00900 1 0 Effluent Gross 00720 1 0 Effluent Gross 00666 1 0 Effluent Gross 00665 1 0 Effluent Gross 00630 1 0 Effluent Gross 00610 1 0 Effluent Gross Phosphorus, total (as P) 00625 1 0 Effluent Gross Cyanide, total (as CN) Hardness, total (as CaCO3) Phosphorus, dissolved Nitrite plus nitrate total 1 det. (as N) Nitrogen, Kjeldahl, total (as N) Nitrogen, ammonia total (as N) PARAMETER SAMPLE MEASUREMENT PERMIT REQUIREMENT REQUIREMENT REQUIREMENT PERMIT REQUIREMENT PERMIT REQUIREMENT PERMIT REQUIREMENT REQUIREMENT PERMIT PERMIT VALUE **** **** **** ***** ***** ***** **** QUANTITY OR LOADING VALUE ***** ***** ***** ***** STIND ***** ***** **** VALUE ***** ***** **** ***** ***** ***** ***** QUALITY OR CONCENTRATION VALUE ***** ***** **** ***** 000 0.023 Req. Mon. ANNL MAX Reg. Mon. ANNL MAX Req. Mon. ANNL MAX 0.17 Req. Mon. ANNL MAX Reg. Mon. ANNL MAX Reg. Mon. ANNL MAX Req. Mon. ANNL MAX 0.27 0.23 VALUE Įw え UNITS J/6m mg/L mg/L mg/L mg/L 1/Bu mg/∟ ДŠ FREQUENCY OF ANALYSIS Three Per Year SAMPLE GRAB GRAB GRAB GRAB GRAB GRAB GRAB

Jeffrey Seltzer F.E.	NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
----------------------	--

I certify under penalty of Jaw thit this document and all attachments were propared under my directions or supervision in secondaries with a yourn designed to secure that qualificate penalter place you guider and exhaust this influence admitted. Beauer on my impurely of the person or persons who intended the system, or those persons derectly responsible for gentering the information attendantiated as, to the best of my harvestage and belief, thus, accurate, and compident. I men wave the there are applicated to precite for submitting these unformation, including the possibility of the end imprisonment for knowning violations.

SIGNATUBE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

AREA Code 202-535-1603 TELEPHONE NUMBER B MM/DD/YYYY DATE 19

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here) POTOMAC RIVER WATERSHEDMON. IS QRTLY, REPORTED ANNLY.

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: The Government of the District of Columbia-DDOE

ADDRESS: 441 4TH STREET, N.W. WASHINGTON, DC 20001

FACILITY: DISTRICT DEPARTMENT OF THE ENVIRONMENT NA

LOCATION: 51 N. STREET, N.E., 5TH FLOOR WASHINGTON, DC 20001

ATTN: Julia Evans, P.E./Senior Envir

FROM

딩

MM/DD/YYYY 09/01/2009

MM/DD/YYYY 08/31/2010

MONITORING PERIOD

PERMIT NUMBER DC0000221

DISCHARGE NUMBER M21-A

MAJOR DMR Mailing ZIP CODE: 20002

OMB No. 2040-0004 Form Approved

External Outfall WASHINGTON SHIP CHANNEL

No Discharge

#/100mL
VALUE VALUE VALUE UNITS ******* Reg Mon. ANNI MAX ******* P. OO S S ****** ANNI MAX ****** Reg Mon. ANNI MAX ****** P. OO S S ****** ANNI MAX ****** Reg Mon. Mon. Mon. Mon. Mon. Mon. Mon. Mon.
× #/100mL × mg/L

TYPED OR PRINTED

NAME/ITTLE PRINCIPAL EXECUTIVE OFFICER

| I continued to possible of law that this document and all machmants were prepared under my founds in a conductance with an system of the present and proposely guider and culture the information arbitraried. Based on my purply of the present or persons with musicage the system of these presents describe for guidering the information, the information with musicage the conductive formation of persons with musicage the present or persons with musicage the present or persons with musicage the present or persons with musicage the present of personal property guider and continued to persons with musicage the present of personal property guider and the musicage that the information of the inf

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

202-535-7603 TELEPHONE 3 DATE

AREA Code NUMBER MM/DD/YYYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here) POTOMAC RIVER WATERSHEDMON. IS QRTLY, REPORTED ANNLY.

See

EPA Form 3320-1 (Rev.01/06) Previous editions may be used.

OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: The Government of the District of Columbia-DDOE

ADDRESS: 441 4TH STREET, N.W. WASHINGTON, DC 20001

FACILITY: DISTRICT DEPARTMENT OF THE ENVIRONMENT NA

LOCATION: 51 N. STREET, N.E., 5TH FLOOR WASHINGTON, DC 20001

ATTN: Julia Evans, P.E./Senior Envir

FROM

ð

08/31/2010

MM/DD/YYYY 09/01/2009

MM/DD/YYYY

MONITORING PERIOD

PERMIT NUMBER DC0000221

DISCHARGE NUMBER M21-A

MAJOR DMR Mailing ZIP CODE: 20002

WASHINGTON SHIP CHANNEL

External Outfall

No Discharge

39508 1 0 Effluent Gross 46000 1 0 Effluent Gross 39504 1 0 Effluent Gross 39500 1 0 Effluent Gross 70296 1 0 Effluent Gross Effluent Gross 74053 1 0 Effluent Gross PCB-1254 Coliform, fecal general Solids, total dissolved (TDS) Phenols PCB-1248 Pesticides, general PCB-1260 74055 1 0 PARAMETER SAMPLE MEASUREMENT PERMIT REQUIREMENT REQUIREMENT PERMIT REQUIREMENT PERMIT REQUIREMENT PERMIT REQUIREMENT PERMIT REQUIREMENT PERMIT REQUIREMENT VALUE ***** ***** ***** ***** **** ***** ***** ***** QUANTITY OR LOADING VALUE ***** ***** *** ***** ***** ***** STIND ***** **** **** ***** **** * **** VALUE * **** **** ***** ***** ***** **** *** QUALITY OR CONCENTRATION VALUE ***** ***** **** **** **** ***** **** **** ***** 5,900 Req. Mon. ANNL MAX Req. Mon. ANNL MAX Red, Mon. ANNL MAX 0.033 Req. Mon. ANNL MAX Reg. Mon. ANNL MAX Req. Mon. ANNL MAX 1,600 Req. Mon. ANNL MAX Ś VALUE S Š <u>></u> #/100mL UNITS mg/L mg/L πg/L 76W mg/L mg/L 몃충 FREQUENCY OF ANALYSIS Three Per Year SAMPLE TYPE GRAB GRAB GRAB GRAB **GRAB** GRAB GRAB

	/ TYPED OR PRINTED
7.E	JEHRY Seltzer
E OFFICER	NAME/ITTLE PRINCIPAL EXECUTIVE OFFICER

I cristly under penalty of two that this objectment and all situationents were prepared under my direction or apprehiate in accordance with a spacent designed to assure that qualified possents poperly global and valuate the information administ laser for my migrary of the pressure of persons who is namely the system, or those pensons afteredly responsible for globality for information, the information submitted it. To the beautiful providing and belief it was, accurate, and complete it in more that there are significant provided or submitting this information, and the provided for submitting this information, methating the possibility of fire and improvement for knowing violations.

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

AREA Code 202-525-1603 TELEPHONE NUMBER 08 MWIDDNYYY DATE 119

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here) POTOMAC RIVER VIATERSHEDMON. IS QRTLY, REPORTED ANNLY.

DISCHARGE MONITORING REPORT (DMR)

PERMITTEE NAME/ADDRESS (include Facility Name/Location if Different)

NAME: The Government of the District of Columbia-DDOE

ADDRESS: 441 4TH STREET, N.W. WASHINGTON, DC 20001

FACILITY: DISTRICT DEPARTMENT OF THE ENVIRONMENT NA

LOCATION: 51 N. STREET, N.E., 5TH FLOOR WASHINGTON, DC 20001

ATTN: Julia Evans, P.E./Senior Envir

FROM

MW/DD/YYYY 09/01/2009

MM/DD/YYYY

5

08/31/2010

MONITORING PERIOD

DC0000221

PERMIT NUMBER

M21-A

DISCHARGE NUMBER

DMR Mailing ZIP CODE:

20002

Form Approved OMB No. 2040-0004

MAJOR

External Outfall WASHINGTON SHIP CHANNEL

No Discharge

81017 1 0 Effluent Gross 78732 1 0 Effluent Gross Chemical Oxygen Demand (COD) 78240 1 0 Effluent Gross Metals, total Volatile compounds, (GC/MS) PARAMETER SAMPLE MEASUREMENT SAMPLE MEASUREMENT SAMPLE MEASUREMENT PERMIT REQUIREMENT REQUIREMENT REQUIREMENT PERMIT VALUE ***** ***** ***** QUANTITY OR LOADING VALUE ***** **** STIND ***** **** VALUE **** **** QUALITY OR CONCENTRATION VALUE ***** ***** Req. Mon. ANNL MAX Req. Mon. ANNL MAX 0.87 Req. Mon. ANNL MAX VALUE 140 Š STINU mg/L mg/L ing/L ΜŞ FREQUENCY OF ANALYSIS Three Per Year Three Per Year Three Per Year SAMPLE TYPE GRAB GRAB GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER 10/they soltzer TYPED OR PRINTED

I contify under penalty of law that this document and all interdments were prepared supervision in accordance with a system designed to assure that qualified personate evaluate the information attended. Based on my impany of the person or persons we system or those persons and further based for the person of persons we system or those persons directly insectsoble for gathering the information, the information of the person of the pe prepared under my direction or casonnel properly gather and persons who manage the the information submitted is, nation submitted is, there are significant somnent for knowing

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

AREA Code 202-535-1608 TELEPHONE

DATE

NUMBER 08/19/ MW/DD/YYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here) POTOMAC RIVER WATERSHEDMON. IS QRTLY, REPORTED ANNLY.

See paso

OMB No. 2040-0004 Form Approved

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: The Government of the District of Columbia-DDOE

ADDRESS: 441 4TH STREET, N.W. WASHINGTON, DC 20001

FACILITY: DISTRICT DEPARTMENT OF THE ENVIRONMENT NA

LOCATION: 51 N. STREET, N.E., 5TH FLOOR WASHINGTON, DC 20001

ATTN: Julia Evans, P.E./Senior Envir

FROM

ಠ

WW/DD/YYYY 09/01/2009

MM/DD/YYYY 08/31/2010

PERMIT NUMBER DC0000221

M22-A

MONITORING PERIOD DISCHARGE NUMBER

> MAJOR DMR Mailing ZIP CODE: 20002

C&O CANAL External Outfall

No Discharge

PARAMETER VALUE QUANTITY OR LOADING VALUE STIND VALUE QUALITY OR CONCENTRATION VALUE VALUE UNITS 叹 FREQUENCY OF ANALYSIS SAMPLE

00605 1 0 Effluent Gross	Nitrogen, organic total (as N)	00600 1 0 Effluent Gross	Nitrogen, total	00556 1 0 Effluent Gross	Oil & Grease	00530 1 0 Effluent Gross	Solids, total suspended	00400 1 0 Effluent Gross	рH	00310 1 0 Effluent Gross	BOD, 5-day, 20 deg. C	00011 1 0 Effluent Gross	Temperature, water deg. fahrenheit
PERMIT	SAMPLE MEASUREMENT	PERMIT REQUIREMENT	SAMPLE MEASUREMENT	PERMIT REQUIREMENT	SAMPLE MEASUREMENT	PERMIT REQUIREMENT	SAMPLE MEASUREMENT	PERMIT REQUIREMENT	SAMPLE MEASUREMENT	PERMIT REQUIREMENT	SAMPLE MEASUREMENT	PERMIT REQUIREMENT	SAMPLE MEASUREMENT
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Req. Mon. ANNL MAX	NR	Req. Mon. ANNL MAX	5.0	Req. Mon. ANNL MAX	WD	Reg. Mon. ANNL MAX	51	Req. Mon. ANNL MAX	7.5	Red. Mon. ANNL MAX	29	Req. Mon. ANNL MAX	65.3
mg/L		mg/L		mg/L		mg/L		SU		mg/L		deg F	
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Three Per Year		Three Per Year		Three Per Year		Three Per Year		Three Per Year		Three Per Year		Three Per Year	
COMPOS		GRAB		GRAB		GRAB		GRAB		COMPOS		GRAB	

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER leftiney Seltzer F.F.

TYPED OR PRINTED

I bertify under penalty of two that this document and all statchments were prepared tooler my direction or supervision in coordance with a system designed to assure that qualified phenomed proporty glother and realizate the information shoulded Bestell on an unquity of the penance or persons who training the system, or those penance directly responsible for gathering the administer, the information, the information should be the order of my hospital for a directly responsible for gathering the administer, the information through the solution of the control of the supervision o

SIGNATORE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

AREA Code 2025257 TELEPHONE NUMBER MiMADDYYYY

DATE

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here) POTOMAC RIVER WATERSHEDMON, IS ORTLY, REPORTED ANNLY.

Monstorma Year 2010-Sampling May 2010 - July 2011

EPA Form 3320-1 (Rev.01/06) Přévious editions may be used.

OMB No. 2040-0004 Form Approved

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: The Government of the District of Columbia-DDOE

ADDRESS: 441 4TH STREET, N.W. WASHINGTON, DC 20001

FACILITY: DISTRICT DEPARTMENT OF THE ENVIRONMENT NA

LOCATION: 51 N. STREET, N.E., 5TH FLOOR WASHINGTON, DC 20001

ATTN: Julia Evans, P.E./Senior Envir

FROM MM/DD/YYYY 09/01/2009

7

08/31/2010

MM/DD/YYYY

PERMIT NUMBER DC0000221

M22-A

MONITORING PERIOD DISCHARGE NUMBER

> MAJOR DMR Mailing ZIP CODE: 20002

C&O CANAL External Outfall

No Discharge

00610 1 0 Effluent Gross 00900 1 0 Effluent Gross 00666 1 0 Effluent Gross 00665 1 0 Effluent Gross 00625 1 0 Effluent Gross Hardness, total (as CaCO3) 00720 1 0 Effluent Gross Phosphorus, total (as P) 00630 1 0 Effluent Gross Nitrite plus nitrate total 1 det. (as N) Nitrogen, Kjeldahl, total (as N) Nitrogen, ammonia total (as N) Cyanide, total (as CN) Phosphorus, dissolved PARAMETER SAMPLE MEASUREMENT SAMPLE MEASUREMENT SAMPLE MEASUREMENT SAMPLE MEASUREMENT SAMPLE MEASUREMENT SAMPLE MEASUREMENT REQUIREMENT SAMPLE MEASUREMENT PERMIT REQUIREMENT REQUIREMENT PERMIT REQUIREMENT PERMIT REQUIREMENT PERMIT REQUIREMENT PERMIT REQUIREMENT VALUE **** ***** **** **** ***** ***** **** **** ***** QUANTITY OR LOADING VALUE **** **** ***** ***** **** ***** **** *** STINU ***** *** ***** ***** **** **** **** ***** VALUE ***** ***** *** *** *** ***** **** *** **** ***** QUALITY OR CONCENTRATION VALUE ***** ***** ***** ***** ***** ***** *** *** 0.006 Req. Mon. ANNL MAX といる Req. Mon. MAXIMUM Req. Mon. ANNL MAX Req. Mon. ANNL MAX Req. Mon. ANNL MAX Req. Mon. ANNL MAX Reg. Mon. ANNL MAX 0,12 5 VALUE . Μ 0,0 ゑ STINU mg/L mg/L mg/L mg/L mg/L mg/L mg/L 偄중 FREQUENCY OF ANALYSIS Three Per Year SAMPLE TYPE GRAB GRAB GRAB GRAB GRAB GRAB GRAB

I certify under penalty of law that this document and all attachments were prepared under my direction or supervisors in accordance with a system designed to assure that qualified pensonner projectly gather and excludent the information attinuated. Based on my meaning of the person or presence who manage the system or those pensons directly responsible for gathering the information, the information abundance is no the best of my knowledge and belief, true, accounts, and complete I am aware that there are significant in pensitives for subcarding lake molerations, the business of the and intrasovation for knowing the possibility of the and intrasovation for knowing the possibilities of the property of

SIGNAPURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT 9

> 202-535-160 TELEPHONE DATE

AREA Code NUMBER 08/19/1 MM/DD/YYY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here) POTOMAC RIVER WATERSHEDMON, IS QRTLY, REPORTED ANNLY.

See page

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) DISCHARGE MONITORING REPORT (DMR)

Form Approved OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

The Government of the District of Columbia-DDOE

ADDRESS: 441 4TH STREET, N.W. WASHINGTON, DC 20001

FACILITY: DISTRICT DEPARTMENT OF THE ENVIRONMENT NA

LOCATION: 51 N. STREET, N.E., 5TH FLOOR WASHINGTON, DC 20001

ATTN: Julia Evans, P.E./Senior Envir

FROM

5

08/31/2010

MM/DD/YYYY 09/01/2009

MM/DD/YYYY

MONITORING PERIOD

PERMIT NUMBER DC0000221

M22-A

DISCHARGE NUMBER

MAJOR DMR Mailing ZIP CODE: 20002

C&O CANAL External Outfall

No Discharge

PARAMETER		QUANT	QUANTITY OR LOADING		Q	QUALITY OR CONCENTRATION	ENTRATION		ΜŸ	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	STINU	VALUE	ANLUE	VALUE	STINU			
Fecal streptococci, MF m-enterococcus ag	SAMPLE MEASUREMENT	*	*****	*****	*****	****	13,000				
31679 1 0 Effluent Gross	PERMIT	*****	***	****	*****	*****	Reg. Mon. ANNL MAX	#/100mL		Three Per Year	GRAB
Base/neutral compounds	SAMPLE MEASUREMENT	***	***	***	*****	*****	0.012				
32015 1 0 Effluent Gross	PERMIT REQUIREMENT	***	女子女女	****	· · · · · · · · · · · · · · · · · · ·	****	Req. Mon. ANNL MAX	т/бш		Three Per Year	GRAB
Acid compounds	SAMPLE MEASUREMENT	*****	*****	****	*******	****	NO				
32020 1 0 Effluent Gross	PERMIT	给水火油油水	中华沙泽南沙	****	老老女女老子	******	Reg. Mon. ANNL MAX	лувш		Three ≏er Year	GRAB
PCB-1016	SAMPLE MEASUREMENT	***	***	****	*****	***	dn			ò	
34671 1 0 Effluent Gross	PERMIT REQUIREMENT	典书是非非书	******	****	外外等等的	**************************************	Reg. Mon. ANNL MAX	тувш		⊺hree Per Year	GRAB
PCB-1221	SAMPLE MEASUREMENT	****	***	*****	******	******	div				
39488 1 0 Effluent Gross	PERMIT REQUIREMENT	法裁判法法法	*****	****	法法法法法律	***************************************	Req. Mon. ANNL MAX	mg/L		Three Per Year	GRAB
PCB-1232	SAMPLE MEASUREMENT	****	****	****	*****	****	ND				
39492 1 0 Effluent Gross	PERMIT REQUIREMENT	****	女母外女母女	******	*****	******	Req. Mon. ANNL MAX	mg/L		Three Per Year	GRAB
PCB-1242 bot, dep., dry solid	SAMPLE MEASUREMENT	***	****	*****	****	*****	NO				
39499 1 0 Effluent Gross	PERMIT REQUIREMENT	****	******	*****	***	****	Req. Mon. ANNL MAX	mg/L		Three Per Year	GRAB

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here) POTOMAC RIVER WATERSHEDMON, IS QRTLY; REPORTED ANNLY. TYPED OR PRINTED

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

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I contify under possity of law that this document sold all manchments were pregued under my direction of supervision in exceeding with a special expensed property getter and confused the information administs. Based on my copiny of the pressure progressive star protection of the pressure a frequency that makes the system, or those passons directly repossible for guidering the information, the information submitted is to the best of any inventibality and belief, true, securate, and compiles I am event that there are significant premitted for submitting base information, matching the possibility of the and imprisonment for knowing both distinct.

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

AREA Code

NUMBER

WWWWW

202-535-1603

08//

TELEPHONE

DATE

2000

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) DISCHARGE MONITORING REPORT (DMR)

Form Approved OMB No. 2040-0004

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: The Government of the District of Columbia-DDOE

ADDRESS: 441 4TH STREET, N.W. WASHINGTON, DC 20001

FACILITY: DISTRICT DEPARTMENT OF THE ENVIRONMENT NA

LOCATION: 51 N. STREET, N.E., 5TH FLOOR WASHINGTON, DC 20001

ATTN: Julia Evans, P.E./Senior Envir

PERMIT NUMBER DC0000221

DISCHARGE NUMBER M22-A

MAJOR DMR Mailing ZIP CODE:

20002

External Outfall C&O CANAL

No Discharge

MW/DD/YYYY 09/01/2009 MONITORING PERIOD 딩 MM/DD/YYYY 08/31/2010

FROM

39500 1 0 Effluent Gross 46000 1 0 Effluent Gross 39508 1 0 Effluent Gross 39504 1 0 Effluent Gross 74055 1 0 Effluent Gross 74053 1 0 Effluent Gross 70296 1 0 Effluent Gross Pesticides, general Solids, total dissolved (TDS) Phenols PCB-1260 PCB-1254 PCB-1248 Coliform, fecal general PARAMETER SAMPLE MEASUREMENT PERMIT REQUIREMENT REQUIREMENT PERMIT REQUIREMENT PERMIT REQUIREMENT REQUIREMENT PERMIT REQUIREMENT PERMIT REQUIREMENT PERMIT VALUE ***** *** ***** ***** **** ***** ***** QUANTITY OR LOADING VALUE ***** **** ***** **** **** **** STINO ***** ***** **** ***** ***** **** ***** VALUE ***** **** ***** **** **** ****** ***** *** *** QUALITY OR CONCENTRATION VALUE **** ***** ***** **** **** ***** ***** Reg. Mon. ANNL MAX Req. Mon. ANNL MAX 30,000 Req. Mon. ANNL MAX Req. Mon. ANNL MAX Req. Mon. ANNL MAX Reg. Mon. ANNL MAX Req. Mon. ANNL MAX VALUE 080 È 3 Š B Š #/100mL STINU mg/L ng/∟ mg/L mg/L mg/ mg/L 였 FREQUENCY OF ANALYSIS Three Per Year SAMPLE TYPE GRAB ĞRAB GRAB GRAB GRAB GRAB GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER letter Se, 有YPED OR PRINTED 1201

I carriely under penalty of law that this document and all attachments were proposed under my detaction or supervision in tenoridence with a system designed to searce that qualified forestants properly gibbs and evaluate the information administed. Based on my anguly of the puests or presents who manual the system, or these presents described propasible for gathering the information, the information submitted is to the best of my browthedge and belief, true, securior, and compiler. I am aware that there are supplificant practices for submitting libes information, including the possibility of fine and impresented to Crowing violations.

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

AREA Code 705-555 1603 TELEPHONE NUMBER 20/19 MW/DD/YYY DATE

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here) POTOMAC RIVER WATERSHEDMON. IS QRTLY, REPORTED ANNLY.

passe

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) DISCHARGE MONITORING REPORT (DMR)

OMB No. 2040-0004 Form Approved

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME: ADDRESS: The Government of the District of Columbia-DDOE

441 4TH STREET, N.W. WASHINGTON, DC 20001

FACILITY: DISTRICT DEPARTMENT OF THE ENVIRONMENT NA

LOCATION: 51 N. STREET, N.E., 5TH FLOOR WASHINGTON, DC 20001

ATTN: Julia Evans, P.E./Senior Envir

FROM

5

08/31/2010

MM/DD/YYYY 09/01/2009

MM/DD/YYYY

PERMIT NUMBER DC0000221 MONITORING PERIOD

M22-A

DISCHARGE NUMBER

MAJOR DMR Mailing ZIP CODE: 20002

C&O CANAL External Outfall

No Discharge

81017 1 0 Effluent Gross 78732 1 0 Effluent Gross 78240 1 0 Effluent Gross Chemical Oxygen Demand (COD) Volatile compounds, (GC/MS) Metals, total PARAMETER SAMPLE MEASUREMENT SAMPLE MEASUREMENT SAMPLE ... REQUIREMENT PERMIT REQUIREMENT PERMIT REQUIREMENT PERMIT VALUE **** **** ***** *** QUANTITY OR LOADING VALUE **** STINU ***** ***** ***** VALUE ***** **** ***** QUALITY OR CONCENTRATION VALUE ***** ***** ***** 0.0022 ANNL MAX Req. Mon. ANNL MAX Reg. Mon. ANNL MAX 0,12 VALUE STINU mg/L щg/L mg/L Νõ FREQUENCY OF ANALYSIS Three Per Year Three Per Year Three Per Year SAMPLE GRAB GRAB GRAB

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER CHIEV SOITZEL

TYPED OR PRINTED

I certify under penity of law fast this document and all attachments were prepared under my disention of supervision in unconviounce with a spation designed to assure that qualified becames loopedly added and supervision in the conviounce with a spation designed to assure that qualified becames loopedly added and evident or evaluate the information shortified in a spation of the person of persons who inturage the system, or those persons desertly responsible for gathering the information, the information that makes a supplication to the best of my favorising and my supervision and impressioners for forewing penalties for submitting false information, including the possibility of fine and impressioners for forewing variations.

SIGNATURE OF PRACIPAL EXECUTIVE OFFICER OR ACTHORIZED AGENT

AREA Code 202 5 35 7/60 TELEPHONE NUMBER 08/19 MM/DD/YYYY DATE

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here) POTOMAC RIVER WATERSHEDMON, IS QRTLY, REPORTED ANNLY.

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APPENDIX C

POTOMAC RIVER WATERSHED SAMPLING ANALYTICAL DATA

POTOMAC WATERSHED WET WEATHER SAMPLING RAW DATA

	T	Ι	E	Battery Kembl	le	Fo	oundary Bran	ch		Dalecarlia			Oxon Run			Tidal Basin			Ship Channe	el		C&O Canal	
Parameter	Units	RL	Wet 1	Wet 2	Wet3	Wet 1	Wet 2	Wet3	Wet 1	Wet 2	Wet 3	Wet 1	Wet 2	Wet 3	Wet 1	Wet 2	Wet 3	Wet 1	Wet 2	Wet 3	Wet 1	Wet 2	Wet 3
1,1,1-Trichloroethane	ug/L	5.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<5.0	ND	ND	ND
1,1,2,2-Tetrachloroethane	ug/L	5.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<5.0	ND	ND	ND
1,1,2-Trichloroethane	ug/L	5.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND ND	ND	<5.0	ND	ND	ND
1,1-Dichloroethane 1,1-Dichloroethene (1,1-Dichloroethylene)	ug/L	5.0 5.0	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	<5.0 <5.0	ND ND	ND ND	ND ND
1.2.4-Trichlorobenzene	ug/L ug/L	5.0	ND	ND	ND ND	ND	ND ND	ND	ND ND	ND	ND ND	ND	ND	ND	ND	ND ND	ND ND	ND ND	ND	<5.0 <5.0	ND	ND ND	ND
1,2-Dichlorobenzene	ug/L	10	ND	ND	ND ND	ND ND	ND ND	ND	ND ND	ND	ND	ND ND	ND	ND	ND ND	ND	ND	ND ND	ND	<10	ND ND	ND	ND
1,2-Dichloroethane	ug/L	5.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<5.0	ND	ND	ND
1,2-Dichloropropane	ug/L	5.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<5.0	ND	ND	ND
1,2-Diphenylhydrazine	ug/L	5.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<5.0	ND	ND	ND
1,2-Trans-Dichloroethylene (Trance-1,2-Dichloroethane)	ug/L	5.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<5.0	ND	ND	ND
1,3-Dichlorobenzene	ug/L	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<10	ND	ND	ND
1,3-Dichloropropylene (trans-1,3-Dichloropropylene)	ug/L	5.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND ND	ND	ND	ND	ND	ND	ND	ND	<5.0	ND	ND	ND
1,4-Dichlorobenzene 2.3.7.8-TCDD (Dioxin)	ug/L	10	ND ND	ND	ND -1.0	ND ND	ND ND	ND	ND ND	ND	ND	ND ND	ND	ND -1.0	ND ND	ND	ND	ND ND	ND	<10	ND ND	ND	ND
2,4,6-Trichlorophenol	pg/l ug/L	5.0	ND ND	ND ND	<1.0 ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	<1.0 ND	ND ND	ND ND	ND ND	ND ND	<1.0 ND	<1 <5.0	ND ND	ND ND	<1.0 ND
2,4-Dichlorophenol	ug/L	5.0	ND ND	ND	ND ND	ND ND	ND	ND	ND	ND	ND	ND ND	ND	ND ND	ND ND	ND	ND	ND	ND	<5.0	ND ND	ND ND	ND
2,4-Dimethylphenol	ug/L	5.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND ND	ND	ND	ND ND	ND	ND	ND	ND	<5.0	ND	ND	ND
2,4-Dinitrophenol	ug/L	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<10	ND	ND	ND
2,4-Dinitrotoluene	ug/L	5.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<5.0	ND	ND	ND
2,6-Dinitrotoluene	ug/L	5.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<5.0	ND	ND	ND
2-Chloroethyl Vinyl Ether	ug/L	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<10	ND	ND	ND
2-Chloronaphthalene	ug/L	5.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<5.0	ND	ND	ND
2-Chlorophenol	ug/L	5.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND ND	ND	ND	ND	ND	ND	ND	ND	<5.0	ND	ND	ND
2-Nitrophenol	ug/L	5.0 5.0	ND ND	ND	ND ND	ND	ND ND	ND ND	ND	ND	ND ND	ND	ND ND	ND ND	ND ND	ND ND	ND	ND ND	ND	<5.0	ND ND	ND ND	ND
3,3'-Dichlorobenzidine 3.4-Benzofluoranthene (Benzofb]fluoranthene)	ug/L ug/L	5.0	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	<5.0 <5.0	ND ND	ND ND	ND ND
4,6-Dinitro-o-Crestol (4,6-Dinitro-2-methylphenol)	ug/L	5.0	ND ND	ND	ND ND	ND ND	ND ND	ND	ND ND	ND	ND	ND ND	ND	ND	ND ND	ND	ND	ND ND	ND	<5.0	ND	ND ND	ND
4-Bromophenyl-phenylether	ug/L	5.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND ND	ND	ND	ND	ND	<5.0	ND	ND	ND
4-Chlorophenyl-phenylethe	ug/L	5.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND ND	ND	ND	ND	<5.0	ND	ND	ND
4-Nitrophenol	ug/L	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<10	ND	ND	ND
Acenaphthene	ug/L	5.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<5.0	ND	ND	ND
Acenaphthylene	ug/L	5.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<5.0	ND	ND	ND
Acrolein	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<100	ND	ND	ND
Acrylonitrile	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<100	ND	ND	ND
Aldrin Alpha-BHC	ug/L	0.10	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	<0.10 <0.10	ND ND	ND ND	ND ND
Anthracene	ug/L ug/L	5.0	ND	ND	ND ND	ND	ND ND	ND	ND ND	ND	ND	ND	ND	ND	ND ND	ND	ND ND	ND ND	ND	<5.0	ND	ND	ND
Antimony	mg/L	0.0050	ND	ND	ND ND	ND	ND	ND ND	ND	ND	ND	ND ND	ND	ND	ND ND	ND	ND	0.0073	ND	<0.0050	ND	ND ND	ND
Aroclor 1016 (PCB 1016)	ug/L	0.10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.10	ND	ND	ND
Aroclor 1221 (PCB 1221)	ug/L	0.10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.10	ND	ND	ND
Aroclor 1232 (PCB 1232)	ug/L	0.10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.10	ND	ND	ND
Aroclor 1242 (PCB 1242)	ug/L	0.10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.10	ND	ND	ND
Aroclor 1248 (PCB 1248)	ug/L	0.10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.10	ND	ND	ND
Aroclor 1254 (PCB 1254)	ug/L	0.10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND ND	ND	ND	ND	ND	<0.10	ND	ND	ND
Aroclor 1260 (PCB 1260)	ug/L	0.10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.10	ND	ND	ND 0.0000
Arsenic Benzene	mg/L ug/L	0.0020 5.0	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	<0.0020 <5.0	ND ND	ND ND	0.0026 ND
Benzidine	ug/L ug/L	5.0	ND	ND	ND ND	ND ND	ND ND	ND	ND ND	ND	ND	ND ND	ND	ND	ND ND	ND ND	ND ND	ND ND	ND	<5.0	ND	ND ND	ND
Benzo(a)anthracene	ug/L	5.0	ND	ND	ND ND	ND	ND	ND	ND	ND	ND	ND ND	ND	ND	ND	ND	ND	ND	ND	<5.0	ND	ND ND	ND
Benzo[a]pyrene	ug/L	5.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<5.0	ND	ND	ND
Benzo[g,h,i]perylene	ug/L	5.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<5.0	ND	ND	ND
Benzo[k]fluoranthene	ug/L	5.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<5.0	ND	ND	ND
Beryllium	mg/L	0.0010	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.0010	ND	ND	ND
Beta-BHC	ug/L	0.10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.10	ND	ND	ND
Bis(2-Chloroethoxy)methane	ug/L	5.0	ND	ND	ND	ND	ND ND	ND	ND	ND	ND	ND ND	ND	ND	ND ND	ND	ND ND	ND ND	ND	<5.0	ND	ND	ND
Bis(2-Chloroethyl)ether Bis(2-chloroisopropyl)ether	ug/L ug/L	5.0 5.0	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	<5.0 <5.0	ND ND	ND ND	ND ND
Bis(2-Ethylhexyl)phthalate	ug/L	5.0	ND	ND	ND ND	ND	ND ND	ND	ND ND	77	ND	ND	ND ND	8.2	10	ND	ND	ND ND	ND	5.6	ND	12	7.8
BOD	mg/L	5.0	6.5	21	9.2	56	13	37	15	52	33	2.7	8.7	9.7	58	19	22	57	9.0	32	9.1	29	9.7
Bromodichloromethane (Dichlorobromomethane)	ug/L	5.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<5.0	ND	ND	ND
Bromoform	ug/L	5.0	ND	ND	ND	ND	ND	9.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<5.0	ND	ND	ND
Bromomethane (Methyl bromide)	ug/L	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<10	ND	ND	ND
Butylbenzylphthalate	ug/L	5.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<5.0	ND	ND	ND
Cadmium	mg/L	0.00050	ND	ND	ND	0.00053	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0013	ND	<0.00050	ND	ND	ND
Carbon Tetrachloride	ug/L	5.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND ND	ND	ND	ND	ND	<5.0	ND	ND	ND
Chlordane (Technical Chlordane)	ug/L	0.10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND ND	ND ND	ND	ND ND	ND	<0.10	ND	ND	ND
Chloropthana	ug/L	5.0	ND	ND	ND	ND	ND ND	ND	ND	ND	ND	ND	ND	ND	ND ND	ND ND	ND	ND ND	ND	<5.0	ND	ND ND	ND
Chloroethane Chloroform	ug/L	5.0	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	<10 <5.0	ND ND	ND ND	ND ND
Chloromethane (Methyl chloride)	ug/L ug/L	10	ND ND	ND	ND ND	ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND	<10	ND ND	ND ND	ND ND
Chlorophyll a	ug/L	0.50	6.2	ND	16	5.8	1.9	ND	0.64	ND	ND	ND	ND	ND	ND	1.3	4.1	8.2	1.0	<0.50	ND	ND	2.0
Oniorophyli a	rug/L	0.00	U.Z	שאו	10	J.0	1.3	שואו	0.04	ואט	IAD	110	ן ואט	שויו	וו ואט	1.3	7.1	U.Z	1.0	~∪.J∪	140	שאו	2.0

Chromium	mg/L	0.0020	ND	0.0054	0.0070	0.0023	0.0048	0.0028	ND	ND	0.0018	ND	0.0017	0.0069	0.010	0.0095	0.0011	0.0060	0.0057	0.0044	ND	0.0041	0.0051
Chrysene cis-1,3-Dichloropropylene	ug/L ug/L	5.0	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	<5.0 <5.0	ND ND	ND ND	ND ND
из 1,0 Вилиогорторуюте	ug/L	5.0		Battery Kembi			oundary Bran		ND	Dalecarlia	ND	ND	Oxon Run	ND	ND	Tidal Basin	IND	ND	Ship Channel		ND	C&O Canal	ND
Parameter	Units	RL	Wet 1	Wet 2	Wet3	Wet 1	Wet 2	Wet3	Wet 1	Wet 2	Wet 3	Wet 1	Wet 2	Wet 3	Wet 1	Wet 2	Wet 3	Wet 1	Wet 2	Wet 3	Wet 1	Wet 2	Wet 3
COD, Total	mg/L	10	41	140	41	95	75	84	39	110	240	ND	35	47	140	56	77	120	37	67	18	74	41
Copper	mg/L	0.0010	0.0074	0.36	0.039	0.086	0.036	0.035	0.053	0.086	0.10	0.0032	0.26	0.031	0.046	0.029	0.074	0.23	0.14	0.16	0.039	0.042	0.029
Cyanide, Total	mg/L	0.0050	2.4	ND	2.4	ND	ND	ND	ND	ND	ND	ND	ND	0.040	ND	ND	ND	0.023	ND	< 0.0050	ND	ND	0.0060
delta-BHC	ug/L	0.10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.10	ND	ND	ND
Dibenz[a,h]anthracene	ug/L	5.0	ND	ND	ND	ND ND	ND	ND	ND	ND	ND	ND ND	ND	ND	ND	ND	ND	ND	ND	<5.0	ND	ND	ND
Dibromochloromethane (Chlorodibromomethane)	ug/L	5.0 0.10	ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND	ND ND	ND ND	ND	ND ND	ND ND	ND ND	<5.0 <0.10	ND ND	ND ND	ND ND
Dieldrin Diethylphthalate	ug/L ug/L	5.0	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND	ND ND	ND ND	ND ND	ND	ND ND	ND ND	ND ND	ND ND	<5.0	ND ND	ND ND	ND ND
Dimethylphthalate	ug/L	5.0	ND	ND ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND ND	ND	ND	<5.0	ND	ND	ND
Di-n-butylphthalate	ug/L	5.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<5.0	ND	ND	ND
Di-n-octylphthalate	ug/L	5.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<5.0	ND	ND	ND
Endosulfan I (Alpha-endosulfan)	ug/L	0.10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.20	ND	ND	ND	ND	ND	ND	<0.10	ND	ND	ND
Endosulfan II (Beta-endosulfan)	ug/L	0.10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.10	ND	ND	ND
Endosulfan Sulfate Endrin	ug/L ug/L	0.10	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	<0.10 <0.10	ND ND	ND ND	ND ND
Endrin Aldehyde	ug/L ug/L	0.10	ND	ND ND	ND	ND ND	ND	ND ND	ND	ND	ND	ND	ND ND	ND	ND	ND ND	ND ND	ND ND	ND ND	<0.10	ND	ND ND	ND ND
Ethylbenzene	ug/L	5.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<5.0	ND	ND	ND
Fecal Coliforms	MPN/100 ml	L 2.0	80	30000	130	>1600	24000	11000	17000	7000	>1600	8000	>1600	>1600	>1600	30000	2300	400	230	>1600	>1600	30000	3000
Fecal Streptococcus	MPN/100 ml		350	>160,000	500	>1600	90000	3000	160000	24000	900	400	>1600	>1600	>1600	>160,000	ND	800	500	300	>1600	13000	2400
Fluoranthene	ug/L	5.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<5.0	ND	ND	ND
Fluorene gamma-BHC	ug/L	5.0 0.10	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	<5.0 <0.10	ND ND	ND ND	ND ND
Hardness (As CaCO ₃)	ug/L mg CaCO3/l		280	200	190	200	160	180	140	120	120	150	96	64	190	160	190	800	ND 88	75	220	150	200
Heptachlor	ug/L	0.10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	96 ND	ND	ND	ND	ND	ND	ND	<0.10	ND	ND	ND
Heptachlor epoxide	ug/L ug/L	0.10	ND	ND ND	ND	ND ND	ND	ND ND	ND	ND	ND	ND	ND	ND	ND	ND	ND ND	ND	ND ND	<0.10	ND	ND ND	ND
Hexachlorobenzene	ug/L	5.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND ND	ND	ND	<5.0	ND	ND	ND
Hexachlorobutadiene	ug/L	5.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<5.0	ND	ND	ND
Hexachlorocyclopentadiene	ug/L	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<10	ND	ND	ND
Hexachloroethane	ug/L	5.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<5.0	ND	ND	ND
Indeno[1,2,3-cd]pyrene	ug/L	5.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<5.0	ND	ND	ND
Isophorone Lead	ug/L mg/L	5.0 0.0010	ND ND	ND 0.025	ND 0.0072	ND ND	ND ND	ND ND	ND ND	ND ND	ND 0.011	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND 0.12	ND 0.086	<5.0 0.062	ND ND	ND 0.012	ND 0.011
Mercury	mg/L	0.0010	ND	0.023 ND	ND	ND ND	ND	ND ND	ND	ND	ND	0.00026	ND	ND	ND	0.00051	ND ND	ND	ND	<0.002	ND	ND	ND
Methylene Chloride	ug/L	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<10	ND	ND	ND
Naphthalene	ug/L	5.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<5.0	ND	ND	ND
Nickel	mg/L	0.0050	ND	ND	0.011	0.012	ND	ND	ND	ND	ND	ND	ND	0.011	0.013	ND	ND	0.067	0.025	0.0056	ND	ND	0.0081
Nitrate/Nitrite as N	mg/L	0.050	0.41	0.22	2.5	ND ND	0.10	2.0	0.34	0.50	ND	0.81	ND	ND	ND	0.40	1.6	ND	0.23	0.061	ND	ND	3.0
Nitrobenzene	ug/L	5.0 1.0	ND 1.4	ND 0.2	ND 2.5	ND 3.0	ND 4.3	ND 2.5	ND F 1	ND ND	ND F. 6	ND 4.2	ND 5.6	ND 1.4	ND 5.7	ND	ND 2.6	ND 3.9	ND	<5.0	ND 1.6	ND 5.0	ND 2.0
Nitrogen, Total N-Nitrosodimethylamine	mg/L ug/L	5.0	1.4 ND	9.2 ND	2.5 ND	3.8 ND	ND	3.5 ND	5.1 ND	ND ND	5.6 ND	ND	5.6 ND	1.4 ND	5.7 ND	3.5 ND	2.6 ND	ND	ND ND	2.0 <5.0	1.6 ND	5.0 ND	3.0 ND
N-Nitroso-di-n-propylamine	ug/L ug/L	5.0	ND	ND ND	ND	ND	ND	ND ND	ND	ND	ND	ND	ND	ND	ND	ND	ND ND	ND	ND ND	<5.0	ND	ND ND	ND
N-Nitrosodiphenylamine		5.0	n/a	ND	ND	n/a	ND	ND	ND	ND	ND	ND	ND	ND	n/a	ND	ND	ND	ND	<5.0	n/a	ND	ND
Oil & Grease	mg/L	5	ND	7.2	ND	ND	8.9	ND	6.0	ND	ND	ND	ND	ND	ND	ND	5	ND	ND	<5	ND	ND	ND
p,p'-DDD	ug/L	0.10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.10	ND	ND	ND
p,p'-DDE	ug/L	0.10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.10	ND	ND	ND
p.p'-DDT p-Chloro-m-Crestol (4-Chloro-3-methylphenol)	ug/L ug/L	0.10 5.0	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	<0.10 <5.0	ND ND	ND ND	ND ND
Pentachlorophenol	ug/L ug/L	10	ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND	ND ND	ND ND	ND ND	ND	ND	ND ND	ND ND	ND ND	<5.0 <10	ND ND	ND ND	ND ND
Phenanthrene	ug/L	5.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<5.0	ND	ND	ND
Phenol	ug/L	5.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<5.0	ND	ND	ND
Phenolics, Total Recoverable	mg/L	0.010	ND	0.034	ND	ND	ND	0.016	ND	ND	0.015	ND	ND	0.022	0.045	ND	ND	0.033	ND	<0.010	ND	ND	ND
Phosphorus, Dissolved (As P)	mg/L	0.010	0.019	1.1	0.096	0.41	0.36	0.48	0.22	2.3	0.10	0.014	0.15	0.14	0.82	0.042	0.27	0.11	0.17	0.086	0.11	0.014	0.15
Phosphorus, Total (As P)	mg/L	0.010	0.039	1.6	0.15 ND	0.44 ND	0.54 ND	0.63 ND	0.32 ND	2.6 ND	0.25	0.54	0.21 ND	0.18	0.95	0.052	0.31	0.27	0.19 ND	0.18	0.11 ND	0.039	0.20 ND
Pyrene Selenium	ug/L mg/L	5.0 0.0050	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND 0.059	ND ND	<5.0 <0.0050	ND ND	ND ND	ND ND
Silver	mg/L	0.0030	ND	ND ND	ND	ND	ND	ND ND	ND	ND	ND	ND	ND	ND	ND	ND	ND ND	ND	ND	<0.0030	ND	ND	ND
Tetrachloroethene	ug/L	5.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<5.0	ND	1.6	2.2
Thallium	mg/L	0.0010	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.094	ND	<0.0010	ND	ND	ND
Toluene	ug/L	5.0	ND	1.7	ND	ND	1.2	ND	ND	ND	ND	ND	ND	ND	2.4	4.3	ND	ND	ND	<5.0	ND	ND	ND
Total Dissolved Solids	mg/L	20	450	240	490	390	290	360	160	210 ND	230	380	240	130	240	190	380	5700	230	120	680	320	510
Total Kjeldahl Nitrogen Total Organic Carbon	mg/L	0.50	1.0	9.0 46	ND 6.6	3.8	4.2	1.5 31	4.8	ND 47	5.6	3.4	5.6	1.4 8.2	5.7	3.1	1.0	3.9	ND	2.0	1.6	5.0	ND 0.6
Total PCBs	mg/L ug/L	0.50	4.5 ND	ND	6.6 ND	34 ND	15 ND	ND	13 ND	47 ND	15 ND	1.9 ND	8.0 ND	ND	47 ND	17 ND	20 ND	15 ND	7.3 ND	13 <0.10	16 ND	22 ND	9.6 ND
Total Suspended Solids	mg/L	10	23	94	41	53	91	19	24	16	70	16	34	140	220	89	36	97	43	29	5.2	39	51
Toxaphene	ug/L	0.10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.10	ND	ND	ND
Trichloroethylene	ug/L	5.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<5.0	ND	ND	ND
Vinyl chloride	ug/L	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<2.0	ND	ND	ND
Zinc	mg/L	0.0050	0.0095	0.086	0.020	0.12	0.10	0.12	0.046	0.033	0.083	0.016	0.18	0.12	0.097	0.095	0.048	0.28	0.22	0.18	0.064	0.089	0.066

RL - reporting limit n/a - not available ND - none detected

POTOMAC SUBWATERSHED DRY WEATHER SAMPLING RAW DATA

		Battery	/ kemble	Founda	ry Branch	Dale	ecarlia	Oxo	n Run	Tida	al Basin	Ship	Channel	C&O	Canal
Parameter	Units	Dry1 (NDF)	Dry2	Dry1	Dry2	Dry1	Dry2 (NDF)	Dry1	Dry2	Dry1	Dry2 (NDF)	Dry1	Dry2 (NDF)	Dry1	Dry2
1,1,1-Trichloroethane	ug/L		ND	ND	ND	ND		ND	ND	ND		ND		ND	ND
1,1,2,2-Tetrachloroethane	ug/L		ND	ND	ND	ND		ND	ND	ND		ND		ND	ND
1,1,2-Trichloroethane	ug/L		ND	ND	ND	ND		ND	ND	ND		ND		ND	ND
1,1-Dichloroethane	ug/L		ND	ND	ND	ND		ND	ND	ND		ND		ND	ND
1,1-Dichloroethene (1,1-Dichloroethylene)	ug/L		ND	ND ND	ND	ND NB		ND	ND	ND		ND		ND ND	ND
1,2,4-Trichlorobenzene	ug/L		ND ND	ND	ND	ND ND		ND	ND	ND		ND ND		ND ND	ND ND
1,2-Dichlorobenzene	ug/L		ND	ND	ND	ND		ND	ND	ND		ND ND		ND	ND
1,2-Dichloroethane 1,2-Dichloropropane	ug/L ug/L		ND ND	ND ND	ND ND	ND ND		ND ND	ND ND	ND ND		ND ND		ND ND	ND ND
1,2-Dichloroproparie	ug/L		ND ND	ND	ND ND	ND ND		ND ND	ND ND	ND ND		ND ND		ND ND	ND ND
1.2-Trans-Dichloroethylene (Trance-1.2-Dichloroethane)	ug/L		ND	ND	ND ND	ND ND		ND	ND	ND ND		ND		ND ND	ND ND
1.3-Dichlorobenzene	ug/L		ND	ND	ND	ND		ND	ND	ND		ND		ND	ND
1,3-Dichloropropylene (trans-1,3-Dichloropropylene)	ug/L		ND	ND	ND	ND		ND	ND	ND		ND		ND ND	ND
1,4-Dichlorobenzene	ug/L		ND	ND	ND	ND		ND	ND	ND		ND		ND	ND
2,3,7,8-TCDD (Dioxin)	pg/l		ND	ND	ND	ND		ND	n/a	ND		ND		ND	ND
2,4,6-Trichlorophenol	ug/L		ND	ND	ND	ND		ND	ND	ND		ND		ND	ND
2,4-Dichlorophenol	ug/L		ND	ND	ND	ND		ND	ND	ND		ND		ND	ND
2,4-Dimethylphenol	ug/L		ND	ND	ND	ND		ND	ND	ND		ND		ND	ND
2,4-Dinitrophenol	ug/L		ND	ND	ND	ND		ND	ND	ND		ND		ND	ND
2,4-Dinitrotoluene	ug/L		ND	ND ND	ND	ND ND		ND	ND	ND ND		ND ND		ND ND	ND
2,6-Dinitrotoluene	ug/L		ND	ND ND	ND ND	ND ND		ND ND	ND ND	ND ND		ND ND	 	ND	ND ND
2-Chloroethyl Vinyl Ether	ug/L	-	ND ND	ND ND	ND ND	ND ND		ND ND	ND ND	ND ND		ND ND	<u> </u>	ND ND	ND ND
2-Chloronaphthalene 2-Chlorophenol	ug/L ug/L	-	ND ND	ND ND	ND ND	ND ND	+	ND ND	ND ND	ND ND		ND ND		ND ND	ND ND
2-Nitrophenol	ug/L ug/L	1	ND ND	ND ND	ND ND	ND ND	+	ND ND	ND ND	ND ND		ND ND	+	ND ND	ND ND
3,3´-Dichlorobenzidine	ug/L	 	ND ND	ND	ND ND	ND ND		ND ND	ND ND	ND ND		ND ND	 	ND ND	ND ND
3,4-Benzofluoranthene (Benzo[b]fluoranthene)	ug/L		ND	ND	ND	ND ND		ND	ND	ND		ND		ND ND	ND
4,6-Dinitro-o-Crestol (4,6-Dinitro-2-methylphenol)	ug/L		ND	ND	ND	ND		ND	ND	ND		ND		ND ND	ND
4-Bromophenyl-phenylether	ug/L		ND	ND	ND	ND		ND	ND	ND		ND		ND	ND
4-Chlorophenyl-phenylethe	ug/L		ND	ND	ND	ND		ND	ND	ND		ND		ND	ND
4-Nitrophenol	ug/L		ND	ND	ND	ND		ND	ND	ND		ND		ND	ND
Acenaphthene	ug/L		ND	ND	ND	ND		ND	ND	ND		ND		ND	ND
Acenaphthylene	ug/L		ND	ND	ND	ND		ND	ND	ND		ND		ND	ND
Acrolein	ug/L		ND	ND	ND	ND		ND	ND	ND		ND		ND	ND
Acrylonitrile	ug/L		ND	ND	ND	ND		ND	ND	ND		ND		ND	ND
Aldrin	ug/L		ND	ND ND	ND	ND NB		ND	ND	ND		ND		ND ND	ND
Alpha-BHC	ug/L		ND	ND	ND	ND ND		ND	ND	ND ND		ND ND	-	ND	ND
Anthracene Antimony	ug/L mg/L		ND ND	ND n/a	ND ND	ND ND		ND ND	ND ND	ND ND		ND ND	-	ND ND	ND ND
Aroclor 1016 (PCB 1016)	ug/L		ND ND	ND	ND ND	ND ND		ND ND	ND ND	ND ND		ND ND		ND ND	ND ND
Aroclor 1221 (PCB 1221)	ug/L		ND ND	ND ND	ND ND	ND ND		ND ND	ND ND	ND ND		ND ND		ND ND	ND ND
Aroclor 1221 (FOB 1221) Aroclor 1232 (PCB 1232)	ug/L		ND ND	ND ND	ND	ND ND		ND	ND	ND ND		ND		ND ND	ND
Aroclor 1242 (PCB 1242)	ug/L		ND	ND	ND	ND ND		ND	ND	ND		ND		ND ND	ND ND
Aroclor 1248 (PCB 1248)	ug/L		ND	ND	ND	ND		ND	ND	ND		ND		ND	ND
Aroclor 1254 (PCB 1254)	ug/L		ND	ND	ND	ND		ND	ND	ND		ND		ND	ND
Aroclor 1260 (PCB 1260)	ug/L		ND	ND	ND	ND		ND	ND	ND		ND		ND	ND
Arsenic	mg/L		ND	ND	ND	ND		ND	ND	ND		ND		ND	ND
Benzene	ug/L		ND	ND	ND	ND		ND	ND	ND		ND		ND	ND
Benzidine	ug/L		ND	ND	ND	ND		ND	ND	ND		ND		ND	ND
Benzo(a)anthracene	ug/L		ND	ND	ND	ND		ND	ND	ND		ND		ND	ND
Benzo[a]pyrene	ug/L		ND ND	ND ND	ND	ND ND		ND ND	ND	ND ND		ND ND		ND ND	ND
Benzo[g,h,i]perylene	ug/L		ND	ND	ND	ND ND		ND	ND	ND		ND ND		ND	ND
Benzo[k]fluoranthene	ug/L	 	ND ND	ND ND	ND ND	ND ND	+	ND ND	ND ND	ND ND		ND ND		ND ND	ND ND
Beryllium Beta-BHC	mg/L	-	ND ND	ND ND	ND ND	ND ND	+	ND ND	ND ND	ND ND		ND ND		ND ND	ND ND
Bis(2-Chloroethoxy)methane	ug/L ug/L	1	ND ND	ND ND	ND ND	ND ND	+	ND ND	ND ND	ND ND		ND ND	+	ND ND	ND ND
Bis(2-Chloroethyl)ether	ug/L ug/L	1	ND ND	ND ND	ND ND	ND ND	+	ND ND	ND ND	ND ND		ND ND	+	ND ND	ND ND
Bis(2-chloroisopropyl)ether	ug/L	 	ND ND	ND	ND ND	ND ND	+	ND	ND ND	ND ND		ND ND	 	ND ND	ND ND
Bis(2-Ethylhexyl)phthalate	ug/L	1	ND	ND	ND ND	ND ND		ND	ND	ND ND		ND	<u> </u>	ND ND	ND ND
BOD	mg/L		3.3	16	11	6.1	1	ND	4.4	440		52	1	3.4	ND
Bromodichloromethane (Dichlorobromomethane)	ug/L		ND	ND	ND	ND		ND	ND	ND		ND		ND	ND
Bromoform	ug/L		ND	1.0	ND	ND		ND	ND	ND		ND		ND	ND
Bromomethane (Methyl bromide)	ug/L		ND	ND	ND	ND		ND	2.4	ND		ND		ND	ND
Butylbenzylphthalate	ug/L		ND	ND	ND	ND		ND	ND	ND		ND		ND	ND
Cadmium	mg/L		ND	ND	ND	ND		ND	ND	ND		0.00096		ND	ND
Carbon Tetrachloride	ug/L		ND	ND	ND	ND		ND	ND	ND		ND		ND	ND
Chlordane (Technical Chlordane)	ug/L		ND	ND	ND	ND		ND	ND	ND		ND		ND	ND
Chlorobenzene	ug/L		ND	ND ND	ND	ND NB		ND	ND	ND		ND		ND ND	ND
Chloroethane	ug/L		ND ND	ND 1.0	ND	ND 1.0		ND ND	ND	ND ND		ND ND		ND ND	ND
Chloroform	ug/L		ND ND	1.0	ND	1.8		ND	ND	ND		ND ND		ND	ND
Chloromethane (Methyl chloride)	ug/L	-	ND 1.6	ND	ND ND	ND ND		ND 3.5	ND 6.9	ND		ND 0.8	<u> </u>	ND ND	ND
Chromium	ug/L	-	1.6	3.3	ND 0.0013	ND ND	+	2.5	6.8	3.4		9.8	<u> </u>	ND ND	2.4 ND
Chromium	mg/L		ND	ND	0.0012	ND		ND	ND	0.0043		0.0025		ND	ND

Chrysene	ug/L		ND	ND	ND	ND		ND	ND	ND		ND		ND	ND
cis-1,3-Dichloropropylene	ug/L		ND	ND	ND	ND		ND	ND	ND		ND		ND	ND
Parameter	Units	Battery	y kemble	Foundar	y Branch	Dale	carlia	Oxor	n Run	Tidal	Basin	Ship C	hannel	C&O	Canal
r ai ainetei	Office	Dry1 (NDF)	Dry2	Dry1	Dry2	Dry1	Dry2 (NDF)	Dry1	Dry2	Dry1	Dry2 (NDF)	Dry1	Dry2 (NDF)	Dry1	Dry2
COD, Total	mg/L		ND	23	28	19		ND	25	810		82	 	14	ND
Copper	mg/L		0.0014	0.055	0.016	0.0089		0.0022	0.0082	0.22		0.16		0.0017	0.0026
Cyanide, Total	mg/L		ND	ND	ND	0.0075		ND	ND	ND		ND		ND	ND
delta-BHC	ug/L		ND	ND	ND	ND		ND	ND	ND		ND		ND	ND
Dibenz[a,h]anthracene	ug/L		ND	ND	ND	ND		ND	ND	ND		ND		ND	ND
Dibromochloromethane (Chlorodibromomethane)	ug/L		ND	ND	ND	ND		ND	ND	ND		ND		ND	ND
Dieldrin	ug/L		ND	ND	ND	ND		ND	ND	ND		ND		ND	ND
Diethylphthalate	ug/L		ND	ND	ND	ND		ND	ND	ND		ND		ND	ND
Dimethylphthalate	ug/L		ND	ND	ND	ND		ND	ND	ND		ND		ND	ND
Di-n-butylphthalate	ug/L		ND	ND	ND	ND		ND	ND	ND		ND		ND	ND
Di-n-octylphthalate	ug/L		ND	ND	ND	ND		ND	ND	ND		ND		ND	ND
Endosulfan I (Alpha-endosulfan)	ug/L		ND	ND	ND	ND		ND	ND	ND		ND =		ND	ND
Endosulfan II (Beta-endosulfan)	ug/L		ND	ND ND	ND ND	ND		ND ND	ND	ND ND		ND ND		ND ND	ND
Endosulfan Sulfate	ug/L		ND	ND ND	ND	ND		ND	ND	ND ND		ND		ND	ND
Endrin	ug/L		ND	ND ND	ND	ND		ND	ND	ND ND		ND ND		ND ND	ND
Endrin Aldehyde	ug/L		ND ND	ND ND	ND ND	ND ND		ND ND	ND	ND ND		ND ND		ND ND	ND ND
Ethylbenzene Eggel Coliforms	ug/L		ND 000	ND	ND 200	ND > 1600	 	ND 130	ND > 1600	ND > 1600		ND 8000	1	ND > 1600	ND 300
Fecal Coliforms Fecal Streptococcus	MPN/100 mL MPN/100 mL		900	>1600 >1600	200 ND	>1600 >1600	 	130 500	>1600 >1600	>1600 >1600		8000 1700	┼	>1600 >1600	300 50
Fluoranthene	ug/L	 	ND	>1600 ND	ND ND	>1600 ND	+	ND	>1600 ND	>1600 ND	 	ND	+	>1600 ND	ND
Fluoranthene	ug/L ug/L		ND ND	ND ND	ND ND	ND ND	1	ND ND	ND ND	ND ND	-	ND ND	1	ND ND	ND ND
gamma-BHC	ug/L ug/L		ND ND	ND ND	ND ND	ND ND		ND ND	ND ND	ND ND		ND ND	+	ND ND	ND ND
Hardness (As CaCO ₃)	mg CaCO3/L		700	190	140	160		160	170	110		170		310	340
Heptachlor	ug/L		ND	ND	ND	ND		ND	ND	ND		ND	+	ND ND	ND
Heptachlor epoxide			ND ND	ND ND	ND ND	ND ND		ND ND	ND ND						ND ND
Hexachlorobenzene	ug/L ug/L		ND ND	ND ND	ND ND	ND ND		ND ND	ND ND	ND ND		ND ND		ND ND	ND ND
Hexachlorobutadiene	ug/L		ND ND	ND ND	ND ND	ND ND		ND	ND ND	ND ND		ND ND		ND ND	ND
Hexachlorocyclopentadiene	ug/L		ND ND	ND ND	ND ND	ND ND		ND	ND ND	ND ND		ND ND		ND ND	ND
Hexachloroethane	ug/L		ND	ND	ND ND	ND ND		ND	ND ND	ND ND		ND		ND ND	ND
Indeno[1,2,3-cd]pyrene	ug/L		ND	ND	ND ND	ND ND		ND	ND	ND ND		ND ND		ND ND	ND
Isophorone	ug/L		ND	ND ND	ND ND	ND ND		ND	ND	ND ND		ND		ND	ND
Lead	mg/L		ND	0.016	ND	ND		ND	ND ND	0.015		0.10		ND	ND
Mercury	mg/L		ND	ND	ND ND	ND		ND	0.00035	ND		ND		ND	ND
Methylene Chloride	ug/L		ND	ND	ND	ND		1.2	ND	ND		ND		ND	ND
Naphthalene	ug/L		ND	ND	ND	ND		ND	ND	ND		ND		ND	ND
Nickel	mg/L		ND	0.020	0.012	ND		ND	ND	0.016		0.036		ND	ND
Nitrate/Nitrite as N	mg/L		3.9	ND	0.43	0.60		ND	0.39	ND		2.1		0.17	ND
Nitrobenzene	ug/L		ND	ND	ND	ND		ND	ND	ND		ND		ND	ND
Nitrogen, Total	mg/L		3.9	3.0	3.2	17		3.1	2.2	37		8.3		3.0	ND
N-Nitrosodimethylamine	ug/L		ND	ND	ND	ND		ND	ND	ND		ND		ND	ND
N-Nitroso-di-n-propylamine	ug/L		ND	ND	ND	ND		ND	ND	ND		ND		ND	ND
N-Nitrosodiphenylamine	ug/L		ND	n/a	ND	n/a		n/a	ND	n/a		n/a		n/a	ND
Oil & Grease	mg/L		ND	ND	ND	ND		ND	ND	14		ND		ND	ND
p,p'-DDD	ug/L		ND	ND	ND	ND		ND	ND	ND		ND		ND	ND
p,p'-DDE	ug/L		ND	ND	ND	ND		ND	ND	ND		ND	<u> </u>	ND	ND
p,p'-DDT	ug/L		ND	ND	ND	ND		ND	ND	ND		ND	1	ND	ND
p-Chloro-m-Crestol (4-Chloro-3-methylphenol)	ug/L		ND	ND	ND	ND	ļ	ND	ND	ND ND	ļļ	ND ND	 	ND	ND
Pentachlorophenol	ug/L		ND	ND ND	ND	ND	ļ	ND	ND	ND ND	ļļ	ND ND	 	ND ND	ND
Phenanthrene	ug/L		ND	ND	ND	ND		ND	ND	ND ND		ND	 	ND	ND
Phenol	ug/L		ND 0.015	ND ND	ND ND	ND		ND	ND 0.038	ND 0.15		ND 0.056	+	ND ND	ND 0.012
Phenolics, Total Recoverable	mg/L		0.015	ND 0.46	ND ND	ND 0.13		ND	0.028	0.15		0.056		ND 0.076	0.012
Phosphorus, Dissolved (As P)	mg/L		0.015	0.46	ND 0.48	0.13		ND 0.045	0.015	5.0		0.58	+	0.076	0.12 0.14
Phosphorus, Total (As P)	mg/L	 	0.89 ND	0.58 ND	0.48 ND	0.13 ND	 	0.045 ND	0.039	5.2	 	0.85	┼───	0.064	0.14 ND
Pyrene Selenium	ug/L		ND ND	ND ND	ND ND	ND ND	+ +	ND ND	ND ND	ND ND		ND ND	+ +	ND ND	ND ND
Silver	mg/L mg/L		ND	ND ND	ND ND	ND ND	+	ND ND	ND ND	ND ND	+	ND	+ +	ND ND	ND ND
Tetrachloroethene	ug/L		ND ND	ND ND	ND ND	ND ND	1	ND ND	4.0	ND ND	-	ND ND	1	ND ND	1.5
Thallium	mg/L		ND ND	0.020	ND ND	ND ND	1	ND ND	ND	ND ND	-	ND ND	1	ND ND	ND
Toluene	ug/L		ND ND	2.5	ND ND	ND ND	+	ND	ND ND	4.5		ND ND	+	ND ND	ND
Total Dissolved Solids	mg/L		1100	430	530	710	 	290	370	320	 	380	+	760	660
Total Kjeldahl Nitrogen	mg/L		ND	3.0	2.8	16	+	3.1	1.8	37		6.2	+	2.8	ND
Total Organic Carbon	mg/L		1.9	5.1	4.6	2.8	+	1.1	2.8	130		15	+	1.2	1.5
Total PCBs	ug/L		ND	ND	ND	ND	+	ND	ND	ND		ND	+	ND	ND
Total Suspended Solids	mg/L		31	5.6	8.0	ND ND	 	4.4	26	410	 	160	+	ND ND	ND
Toxaphene	ug/L		ND	ND	ND	ND ND	+	ND	ND	ND ND		ND	+	ND ND	ND ND
	ug/L		ND	ND	ND ND	ND ND	 	ND	ND ND	ND ND	 	ND	+	ND ND	ND
		ii l	140	. 10	140	140	1	110	110	140		110	1	110	
Trichloroethylene Vinyl chloride	ug/L		ND	ND	ND	ND		ND	ND	ND	l II	ND	1	ND	ND

RL - reporting limit n/a - not available ND - none detected NDF- No Dry Flow

APPENDIX D

ESTIMATION OF RUNOFF COEFFICIENTS

Estimation of Runoff Coefficients for Monitored Sewersheds

Runoff coefficients were estimated for each of the nine monitored sewersheds contributing flow to the Anacostia River monitoring sites. Land use and acreage calculations within each sewershed were completed using the 'Land Use-Existing' dataset provided by the District of Columbia Office of Planning. This layer is also available to the public at: http://dcatlas.degis.de.gov/catalog/

Weighted average runoff coefficients were assigned to each sewershed using Equation 2 on page 5-16 of the US EPA "Guidance Manual for the Preparation of Part 2 of the NPDES Permit Applications for Discharges from Municipal Separate Storm Sewer Systems", 1992. The equation is expressed:

$$Rv_i = \left(\sum A_i R_v\right) / \left(\sum A_i\right)$$
 (Equation 2)

Where: Rv_i = Weighted Average Runoff Coefficient

 R_v = Assigned Runoff Coefficient for each land use type

A_i = Catchment area (acres) for corresponding land use type

Runoff coefficients (R_v) were estimated for each land use type in the District of Columbia by taking into consideration both the runoff coefficient ranges for various land use types presented in exhibit 3-12 on page 57 of the US EPA "NPDES Stormwater Sampling Guidance Document", and runoff coefficient values used associated with District of Columbia zoning categories used in previous DMR's. Where the US EPA suggested runoff coefficients from Exhibit 3-12 did not contain a corresponding runoff coefficient range for a District of Columbia land use category, the corresponding code from a previous DMR was used as a substitute. The estimated runoff coefficient values for each land use category is presented in Table D-1.

The calculation of the weighted average runoff coefficient for each monitoring is given in subsequent sections.

Table D-1. Estimated Runoff Coefficients for District of Columbia Existing Land Use Categories

Land Use Code	Description	Rv
C, O	Commercial (ac)	0.85
LDR	Low Density Residential	0.5
LMDR	Low Medium Density Residential	0.65
MDR	Medium Density Residential	0.77
HDR	High Density Residential	0.85
FP	Federal Public Land	0.77
Ι	Industrial	0.95
TCU	Transport/Communications/Utilities	0.95
LP	Local Public	0.77
MU	Mixed Use	0.905
PQP-I	Public-Quasi Public Institutional	0.8
R	Parks and Open Space	0.35
S	Institutional	0.8
TROW	Transportation Right of Way	0.85
ALLEYS	alleys	0.95
MEDIAN	Median	0.3
PARKING	Parking	0.95
ROADS	Roads	0.95
TRAFFICS	TRAFFIC	0.95

WEIGHTED RUNOFF COEFFICIENT FOR EACH MONITORING SITE

Battery Kemble

Land Use Code	Runoff Coef.	Acrage	Weighted Runoff Coef. (Rv)
LDR	0.5	9.072	
ROADS	0.95	0.863	
TROW	0.85	1.556	
			0.58

Foundary Branch

Land Use Code	Runoff Coef.	Acrage	Weighted Runoff Coef. (Rv)
ALLEYS	0.95	0.29	
С	0.95	2.74	
FP	0.77	3.43	
LDR	0.5	7.58	
LMDR	0.65	0.42	
LP	0.77	2.23	
MEDIAN	0.3	0.01	
MU	0.905	0.99	
0	0.85	1.36	
R	0.35	1.43	
ROADS	0.95	8.86	
S	0.8	11.81	
TROW	0.85	8.51	

0.78

Dalecarlia

Land Use Code	Runoff Coef.	Acrage	Weighted Runoff Coef. (Rv)
LDR	0.5	16.28	
MEDIAN	0.3	0.01	
ROADS	0.95	3.34	
S	0.8	0.00	
TROW	0.85	4.25	

0.63

Oxon Run

Land Use Code	Runoff Coef.	Acrage	Weighted Runoff Coef. (Rv)
ALLEYS	0.95	0.74	
С	0.95	0.45	
FP	0.77	11.77	
LDR	0.5	0.49	
LMDR	0.65	4.55	
LP	0.77	3.16	
MDR	0.77	10.17	
MU	0.905	1.25	
R	0.35	0.17	
RIVER		0.07	
ROADS	0.95	6.38	
TCU	0.95	1.19	
TROW	0.85	2.96	

0.80

Tidal Basin

Land Use Code	Runoff Coef.	Acrage	Weighted Runoff Coef. (Rv)
FP	0.77	0.09	
MEDIAN	0.3	0.01	
R	0.35	7.04	
ROADS	0.95	0.72	

0.41

Washington Ship Channel

Land Use Code	Runoff Coef.	Acrage	Weighted Runoff Coef. (Rv)
FP	0.77	12.50	
MEDIAN	0.3	0.01	
PARKIN			
G	0.95	5.56	
R	0.35	0.52	
ROADS	0.95	4.42	
S	0.8	0.05	
TCU	0.95	0.04	
TROW	0.85	2.31	

C and O Canal

Land Use Code	Runoff Coef.	Acrage	Weighted Runoff Coef. (Rv)
ALLEYS	0.95	9.61	
С	0.85	24.16	
FP	0.77	40.35	
HDR	0.85	29.98	
LAKE		0.13	
LDR	0.5	218.36	
LMDR	0.65	78.77	
LP	0.77	17.01	
MDR	0.77	121.18	
MEDIAN	0.3	2.49	
MU	0.905	0.00	
0	0.85	5.80	
R	0.35	258.29	
ROADS	0.95	92.53	
S	0.8	87.08	
TCU	0.95	0.02	
TROW	0.85	121.82	