

FACT SHEET



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 3
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029
NPDES Permit No. DC0000141

The United States Environmental Protection Agency (EPA) is Proposing the Reissuance of a National Pollutant Discharge Elimination System (NPDES) Permit to Discharge Pollutants Pursuant to the Provisions of the Clean Water Act (CWA) For:

**Washington Navy Yard
Naval Support Activity
1411 Parsons Avenue SE
Suite 200
Washington, DC 20374**

**RECEIVING WATER:
Anacostia River**

ACTION TO BE TAKEN:

EPA is finalizing the reissuance of the NPDES permit for the Washington Navy Yard. The final permit is intended to replace the 2009 permit which was administratively continued past the January 22, 2015 expiration date. The effective date of this reissued permit is February 1, 2022.

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1.0 Facility Summary

1.1 Site Description

The Naval District Washington, also known as the Washington Navy Yard (WNY), was established on October 2, 1799, and served as a major shipbuilding facility during the first part of the 19th century. During the latter part of the 19th century, shipbuilding operations ceased and the WNY became the Naval Gun Factory in 1886. During World War II the Naval Gun Factory employed 25,000 people and was the largest gun factory in the world. In 1961, gun production ceased and the facility was converted to administrative and supply use. The Washington Navy continues to be the “Quarterdeck of the Navy” and serves as the headquarters for Naval District Washington. The Washington Navy Yard currently houses numerous support activities for the fleet and aviation communities

The Washington Navy Yard is a 75 acre facility on the banks of the Lower Anacostia River and borders the eastern boundary of the Southeast Federal Center. The site is comprised of administrative buildings, loading/unloading areas, and services such as restaurants, public works, fire and police departments, parking lots, garages, and recreational centers. The site is highly developed with very little green space. The WNY includes a large boiler plant at the southwestern corner of the property that provides heat to facility buildings. In addition, some facility maintenance activities such as painting and light carpentry are performed. The WNY uses permeable pavers at various sites of its facility. Under the Comprehensive Environmental Response, Compensation and Liability Act or CERCLA (42 U.S.C. § 9601 et seq.), the Washington Navy Yard was added to the National Priorities list on July 28, 1998. CERCLA requires that the National Oil and Hazardous Substances Pollution Contingency Plan or NCP include a list of national priorities among the known releases or threatened releases of hazardous substances, pollutants, or contaminants through the United States. For more information on CERCLA and the National Priorities List, please visit <https://www.epa.gov/superfund/superfund-national-priorities-list-npl>.

1.2 Discharge Description and Outfall Locations

The Washington Navy Yard discharges stormwater collected from various locations on the military base. There are eleven (11) active stormwater outfalls. The 2009 permit included Outfall 014F, however, this outfall was disconnected and removed from service. As such, Outfall 014F was removed from the permit. Stormwater that accumulates at the site is collected in a subsurface storm water drainage system which discharges directly into the Lower Anacostia River, the District of Columbia Combined Sewer System (CSS) and to the District Municipal Separate Storm Sewer System (MS4). Two outfalls drain to the CSS and one outfall drains to theMS4. The remaining eight (8) outfalls discharge directly to the Anacostia River. The geographic location and description of each outfall is listed in Table 1 below.

Table 1. Geographic location and description of outfalls

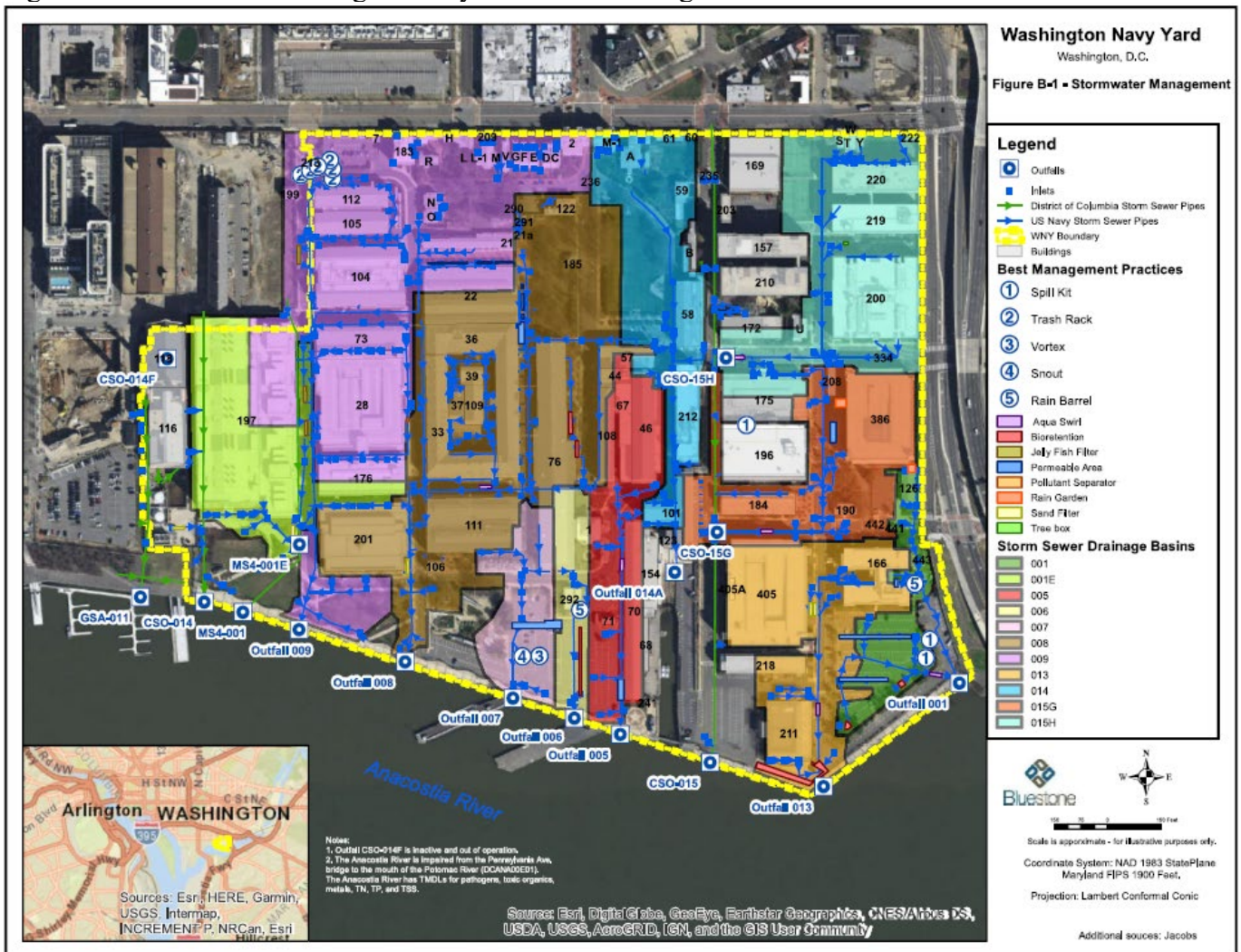
Outfall No.	Latitude			Longitude			Basin Area (Acres)	Receiving Water	Description
	Deg	Min	Sec	Deg	Min	Sec			
001	38	52	19	76	59	29	2.15	Anacostia River	Drainage Basin 001 encompasses 2.15 acres on the south east edge of Installation. Drainage Basin 001 is bound to the west and north by Basins 013 and 015G and to the east by the WNY installation boundary.

Outfall No.	Latitude			Longitude			Basin Area (Acres)	Receiving Water	Description
	Deg	Min	Sec	Deg	Min	Sec			
005	38	52	18	76	59	41	3.74	Anacostia River	Drainage Basin 005 encompasses two disconnected areas totaling 3.74 acres. The larger portion of drainage Basin 005 extends from Building 57 at the northern end to the southern extent of Building 70 at the south. This larger portion of Basin 005 is bound to the east by Basin 015G and an area that discharges runoff directly to the Anacostia River and to the west by Basin 006.
006	38	52	18	76	59	43	1.42	Anacostia River	Drainage Basin 006 encompasses 1.42 acres. The eastern, northern, and western edges of Basin 006 are bounded by Basins 005, 008, and 007, respectively.
007	38	52	18	76	59	45	2.07	Anacostia River	Drainage Basin 007 encompasses 2.07 acres near Willard Park. Drainage Basin 007 is bound by Basin 006 to the east and Basin 008 to the north and west. The southern side of Basin 007 is the boardwalk adjacent to the Anacostia River with the exception of one drop inlet in the boardwalk.
008	38	52	20	76	59	49	12.55	Anacostia River	Drainage Basin 008 encompasses 12.55 acres and runs vertically from the fire station (Building 122) at the northern extent down to the boardwalk along the Anacostia River. The eastern edge of Drainage Basin 008 is bound by Basins 007 and 014, and the north western edge is bound by Drainage Basin 009.
009	38	52	21	76	59	53	12.55	Anacostia River	Drainage Basin 009 is the largest stormwater basin at the WNY, consisting of two disconnected areas that total 12.55 acres. The northern extent of the first area of Basin 009 is the installation boundary from the guard shack (Building 213). Basin 009 borders the historical WNY entrance to the north west and Basin 001E at the south west, and Basin 008 to the east.
013	38	52	16	76	59	34	5.08	Anacostia River	Drainage Basin 013 encompasses 5.08 acres of primarily impervious areas. The basin is bounded by Drainage Basin 001 to the east, the Anacostia River to the south, Drainage Basin 015G to the north, and an area to the west that does not contribute runoff to a permitted WNY outfall.
014A	38	52	22.9	76	59	38.8	4.62	Anacostia River	Drainage Basin 014A encompasses 4.62 acres in the center of WNY. The northern extent of Basin 014A is the WNY installation boundary. The south west end of Basin 014A is bordered by Basin 005. The south east end of Basin 014A is bordered by Basin 015G. The northern half of Basin 014A is bordered by Basins 008 and 009 on the west and an area that discharges to CSO-015H to the east.
001E MS4	38	52	23	76	59	53	4.41	Anacostia River	Drainage Basin 001E encompasses 4.41 acres on the southwestern side of WNY. This is a

Outfall No.	Latitude			Longitude			Basin Area (Acres)	Receiving Water	Description
	Deg	Min	Sec	Deg	Min	Sec			
									permitted connection point to the DC Municipal Separate Storm Sewer system (MS4).
015G-CSO	38	52	23	76	59	37	4.73	Anacostia River	Drainage Basin 015G encompasses 4.73 acres along the eastern boundary of WNY. Basin 015G is one of two basins with an outfall that discharges directly to a District of Columbia Water and Sewer Authority (WASA) CSO pipe. This DC WASA CSO is designated 015.
015H-CSO	38	52	28	76	59	37	6.69	Anacostia River	Drainage Basin 015H encompasses 6.69 acres in the northeastern corner of WNY. Basin 015H is the second basin that discharges directly to CSO 015.

The eleven outfalls are depicted on the map in Figure 1 below. The map also shows the drainage basins associated with each outfall as well as the Best Management Practices (BMPs) implemented in each area.

Figure 1. Location of Washington Navy Yard outfalls. Figure borrowed from the WNY 2020 SWPPP.



The permit contains new monitoring requirements and effluent limits for each outfall. These new requirements are based on the outcome of the reasonable potential (RP) analysis and the assumptions and requirements of applicable TMDLs. The TMDLs and the RP analysis are discussed in more detail in Sections 2.0 and 3.0, respectively.

2.0 Receiving Water Characterization

The permittee discharges to the Anacostia River.

2.1 Designated Uses

Table 2 below describes the designated uses for the receiving water at each Outfall.

Table 2. Classification of Receiving Waterbody

OUTFALL NO.	RECEIVING WATER	DESIGNATED USES
001	ANACOSTIA RIVER	A, B, C, D, E
005	ANACOSTIA RIVER	A, B, C, D, E
006	ANACOSTIA RIVER	A, B, C, D, E
007	ANACOSTIA RIVER	A, B, C, D, E
008	ANACOSTIA RIVER	A, B, C, D, E
009	ANACOSTIA RIVER	A, B, C, D, E
013	ANACOSTIA RIVER	A, B, C, D, E
014A	ANACOSTIA RIVER	A, B, C, D, E
001E- MS4	ANACOSTIA RIVER	A, B, C, D, E
015G- CSO	ANACOSTIA RIVER	A, B, C, D, E
015H CSO	ANACOSTIA RIVER	A, B, C, D, E

Classifications of the District's Waters, Defined:

Class A – Primary Contact Recreation

Class B – Secondary Contact Recreation

Class C – Protection and propagation fish, shellfish and wildlife

Class D – Protection of human health related to consumption of fish and shellfish

Class E – Navigation

2.2 303(d) Status of the Anacostia River

The Anacostia River is impaired, *i.e.*, not achieving applicable water quality standards, for various pollutants. The District developed and EPA has approved Total Maximum Daily Loads (TMDLs) to address these pollutants.¹ The applicable TMDLs are discussed in the next section.

2.3 Total Maximum Daily Loads (TMDLs)

According to 40 C.F.R. § 122.44 (d)(1)(vii)(B), the effluent limits developed to protect a narrative water quality criterion, a numeric water quality criterion, or both, must be consistent with the assumptions and requirements of any available wasteload allocation for the discharge in a TMDL established or approved by EPA pursuant to 40 C.F.R. § 130.7. The table below lists the applicable TMDLs for the Anacostia

¹ EPA's approvals of many of the TMDLs for the Anacostia River have been challenged in federal district court and vacated. In these instances, the federal district court has stayed its vacatur of EPA's approvals for a specific period of time to allow for development of replacement TMDLs. The TMDLs discussed herein are the applicable TMDLs at the time of permit issuance.

River, the receiving stream to which the permittee discharges. Copies of these TMDLs may be found at: <https://doee.dc.gov/service/total-maximum-daily-load-tmdl-documents>

Table 3. Applicable TMDLs and outfalls at the Washington Navy Yard.

TMDL	Pollutants	Applicable Outfall
Anacostia Watershed TMDLs	<ul style="list-style-type: none"> • Total Suspended Solids (TSS), approved 2007 • Nutrients/Biological Oxygen Demand (BOD), approved 2008 • Trash TMDL, approved 2010 • Bacteria/<i>E.coli</i>, approved 2003, revised 2014 • Oil and grease, approved 2003 • Organics and Metals, approved 2003 <ul style="list-style-type: none"> - Arsenic - Copper - Lead - Zinc - Chlordane - DDD, DDE, and DDT - Dieldrin - Heptachlor Epoxide - Total PAHs: PAH1, PAH2, PAH3 • Total PCBs, approved 2007 	All outfalls
Chesapeake Bay TMDL (established 2010)	<ul style="list-style-type: none"> • Total Nitrogen (TN) • Total Phosphorus (TP) • TSS that address Dissolved Oxygen (DO), pH, Chlorophyll <i>a</i> impairments 	All outfalls

2.3.1 Anacostia Watershed TMDLs for TSS, Nutrients/BOD, Organics and Metals

Consistent with the assumptions and requirements of the TMDLs for TSS, Nutrients/BOD, and Organics and Metals, the permit contains as a WQBEL annual aggregate loads from all Outfalls for these TMDL pollutants (“maximum cumulative annual loads”) calculated as follows.

At the last permit reissuance in 2009, loadings consistent with the assumptions and requirements of the TMDLs were calculated for all pollutants shown above except trash, PCBs, and *E.coli* by first calculating baseline loads for each pollutant and then reducing those baseline loads by the same amount as the reductions called for in the corresponding TMDLs. The Baseline loads for the Navy Yard’s 2009 permit were calculated by the Interstate Commission on the Potomac River Basin (ICPRB) with input from DOEE, EPA, and the Navy Yard. The ICPRB calculated the baseline loads consistent with the applicable TMDL simulation period and other assumptions of the TMDL as well as the Navy’s estimate of 80.2 total acres and 60% impervious cover. The Navy Yard provided EPA with new information in the form of a real estate map from 2016 which shows the Navy Yard total acreage to be 75 acres. Therefore, this new information (75 acres) was used to recalculate the baseline loads for this permit reissuance.

The ICPRB provided a spreadsheet to EPA that was used to calculate the baseline loads for the 2009 permit. This spreadsheet was again used to recalculate the baseline loads for the 2021 permit this time using 75 acres instead of 80.2. All other inputs remain unchanged. TSS was calculated by taking the ratio from the 2009 loads based on 80.2 acres and the 2021 loads based on 75 acres because the calculations for TSS were not included in the ICPRB spreadsheet. This spreadsheet can be found in the administrative record.

The following equation was used to calculate the Navy Yard’s baseline loads:

$$\text{Baseline load} = [\text{impervious area}] * [\text{impervious flow}] * [\text{storm concentration}] + [\text{pervious area}] * [\text{pervious baseflow}] * [\text{baseflow concentration}] + [\text{pervious area}] * [\text{pervious stormflow}] * [\text{storm concentration}]$$

The average flows (inch-acres/acre/year) that were used in the TMDLs are shown below in Table 4.

Table 4. Average Annual flow (in-ac/ac/yr) Simulated for Direct Drainage to Tidal Anacostia River

TMDL	Pervious Baseflow	Pervious Stormflow	Impervious Stormflow
Metals/Toxics	12.7	1.8	30.2
Sediment/Nutrients	12.6	0.8	33.5

Table 5 shows the conversion factors used in the baseline load calculations.

Table 5. Factor for converting into in/yr to l/ac/yr

in-ac/yr	ft/in	l/ac-ft	Conversion Factor
1.00	0.083333	1,233,477.138	102,787

Table 6 shows the constituent concentrations for baseline calculations for outfalls that do not discharge to the CSO.

Table 6. Concentrations for TMDL pollutants

Constituent	Unit	Base	Storm
Arsenic	µg/L	0.2	1.4
Copper	µg/L	3.5	57
Lead	µg/L	0.6	29
Zinc	µg/L	7.5	173
Chlordane	µg/L	0.000963	0.009829
DDD	µg/L	0.00462	0.003
DDE	µg/L	0.00393	0.0133
DDT	µg/L	0.0123	0.0343
Dieldrin	µg/L	0.000641	0.00029
PAH1	µg/L	0.0825	0.6585
PAH2	µg/L	0.219	4.1595
PAH3	µg/L	0.1065	2.682
Heptachlor Epoxide	µg/L	0.000641	0.000957
TP	mg/L	0.055	0.475
BOD	mg/L	1.20	42.92

Accordinging the ICPRB, the sediment and PCB loads are given on a per acre basis. For sediment, the loading rates are 15.43 lbs/ac/yr for pervious land and 879.06 lbs/ac/yr for impervious land. For PCBs, the loading rate is 9.89E-04 (0.000989) lbs/ac/yr for all land uses.

For TN, the nitrate baseflow concentrations are assumed to be seasonal. Table 7 shows the seasonal baseflow and baseflow nitrate concentrations. The baseflow TKN concentration was assumed to be 0.49

mg/L and the TN stormflow concentration was assumed to be 3.36 mg/L. Baseflow TN is TKN plus Nitrate.

Table 7. Average Annual Seasonal Baseflow (in-ac/ac/yr) and Seasonal Nitrate Baseflow Concentrations (mg/L) Simulated for Direct Drainage to Tidal Anacostia River.

Season	Baseflow	Nitrate
Winter	0.19	1.5
Spring	0.16	1
Summer	0.05	0.6
Fall	0.12	0.86

Table 8 shows the baseline loads that were calculated using the above information. The table also shows the recalculated annual TMDL-based wasteload allocations (WLAs) that were calculated from the baseline loads. The wasteload allocations were based on the percent reduction required in each TMDL. The wasteload allocation was calculated in the following manner:

$$\text{WNY baseline load (lbs/year)} \times \% \text{ reduction} = \text{Maximum cumulative WLA.}$$

Table 8. Washington Navy Yard baseline loads and wasteload allocation calculated based on the percent reduction requirements of the TMDL.

Pollutant	Applicable TMDL	2009 Baseline Loads 80.2 acres (lbs/year)	2021 Baseline Loads 75 acres (lbs/year)	Recalculated TMDL-based WLAs 75 acres (lbs/year)
Arsenic	Organics and Metals (2003)	4.98E-01	4.65E-01	6.98E-02
Copper	Organics and Metals (2003)	1.98E+01	1.85E+01	1.84E+01
Lead	Organics and Metals (2003)	9.98E+00	9.33E+00	9.24E+00
Zinc	Organics and Metals (2003)	5.99E+01	5.60E+01	5.55E+01
Chlordane	Organics and Metals (2003)	3.45E-03	3.23E-03	3.23E-04
DDD	Organics and Metals (2003)	1.45E-03	1.36E-03	1.36E-04
DDE	Organics and Metals (2003)	4.91E-03	4.60E-03	4.60E-04
DDT	Organics and Metals (2003)	1.29E-02	1.20E-02	1.20E-03
Dieldrin	Organics and Metals (2003)	1.58E-04	1.48E-04	1.04E-04
PAH	Organics and Metals (2003)	2.60E+00	5.21E-02	5.21E-02
PAH1	Organics and Metals (2003)	2.33E-01	4.66E-03	4.36E-03
PAH2	Organics and Metals (2003)	1.44E+00	2.89E-02	2.70E-02
PAH3	Organics and Metals (2003)	9.28E-01	1.86E-02	1.74E-02
Heptachlor Epoxide	Organics and Metals (2003)	3.87E-04	7.73E-05	7.23E-05
PCB	PCB (2007)			
TP	BOD/TN/TP (2008)	1.81E+02	1.69E+02	8.46E+01
BOD	BOD/TN/TP (2008)	1.60E+04	1.50E+04	7.49E+03
TN	BOD/TN/TP (2008)	1.38E+03	1.29E+03	6.45E+02
TSS	Sediment (2007)	4.28E+04	4.00E+04	6.00E+03

Maximum Cumulative Wasteload Allocations

The above aggregated wasteload allocations are not outfall-specific but reflect the Navy Yard's aggregate discharges from all outfalls. Because the Navy Yard has eleven outfalls, the combined discharges from these eleven outfalls must not exceed the wasteload allocation for each pollutant listed above² to be consistent with the TMDL. The Navy Yard is required to report on its DMRs the pollutant loadings from each outfall. At the end of each year, the reported loads for each pollutant at all the outfalls must be added together and must not exceed the aggregate wasteload allocation for each pollutant.

2.3.2 Anacostia Watershed TMDL for Trash (approved 2010)

The trash TMDL identifies both point and non-point sources of trash in the Anacostia River. The point sources identified in the TMDL are primarily from Municipal Separate Storm Sewer Systems (MS4) and Combined Sewer Systems (CSS). The TMDL has an "Other Facilities" category which addresses facilities such as the WNY, and includes these facilities in the aggregate.³

2.3.3 Anacostia Watershed TMDL for Bacteria (approved 2003, revised 2014)

According to the District's Clean Water Act Sections 305(b) and 303(d) Water Quality Assessment 2020 Integrated Report, the Anacostia River is impaired for and has a TMDL for *E.coli*. The point sources considered in the bacteria TMDL are Combined Sewer Overflows. The Washington Navy Yard is not identified as a source, however, the permittee has had elevated levels of bacteria in their discharges over the previous two permit terms. As discussed in Section 4.1.2 of this fact sheet, the Navy Yard conducted two fecal source tracking studies. The studies revealed that all outfalls are impacted by fecal pollution to varying degrees. Because of the urban setting that exists at the WNY, the fecal contamination in the stormwater discharges appear to be from a combination of natural and anthropogenic sources.

2.3.4 Anacostia Watershed TMDL for Oil and Grease (approved 2003)

According to the District's Clean Water Act Sections 305(b) and 303(d) Water Quality Assessment 2020 Integrated Report, the Anacostia River is impaired for and has a TMDL for oil and grease. The permit directs the Washington Navy Yard to monitor for oil and grease so that EPA can determine whether limits should be included.

2.3.5 TMDL for Total PCBs for Tidal Portions of the Potomac and Anacostia Rivers (approved 2007)

The TMDL requires a 99.9% reduction in PCBs for the upper Anacostia river segment. The jurisdictions (Maryland and D.C.) involved in the development of the TMDL have agreed to an adaptive implementation strategy for NPDES permits to comply with the wasteload allocation provisions of the TMDL as authorized by 40 C.F.R. § 122.44(k). This implementation strategy focused on requiring data collection in NPDES permits and the use of non-numeric WQBELs (BMPs). The TMDL recommended, and the regulatory authorities agreed, PCB sampling in NPDES permit should be performed using the most current version of EPA Method 1668, or other equivalent methods capable of providing low-detection level, congener specific results.

² except Chlordane, DDD, DDE, DDT, Dieldrin, Heptachlor Epoxide

³ See section 3.1 of the TMDL of Trash for the Anacostia River Watershed

2.3.6 The 2010 Chesapeake Bay TMDL (established 2010)

EPA established the Chesapeake Bay TMDL for nitrogen, phosphorus, and sediment (Bay TMDL) in 2010 as a result of significant involvement and investment by the Chesapeake Bay Program (CBP) partnership. See EPA's website for more information on the development of the Bay TMDL: <https://www.epa.gov/chesapeake-bay-tmdl/chesapeake-bay-tmdl-document>. The Bay TMDL identified 478 individual wasteload allocations (WLAs) for significant wastewater facilities across the 92 river segments and identified aggregate WLAs for non-significant wastewater facilities. The CBP partners, including the District, have been implementing the Bay TMDL since 2010; most recently, the Bay states developed Phase III Watershed Implementation Plans (WIPs) to provide further information on how they intend to continue implementing the Bay TMDL.⁴

2.3.6.1 The District's 2019 Phase III Watershed Implementation Plan (WIP)

The District's Phase III WIP, which was finalized in 2019, describes the District's strategy for continuing to reduce nitrogen, phosphorus, and sediment in the Chesapeake Bay. The District's Phase III WIP guides the District's continued implementation of the Bay TMDL and outlines the various pollutant reduction strategies the District plans to implement to meet planning targets. These planning targets were calculated by EPA and agreed to by the CBP partnership. As part of its Phase III WIP, the District developed local planning goals for various source sectors, including individually permitted wastewater point sources.

Chapter 6 of the District's Phase III WIP includes planning goals for individually permitted municipal and industrial facilities. The planning goals for these facilities are based on existing permit limits at the time of WIP development and DMR data for the specific progress reporting period of July 2017 through June 2018. These data were used as inputs to the Chesapeake Assessment Scenario Tool⁵ (CAST), which is a CBP partnership load estimator tool that provides estimates of load reductions for sources such as wastewater. States, federal agencies, and local governments use the results from CAST to identify which pollutant reduction strategies provide the greatest reduction in TN, TP, and TSS loads and to determine if WLAs are being met. DOEE used CAST to estimate load reductions and set planning goals for the nonsignificant permitted facilities in the District. See Table 6-5 of the District's Phase III WIP.

In an effort to better understand how the District's Phase III WIP planning goals for the nonsignificant permitted facilities are intended to implement the Bay TMDL aggregate WLAs, EPA Region 3 consulted with DOEE and the Chesapeake Bay Program Office. After several discussions, EPA Region 3 understands that the planning goals for the facilities listed in Table 6-5 of the District's Phase III WIP are not intended to be incorporated into NPDES permits as effluent limits. The District's Phase III WIP and the WLAs of the Bay TMDL both have the ultimate goal of reducing pollutant loadings into the Bay by 2025.

⁴ As described on EPA's website <https://www.epa.gov/chesapeake-bay-tmdl/chesapeake-bay-watershed-implementation-plans-wips>, the Watershed Implementation Plans are the roadmap for how the Bay jurisdictions, in partnership with federal and local governments, will achieve the Bay TMDL allocations.

⁵ For more information about CAST visit <https://cast.chesapeakebay.net/about>.

2.3.6.2 Nonsignificant Dischargers and the Bay TMDL

The Chesapeake Bay TMDL categorizes the Washington Navy Yard as a non-significant industrial discharger and includes this facility in the aggregate wasteload allocations for Total Nitrogen (TN), Total Phosphorus (TP), and TSS. For facilities included within an aggregate WLA, the TMDL assumes permitting authorities will explain in the permit fact sheet that the limits assigned to the individual facility are included as part of the aggregate TMDL WLA (Section 8.3.3 of the Bay TMDL). Moreover, the TMDL expects these facilities to provide, at minimum, TN, TP, and TSS monitoring data to verify the loads do not contribute to any exceedance of the individual or aggregate WLA. The Navy Yard is one of four nonsignificant permits listed under the aggregate for its associated stream segment. The table below contains relevant information extracted from the Appendix Q spreadsheet of the Bay TMDL.

Table 9. Excerpt from Appendix Q of the Chesapeake Bay TMDL.

Row number	Facility	NPDES	EOS ⁶ TN WLA (lbs/yr)	DEL ⁷ TN WLA (lbs/yr)	EOS TP WLA (lbs/yr)	DEL TP WLA (lbs/yr)	EOS TSS WLA (lbs/yr)	DEL TSS WLA (lbs/yr)
4	Aggregate	See Permit Numbers Below	3,298.07	3,285.41	613.56	594.56	34,167.35	34,190.00
5	GSA - (WEST HEATING PLANT)	DC0000035						
6	NULL	DC0000345						
7	Pepco-Benning	DC0000019						
8	Washington Navy Yard	DC0000141						

3.0 Basis for Effluent Limitations

In general, the Clean Water Act (Act) requires compliance with all applicable statutory and regulatory requirements, including effluent limitations based on the capabilities of technologies available to control pollutants (i.e., technology-based effluent limits) and limitations that are protective of the water quality standards of the receiving water (i.e., water quality-based effluent limits). Typically, technology-based effluent limitations or TBELs are developed for all applicable pollutants of concern (40 C.F.R § 122.44(a)). Technology-based treatment requirements represent the minimum level of control that must be imposed under Sections 301(b) and 402 of the Clean Water Act.

3.1 Technology Based Effluent Limitations (TBELs)

Federal regulations at 40 C.F.R. § 122.44(a) and § 125.3 require that permits include conditions requiring dischargers to meet applicable TBELs. Where, as is the case with the WNY, EPA has not promulgated effluent limitation guidelines (ELG) for an industry, permit limitations may be based on best professional judgment (BPJ). (40 C.F.R. § 125.3(c)). The TBELs in this permit are expressed as non-numeric pollution

⁶ Edge of Stream load is the amount of a pollutant reaching a simulated stream segment from a point in that stream’s watershed. (Section 11 of the Bay TMDL)

⁷ Delivered load is the amount of a pollutant delivered to the tidal waters of the Chesapeake Bay or its tidal tributaries from an upstream point of discharge/runoff after accounting for permanent reductions in pollutant loads due to natural in-stream processes in nontidal rivers.

prevention requirements for minimizing pollutants in the discharge. See the facility's Storm Water Pollution Prevention Plan which is included in the permit's administrative record.

3.2 Water Quality Based Effluent Limitations (WQBELs)

Water quality-based effluent limitations, or WQBELs, are developed where TBELs are not adequate to meet water quality standards in the receiving water (§122.44(d)). 40 C.F.R. § 122.44(d)(1)(i) requires limitations to be established in permits to control all pollutants or pollutant parameters that are or may be discharged at a level that *cause*, have the *reasonable potential (RP) to cause*, or *contribute* to an excursion above any state water quality standard (WQS), including state narrative water quality criteria. The WQBELs in this permit will be as stringent as necessary to achieve applicable water quality standards. EPA assessed the reasonable potential (RP) for the discharge from this facility to cause, have the RP to cause, or contribute to an exceedance of the District's applicable WQS. EPA used the *Technical Support Document for Water Quality-based Toxics Control (TSD)* approach to conduct that analysis.

In addition to the TMDL-based maximum cumulative annual wasteload allocations and other TMDL-based limits discussed above, EPA has calculated reasonable potential on an outfall-by-outfall basis and included WQBELs at each outfall where reasonable potential to cause or contribute to an exceedance of the District's applicable WQSs was identified.

3.2.1 Reasonable Potential (RP) Analysis

A reasonable potential analysis was conducted using DMR data and data submitted with the permit application to determine if the discharge shows the potential to exceed in-stream water quality criteria. 40 C.F.R. § 122.44(d)(1)(iii) requires effluent limitations be established in permits when it is determined that a discharge will cause, have the reasonable potential to cause, or contribute to an excursion above any state water quality standard, including narrative criteria. Procedures in the TSD were used in the RP analysis and the spreadsheet detailing the calculations can be found in Appendix A of this fact sheet. The data used for the RP analysis is available in the permit record and includes but is not limited to data reported on the permittee's DMRs, and application data. For pollutants in which the RP analysis shows the potential to cause or contribute to an exceedance of in-stream water quality values, water quality-based effluent numbers must be calculated as required at 40 C.F.R. § 122.44(d).

The District of Columbia water quality criteria for copper, lead, and zinc are expressed as dissolved. EPA is assuming a 1:1 translator using a conservative approach to convert the total dissolved metals criterion to total recoverable effluent limits, consistent with EPA Metal Translator Guidance.

3.2.1.1 Parameters of Concern

The permittee has eleven active outfalls discharging to the Anacostia River. The parameters of concern for this facility are *E.coli*, BOD₅, TN, TP, oil and grease, copper, lead, zinc, PCBs, PAHs, and Total Suspended Solids (TSS). A parameter of concern is defined as a pollutant with quantifiable values reported to EPA. A parameter is considered a candidate for the RP analysis when the reported quantifiable values are at or above water quality criteria after accounting for variability. This is achieved by applying a multiplying factor to the parameter's highest value. If the parameter's highest value does not exceed the water quality criterion after applying the multiplying factor, then that parameter does not continue with the RP analysis to completion. The step-by-step approach to the RP analysis can be found in the RP spreadsheet which is in Appendix A of this fact sheet.

The previous permit did not contain effluent limits or monitoring requirements for chlordane, DDD, DDE, DDT, Dieldrin, and Heptachlor Epoxide. Because monitoring for these TMDL pollutants was not required in the previous permit and data for these TMDL pollutants were not provided to EPA with the application, the permit requires monitoring for these pollutants to ensure the discharges are consistent with the DC water quality standards and TMDL requirements. There is insufficient data to determine RP for these pollutants, therefore report only requirement is imposed in the permit.

3.2.1.2 Dilution Factors

The Navy Yard conducted a mixing zone modeling study in 2004 to fulfill their 2001 permit requirement. The results of the study determined the location of where the discharge of dissolved metals can mix with the Anacostia River and not exceed water quality standards. Based on the study, dilution factors were calculated for Outfalls 001, 005, 006, 007, 008, 009, 013, and 014. The mixing zone study applied the District's regulations and EPA guidance to calculate dilution factors for both 1-hour and 3-hour float time criterion averaging periods, with a frequency of once in 3-years. The dilution factors were also adjusted to account for plume overlap between adjacent outfalls. Dilution factors determined for the Navy Yard outfalls for both 1-hour and 3-hour averaging periods are summarized in the following table.

Outfall	1-hour	3-hour
001	22.1	45.8
005	11.8	21.3
006	12.5	23.8
007	8.8	19.0
008	8.4	12.5
009	6.7	11.2
013	9.6	19.3
014	27.0	36.9

EPA used the 1-hour dilution factor in the reasonable potential analysis in the 2009 permit because the District of Columbia's Municipal Regulations Title 21 Section 21-1199 define the acute criterion, referred to as the CMC or Criterion Maximum Concentration, as the "highest concentration of a pollutant to which aquatic life can be exposed for a short period of time (one-hour (1-hour) average) without deleterious effects at a frequency that does not exceed more than once every three (3) years."

The mixing zone modeling study did not include Outfalls 001E-MS4, 015G-CSO, and 015H-CSO because these outfalls were not active at the time. During the development of the 2009 permit, the dilution factor for Outfall 009 was used at Outfall 001E-MS4 because Outfall 001E-MS4 is in close proximity to Outfall 009. Therefore, the same dilution factor was also applied to Outfall 001E-MS4 in the permit with the same rationale. For Outfalls 015G-CSO and 015H-CSO, the 2009 permit averaged the dilution factors of Outfalls 013 and 005 and applied it to these two outfalls. This approach was also applied to the permit for Outfalls 015G-CSO and 015H-CSO.

EPA does not intend to continue the use of the 2004 dilution factors in the next permit cycle, therefore, dilution will not be applied to future RP analyses unless a new mixing zone study is submitted to EPA. If the permittee chooses to conduct a new mixing zone study, the permittee must submit the study to EPA before or with the next permit application. Furthermore, if the permittee chooses to conduct a new mixing

zone study it must include information required to meet the District’s mixing zone regulations in Chapter 21-1105.7 in order to be used in the next permit.

3.2.1.3 Outcome of Reasonable Potential Analysis

The following table sets out the outcome of the Reasonable Potential Analysis by Outfall and Parameter.⁶ “X” indicates that EPA found reasonable potential.

Table 10. Outcome of the RP analysis at each outfall at the Washington Navy Yard.

	<i>E.coli</i>	PCBs	PAHs	Lead ³	Zinc ⁴	Copper ¹	Oil & Grease ²	TSS, TN, TP, BOD ⁵
001	X	X	X					X
001E-MS4	X	X	X			X		X
005	X	X	X			X		X
006	X	X	X		X	X		X
007	X	X	X		X	X		X
008	X	X	X		X	X		X
009	X	X	X		X	X		X
013	X	X	X	X	X	X		X
014A	X	X	X			X		X
015G-CSO	X	X	X	X	X	X		X
015H-CSO	X	X	X			X		X

¹Because the 2009 permit did not require monitoring for copper at Outfall 001, EPA lacks data to determine whether there is RP for copper at Outfall 001.

²Because the 2009 permit did not require monitoring for oil and grease for Outfalls 001, 001E-MS4, 005, 006, 007, 008, 013, and 015G-CSO, EPA lacks data to determine whether there is RP for oil and grease at these Outfalls. EPA found no reasonable potential for oil and grease at Outfalls 009, 014A and 015H-CSO.

³Because the 2009 permit did not require monitoring for lead at Outfalls 001E-MS4, 006, 008, and 015H-CSO, EPA lacks data to determine whether there is RP for lead at these Outfalls. EPA found no reasonable potential for lead at Outfalls 001, 005, 007, 009, 014A.

⁴Because the 2009 permit did not require monitoring for zinc at Outfalls 001E-MS4 and 015H-CSO, EPA lacks data to determine whether there is RP for zinc at these Outfalls. EPA found no reasonable potential for zinc at Outfalls 001, 005, and 014A.

⁵EPA based its determination to include effluent limitations for TP, TN, TSS, and BOD5 on the applicable TMDLs.

⁶Because the 2009 permit did not require monitoring for chlordane, DDD, DDE, DDT, Dieldrin, and Heptachlor Epoxide, EPA lacks data to determine whether there is outfall-specific RP for these pollutants and will require monitoring.

3.2.2 Justification for water quality-based effluent limitations

E.coli (all Outfalls)

According to the District's Clean Water Act Sections 305(b) and 303(d) Water Quality Assessment 2020 Integrated Report, the Anacostia River is impaired for and has a TMDL for *E.coli*. The Washington Navy Yard is not identified as a source of *E. coli* in the TMDL; however, the permittee has had elevated levels of bacteria in their discharges over the previous two permit terms. As discussed in Section 4.1.2 and Appendices D and E of this fact sheet, the Navy Yard conducted two fecal source tracking studies. The studies revealed that all outfalls are impacted by fecal pollution to varying degrees. Because of the urban setting that exists at the WNY, the fecal contamination in the stormwater discharges appear to be from a combination of natural and anthropogenic sources. The reasonable potential analysis discussion in Section 3.2.1 of this fact sheet shows that all the outfalls have a reasonable potential to cause or contribute to an exceedance of the District's water quality criteria for *E.coli*. While the bacteria TMDL does not identify the Navy Yard as a source, the discharges of *E.coli* at the outfalls are contributing to the impairment of the Anacostia River for which there is a TMDL for this pollutant. As such, the permit contains new limits for *E.coli* at all the outfalls. The limit is derived from the District's numeric water quality criterion for *E.coli* and is set at 126 MPN/100 mL expressed as a concentration.

The limit for *E.coli* is new and the DMR data show the permittee will not be able to immediately meet these limits at these outfalls. The permittee has indicated they will need time to evaluate options for treatment and implement the chosen treatment system in order to meet the effluent limitations at all the outfalls.

Per 40 C.F.R § 122.47 and the District of Columbia's Municipal Regulations at Title 21 Section 21-1105.9 a compliance schedule was included in the permit to allow time for the permittee to come into compliance with the new limits. See sections 3.2.3 and 4.2.1 below for the compliance schedule rationale and documentation of "as soon as possible" consistent with 40 C.F.R. § 122.47(a)(1).

PCBs (all Outfalls)

The 2009 permit had a "no discharge" limit for PCBs. This meant that the discharge of PCBs was not authorized by the permit. The 2009 permit required monitoring of PCBs at all the outfalls using 40 C.F.R. Part 136 Method 608 (PCB aroclors) and the more sensitive Method 1668 (PCB congeners) which is not in Part 136. The permittee was required to analyze for select PCB aroclors over the permit term using Method 608 to ensure compliance with the "no discharge" PCB limit in Part I of the permit. The test results obtained using test Method 608 were reported on the DMRs in accordance with 40 C.F.R. § 122.41(j)(4) which required monitoring for compliance purposes be conducted according to test procedures approved under 40 C.F.R. Part 136. The minimum detection level of Method 608 is 1 µg/L, however, the District's water quality standard for PCBs is 0.000064 µg/L (64 pg/L). While the PCB data reported using Method 608 was "non detect" this was based on a minimum level of 1.0 µg/L. The permittee was required to report Method 608 data as either "non detect" or zero if the results were below 1.0 µg/L, however, Method 608 raw data show there is a presence of PCBs but because the method does not go low enough, compliance with the district's water quality criterion of 0.000064 µg/L (64 pg/L) cannot be determined.

A review of the test results using test Method 1668 revealed that PCB congeners were detected in some samples over the previous permit term. Other samples were below the detection limit, however, the

detection limit was higher than the water quality criterion of 0.000064 µg/L for PCBs. In other words, PCBs were detected in the sample but because the detection limit was above the water quality criterion, consistency with the water quality criterion cannot be determined. It should be noted that the detection limits for Method 1668 are expressed in picograms per liter (pg/L), and 1 pg is equivalent to 0.000001 micrograms (µg).

The permit includes a “no discharge” limit for PCBs. This effluent limitation implements the applicable District of Columbia water quality criterion for PCBs and is below the level of detection for Method 608, therefore, the permit requires that compliance with the effluent limitation for PCBs be measured using Method 1668. EPA believes these requirements are consistent with the assumptions and requirements of the PCB TMDL as well as the District’s water quality standard.

Per 40 C.F.R. § 122.47 and the District of Columbia’s Municipal Regulations at Title 21 Section 21-1105.9 a compliance schedule was included in the permit to allow time for the permittee to come into compliance with the new requirement to comply with the “no discharge” limit by using Method 1668. See sections 3.2.3 and 4.2.1 below for the compliance schedule rationale and documentation of “as soon as possible” consistent with 40 C.F.R. § 122.47(a)(1).

TSS, BOD₅, TN, and TP TMDLs

The previous permit contained effluent limits for TSS, BOD₅, TN, and TP. These limits were expressed in the permit as aggregated loads based on the percent reduction levels specified in the TMDLs. These loads were calculated using the Navy Yard’s baseline loads. The permit will continue to include effluent limits expressed as aggregate loads for TSS, BOD₅, TN, and TP to be consistent with the anti-backsliding requirements specified in CWA Section 402(o) (33 U.S.C. § 1342(o)) and CWA Section 303(d)(4) (33 U.S.C. § 1313(d)(4)) and the applicable TMDLs. The loads were recalculated based on new information and using the updated acreage of 75 acres. The loads were adjusted proportionally based on the 75 acres.

This facility is categorized as a non-significant discharger of TN, TP, and TSS and is included in the Chesapeake Bay TMDL’s aggregate wasteload allocation for these pollutants. The Navy Yard has been monitoring for TN, TP, and TSS since their 2001 permit and the 2009 permit included maximum loads for these pollutants. These DMR data were available during the development of the Bay TMDL and were used to categorize the Navy Yard as a non-significant discharger. For facilities included within an aggregate WLA, the TMDL assumes that permitting authorities will provide justification in the permit fact sheet that the limits assigned to the individual facility are included as part of the aggregate TMDL WLAs. The previous permit contained effluent limits for TN, TP, and TSS. These limits were expressed as aggregated loads based on the percent reduction levels specified in the Anacostia BOD/Nutrients TMDL; the Bay TMDL did not become final until after the permit was reissued. While these WLAs were calculated to be consistent with the BOD/Nutrients TMDL, they are adequate for the Navy Yard to meet the Bay TMDL aggregate wasteload allocations for TSS, TN, and TP, therefore, these effluent limitations expressed as aggregate loads for TN, TP, and TSS will be retained in the permit to be consistent with the Bay TMDL and the anti-backsliding requirements in CWA Section 402(o) (33 U.S.C. § 1342(o)) and CWA Section 303(d)(4) (33 U.S.C. § 1313(d)(4)).

PAH TMDL

The previous permit contained effluent limits for PAHs. These limits were expressed in the permit as aggregated loads based on the percent reduction levels specified in the TMDL as well as the Navy Yard’s baseline loads. The reasonable potential analysis showed RP for PAHs, this is discussed in more detail in

Section 3.0 above. The permit does not include the aggregated loads because the District updated their water quality standards for PAHs in 2020 and the TMDL loads were based on old standards. Therefore, the limits for PAHs were calculated using the District’s current water quality standards finalized in 2020. This will ensure the discharge is consistent with the District’s updated water quality standards for these pollutants.

The District does not have a single water quality standard for Total PAHs, instead 14 different PAH compounds and their associated standards are listed in Chapter 21-1104 of the District’s Municipal Regulations. To reduce the burden of reporting the 14 compounds individually, EPA grouped these compounds according to the number of aromatic rings in each PAH compound. The 2 and 3 ring compounds were grouped together and labeled “PAH-1.” The 4 ring compounds were grouped together and labeled “PAH-2” and the 5 and 6 ring compounds were grouped together and labeled “PAH-3.” The most stringent water quality standard in each PAH group was used in the calculation of the WQBEL. The table below summarizes the PAH groupings and the associated standard used in the calculations.

Table 11. PAH groups according to the number of aromatic rings in each compound and the associated water quality standard.

PAH Groupings	Most Stringent Water Quality Standard
PAH-1 Acenaphthene, Acenaphthylene, Anthracene, Fluorene, Naphthalene	50 µg/L
PAH-2 Fluoranthene, Pyrene, benz(a)anthracene, chrysene	0.0013 µg/L
PAH-3 Benzo(k)fluoranthene, Benzo(a)pyrene, Benzo[b]fluoranthene, Dibenzo[a,h]anthracene, Indeno[1,2,3-c,d]pyrene	0.00013 µg/L

Arsenic, Copper, Lead, Zinc TMDLs

The permittee monitored for copper, lead, and zinc over the last permit term at some outfalls. A reasonable potential analysis was conducted on the outfalls that had monitoring data. *See footnotes to Table 10 above.* If the pollutant demonstrated a reasonable potential (RP) to cause or contribute to an exceedance of the District’s applicable water quality standard, then a WQBEL was calculated. This WQBEL was compared to the TMDL WLA and the most stringent of the two was imposed in the permit as an effluent limit. If there was no RP, then the permittee is required to monitor for that pollutant. The RP analysis can be found in Appendix A and is discussed in more detail in Section 3.0 of this fact sheet.

The limits for copper and zinc are more stringent than the previous permit (with the exception of Outfalls 001 and 005 where the limits for zinc were removed based on a finding of no RP) and the DMR data show the permittee will not be able to immediately meet these limits at the outfalls. The permittee has indicated they will need time to evaluate options for treatment and implement the chosen treatment system in order to meet the effluent limitations at the outfalls.

Per 40 C.F.R. § 122.47 and the District of Columbia’s Municipal Regulations at Title 21 Section 21-1105.9 a compliance schedule was included in the permit to allow time for the permittee to come into compliance with the new limits. See sections 3.2.3 and 4.2.1 below for the compliance schedule rationale and documentation of “as soon as possible” consistent with 40 C.F.R. § 122.47(a)(1).

Trash

The permit contains no numeric effluent limitation for trash, but does require appropriate best management practices in the form of the Navy Yard's stormwater pollution prevention plan (SWPPP). Washington Navy Yard has trash cans located throughout the property, with more trash cans located near buildings and work areas. Storm drains are adequately covered to prevent trash from entering the system. The permittee's 2020 Stormwater Pollution Prevention Plan identified good housekeeping practices that minimize trash from entering the system. The following good housekeeping practices are included in the SWPPP and intended to prevent trash from entering the Anacostia River:

- Keep site free of litter.
- Trash and recycling receptacles are kept closed when not in use and frequently emptied.
- Cigarettes and small trash items are swept up.
- Maintain organized work areas.

Oil and Grease

The previous permit had oil and grease limits at outfalls 009, 014A, and 015H. These limits have been removed from the permit because EPA has determined there is no reasonable potential.

All Outfalls have monitoring for oil and grease to ensure the discharges at these outfalls are consistent with the District's water quality standard of 10 mg/L. EPA may reopen the permit to include oil and grease limits at these outfalls based upon an evaluation of the monitoring data. After two years, the permittee can submit a request to EPA to modify the permit to remove this monitoring requirement.

3.2.3 Compliance Schedule rationale and documentation of "as soon as possible" as required by 40 C.F.R. § 122.47(a)(1).

The permittee needs a total of fifty four (54) months to come into compliance with the effluent limits for *E.coli*, PCBs, Copper, and Zinc because different treatment technologies need to be evaluated for each pollutant to determine the most suitable option. There are other limitations including the governmental process that the permittee must follow to secure funding for such projects. The permittee has indicated they will need the first twelve (12) months to develop a plan of action. For *E.coli* and PCBs, developing the plan of action includes, at a minimum, evaluating the recommendations provided in the *E.coli* and PCB studies and determining which of these recommendations are both economically feasible and would result in compliance with the new limits. For copper, the permittee believes the copper source may be coming from the copper downspouts that are attached to the buildings. The permittee believes the copper downspouts may need to be replaced but because the buildings and their copper downspouts are considered historic landmarks, consultation with the D.C. Historic Preservation Office is required. As part of the consultation, the Washington Navy Yard needs to explore other viable options to control the copper discharges at all the outfalls which includes evaluating whether other sources of copper exist at the site. For zinc, this is a new pollutant of concern for the permittee so time will be needed to determine the source and evaluate treatment options. Once the permittee submits a plan of action for all the pollutants and determines the best options available for reducing these pollutants in the discharges they will need another twelve (12) months to implement the compliance plan of action which includes beginning the process of procuring any necessary treatment technologies or equipment that will be needed to come into compliance with the final effluent limits. Because funding requests and approvals are done on an annual basis, the permittee will prepare the scope and government estimates for any treatment technology or equipment they will need to install to meet the effluent limits as soon as possible but no later than thirty-

six (36) months from the permit effective date. The permittee will need the next twelve months to complete installation of any treatment technology or additional equipment necessary to achieve compliance with the final limits. The final six months will be necessary to collect data on the newly installed treatment technology to determine if any adjustments need to be made to ensure compliance with the final limits.

4.0 Special Conditions

4.1 Special Conditions in the 2009 Permit

4.1.1 PCB Study (Part III.A.19.b.)

The 2009 permit required the permittee to submit a PCB Source Tracking and Pollutant Minimization Plan within six months of recording the first PCB result above the detectable level. The permittee submitted the Plan on July 19, 2010 and conducted a PCB source tracking study which identified potential sources of PCBs. The first study was conducted in 2013-2014 and a final report was submitted to EPA in 2016. A follow up study was conducted in 2017 and final report was submitted to EPA in 2018. Both PCB studies are discussed in more detail in Appendices B and C.

4.1.2 Fecal Coliform Study (Part III.B)

The 2009 permit required the permittee to undertake a microbial source tracking study to identify the sources of fecal coliform at the Washington Navy Yard. If the sources were determined to be anthropogenic, then the permittee was required to submit a corrective action plan to reduce the presence of fecal in the discharge. At the time the permit condition was written, the indicator bacteria for the District's water quality criteria was Fecal Coliform, however, the criteria have since been revised to limit *E.coli*. Two fecal studies were conducted as a result of this permit requirement, one study was conducted in 2016 and a second study in 2018. The results of each study are discussed in Appendices D and E.

4.1.3 Special Condition E. Best Management Practices for Hazardous and Toxic Wastes

This special condition was included in previous permits based upon 40 C.F.R. Part 129. The facility, however, does not discharge process wastewater or stormwater associated with current manufacturing or formulating operations. Accordingly, this Special Condition is not being carried forward in the permit.

4.2 Special Conditions

4.2.1 Special Condition A. Compliance Schedule for *E.coli*, PCBs, copper, and zinc (See Part III.A of the permit and Part 3.2.3 of this fact sheet)

A reasonable potential analysis was conducted at all the outfalls (discussed in more detail in Section 3.0 and Appendix A) for *E.coli* and showed the discharge has the reasonable potential to cause or contribute to an exceedance of water quality criteria for *E.coli* at all the outfalls, therefore, limits were included in the permit. These *E.coli* limits are new at these outfalls and DMR data show that the permittee will not be able to immediately meet the *E.coli* limits upon effective date of the permit. The District's water quality standard for bacteria was adopted after July 1, 1977 (revised from fecal coliform to *E.coli* in 2005). 40

C.F.R § 122.47 allows the use of a compliance schedule in permits if certain conditions are met⁸ and the District of Columbia's Municipal Regulations Title 21 Section 21-1105.9 also allows the permit to include a compliance schedule when deemed appropriate. As such, Part III.A provides compliance schedule for all the outfalls (Outfalls 001, 001E-MS4, 005, 006, 007, 008, 009, 013, 014A, 015G-CSO, 015H-CSO) to allow the permittee time to come into compliance with the new *E.coli* limits as soon as possible but no later than 54 months after the permit effective date.

A reasonable potential analysis was conducted at all the outfalls (discussed in more detail in Section 3.0 and Appendix A) for PCBs and showed the discharge has a reasonable potential to cause or contribute to an exceedance of water quality criteria for PCBs at all the outfalls. The no discharge limit for PCBs will remain in the permit and compliance with this limit will be determined by comparing the result using Method 1668 with the District's water quality standard of 64 pg/L. This is a new permit requirement. Based on discharge data, the permittee will not be able to meet this new requirement upon permit reissuance, therefore, a compliance schedule for PCBs was included in the permit. The District's water quality standard for PCBs was adopted after July 1, 1977. 40 C.F.R § 122.47 allows the use of a compliance schedule in permits if certain conditions are met⁹ and the District of Columbia's Municipal Regulations Title 21 Section 21-1105.9 also allows the permit to include a compliance schedule when deemed appropriate. As such, Part III.A provides compliance schedule for all the outfalls (Outfalls 001, 001E-MS4, 005, 006, 007, 008, 009, 013, 014A, 015G-CSO, 015H-CSO) to allow the permittee time to come into compliance with the new PCB limits as soon as possible but no later than 54 months after the permit effective date.

A reasonable potential analysis was conducted at all the outfalls for copper and all outfalls except 001E-MS4 and 015H-CSO for zinc¹⁰ (discussed in more detail in Section 3.0 and Appendix A). The analysis showed a reasonable potential to cause or contribute to an exceedance of water quality criteria for copper at all the outfalls and zinc at outfalls 006, 007, 008, 009, 013, and 015G-CSO, therefore, effluent limits were included in the permit. The effluent data show that the permittee will not be able to immediately meet these copper and zinc limits upon the effective date of the permit. The District's water quality standard for copper and zinc were adopted after July 1, 1977. 40 C.F.R § 122.47 allows the use of a compliance schedule in permits if certain conditions are met⁹ and the District of Columbia's Municipal Regulations Title 21 Section 21-1105.9 also allows the permit to include a compliance schedule when deemed appropriate. As such, Part III.A provides compliance schedule for copper and zinc to allow the permittee time to come into compliance with the new limits as soon as possible but no later than 54 months after the permit effective date.

4.2.2 Special Condition B. TMDL Monitoring Requirements (Part III.B)

The permit includes monitoring requirements for certain TMDL pollutants to ensure consistency with the assumptions and requirements of the applicable TMDLs. At the last permit reissuance, baseline loads and wasteload allocations (WLAs) were calculated for the Navy Yard for the Anacostia Watershed TMDL pollutants listed in Section 2.0 of this fact sheet, except for trash, PCBs, and *E.coli*. The basis for the Navy Yard's wasteload allocations and details about the calculations are discussed in more detail in

⁸ These conditions are outlined in 40 C.F.R. § 122.47 and clarified in EPA's 2007 "Hanlon Memo" which can be found in the permit's administrative record.

⁹ These conditions are outlined in 40 C.F.R. § 122.47 and clarified in EPA's 2007 "Hanlon Memo" which can be found in the permit's administrative record.

¹⁰ Outfalls 001E-MS4 and 015H-CSO did not have monitoring data for zinc because the 2009 permit did not require monitoring for zinc at these outfalls. As a result, EPA lacks data to determine whether there is RP for zinc at these Outfalls.

Section 2.0 of this fact sheet. The 2009 permit contained effluent limits at all the outfalls for TSS, BOD₅, TN, TP, and PAHs only. These limits were expressed in the permit as aggregated loads based on the percent reduction levels specified in the TMDL as well as the Navy Yard's baseline loads. Details about TMDL monitoring requirements are included in this special condition.

As indicated above, all of the outfalls had effluent limits for some, but not all TMDL pollutants. Because monitoring for the other TMDL pollutants was not required in the previous permit, monitoring for these pollutants will be required in the permit to ensure the discharges are consistent with the aggregated wasteload allocations. These aggregated wasteload allocations are not outfall-specific but apply to the Navy Yard's total discharges. Therefore, the sum of loads of each pollutant from all outfalls will be calculated and reported as a cumulative annual load for each TMDL pollutant as required in Part III.B of this special condition. The cumulative annual load must not exceed the aggregated wasteload allocation for that pollutant, also called maximum cumulative annual load. This is discussed in more detail in Section 2.0 of this fact sheet.

4.2.3 Special Condition C. Conditions Applicable to PCB Monitoring and Limits

This special condition was carried over from the 2009 permit and updated to include more specific monitoring and reporting requirements for PCBs. Over the previous permit term, the permittee submitted PCB monitoring data using both the 40 C.F.R. Part 136 method, Method 608, and the more sensitive Method 1668 which is not in Part 136. The sampling results periodically showed a presence of PCBs in the discharge using both methods. Monitoring for PCBs is retained in the permit along with the "no discharge" limit.

4.2.4 Special Condition D. Storm Water Pollution Prevention Plan

The permittee was required to submit and maintain a Stormwater Pollution Prevention Plan (SWPPP) in accordance with the requirements outlined in Part III.A.1-18 of the 2009 permit. The permittee submitted a SWPPP to EPA after the 2009 permit was reissued as well as an updated SWPPP to EPA on December 30, 2020. The permittee continues to update the SWPPP to reflect current conditions and practices at the site. The SWPPP is certified by the Commanding Officer when there are major revision to the SWPPP or when changes will impact operations and maintenance. If there are only programmatic changes and revisions to the SWPPP, the Commanding Officer's environmental representative known as the Installation Environmental Program Director (IEPD) has the authority to sign and certify the SWPPP on these occasions.

This special condition is being carried over from the 2009 permit. It has been updated to reflect current requirements and conditions at the site. This special condition outlines specific requirements for the management of stormwater to minimize the discharge of pollutants in the facility's stormwater discharge.

5.0 Endangered Species Protection

EPA requested an official species list from the U.S. Fish and Wildlife Service (USFWS) using their *Information for Planning and Consultation* tool found on their website at: <https://ecos.fws.gov/ipac> to determine if there are any federally listed threatened or endangered species or their designated critical habit(s) that will be affected by this discharge. The FWS has indicated that there are no critical habitats near the facility or the discharge.

For listed species or critical habitats that fall under the jurisdiction of The National Oceanic and Atmospheric Administration Fisheries (also known as National Marine Fisheries Service or NMFS), EPA submitted a biological evaluation with the determination that all effects are insignificant or discountable, and that the discharges from the Washington Navy Yard may affect, but are not likely to adversely affect listed species or critical habitat. EPA has completed consultation with the National Marine Fisheries Service in that determination.

6.0 National Historic Preservation Act

The National Historic Preservation Act of 1966, and implementing regulations (36 C.F.R. Part 800) requires federal agencies to take into account the effects of their undertakings on historic properties and afford the Advisory Council on Historic Preservation, or designee, the opportunity to comment on such undertakings. See Section 106, 54 U.S.C. § 306108. EPA has determined that the terms and conditions of this permit do not direct WNY to undertake any action that would affect historic properties. To the extent WNY proposes to affect historic properties as part of its implementation of the terms and conditions of the permit, WNY will take the lead in coordinating with the D.C. Historic Preservation Office.

7.0 Anti-Backsliding

Section 402(o) of the CWA and 40 C.F.R §122.44(l) prohibit the renewal, reissuance or modification of an existing NPDES permit that contains effluent limits, permit conditions, or standards that are less stringent than those established in the existing permit, unless certain exceptions are met. The 2009 permit contained Water Quality Based Effluent Limits (WQBELs) at Outfall 005 for lead and zinc; and WQBELs at Outfalls 009, 014A, and 015H-CSO for oil and grease. These WQBELs are not being carried forward into the permit because the RP analysis did not show reasonable potential to contribute to or cause an excursion of DC's water quality criteria for these pollutants. The permit retains, however, a limit on the total load of these pollutants except oil and grease from all outfalls and requires monitoring for these parameters at these Outfalls. Removal of these limits while retaining monitoring requirements constitutes a relaxation of these limits and triggered an anti-backsliding analysis in accordance with CWA Section 402(o)(1). Where the effluent limitation under consideration is water quality-based, Section 401(o)(1) states that such backsliding may occur only in compliance with the requirements of Section 303(d)(4) of the CWA.

CWA Section 303(d)(4) addresses relaxation of water quality-based effluent limits under two circumstances: where the receiving water is not attaining the applicable water quality standards (WQS) (CWA Section 303(d)(4)(A)) and where the receiving water is attaining the applicable WQS (CWA Section 303(d)(4)(B)). The permit contains less stringent effluent limits for pollutants where the WQS is being attained for some pollutants and not attained for others. These two circumstances are discussed separately below.

CWA Section 303(d)(4)(A) Standard not attained (zinc and oil and grease)

The 2009 permit contained WQBELs for zinc at Outfalls 001 and 005 and oil and grease at Outfalls 009, 014A and 015H-CSO. The permit does not include these WQBELs, making the effluent limitations in the permit less stringent than the WQBELs in the previous 2009 permit. The Anacostia River is not attaining the applicable WQS for zinc and oil and grease resulting in an anti-backsliding review under CWA Section 303(d)(4)(A). The RP analysis that was conducted

for zinc and oil and grease used critical conditions, which is a combination of worst-case assumptions of stream and effluent flow. The RP analysis evaluates whether the maximum effluent load discharged by the permittee under critical conditions will meet the WQS outside of the mixing zone, using instream background data where available. In other words, is the permittee's maximum pollutant load causing an excursion of the WQS outside the mixing zone in the Anacostia River. The RP analysis revealed that there was no reasonable potential to cause or contribute to an exceedance of water quality criteria for zinc at Outfalls 001 and 005 and oil and grease at Outfalls 009, 014A, and 015H-CSO. In addition, the new permit includes a requirement that the combined discharges from all Outfalls must not exceed the annual maximum cumulative load for zinc. Therefore, the relaxation of the effluent limits for zinc and oil and grease is consistent with the exception to the prohibition to backsliding found at CWA Section 303(d)(4)(A) because the cumulative effect of the revised WQBELs for zinc and oil and grease will assure the attainment of the applicable WQS.

CWA Section 303(d)(4)(B) Standard attained (lead)

The WQBEL from the 2009 permit for lead at Outfalls 001 and 005 were removed because the reasonable potential analysis did not show a reasonable potential to cause or contribute to an exceedance of the applicable WQS for this pollutant. Based upon EPA's Assessment, Total Maximum Daily Load Tracking and Implementation System (ATTAINS) online database, the Anacostia River has been determined to be attaining the applicable WQS for lead triggering an anti-backsliding review under CWA Section 303(d)(4)(B). Because the lead standards are being attained, the relaxation of the WQBELs is consistent with the exception to the prohibition against backsliding found at CWA Section 303(d)(4)(B) providing it is also consistent with the District's antidegradation policy. The Anacostia River is a Tier 1 designated waterbody. The District of Columbia's Municipal Regulations Title 21 Section 21-1102.1 define a Tier 1 designation as "Existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected." The relaxation of the effluent limit is consistent with the District's Tier 1 antidegradation policy because the discharge is meeting the water quality standards for lead thereby maintaining the existing instream water uses of the Anacostia River. Because the discharge is meeting water quality standards for lead, and the District's antidegradation policy is being met, the removal of this limit is consistent with the exception to the prohibition to backsliding found at CWA Section 303(d)(4)(B).

Special Condition for Best Management Practices for Hazardous and Toxic Wastes

As set forth in Section 4.1.3 above, this special condition was included in previous permits based upon 40 C.F.R. Part 129. The facility, however, does not discharge process wastewater or stormwater associated with current manufacturing or formulating operations. Accordingly, this Special Condition is not being carried forward in the permit. Removal of this Special Condition falls within the exceptions to anti-backsliding allowed pursuant to 40 C.F.R. § 122.44(l), specifically new information and technical error.

8.0 Antidegradation Statement

The Anacostia River is a Tier 1 protected water. The permit contains water quality based effluent limits sufficient to maintain and protect the water quality necessary to protect existing uses. Discharges from this facility meet the District's water quality standards for the applicable pollutants.

9.0 Clean Water Act Section 401 Certification

In accordance with CWA 401(a)(1), EPA requested a water quality certification from the District of Columbia, via DOEE, to ensure compliance with the District's WQS.

401 Pre-filing meeting request to DOEE: February 25, 2021

401 Certification request to DOEE: August 4, 2021

401 Certification received from DOEE: August 20, 2021

Appendix A. Reasonable Potential Analysis Calculations

Reasonable Potential Analysis Calculations



RP_WNY_April_2021
.xlsx

Appendix B. 2016 PCB Report

A study and site investigation was conducted to identify potential sources of PCB congeners at the Washington Navy Yard as required by the 2009 permit. A preliminary investigation was conducted to determine the locations for the first round of sampling by reviewing the PCB data the WNY submitted as part of their permit requirements. The outfalls identified for further PCB investigation were outfalls 001, 005, 007, 008, 009, 014, 015G-CSO, 015H-CSO, and 001E-MS4. Each targeted outfall included various sampling locations within the drainage basin of each outfall.

The 2016 report provided results for the 9 outfalls identified above and recommendations to conduct a subsequent PCB investigation focusing on the outfall drainage areas that had the highest total PCB concentrations. The results from the 2016 study are summarized for each outfall in Table 12 below. PCBs were detected in varying concentrations in the drainage areas for all the outfalls¹¹.

Table 12. Sampling results from 2016 Study (tPCB or tPCBs = total PCBs; pg/L = picogram per liter)

	Monitoring location	tPCBs pg/L
Outfall 001	001-00	717
	001-01	6,150
	001-02	269
	001-03	957
	001-04	1,450
	Monitoring location	Total PCBs pg/L
Outfall 005	005-00	11,800
	005-01	28,200
	005-02	14,200
	005-03	22,800
	Monitoring location	Total PCBs pg/L
Outfall 007	007-00	3,310
	007-01	1,825
	007-02	476
	007-03	371
	Monitoring location	Total PCBs pg/L
Outfall 008	008-00	1,510
	008-01	1,316
	008-02	8,310
	008-03	421
	008-04	254,996
	Monitoring location	Total PCBs pg/L
Outfall 009	009-00	516
	009-01	433
	009-02	522
	009-03	55,200
	009-04	1,180

¹¹ See Section 6 of the Final Polychlorinated Biphenyls (PCB) Source Investigation Report, June 2016, for detailed results. This document can be found in the permit's administrative record.

	009-05	796
	009-06	507
	009-07	679
	009-08	39,400
Outfall 014	Monitoring location	Total PCBs pg/L
	014-00	12,500
	014-01	8,630
	014-02	2,870
	014-03	1,560
	014-04	4,350
Outfall 015G-CSO	Monitoring location	Total PCBs pg/L
	CSO015G-00	286
	CSO015G-01	3,580
	CSO015G-02	295
	CSO015G-03	678
	CSO015G-04	3,490
Outfall 015H-CSO	Monitoring location	Total PCBs pg/L
	CSO015H-00	1,646
	CSO015H-01	1,196
	CSO015H-02	965
	CSO015H-03	738
	CSO015H-04	1,350
Outfall 001E-MS4	Monitoring location	Total PCBs pg/L
	MS4001E-00	893
	MS4001E -01	478
	MS4001E -02	1,500

The 2016 report identified the Washington Navy Yard's Stormwater Pollution Prevention Plan (SWPPP) practices or Best Management Practices (BMPs) that are applied at each outfall and made recommendations on next steps for addressing PCBs in the discharges. This information is summarized in Table 13 below and can also be found in Section 6 of the 2016 final report. The Washington Navy Yard provided responses to the recommendations and identified subsequent actions taken as a result of the recommendations. These responses are included in the column labeled "WNY Comments/Actions."

Table 13. Summary and Recommendations from the 2016 PCB Study. (tPCB or tPCBs = total PCBs; pg/L = picogram per liter)

Outfall	2016 Results evaluation	SWPPP Practices	Potential PCB sources	Recommendations	WNY Comments/ Actions
001	Sampling location-001-01 has the highest contribution of tPCB of 6,150 pg/L versus the concentration for all other locations which range from 269 pg/L to 1,450 pg/L.	A tree box (BMP) is located upstream of 001-01. There are no additional SWPPP practices identified in the drainage area contributing to 001-01.	Drainage area upstream of monitoring location 001-01.	<ul style="list-style-type: none"> - Investigate equipment stored upstream of monitoring location 001-00 at Building 166 that may potentially contain PCBs. Based on aerial photos, it appears the drainage area for 001-01 is used as a laydown area. - Conduct re-sampling of some locations to verify results. Pay particular attention to suspended solids in the flow, look for erosion, and for areas of stained surfaces. 	<p>Investigation revealed that the only material stored are traffic cones and parking barriers (plastic filled with water or sand).</p> <p>Sampled specific locations for sediment in the 2018 study.</p>
005	Outfall 005 shows the highest concentrations of total PCBs within the installation among all NPDES monitoring locations. Sampling locations 005-01 and 005-03 had the greatest concentrations of tPCBs compared to other locations within this outfall, two times greater than monitoring points 005-00 and 005-02.	A pollutant separator (aqua-swirl) is located downstream of monitoring location 005-01. This may be the reason that PCB concentrations found at the Outfall 005 permitted monitoring location, which is downstream of the pollutant separator (aqua-swirl), are roughly an order of magnitude lower than the concentrations upstream of this device. There are no other SWPPP practices in this drainage area.	No specific sources of PCBs have been identified for this drainage area. The consistent PCB homolog and congener patterns do not indicate a specific source area.	<ul style="list-style-type: none"> - It is recommended that additional investigation is conducted throughout Outfall 005 drainage area to identify if there is equipment that may potentially contain PCBs at lower levels than 50 ppm. - Conduct re-sampling to verify results. Pay particular attention to suspended solids in the flow, look for erosion, and for areas of stained surfaces. 	<p>WNY resampled Outfall 005 during the 2017 event.</p> <p>In 2020, PCBs were detected in soil samples underneath B46/47 which may be a source.</p>
007	tPCBs increase as runoff	Based on the SWPPP map there are multiple BMPs	Based on the SWPPP map there are multiple	- Investigate equipment at	Confirmed that no equipment

Outfall	2016 Results evaluation	SWPPP Practices	Potential PCB sources	Recommendations	WNY Comments/ Actions
007 cont'd	reaches downstream monitoring location 007-00. Even though the concentrations for 007-03 and 007-02 are greater than 64 pg/L, these are very low compared to the locations sampled downstream. There is a 74% increase in tPCB concentration from monitoring location 007-02 to 007-01, which suggests that these areas are contributing to higher concentrations of tPCBs. There was a 45% increase of tPCBs at the most downstream location which collects stormwater runoff from the parking lot.	that are connected to this drainage area including a permeable area and pollutant separators (vortex and snout).	BMPs that are connected to this drainage area including a permeable area and pollutant separators (vortex and snout).	Buildings 076 and 111. - Look for areas of erosion or staining in the parking lot draining to the lower parts of this system. - Check Tide-flex valve and other indications of river water infiltration (pipe elevation relative to high tide, etc.) - Conduct re-sampling in downgradient points. Pay particular attention to suspended solids in the flow, include parameters that would indicate river influence.	(i.e. transformers) containing PCBs are on site. Lack of funding for assessment of tide-flex valves. Lack of funding to resample Outfall 007. WNY concentrated on drainage areas with higher tPCB concentrations.
008	Sample locations 008-04, 008-03 and 008-02 evaluate 3 separate legs of the drainage area. The three areas merge together at sample location 008-01. 008-04,	There are multiple BMPs within the drainage area including bioretention and permeable areas upstream of 008-04. There is a pollutant separator (aqua swirl) installed upstream of 008-01. Dumpsters are located within the drainage area. There are also some permeable BMP areas.	Based on the SWPPP map the following areas are located upstream of 008-04: 2 transformers, 3 dumpsters, 1 metal-storage area; Equipment at Building 33 and 76; Floor drains at Building 76. ER Site 13 (Building 290) is potentially located in the drainage area that leads to 008-04, or it may	- Conduct additional sampling up-pipe of 008-04 to narrow down potential source. Investigate equipment located at Building 33 and 076 and identify if there are any potential sources of PCBs. Identify	

Outfall	2016 Results evaluation	SWPPP Practices	Potential PCB sources	Recommendations	WNY Comments/ Actions
	shows the highest concentrations of tPCBs (254,996 pg/L). 008-02 resulted in the second highest tPCB concentrations (8310 g/L). Monitoring location 008-03 resulted in the lowest concentrations of tPCBs.		lead to 009-08 as discussed in section 6.5. Site 13 was investigated for potential PCB releases under the ER program in 2002, and was found to have no Aroclor concentrations in soil above action levels. This potential source is discussed in section 6.5.	<p>floor drains at these buildings that may have had a discharge in the past. Conduct visual survey around Building 290 (ER Site 13) to better understand drainage pathways and potential sources. Look for erosion, and for areas of stained surfaces.</p> <p>- During any re-sampling, pay particular attention to suspended solids in the flow.</p>	
009 009 cont'd	Highest tPCB concentrations resulted from 009-003 (55,200 pg/L) and 009-08 (39,400 pg/L). Compared to all other tPCB results for this drainage area which ranged from 433 pg/L to 1,180 pg/L.	<p>Two permeable BMP areas are located upstream of 009-08. Jelly fish filter is located upstream of 009-05 as well as several trash racks. Jelly fish filters are also located upstream of 009-01 and 009-03.</p> <p>There are no additional SWPPP practices in this drainage area.</p>	<p>Potential surface runoff/erosion from around ER Site 13. Much of the 009 piping system along Isaac Hull Ave (including near 009-03) is located below the water table, and there may be groundwater infiltration, although all PCB congener groundwater results from near this area are at much lower concentrations than the concentrations found at any of the Outfall 009 monitoring points. Groundwater concentrations for total congeners in the west part of the WNY ranged from 10 to 350 pg/L. However, wells in the immediate vicinity of 009-03 were not sampled for PCB congeners.</p>	<p>- Conduct visual survey around Building 290 (ER Site 13) to better understand drainage pathways and potential sources.</p> <p>- Evaluate BMP maintenance.</p> <p>- Evaluate groundwater infiltration.</p> <p>- Conduct additional sampling and repeat sampling in the vicinity of 009-03 and 009-08 to narrow down potential sources. Pay particular attention to suspended solids in the flow, look for erosion, and for areas of stained surfaces.</p>	<p>Repeated sampling in the same location (009-03) during the 2018 study and levels were still high (1,040 pg/L). The BMPs in that area were cleaned around the same time.</p>

Outfall	2016 Results evaluation	SWPPP Practices	Potential PCB sources	Recommendations	WNY Comments/ Actions
014	tPCBs increase as runoff reaches downstream monitoring location 014-00. Monitoring location 014-04 (most upstream location) show 64% higher concentrations than those recorded from the monitoring location downstream (014-03). Monitoring location 014-03 show the lowest tPCB concentrations. There is a 67% increase in tPCBs in monitoring location 014-01. tPCB concentrations increase 31% at the most downstream location 014-00.	There are no SWPPP practices within this drainage area.	Homolog evaluation for drainage area upstream of 014-02 is indicative of a potential source of PCB different from all other locations, however no apparent sources have been identified.	<ul style="list-style-type: none"> - Identify if there are floor drains at Building 212 in equipment rooms that may discharge to the storm drainage system. - Conduct re-sampling of some locations to verify results. Pay particular attention to suspended solids in the flow, look for erosion, and for areas of stained surfaces. 	
CSO-015G	Highest tPCB concentrations occur at CSO15G-04 (3,490 pg/L) and CSO15G-01 (3,580 pg/L). All other locations have tPCB concentrations ranging from 286 to 678 pg/L.	A pollutant separator (aqua swirl) is located downstream of 15G-00. There are no other SWPPP practices within the drainage area.	Roof drains or floor drains from Building 184 and 196. A transformer and an above ground storage tank are located north of 15G-03.	<ul style="list-style-type: none"> - The significant decrease in concentration between location CSO15G-01 and CSO15G-00 does not seem to make sense since these points are in direct line with no BMPs in between. This may warrant resampling to make sure the 01 sample did not contain excessive 	

Outfall	2016 Results evaluation	SWPPP Practices	Potential PCB sources	Recommendations	WNY Comments/ Actions
				suspended solids. Investigate if there are floor drains at buildings 184 and 196 for potential historic discharges. - Pay particular attention to suspended solids in the flow, look for erosion, and for areas of stained surfaces.	
CSO 015-H	tPCBs at CSO15H-04 (most upstream location) are 45% higher than the downstream location. Overall, there is an increase in PCBs through the monitoring locations downstream of CSO15H-03. tPCBs increase between 19-27% between monitoring locations.	During a 2002 study, Buildings 169 and 200 were identified as having transformer rooms where sampling detected PCBs on the concrete floor. These rooms were cleaned in 2005 and resampled. If the transformer rooms have floor drains connected to the storm drainage system, it might have potentially released PCBs in the drain prior to the cleanup.	The following areas were identified upstream of monitoring location CSO15H-02: 2 transformers, 1 dumpster, 1 loading dock. Transformers are located upstream of CSO15H-01 and CSO15H-00.	- Investigate previous spills from transformers. Investigate if floor drains exist at Buildings 169 and 200. - Conduct additional sampling. Pay particular attention to suspended solids in the flow, look for erosion, and for areas of stained surfaces.	
MS4-001E	Highest tPCB concentration occurs at most upstream location MS4001E-02 (1,500 pg/L). MS4001E-00 (893 pg/L) increased 46% from upstream location MS4001E-01 (478 pg/L).	Pollutant separators are located downstream of 001E-01.	Although this drainage area is close to the areas of PCB soil contamination from old Power Plant (Building 118), the contaminated soil is not within this drainage area, so it is unlikely to affect this outfall.	- Concentrations in this system are relatively low, and are significantly lower than recognized urban rainfall concentrations. It is suggested that ambient rainfall concentrations be evaluated for this area of Washington, DC before resources are utilized to evaluate potential WNY-specific	

Outfall	2016 Results evaluation	SWPPP Practices	Potential PCB sources	Recommendations	WNY Comments/ Actions
				sources for these low concentrations.	

Appendix C. 2018 PCB Report

A second PCB source investigation was conducted after the 2016 report was finalized. This subsequent investigation targeted outfall drainage areas with the highest total PCB concentrations. The results from this second study were finalized and submitted to the Navy Yard in 2018. As such, this report is referred to as the “2018 PCB Report.”

Both sediment and stormwater samples were evaluated for the presence of PCBs. The targeted outfalls for Phase 2 were those outfalls identified in Phase 1 as requiring further investigation based on the concentration of PCBs in the outfall’s drainage area. The following outfalls were evaluated during Phase 2 of the study: 005, 008, 009, and 014. Outfall 001 was originally identified as an outfall that should be included in further investigations. However, the 2018 Report indicated that Outfall 001 was not selected because the data were later found to be “lower in magnitude” compared to other outfall drainage areas. The results from the 2018 report are summarized below in Table 14 including the results from rainwater samples that were taken during each storm event. The results do not show consistent patterns of PCB concentrations in the drainage areas. Some sampling locations show steady increases, others show steady decreases, and some show intermittent spikes of PCBs.

Table 14. Summary of PCB concentrations at each outfall during each storm event.

Total PCBs					
	Monitoring location	Storm Event 1	Storm Event 2	Storm Event 3	Storm Event 4
Outfall 005	005-00	7,570 pg/L	2,580 pg/L	2,260 pg/L	2,000 pg/L
	005-02	4,860 pg/L	94,500 pg/L	942,000 pg/L	2,680 pg/L
	005-02 Sediment	216,000 pg/g	---	---	---
Outfall 008	008-00	8.37 pg/L	42.2 pg/L	34.7 pg/L	3.97 pg/L
	008-01	9,940 pg/L	3,940 pg/L	451 pg/L	133 pg/L
	008-01 Sediment	22,700 pg/g	---	---	---
	008-04	217 pg/L	76,600 pg/L	628 pg/L	124 pg/L
Outfall 009	009-00	458 pg/L	1,020 pg/L	283 pg/L	60 pg/L
	009-01	1,040 pg/L	949 pg/L	678 pg/L	44.5 pg/L
	009-04	396 pg/L	710 pg/L	2,440 pg/L	12,700 pg/L
Outfall 014	014-00	2,370 pg/L	336 pg/L	1,370 pg/L	1,050 pg/L
	014-02	934 pg/L	397 pg/L	860 pg/L	181 pg/L
	014-03	2,700 pg/L	161 pg/L	1,690 pg/L	807 pg/L
	014-04	1,300 pg/L	414 pg/L	400 pg/L	267 pg/L
Rainfall		50.8 pg/L	2,360 pg/L	623 pg/L	75.6 pg/L

The 2018 report also identified the Washington Navy Yard’s Stormwater Pollution Prevention Plan (SWPPP) practices or Best Management Practices (BMPs) at each outfall and made recommendations on next steps for addressing PCBs in the discharges. The WNY provided responses to the recommendations and identified subsequent actions taken. The WNY’s responses are included in the column labeled

“WNY Comments/Actions.” The potential sources and recommendations for each outfall are listed in Table 15.

Table 15. Summary and Recommendations from the 2018 PCB Study. (tPCB or tPCBs = total PCBs; pg/L = picogram per liter)

Outfall	2018 Results evaluation	Potential PCB sources	Recommendations	WNY Comments/Actions
005	The PCB impacts to this outfall appear to be limited to intermittent spikes at or upstream of location 005-02.	<p>The potential sources of PCBs entering at location 005-02 include:</p> <ul style="list-style-type: none"> – possible impacts from construction and maintenance surface activities on Harwood Street, – a leaking copper pipe located northeast of Building 46, – a potential inlet connection located within Outfall drainage area 014, and – possible unidentified connections from floor drains or roof drains discharging to location 005-02. <p>The potential sources identified for 005-00 include: discharges from 005-02, and backflow from the Anacostia river due to the possible ineffectiveness of the Tideflex valve.</p>	<ul style="list-style-type: none"> • Conduct interviews and a site reconnaissance with WNY personnel. The purpose is to gather additional operational and historical information from buildings, and other areas of the WNY as identified in this report specifically in the following areas: <ul style="list-style-type: none"> – Outfall 005: Harwood Street, Buildings 46 and 101; – Outfall 008: Patterson Avenue SE north of Kennon Street SE, Paulding Street SE north of Kennon Street SE, and Buildings 22, 28, 33, 36, 73, 76, and 290 (ER Site 13); – Outfall 009: Stevens Street SE, and Buildings 21 and 22; and – Outfall 014: Harwood Street, and Buildings 212, 101, and 123. • Review spill logs and compare to existing equipment inventory with oils or fluids. • Perform evaluations and/or maintenance as recommended in the 2017 Comprehensive BMP Evaluation, as some of the locations identified with leaking pipes had monitoring locations nearby, which might be indicative of a potential source. • Inspect existing subsurface BMPs installed at WNY that were inaccessible during the 2017 Comprehensive BMP Evaluation. • Review the maintenance specifications for each of the BMPs installed at the WNY where the source investigation resulted in the highest tPCB. Determine the BMP’s efficiency, including but not limited to the following: <ul style="list-style-type: none"> – Aqua swirl north of 005-00 located on the parking lot west of Building 70, – Permeable Pavement north of 008-05 located on Paulding Street SE, and – Permeable Pavers north of 009-04 located on Stevens Street SE. 	<p>3 installed BMPs over in the eastern portion of the base.</p> <p>WNY also reached out to the EXWC division to help identify or develop newer technology to help with stormwater treatment.</p> <p>IRP division (Installation Remediation Program) is also looking in the PCB issues.</p>
008	The PCB impacts to this outfall appear to be limited to intermittent spikes at or upstream of location 008-04 and possibly 008-01.	<ul style="list-style-type: none"> - The potential sources identified for monitoring location 008-04 include: materials or equipment discharges through floor drains that may be connected to the storm sewer system located in adjacent buildings discharging to 008-04, and construction or ongoing surface work upstream of 008-04 during the time samples were collected. - The potential sources identified for monitoring location 008-01 include: materials or equipment discharges through floor drains that may be connected to the storm sewer system located in adjacent buildings such as Building 76, construction or ongoing surface work upstream of 008-01 during the time samples were collected, and/or possible soil erosion from ER Site 13. 	<ul style="list-style-type: none"> • Review spill logs and compare to existing equipment inventory with oils or fluids. • Perform evaluations and/or maintenance as recommended in the 2017 Comprehensive BMP Evaluation, as some of the locations identified with leaking pipes had monitoring locations nearby, which might be indicative of a potential source. • Inspect existing subsurface BMPs installed at WNY that were inaccessible during the 2017 Comprehensive BMP Evaluation. • Review the maintenance specifications for each of the BMPs installed at the WNY where the source investigation resulted in the highest tPCB. Determine the BMP’s efficiency, including but not limited to the following: <ul style="list-style-type: none"> – Aqua swirl north of 005-00 located on the parking lot west of Building 70, – Permeable Pavement north of 008-05 located on Paulding Street SE, and – Permeable Pavers north of 009-04 located on Stevens Street SE. 	<p>Subsurface soil sampling in 2020 at B46/67 detected PCBs in the soil. While no positive results were detected in the groundwater, it is plausible that PCB contaminated water infiltrated the SW sewer at or near these locations.</p> <p>WNY made inquiries into possible equipment containing PCBs at the installation and have come up with nothing material. No knowledge of any equipment containing PCBs is still present on site.</p>

Outfall	2018 Results evaluation	Potential PCB sources	Recommendations	WNY Comments/Actions
009	The PCB impacts to this outfall appear to be limited to intermittent spikes at or upstream of location 009-04.	The potential sources identified discharging to monitoring location 009-04 include: one-time maintenance and construction activities in this area preceding the 07 November 2017 sampling event, and a dripping copper pipe upstream of this location. Possible lack of maintenance and resulting inefficiencies of permeable pavers upstream of this location could fail to remedy effects of these potential sources.	<ul style="list-style-type: none"> • Evaluate the potential installation of underground BMPs prior to Outfall 014 discharge pipe. • Implement additional source control BMPs such as regular pavement sweeping, storm drain pipe pipe-jet cleaning to remove sediment, and replace storm drains if groundwater infiltration has been identified. • Conduct a dye test or closed-circuit television at drainage areas where Tideflex valves are installed. This will allow the Navy to evaluate the efficiency of the valves, and identify if water from the Anacostia River is entering the WNY storm sewer system. 	<p>A number of BMPs have been maintained when funding is available. Mainly subsurface sand filters, aquaswirls and both jelly fish filters have been maintained.</p> <p>WNY continues to encounter funding challenges. Funding is needed for maintenance of BMPs.</p>
014	The PCB impacts to this outfall appear to be limited to intermittent spikes at, or upstream of, the NPDES location 014-00.	The potential sources in this drainage area appear to be similar to the sources affecting the Outfall 005 drainage area. As indicated for Outfall 005, spikes in tPCB concentrations were observed at both outfalls during the February 2017 NPDES event, and homolog profiles show similarities, which is indicative of the same source. Possible sources may be one-time construction or maintenance activities on Harwood Street (none specified). There are other indications of a source entering the system between sampling points 014-00 and 014-01. Based on this observation, an additional potential source area may be in the area around Outfall 014 storm sewer system inlet located at the north end of Building 154, just outside the building’s mechanical room.	<ul style="list-style-type: none"> • Evaluate NPDES compliance results for tPCBs of samples collected after November 2017, to identify if there is a significant increase or spike in tPCB concentrations. If there is, or NAVFAC Washington sees the need to conduct additional sampling, it is recommended to isolate the system (e.g. select more locations per drainage area), and targeting potential sources of tPCBs in the stormwater outfalls. • Due to the spikes in tPCBs observed during the current PCB Source Investigation and NPDES compliance monitoring results from June 2016 through November 2017, evaluate public works (and other) construction and maintenance/dig permit records focusing on the following areas: <ul style="list-style-type: none"> – Hardwood Street between monitoring locations 014-02 and 005-02, – Patterson Avenue SE upstream of monitoring location 008-04, and – The area surrounding the storm sewer inlet at the north end of Building 154 (source to Outfall 014). • Manage the unlabeled 55-gallon drum in accordance with WNY Public Works’ procedures. 	<p>Funding not available to determine BMP efficiency.</p> <p>WNY is determining which department is responsible for inspection and maintenance of tide-flex valves.</p> <p>Funding is not available for dye testing and/or CCTV inspections.</p>

Appendix D. 2016 Fecal Study

The 2009 permit required the permittee to undergo a microbial source tracking study to identify the sources of fecal coliform at the Washington Navy Yard. There were two separate fecal studies conducted over the last permit term. Sampling for the first study began in 2014 and continued to 2016 with a report finalized in 2016. As such, the first study is referred to as the “2016 Fecal Study.” Sampling for the second study began in 2017 and continued to 2018 with a report finalized in 2018. As such, the second study was referred to as the “2018 Fecal Study” and is discussed in the next section. The 2016 fecal study targeted outfalls 001E-MS4, 005, 006, 007, 008, 013, 015G-CSO, and 015H-CSO as potential sources of fecal contamination because these outfalls were shown to periodically have high concentrations of fecal in the effluent. Samples were analyzed using four Fecal Indicator Bacteria or FIB and microbial source tracking methods to help determine the extent and sources of bacterial contamination in the Navy Yard’s discharges. Total coliforms, fecal coliforms, *E.coli*, and Enterococcus were the four Fecal Indicator Bacteria that were analyzed at the targeted outfalls listed above. A total of 11 dry events and 4 wet events were evaluated. Samples that contained *E.coli* and fecal coliforms were further analyzed using DNA testing that detects genetic markers from different human-associated fecal strains.

Results

Human-associated fecal DNA was detected at all outfalls during some or all of the sampling events. The dry weather sampling events showed human associated fecal DNA at all the outfalls except 005 and 001E-MS4. There was a presence of *E.coli* at all the outfalls during dry weather sampling. A statistical evaluation of the fecal DNA may suggest that the source of *E.coli* during dry weather is not of human origin. A statistical evaluation of the fecal DNA during wet weather shows evidence that *E.coli* concentrations are associated with human fecal source.

All samples contained fecal coliform and *E.coli* in varying concentrations, however, Outfalls 013 and 015G-CSO were ranked highest as being impacted by human fecal sources under any weather condition (i.e. dry or wet). Outfall 015G-CSO flows to DC’s combined sewer system (CSS). Outfalls 005, 001E-MS4, and 015H-CSO were ranked second highest impacted outfalls, however, Outfall 001E-MS4 had little evidence that the fecal source was from humans. The 2016 report recommended focusing on Outfalls 015G and 013 to further investigate the source of the human fecal contamination as these outfalls were two of the highest ranked locations to have fecal contamination.

Recommendations from 2016 Fecal Report

The 2016 report recommended that the Washington Navy Yard further investigate the stormwater and wastewater sewers to determine if there are illegal cross connections or failing infrastructure causing sewage to leak into the stormwater sewers. Based on the results of this study, further investigation may be required to determine if there are nearby sources outside of the WNY property that might be leaking into the stormwater sewers. The report also recommended the WNY develop a sanitary sewer evaluation plan for the drainage areas that tested positive for both human fecal markers as well as conduct marker testing for other biological species to determine the origin of the fecal pollution. Lastly, the report recommended increasing the sample size per sampling event to improve the statistical precision of the results.

Appendix E. 2018 Fecal Study

Outfalls 001, 005, 006, 007, 008, 009, 013, 014, 015G-CSO, and 015H-CSO were studied during six rain events. Four rain events occurred during the summer/fall and two rain events occurred during the winter.

Results

The study revealed that all outfalls are impacted by fecal pollution in varying concentrations similar to the 2016 study. Because of the urban setting that exists at the WNY, the fecal contamination in the stormwater discharges appear to be from a combination of natural and anthropogenic sources. However, the 2018 study concluded that there is a high likelihood that the fecal sources at Outfalls 006, 009, 013, 014, and 015H are from humans while Outfalls 001, 005, 007, 008, and 015G-CSO have a low likelihood that humans are the source of contamination. The report included results from 4 fecal markers (*E.coli*, total coliform, fecal coliform, and enterococcus) during 6 rain events for each of the 10 outfalls. These data were too numerous to include in the fact sheet but can be found in Section 4 of the 2018 Fecal Source Investigation Report, which can be found in the permit's administrative record. The report evaluated potential sewer cross connections and the likelihood of the fecal source to be human. These results are summarized in Table 16 below.

Table 16. Summary of cross connections found in the 2018 Fecal Study.

Outfall	Number of Potential Sewer Cross Connections	Potential Fecal Sources
001	1	Low likelihood human fecal sources/likelihood of non-human sources
005	3	Low likelihood human fecal sources/likelihood of non-human sources
006	1	High likelihood of human fecal sources/likelihood of non-human sources
007	2	Low likelihood human fecal sources/likelihood of non-human sources
008	9	Low likelihood of human fecal sources/likelihood of non-human fecal sources
009	19	High likelihood of human fecal sources/likelihood of non-human sources
013	1	High likelihood of human fecal sources/likelihood of non-human sources
014	5	High likelihood of human fecal sources/likelihood of non-human sources

Outfall	Number of Potential Sewer Cross Connections	Potential Fecal Sources
015G	3	Low likelihood human fecal sources/likelihood of non-human sources
015H	4	High likelihood of human fecal sources/likelihood of non-human sources

Recommendations

The table below includes the recommendations from the 2018 Fecal Report. The report included many recommendations that focused on conducting further investigations to verify or determine potential cross connections to the stormwater sewer and remedy where necessary. The WNY’s actions are documented below.

Table 17. Recommendations from the 2018 Fecal Report and WNY responses.

2018 Report Recommendations	WNY Comments/Actions
Review all wastewater and stormwater sewer maps for the Washington Navy Yard and DC WASA Blue Plains Treatment Plant to identify and locate the oldest to newest building present at the Navy Yard. This review will also locate the oldest stormwater sewers in relation to these structures to identify which may have been historically combined sewers.	Old reports and figures have been reviewed. A report from a project from the early 2000s showed the existing stormwater sewers were slip-lined. Most of this effort was concentrated in the southern portion of the facility. While these sewers were slip-lined, only some manholes were addressed. Older records are not readily available and it is believed that the sewer system has not changed significantly for some time, though specific elements and sections have been changed/repared, a record of all the activities cannot be obtained.
After reviewing these maps, identify the locations of the newer stormwater and wastewater sewers	Majority of the SW infrastructure is older infrastructure. Sanitary is newer and is separate.
Determine the relationship of the sampling locations from the 2016 survey to the sewers	All samples were collected from the NPDES monitoring points.
Identify buildings near the sampling locations	
Identify potential historic sanitary and storm cross connections. Verify the connections from buildings to existing active sewers or abandoned/inactive sewers will be confirmed.	Potential historic cross connections would be located underneath buildings with floor drains. Records have not been recovered for modernizing the historic buildings. Belief is that SW and sanitary were kept separate during the modernizing effort.

2018 Report Recommendations	WNY Comments/Actions
	Dye testing could potentially confirm any possible cross connections, but funding is not available for such an effort.
Confirm sewer connects with a dye test, videography, or other means to determine if they are feeding into the existing, active sewers.	WNY lacks funding for this recommendation.
After testing is complete, prepare a map indicating which buildings are connected and apparently not connected to the DC WATER sanitary sewer infrastructure.	
Conduct further investigation to determine where illegal cross connections still exist or whether failing infrastructure is leaking into stormwater sewers.	WNY lacks funding for this recommendation.
If further investigations determine there are no connects to the existing, active stormwater system from buildings on base, further testing may be necessary to determine if there is a nearby source outside the Navy Yard property that is leaking into the stormwater system.	

Attachment 1 Response to Comments

**NPDES Permit No. DC0000141
Washington Navy Yard
1411 Parsons Avenue SE Suite 200
Washington, DC 20374**

The U.S. Environmental Protection Agency's Region 3 (EPA) is issuing a Final National Pollutant Discharge Elimination System (NPDES) Permit to the Washington Navy Yard (permittee) to discharge stormwater water from Outfalls 001, 005, 006, 007, 008, 009, 013, 014A, 015G-CSO, and 015H-CSO to the Anacostia River. This permit is being issued under the Federal Clean Water Act (CWA), 33 U.S.C., §§ 1251 et. seq.

EPA solicited public comments on the draft permit from August 4, 2021 through September 3, 2021. In accordance with federal regulations at 40 CFR §124.17, this document presents EPA's responses to comments received on the draft NPDES Permit No. DC0000141. The Response to Comments explains and supports EPA's determinations that form the basis of the final permit (the Final Permit).

Public Notice comments

EPA received five (5) comments on the draft permit and fact sheet offered for public notice on August 4, 2021. These comments were submitted by the permittee. These were the only comments EPA received on the draft permit and fact sheet during the public notice period.

Although EPA's decision-making process has benefited from the comments submitted, the information and arguments presented did not raise any substantial new questions concerning the permit that warrants EPA exercising its discretion to reopen the public comment period. EPA did, however, make certain changes to the permit in response to the public (permittee's) comments.

A copy of the Final Permit and this response to comments document will be posted on the EPA Region 3 web site: <https://www.epa.gov/npdes-permits/district-columbia-npdes-permits>. A copy of the Final Permit may be also obtained by emailing or calling Carissa Moncavage at Telephone: (215) 814-5798; Email moncavage.carissa@epa.gov

Comments received from the Washington Navy Yard (permittee) dated August 23, 2021:

The following comments were embedded in the word document of the draft permit and fact sheet using track changes, or actual edits that were made in the word document itself. Therefore, the following comments were paraphrased from the embedded edits and notes (collectively "comments") submitted on the word documents. The actual comments can be found in the permit's administrative record document # 111 and #112:

1. On page 4 of the draft permit, the permittee recommended revising the location of Outfall 014A depicted on the map on page 4 of the permit.

EPA Response: This map has been replaced with map depicting all the outfalls, including Outfall 014A, and their correct locations.

2. In Section I.B.5 of the draft permit, the permittee recommended remove the sampling location language “near BMP #s# and 4” because these are not the correct descriptions. The permittee also pointed out that the latitude and longitude of the sampling location for this outfall needs to be corrected.

EPA Response: EPA appreciates the clarifications and has revised the final permit accordingly.

3. In Section I.B.9 of the draft permit, the permittee corrected the outfall location for Outfall 014A.

EPA Response: EPA appreciates the clarification and has revised the latitude and longitude accordingly.

4. In Section 1.2 of the draft fact sheet, the permittee recommended minor revisions the drainage basin descriptions for Outfalls 001, 005, 008, 009, and 014A.

EPA Response: EPA appreciates the clarifications provided by the permittee and has revised the final fact sheet accordingly.

5. The permittee made recommendations to correct various grammatical errors found throughout the draft fact sheet. Please see document #111 in the permit’s administrative record for the details of these corrections.

EPA Response: EPA appreciates the permittee pointing out these errors and has revised the final fact sheet accordingly.

Pre-Public Notice Comments

On February 26, 2021, EPA provided a pre-public notice draft permit and fact sheet to both the permittee and the District of Columbia’s Department of Energy and Environment (DOEE) for their review. EPA received comments from the permittee and DOEE on the draft permit and as a result made changes to the draft permit before officially offering for public notice on August 3, 2021.

Other than numbering the comments received for easier readability, the comments on the February 26, 2021 pre-public notice draft permit are reproduced below verbatim as received; they have not been edited. Those comments, and EPA’s responses to them, are as follows:

Comments received from the District of Columbia’s Department of Energy and Environment (DOEE) dated March 25, 2021 on the pre-notice Fact Sheet and Permit:

The following comments from DOEE can be found in the administrative record document number 51.

6. Fact Sheet, Page 1, Section 1.1: Can EPA note that Washington NY is the only Superfund site in DC?

EPA Response: EPA added a sentence on the first page noting that the WNY was added to the National Priorities List in 1998.

7. Fact Sheet, Page 9, Table 13, Outfall 005: PCB concentration is 11,800 pg/L instead of 1,800 pg/L.

EPA Response: EPA agrees that this is an error and the PCB concentration should be 11,800 pg/L. This error was not fixed in the draft fact sheet that was offered for public notice on August 3, 2021, however, the final fact sheet has been changed to reflect 11,800 pg/L.

8. Appendix A - Excel File, Sheet Flows: The 7Q10 and 1Q10 are the same. Should they be different?

EPA Response: The 7Q10 and 1Q10 flows were calculated manually by a hydrologist at USGS Maryland-Delaware-District of Columbia Water Science Center in Baltimore, Maryland. These critical flow calculations were provided to EPA by DOEE. The narrative on how these flows were calculated can be found in the permit's administrative record document #108.

9. Fact Sheet, Pages 6 and 28: Understood that both PCB methods (608 and 1668) will be used. However, the minimum level for method 608 is 1.0 µg/l, which is more than 15,000 times greater than the District's water quality criteria of 0.000064 µg/l for total PCBs. Method 1668, the more sensitive method, has a minimum level in the tens of picograms, which is comparable to the water quality criteria. Even though 1668 is not approved under 40 CFR 136, please consider using method 1668 for compliance purposes. In other EPA NPDES permits, such as the District's MS4 permit, the permittee is required to use Method 1668 - a more sensitive method.

EPA Response: The final permit includes a "no discharge" limit for PCBs. This effluent limitation implements the applicable District of Columbia water quality criterion for PCBs and is below the level of detection for Method 608, therefore, the permit requires that compliance with the effluent limitation for PCBs be measured using the most current version of Method 1668. This new requirement to use Method 1668 for compliance was not included in the February 26, 2021 pre-notice draft permit provided to DOEE. The final permit now requires the use the more sensitive PCB Method 1668 to determine compliance with the permit's "no discharge" limit by comparing the result against the District's applicable water quality standard for PCB. EPA believes these requirements are consistent with the District's water quality standard.

10. The District has recently issued a record of decision, and to get to that point has spent tens of millions of dollars, to put a plan together to remediate PCB contaminated sites in the Anacostia River. This remediation is required under EPA's CERCLA. The PCB method of choice is 1668. The Washington Navy Yard permit has 8 outfalls to the Anacostia River and one outfall to the District's MS4. Fact Sheet page 9. Past PCB reports noted sources of PCBs from various outfalls, e.g., 001E-MS4. The District's MS4 permit requires a TMDL pollutant (e.g., PCB) source study. Given WNY's PCB reports, is this evidence that the Navy Yard is a source of PCBs to the MS4? Recommendations on page 14 do not address this source.

EPA Response: The Washington Navy Yard conducted two PCB source tracking studies in both 2016 and 2018. The 2016 PCB source tracking study showed there was a presence of PCBs at Outfall 001E-MS4 which discharges to the DC MS4. The concentrations were lower at this outfall relative to the Navy Yard's other outfalls and as a result, this outfall was not recommended for further evaluation in the 2018 PCB study. EPA has not made a determination on PCB source

contributions to the DC MS4, however, EPA recognizes that the 2016 PCB study can be used by DOEE to make that determination.

11. Draft Permit, Part III.B: It states that “*The mass loading (lbs/year) for each year of monitoring shall be calculated as follows: concentration (mg/L) x flow (MGD) x 8.34 x number of storm events = lbs/year*”. In this formula, number of storm events is used to calculate mass loadings. Why in Appendix A – RPA Calculations – Sheet TMDL vs WQBELs, 365 days were used to convert the TMDL load mass to TMDL load concentrations?

EPA Response: EPA agrees that using 365 days to convert TMDL mass loads is not appropriate for stormwater discharges. The Interstate Commission on the Potomac River Basin (ICPRB) provided EPA with an excel spreadsheet of the TMDL load calculations that were determined for the 2009 permit. EPA received this spreadsheet after the pre-notice draft permit was sent to DOEE for review on February 26, 2021. After receiving the spreadsheet provided by ICPRB, EPA recalculated the TMDL load calculations using the ICPRB spreadsheet and updated acreage information. These calculations can be found in the permit’s administrative record, document #106.

12. Draft permit, Final Effluent Limitations tables for all outfalls: DOEE recommends that PCB monitoring frequency should be amended from semi-annually to quarterly or bimonthly. Understood that this came from the 2009 NPDES Permit.

EPA Response: EPA agrees that a bimonthly monitoring frequency is more appropriate for all pollutants and has made this change in the final permit.

13. Draft Permit Part II.C and Part III.D: Monitoring data should be kept for at least one permit cycle beyond the time it takes to demonstrate that PCB discharges have ceased from the Washington Navy Yard. The Navy to implement adequate and appropriate PCB corrective actions. Monitoring data from the last two permit cycles should be kept for trends analyses and modeling to show that the remedies are working

EPA Response: Part II.C. of the draft permit requires the permittee to retain records of all monitoring information of its stormwater discharges for six years. EPA’s record retention policy requires the Agency to preserve records in accordance with applicable statutory and regulatory requirements and to facilitate access to information by EPA staff, partners, stakeholders and the public, as appropriate (Directive No. CIO 2155.5 dated 07/07/2005). In most cases, the time period for retaining permit records is ten (10) years.

14. The draft Permit states generic measures like staff training, good housekeeping and maintenance should be used despite PCB discharges. More stringent measures should be required like lining and sealing the stormwater system, checking for and preventing any cross connections, and implementing other appropriate recommendations in WNY source tracking report.

EPA Response: The final permit includes a “no discharge” effluent limit for PCBs and compliance with this limit will be determined by using Method 1668 and comparing the result with the District’s water quality standard of 0.000064 µg/l. This is a more stringent requirement than the requirement included in the pre-notice draft permit dated February 26, 2021. The

permittee will determine what measures they will need to take to comply with the “no discharge” PCB effluent limit.

15. Why is DC’s surface water quality standard for PCB (0.000064 µg/l) not being used in the draft permit, instead there is “No Discharge” limit (at a concentration limit of 1 µg/l). The results in Appendix A show that PCBs were detected in different outfalls at concentrations greater than DC water quality standard of 0.000064 µg/l and based on this analysis WQBEL should have been included in the permit for the concerned outfalls.

EPA Response: EPA made several revisions to the pre-notice draft permit submitted to DOEE on February 26, 2021. One of the changes include a requirement that compliance with the “no discharge” effluent limitation for PCBs be measured using Method 1668 and this result will be compared with the district’s water quality standard of 0.0000064 µg/L. If the results using Method 1668 show PCBs below 0.0000064 µg/L, then the permittee is in compliance with the permit.

16. Draft Permit Part II.B: It states that “*The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also include adequate laboratory controls and appropriate quality assurance procedures.*” - As per the permit the BMPs are supposed to be maintained, however, the fact sheet states that, “funding not available”. Is this not in violation of the permit requirements?

EPA Response: The fact sheet refers to “funding not available” which was a comment made by the permittee to explain why the recommendations from the PCB and Fecal studies were not implemented. The final permit includes effluent limitations for PCBs and E.coli that the permittee must comply with along with implementation of Best Management Practices.

17. Draft Permit Part III.C 1(e) - The permit states - “*Within six months of the recording of the first result above the detectible level the permittee shall submit to EPA and DOEE a plan to determine the source or sources of the PCB discharge and a pollutant minimization plan.*” Since there are PCB studies which are already completed and data are summarized in 2016 and 2018 reports, waiting for additional sampling of the outfalls is not necessary. A corrective action work plan should be prepared within 3 months of the date of the permit issued.

EPA Response: EPA agrees that source tracking studies were already conducted by the permittee over the previous permit term and that these studies could be used by the permittee to reduce the concentrations of PCBs in the discharges over the next permit term. The final permit includes a “no discharge” limit for PCBs which implements the applicable water quality criterion for PCBs which is below the level of detection for Method 608, therefore, the permit requires that compliance with the effluent limitation for PCBs be measured using the most current version of Method 1668. As a result, the special condition in Part III.C of the pre-notice draft permit dated February 26, 2021 “Conditions Applicable to PCB Monitoring” was removed from the final permit because the more sensitive PCB method 1668 will be used to determine compliance with the “no discharge” effluent limit in the permit.

18. Draft Permit Part III.D: Can EPA provide DOEE with Excel files for the PCB congener data? DOEE would like to conduct forensic evaluation.

EPA Response: It is EPA's understanding that the Washington Navy Yard provided DOEE with the same PCB congener data they provided to EPA. These data can be found in the permit's administrative record, document # 24 through #28 and document # 37.

19. Draft Permit Page 4: Facility Map: DOEE was unable to ascertain what the 'Additional Sampling Location' identified on the map is. It does not appear that the permit has added a new Outfall or approved a new composite sample from the previous permit.

EPA Response: This map was provided to EPA by the permittee and was included in the permit to show the general locations of the outfalls. The map also includes a lot of detail that is not necessary for the purposes of demonstrating outfall location, therefore, this map was replaced with a more basic map that shows the outfall locations and associated BMPs. The permittee did not add a new outfall.

20. Draft Permit, Part I.B.4. Final Effluent Limitations and Monitoring Requirements Outfall 006: For total copper: DOEE would recommend the asterisk be removed and bimonthly sampling continue for the entire term of the permit.

EPA Response: The asterisk was removed from all the outfalls in the final permit and the bimonthly sampling frequency is maintained.

21. Draft Permit Page 12. Part I.B.5. Final Effluent Limitations and Monitoring Requirements Outfall 007: Why are arsenic and lead being monitored bimonthly for the rest of the permit term, yet in the other outfalls it is stated that *"If monitoring data show non-detects of this TMDL pollutant during the first year of sampling, the monitoring frequency can be reduced to annually."* DOEE recommends that monitoring should be done for the entire permit cycle.

EPA Response: Including this asterisk for only some of the pollutants was an oversight. EPA removed the asterisks from all the pollutants because it was subsequently determined that a bimonthly sampling frequency over the next permit term will enable EPA to determine whether the discharges are consistent with the applicable TMDLs.

22. Draft Permit, Part I.B: For all metals, DOEE recommends that EPA remove the asterisks so that bimonthly sampling continue for the entire term of the permit. Specifically:
- a. Page 5. Section B.1. Final Effluent Limitations and Monitoring Requirements Outfall 001: total arsenic, total copper, total lead, and total zinc.
 - b. Page 7. Section B.2. Final Effluent Limitations and Monitoring Requirements Outfall 001E: total arsenic, total lead, and total zinc.
 - c. Page 9. Section B.3. Final Effluent Limitations and Monitoring Requirements Outfall 005: total arsenic, total lead, and total zinc.
 - d. Page 10. Section B.4. Final Effluent Limitations and Monitoring Requirements Outfall 006: total arsenic, total copper, and total lead.
 - e. Page 13. Section B.6. Final Effluent Limitations and Monitoring Requirements Outfall 008: total arsenic, total copper, and total lead.
 - f. Page 14. Section B.7. Final Effluent Limitations and Monitoring Requirements Outfall 009: total arsenic, total copper, total zinc, and total lead.
 - g. Page 15. Section B.8. Final Effluent Limitations and Monitoring Requirements Outfall 013: total arsenic, and total copper.

- h. Page 16. Section B.9. Final Effluent Limitations and Monitoring Requirements Outfall 014A: total arsenic, total copper, total zinc, and total lead.
- i. Page 17. Section B.10. Final Effluent Limitations and Monitoring Requirements Outfall 015G-CSO: total arsenic.
- j. Page 18. Section B.11. Final Effluent Limitations and Monitoring Requirements Outfall 015H-CSO: total arsenic, total zinc, and total lead.

EPA Response: See response #21.

23. Draft Permit Page 29, Part III.B: If the permit is concerned with annual loadings calculated for each parameter across all outfalls, what is the purpose of the Maximum Daily Concentrations at certain outfalls for those pollutants?

EPA Response: EPA understands your question to be asking why there are concentration limits in the permit for TMDL pollutants but also annual load calculations that are mass based for the TMDL pollutants listed in Part III Section B of the permit. EPA will first address why the TMDL annual loads are included in the permit and then address why there are concentration based limits for some TMDL pollutants at some outfalls.

40 C.F.R. § 122.44(d)(1)(vii)(B) requires that water quality based effluent limits (WQBELs) in permits be consistent with the assumptions and requirements of any available wasteload allocation. The permit includes a requirement for the permittee to calculate and report the cumulative annual mass loadings at all the outfalls for the TMDL pollutants listed in Part III Section B because the wasteload allocations are mass based and are applied on a facility-wide basis, not outfall-by-outfall. As a result, and to be consistent with 40 C.F.R. § 122.44(d)(1)(vii)(B), EPA included these annual loads (i.e. wasteload allocations) in the permit. This will enable EPA to track facility-wide loadings to determine consistency with the assumptions and requirements of the TMDL wasteload allocations.

Regarding your question on why certain pollutants at certain outfalls have Maximum Daily concentrations for TMDL pollutants. EPA has evaluated reasonable potential on an outfall-by-outfall basis and included Water Quality Based Effluent Limits at each outfall where reasonable potential to cause or contribute to an exceedance of the District's applicable water quality standard was identified. As a result, not all outfalls have Maximum Daily effluent limits. The WQBELs or Maximum Daily Effluent Limits are concentration based because the District's water quality standards are expressed as concentrations, which is in accordance with 40 C.F.R. § 122.45(f)(ii).

24. Given the WNY's repeated issues with sample collection, is reducing the sampling frequency to semi-annually instead of quarterly or bimonthly a reasonable idea? This may become a problem during TMDL estimations if there will be no data collected. Additionally, the collection of only two samples at any point within 6 months of the facility's choosing runs a high likelihood of not properly characterizing the facility's discharge.

EPA Response: EPA agrees that a bimonthly sampling frequency over the next permit term will enable EPA to determine whether the discharges are consistent with the District's water quality standards and applicable TMDLs. As such, the sampling was changed back to bimonthly in the final permit.

25. Draft Permit Page 31, Part III.C: Due to the repeated and consistent detection of PCBs in the prior permit terms and the fact that the WNY already has PCB tracking studies completed and recommendations from those studies on record, DOEE contends that the timetable for submittal for a source tracking and minimization plan be updated and that EPA should not require additional detections/tracking, instead WNY should find solutions to the exceedances. DOEE would like this section to resemble Section A - Compliance Schedule for E. coli and have a specific timeline/schedule for the completion of these plans/corrective actions to take place. WNY has consistently shown an inability to properly plan for and budget for these activities and failed to meet compliance schedules in previous permits.

EPA Response: EPA agrees that source tracking studies were already conducted by the permittee over the previous permit term and that these studies could be used by the permittee to reduce the concentrations of PCBs in the discharges over the next permit term. The final permit includes a “no discharge” limit for PCBs which implements the applicable water quality criterion for PCBs and is below the level of detection for Method 608, therefore, the permit requires that compliance with the effluent limitation for PCBs be measured using the most current version of Method 1668. As a result, the special condition in Part III.C of the draft permit dated February 26, 2021 “Conditions Applicable to PCB Monitoring” was removed from the final permit because the more sensitive PCB method 1668 will be used to determine compliance with the “no discharge” effluent limit in the permit. Because the permittee cannot immediately meet this new requirement, a compliance schedule was included in the permit to allow time for the permittee to come into compliance with the new requirement to comply with the “no discharge” limit by using Method 1668. EPA believes these requirements are consistent with the District’s water quality standard.

26. Draft Permit Page 33, Part III.C.2: DOEE contends that the WNY has already provided sufficient number of samples which exceeded the District’s WQS for PCBs in the previous permits. DOEE requests the action triggered from the previous permit requiring SWPPP review and implementation of additional measures should be activated in the new permit and the timeline should be updated in the new permit to reflect this.

EPA Response: EPA understands this comment to be the same as Comment #17 and #25 above. Accordingly, please see the responses to Comments #17 and #25.

27. Fact Sheet Page 8, Section 3.3: DOEE disagrees with usage of the term ‘*periodically*’ when referring to the frequency of detection of PCBs in the WNY discharge. Samples have consistently exceeded the District WQS for PCBs of 64 pg/L when utilizing method 1668.

EPA Response: EPA appreciates the distinction and acknowledges that PCBs have been detected in the discharges at the Washington Navy Yard throughout the permit term. EPA chose the term “periodically” because the PCB congener data showed detections of PCB congeners, but not all congeners were detected at all the outfalls. The data are fairly inconsistent in terms of which congeners were detected at which outfalls, however, EPA agrees that PCBs are a concern at the site. When EPA reviewed the PCB congener data and the limit of quantitation (LOQ) was below the district’s water quality standard, and the result was either below the LOQ or below the detection level, EPA considered this a non-detect. These PCB congener non-detects occurred at various outfalls over the course of the last four years. These data are included in the permit’s administrative record, document #37. This document is a spreadsheet that shows PBC congener data from 2019 and 2020. Document #s 24-28 are PCB lab reports for sampling during the years

2017 and 2018. It is for these reasons that EPA chose the term “periodically” to characterize the frequency at which PCBs were detected in the discharges. Again, EPA agrees that PCBs are a concern at this site and included PCB requirements in the permit that are consistent with the District’s water quality standards.

28. Draft Permit Page 31. Section C.1 Due to the repeated and consistent detection of PCBs from samples collected under the previous permit term and the fact that the WNY already has PCB tracking studies completed and recommendations from those studies on record; DOEE requests a timetable for submittal of a corrective action and minimization plan and follow-up actions be added to the special conditions section of this permit. The current approach reproduces efforts already underway or completed from the first permit and sets the investigation back to a point that has already been passed. DOEE would like this section to more closely resemble the Compliance Schedule for E. coli in section A and have a specific timeline/schedule for the completion of these plans/studies and for follow-up actions to take place. WNY has consistently shown an inability to properly plan for and budget for these activities and failed to meet compliance schedules in previous permits and should be held to a more definitive schedule.

EPA Response: EPA understands this comment to be the same as comment #25. Accordingly, please see the response to comment #25.

29. Fact Sheet, Page 18, Section 5.1: “*Lack of funding*’ is not an acceptable end result for the progress of an investigation. If the WNY has run out of funds, then the updated report should state what the next steps are to secure funding or when funding will be made available. The permit requirements for future studies outlined in this section should require that WNY provide this information as part of the action progress/milestones and not use this as an explanation in and of itself as the end result of an investigation.

EPA Response: EPA asked the permittee to provide comments or actions that were taken based on the study recommendations. The permit requirements for PCBs were changed since the February 26, 2021 version of the permit was provided to DOEE. The final permit requires the permittee to comply with a “no discharge” limit for PCBs by comparing the results using the most sensitive Method 1668 with the district’s water quality standard. EPA believes this is protective of the Anacostia River and is consistent with the District’s water quality standards.

30. Draft Permit. Part I. Effluent Limits. Section B: DOEE does not agree with the reduction of sampling frequency to annually after one year of the permit cycle with NDs. Given the facility’s repeated inability to collect samples required under the permit there is a potential to cause data gaps when evaluating TMDL compliance. In addition, several of the calculations for the Reasonable Potential analysis are currently based on 4 or fewer than and in multiple cases there are 0 samples that were available for the calculation. DOEE recommends a more gradual decrease from bi-monthly first year to at least semi-annual if not quarterly (preferred) the following year, and then reduction to annual in year 3 if NDs persist and the facility proves the ability to collect samples in compliance with the schedule laid out in the permit. Reduction of sampling frequency should be based on the number of successfully collected samples and the RP Analysis.

Due to documented issues WNY has had with consistently collecting representative samples from all outfalls during each monitoring period DOEE recommends including language in the permit

requiring sample collection be attempted during the first qualifying rain event and each subsequent qualifying rain event during each monitoring period until a representative sample is successfully collected. DOEE also requests language be added requiring the permittee to return to bi-monthly sampling if any annual samples taken after the first year do not show ND or if the facility fails to collect a required sample.

EPA Response: To address the first part of the comment, EPA removed the asterisks from all the pollutants because it was subsequently determined that a bimonthly sampling frequency over the next permit term will enable EPA to determine whether the discharges are consistent with the applicable TMDLs. Regarding the second part of the comment, EPA agrees that representative samples must be taken for each qualifying rain event and if the permittee cannot obtain a representative sample, then they must sample during the next qualifying rain event during the same monitoring period. As such EPA has included in the final permit more detailed language about sampling collection during a qualifying rain event. The last part of the comment regarding the addition of language that requires the permittee to return to bi-monthly sampling, the permit condition to relax the sampling frequency has been removed from the final permit as discussed in previous responses.

31. Draft Permit. Part I. Effluent Limits. Section B: DOEE could not ascertain how did EPA determined which outfalls could decrease the monitoring for certain parameters to annually. It doesn't appear related to TMDLs, WQS, RP calculations or number of historical samples at the outfall. Please explain how it was determined which parameters could decrease sampling frequency and how this determination was reached.

EPA Response: EPA removed the asterisks from all the pollutants because it was subsequently determined that a bimonthly sampling frequency over the next permit term will enable EPA to determine whether the discharges are consistent with the applicable TMDLs

32. Draft Permit, Page 5. Section B.1. Final Effluent Limitations and Monitoring Requirements – Outfall 001 *“The discharge shall be monitored and sampled south of Building 166 and east of the parking lot.”* Does this refer to two sampling locations or directions for one location that is south of the building and east of the parking lot? If this is two locations, then the permit should state that the sample is being composited from two separate samples or if the two samples are to be taken and analyzed separately.

EPA Response: There are two sampling locations at Outfall 001 which will be composited into one sample for analysis. The sampling location for Outfall 001 in Part I Section B.1 of the permit was revised for clarity.

Pre-notice comments from the Washington Navy Yard dated April 23, 2021:

The following comments from the Washington Navy Yard (permittee) were based on the draft permit and fact sheet sent to the permittee on February 26, 2021. This version of the draft fact sheet and permit can be found in the permit's administrative record, document #41 (draft fact sheet) and document #42 (draft permit). The permittee provided comments to EPA in an excel spreadsheet format that was saved as a PDF. EPA transferred the comments here and changed the format for easier readability. Other than numbering the comments and changing the format for easier readability, the comments are reproduced

below verbatim as received. The permittee's comments in their original format can be found in the administrative record, document #74.

33. Permit Section: I.B. Item: Sampling locations. Comment: Please see submittal provided by Eric Ruffer on March 22.

EPA Response: EPA assumes this comment to mean that the permittee submitted sampling locations to EPA on March 22, 2021. However, EPA did not receive an email from Eric Ruffer at the Washington Navy Yard on March 22, 2021. Instead, EPA received an email from Eric Ruffer at the Washington Navy Yard on April 6, 2021 with updated sampling locations for the Washington Navy Yard. These sampling locations were incorporated into the final permit. See the permit's administrative record document #71 for the email and document #72 for sampling locations provided by the Washington Navy Yard.

34. Permit Section: I.D.1. Item: More frequent samples. Comment: Clarify that this refers only to permitted sampling locations. A sampling point upstream of an outfall may not be representative of the actual discharge.

EPA Response: That is correct. If the permittee monitors any pollutant at any of the sampling locations specified in the permit more frequently than required by this permit, using test procedures approved under 40 CFR 136 or as specified in this permit, the result(s) of this additional monitoring shall be included in the calculation and reporting of the data submitted in the Discharge Monitoring Report (DMR) form. The change in frequency shall also be indicated.

35. Permit Section: I.D.2. Item: Representative locations. Comment: See comment #1.

EPA Response: EPA understands this comment to be the same as the first comment the permittee submitted, or comment #1. Because EPA sequentially numbered the comments for easier readability and reference, permittee comment #1 referenced here is comment #33 above. Accordingly, please see EPA's response to comment #33 above.

36. Permit Section: I.D.6. Item: Bimonthly samples. Comment: Please provide the reasoning behind for bimonthly sampling? Wet weather/MS4 sampling requirements are typically quarterly.

EPA Response: EPA acknowledges that many stormwater discharges commonly have a quarterly monitoring period. However, monitoring frequency can and should be tailored according to the nature and effect of the discharge. In this case, EPA has concluded that the nature of the discharge and the need to determine whether the Washington Navy Yard is a source for some pollutants and/or is achieving effluent limitations for other pollutants supports a bimonthly monitoring frequency. The 2009 permit established a bimonthly monitoring frequency at all the outfalls and both DOEE and EPA believed that this was warranted due to the legacy contamination issues at the Washington Navy Yard. This decision is documented in the permit's administrative record, document #35.

37. Permit Section: II.A.10. Item: Other applicable laws. Comment: As discussed, there is a potential conflict between the DC SHPO requirement to maintain copper downspouts on historic buildings, and the copper limitations in this permit.

EPA Response: The National Historic Preservation Act of 1966 and implementing regulations (36 C.F.R. Part 800) require federal agencies to take into account the effects of their undertakings on historic properties and afford the Advisory Council on Historic Preservation, or designee, the opportunity to comment on such undertakings. See Section 106, 54 U.S.C. § 306108. EPA has determined that the terms and conditions of this permit do not direct WNY to undertake any action that would affect historic properties. To the extent the permittee proposes to affect historic properties as part of its implementation of the terms and conditions of this permit, the permittee has agreed to take the lead in coordinating with the D.C. Historic Preservation Office.

38. Permit Section: II.D.8.e. Item: Noncompliance report. Comment: Clarify that this falls under the electronic submission provisions outlined in permit Paragraph I.D.4. If not, how should the written report be submitted?

EPA Response: Section II.D.8e of the permit is a standard condition requiring the permittee to report any noncompliance which may endanger health or the environment orally within 24 hours from the time the permittee becomes aware of the circumstances. See 40 C.F.R. § 122.41(1)(6). This condition also requires written submission be provided to EPA within 5 days of the time the permitted becomes aware of the circumstances. These noncompliance reporting requirements do not fall under the electronic submission requirements in Section I.D.4 of the permit. Section I.D.4 of the permit describes how reports, studies, and DMRs should be reported to EPA. The twenty-four hour noncompliance reporting requirement is noncompliance reporting and does not fall under Section I.D.4 of the permit. EPA agrees that the twenty-four hour noncompliance reporting requirement is not clear as to how written submissions should be provided to EPA. Written submissions shall be submitted to EPA in the form of an email. The permit was revised to clarify that written submissions are submitted electronically via email. Please note, the permit was renumbered and Section II.D.8.e is now Section II.D.1.e in the final permit.

39. Permit Section: II.D.8.f. Item: Compliance Schedule. Comment: Confirm that this report falls under the electronic submission provisions of Paragraph I.D.4.

EPA Response: Section II.D.8.f is a standard permit condition that applies to the reporting of noncompliance as they relate to compliance schedules. See 40 C.F.R. § 122.41(1)(5). The reporting requirement in Section I.D.4 of the permit only applies to reports, studies, and DMRs and does not apply to noncompliance reporting. All noncompliance reporting shall be submitted electronically via email to EPA. Please note, the permit was renumbered and Section II.D.8.f is now Section II.D.1.f in the final permit.

40. Permit Section: III.A. Item: E.Coli schedule. Comment: Request that EPA modify the timelines as follows: 1. Add phrase "for review and approval" after "submit to EPA" 2. No change 3. Within 24 months and again within 36 months of the permit effective date the permittee shall submit a progress report to EPA summarizing the actions taken to achieve compliance with the final effluent limitations for E. coli. 4. Within 48 months of the permit effective date the permittee shall attain compliance with the final E. coli effluent limitations specified in Part I.B of this permit.

EPA Response: After these comments were submitted to EPA, the Washington Navy Yard and EPA participated in numerous calls to discuss the compliance schedule milestones. The Washington Navy Yard identified the actions it will need to take to come into compliance with

the final effluent limits for E. coli. These actions were incorporated into the final permit as interim milestones.

41. Permit Section: III.A. Item: E.Coli. Comment: Outfalls 15H and 15G are connected to a D.C. CSO. Although D.C. has installed a basin upstream of this outfall to minimize flows, it is probable that D.C. shares some of the bacterial load to this outfall and should therefore share responsibility for the limitation on E.Coli.

EPA Response: It is EPA's understanding that Outfalls 015G and 015H discharge into the District's Combined Sewer System. Therefore, sampling for Outfalls 015G and 015H should be conducted at a location prior to connecting to the Combined Sewer System (CSS) for an accurate representation of the stormwater discharges at the site.

42. Permit Section: III.B.1. Item: Mass load calculation. Comment: As discussed, the mass load calculation time factor will be based upon rainfall events, not on 365 days per year. There is not a discharge 365 days per year, only during qualifying rainfall events.

EPA Response: EPA agrees and acknowledges this was an oversight and has removed it from the permit. The final permit calculates the mass load using the number of qualifying rain events per year.

43. Permit Section: III.C.1.b. Item: PCB Aroclor reporting. Comment: Clarify that measurements below 1.0 µg/L will be reported as "0" (zero) and NOT as NODI code "B" for "no detection."

EPA Response: This special condition was removed from the final permit and replaced with a requirement to analyze PCBs using Method 1668.

44. Permit Section: III.C.1.e. Item: EPA Method 1668. Comment: The Anacostia River has PCB levels that significantly exceed the detection limit of Method 1668 and most of the sampling location are impacted by the Anacostia to some degree. Additionally, PCB levels in rainfall have been shown to exceed PCBs at some WNY outfalls. BMP requirements to reduce PCBs below the detection limit of Method 608 must take into consideration these sources.

EPA Response: EPA agrees the Anacostia River contains levels of PCBs that require reductions to be made by various dischargers such as the WNY. WNY has identified sampling locations that are representative of its discharge, and EPA accepted that identification. If WNY determines that the sampling locations are not representative of its discharge, WNY may seek a permit modification.

45. Permit Section: III.C.1.l. Item: One year of PCB compliance. Comment: Does this paragraph apply only to 608 sampling? If WNY can meet this for 608 sampling but not for 1668, does this still apply to 608 samples?

EPA Response: This section has been removed from the final permit and only Method 1668 is required.

46. Permit Section: III.C.2. Item: PCB WQS. Comment: See comment 12.

EPA Response: Comment #12 was renumbered as comment #41 above. Accordingly, see EPA response #41 above.

47. Permit Section: III.C.b and paragraph after b. Item: PCB "additional measures" and "14 days to implement." Comment: If WNY implements additional BMPs and continues to be unable to meet 0.000064, are there next steps/investigations that should be taken? As discussed, consider the option of using the 45 days to provide EPA with a plan of action with timelines for approval if there are items that cannot be accomplished in 45 days.

EPA Response: This special condition was removed from the final permit.

48. Permit Section: III.C.b and paragraph after b. Item: 14 days to implement control measures. Comment: What happens if these measures don't bring the discharge below 0.000064?

EPA Response: This special condition was removed from the final permit. The permit requires compliance with a "no discharge" limit by using Method 1668 and comparing the result to the District's applicable water quality standard.

49. Permit Section: III.D. Item: SWPPP - reference documents. Comment: The SPCC Plan and EMS Plan are maintained on the Navy's electronic EV database, as is the SWPPP. Is this adequate for keeping copies "with" the SWPPP? Can this paragraph be clarified to explain what "with" means in terms of electronic storage?

EPA Response: If the SWPPP makes references to any document such as the Spill Prevention, Control and Countermeasure Plan (SPCC Plan), the relevant or referenced portions of must be included in the SWPPP. This inclusion could be as an Appendix, Attachment, or inserted directly into the section of the SWPPP.

50. Permit Section: III.D.2.a. Item: Industrial activities. Comment: No industrial activities exist at WNY.

EPA Response: EPA has revised the SWPPP section in response to this comment. Please note, the permit was renumbered and Section III.D.2.a is now Section III.C.2.a in the final permit.

51. Permit Section: III.D.2.xiii. Item: Liquid storage tanks. Comment: Please include a definition of "liquid storage tank" in Section III.G.

EPA Response: EPA made revisions to the draft permit since the February 26, 2021 version was provided to the WNY. As a result of these revisions, the permit sections were re-organized. Section III.D.2.xiii is now Section III.C.2.xiii in the final permit. The following footnote was included in Section III.C.2.xiii to clarify what a liquid storage tank is: *Liquid storage tank is defined as any container used to store liquid. These containers are used for purposes including, but not limited to, the storage of any liquid prior to use or while being used.*

52. Permit Section: III.D.3. Item: 1st paragraph. Comment: This paragraph references only industrial areas, of which there are none at WNY. Therefore, this is not applicable including the references to metal leaching.

EPA Response: EPA has revised the SWPPP section in the permit in response to this comment.. EPA disagrees with the permittee's conclusion that there is no metal leaching occurring at the site. The WNY has indicated that it believes the source of copper in the discharges is likely from the copper downspouts on the buildings. As such, this section will remain in the final permit.

53. Permit Section: III.D.3 Italicized headings under 1st paragraph. Comment: This paragraph applies only to industrial areas, which WNY does not have. Note that sub-headers under this section would not apply as currently written, such as the since sampling data collected during the previous permit term.

EPA Response: The SWPPP requirements included in the Washington Navy Yard's permit are appropriate to ensure that adequate controls are in place in light of the nature of the discharges from the facility. Please note, the permit was renumbered and Section III.D.3 is now Section III.C.3 in the final permit.

54. Permit Section: III.D.14. Item: Additional Requirements. Comment: Entire section is not applicable since we don't have any industrial activities.

EPA Response: EPA disagrees with the permittee's conclusion that the controls described in this section do not apply. EPA has revised the permit condition consistent with this comment. Please note, the permit was renumbered and Section III.D.14 is now Section III.C.14 in the final permit.

55. III.F.2 NHPA. Comment: There is a potential for impacts to historic activities if we need to modify downspouts from historic buildings to remove a copper source. A recent analysis of runoff from copper downspouts showed the runoff to have high levels of copper at the source. We are currently reviewing long term results at outfalls to determine if there are specific historic buildings that would cause exceedances of the new limit.

EPA Response: EPA appreciates the additional information. See EPA's response to comment #37 above.

56. Fact sheet Page 1. Item: Name. Comment: "aka The Naval District" is incorrect. WNY is a part of Naval Support Activity Washington, which should be the permittee.

EPA Response: EPA appreciates the clarification and has revised the fact sheet and permit accordingly.

57. Fact Sheet Section 7.1. Item: Baseload allocations. Comment: Are the baseload allocations based on the correct acreage of WNY at 75 acres?

EPA Response: Yes the TMDL baseline loads and wasteload allocations were calculated using 75 acres. See document #106 in the permit's administrative record.

58. Fact Sheet Section 7.1.1. Item: Pollutant load year. Comment: Will this be a year from the date the permit is issued, a calendar year, or the fourth quarter of reporting after the permit is issued?

EPA Response: The pollutant load monitoring period is per calendar year, January – December. If the permit becomes effective in November then the monitoring period will begin in January.

59. Fact Sheet Section: 7.2. Item: "Other facilities." Comment: WNY does not have any industrial activities, so those would not be applicable.

EPA Response: This section of the fact sheet repeats the description of the Washington Navy Yard in the referenced TMDL. Regardless of the manner in which the TMDL characterized the facility, it remains that the facility is identified as a source in the TMDL and that discharges from the facility must be consistent with the assumptions and requirements of the TMDL. Please note, the fact sheet was renumbered and Section 7.2 is now Section 2.3.2 in the final fact sheet.

60. Fact Sheet Section: 7.2. Item: Storm drain coverage. Comment: Addressing comment "WNY needs to confirm" - WNY has manhole covers and, and has trash racks for drop inlets. Only curb inlets do not have coverage.

EPA Response: EPA appreciates the permittee confirming the information as it relates to consistency with assumptions and requirements of the Anacostia Trash TMDL.

61. Fact Sheet Section: 7.5. Item: Reference to permit III.C.2. Comment: As in comment 18 above, need clarification that the last paragraph of whether 7.5 references 608 or 1668.

EPA Response: As explained in previous comments, this section was removed and the final permit now requires the use of Method 1668 for PCBs.

62. Fact Sheet Section: 7.6.2. Item: First sentence. Comment: Why is WNY categorized as an industrial discharger? There are no industrial discharges.

EPA Response: As mentioned in previous responses, EPA understands that there are no industrial activities as defined in 40 C.F.R. § 122.26(a)(14), however, EPA has concerns over the stormwater being discharged from the site.

63. Fact Sheet Section: 11. Item: Biological evaluation. Comment: Incomplete.

EPA Response: EPA is unsure of the meaning of this comment, however, we would like to point out that the language in this section was included as a placeholder until consultation with the Services is complete. Once complete, the final fact sheet and permit will be updated accordingly.

64. Fact Sheet Section: 12. Item: Historical properties. Comment: See comments above in regard to copper downspouts.

EPA Response: Similarly, see EPA's response to comment #37 and #55 above.

65. Fact Sheet Table 18. Item: 2018 Fecal Rpt Recommendations. Comment: This table appears to list the 2016 recommendations rather than the Recommendations in the 2018 report. The 2018 report recommendation page is included as Enclosure (1).

EPA Response: EPA appreciates the Navy Yard pointing this out and has included the 2016 recommendations in the final fact sheet.