FACT SHEET

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

NPDES Permit No. DC0000345

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

National World War II Memorial
17th Street and Independence Avenue, S.W.
Washington, D.C. 20024

Applicant Information	
Applicant Name	United States National Park Service, National Mall & Memorial Parks
Applicant Mailing Address	900 Ohio Drive, S.W. Washington, D.C. 20024

PUBLIC COMMENT

Public Comment Start Date: April 25, 2018
Public Comment Expiration Date: June 8, 2018

EPA public noticed the draft permit and its accompanying documents on April 25, 2018. The public notice itself was published electronically on EPA's website as well as locally in The Washington Times newspaper in D.C. The draft permit and its accompanying documents were made available to the public in electronic form via EPA's website and in hard-copy or paper format via the local library in D.C. EPA received no comments and no requests for a hearing regarding the draft permit during or after the public notice and comment period.

SUMMARY

Facility Description

This permit covers the facility known as the World War II Memorial ("WWII Memorial" or "Memorial") which is located on 17th Street near the intersection of Independence Avenue SW in Washington, D.C. The Memorial was dedicated to the public in 2004 to commemorate and honor all who served in the United States armed forces during World War II. The Memorial is approximately 8.5 acres in the National Mall area of Washington, D.C. and is managed by the National Mall and Memorial Parks, a unit of the U.S. National Park Service. There are four water features which include two pools and two fountains.

The Main plaza area consists of two pools, The Rainbow Pool and Ceremonial Pool, and their accompanying fountains. The Rainbow Pool is the larger of the two pools and holds approximately 320,000 gallons of water. The smaller Ceremonial Pool holds approximately 50,000 gallons of water (see image below). The site also includes pedestrian walkways, vehicle parking, vehicular maintenance access areas, a comfort station, and an information center. Stormwater collected on the site is diverted to an underground drainage system located beneath the Memorial. This drainage system also captures groundwater, pool flushings, and filter backwash. The pool waters are circulated through a filter chamber to capture solids and other constituents. Pool flushings and filter backwash is combined with groundwater and stormwater collected underground. The stormwater, groundwater, and pool flushings collected from the Memorial is then diverted to an underground wet well located beneath the main plaza prior to discharging to Outfall 001. Both pools are drained for cleaning, maintenance, and winterizing on an infrequent basis.

Aerial view of the World War II Memorial, Wasthington, D.C.

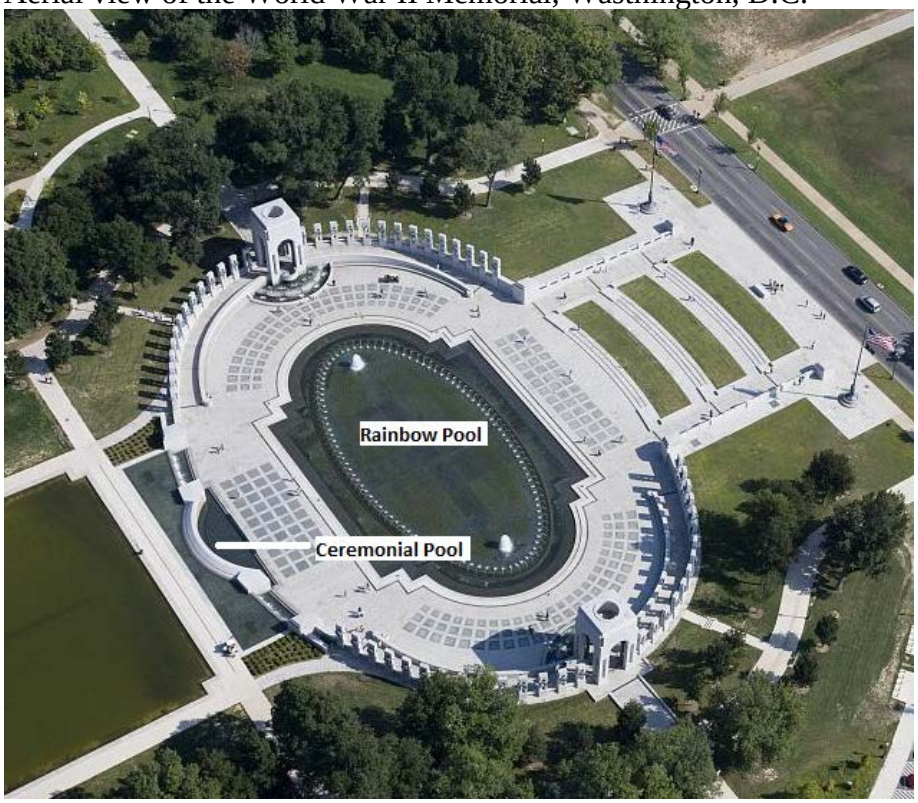

Image from the United States Library of Congress Prints and Photographs Division under digital ID highsm.04465 (http://loc.gov/pictures/resource/highsm.04465/, accessed March 26, 2018). Labels were added to the image for illustrative purposes.

Discharge Description

The discharge is composed of a mixture of stormwater, uncontaminated groundwater, and intermittent discharges of filter backwash and pool flushings. A pump station with a wet well located in the south vault of the underground drainage system will collect and convey the combined discharge to the receiving waters of the Tidal Basin at Outfall 001.

Treatment

Stormwater that accumulates on the main plaza of the Memorial from rain events drains to an oil/grit separator and then to a three-chamber sedimentation basin where it is combined with any groundwater and pool flushings and before discharging through Outfall 001. Pool water is circulated through a filter chamber to capture solids and other pollutants.

OUTFALL NO.	LATITUDE	LONGITUDE	RECEIVING WATER	DESIGNATED USES	RECEIVING WATER IMPAIRMENT	TMDL
001	38º 53' 27"N	77º 02' 41"W	Tidal Basin	**Class A, B, C, D, E**	**pH, *E. coli*, Total PCBs**	**Yes**

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

The Tidal Basin drains to the Washington Ship Channel which then drains to the Potomac River. The designated uses for all three waterbodies are the same. There are approved Total Maximum Daily Loads (TMDLs) for these three waterbodies and are discussed in the TMDL section below.

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 (TBELs) are developed for all applicable pollutants of concern and water quality-based effluent limitations (WQBELs) are developed where TBELs are not adequate to meet water quality standards in the receiving water.

The final effluent limitations will ensure that all applicable water quality standards (WQS) are met.

TECHNOLOGY-BASED EFFLUENT LIMITATIONS (TBELS)

40 C.F.R. § 122.44(a) and §125.3 require that permits include conditions requiring dischargers to meet applicable technology-based requirements (i.e. TBELS). When EPA has not promulgated effluent limitation guidelines (ELG) for an industry, permit limitations may be based on best professional judgement (BPJ). (40 CFR § 125.3(c))

The following technology-based limits apply to the facility and are subject to water quality analysis and BPJ where applicable. The proposed effluent limits for TSS and Oil & Grease are TBELs are based on Best Professional Judgement since no ELG applies to this facility.

WATER QUALITY-BASED EFFLUENT LIMITATIONS (WQBELS)

40 CFR § 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 to cause*, or *contribute* to an excursion above any state water quality standard, including state narrative criteria. The WQBELs in this permit are as stringent as necessary to ensure that the designated uses of the Tidal Basin are protected, maintained, and/or attained. EPA applied the District's WQS to assess the effluent for reasonable potential (RP) to cause or contribute to an exceedance of the District's WQSs. EPA used the *Technical Support Document for Water Quality-based Toxics Control* (TSD) approach to determine if the parameters that have a water quality criterion have RP to cause or contribute to an exceedance of the criterion.

Total Residual Chlorine (TRC) & pH

The limits for total residual chlorine and pH are based on the District's water quality standards which are <0.1 mg/L for chlorine and between 6.0 and 8.5 standard units for pH. Based on DMR data there is no reasonable potential to exceed water quality criteria for TRC and pH.

E. coli

The E. coli data submitted with the application were evaluated and indicate a reasonable potentional to cause or contribute to an exceedance of the District's water quality standard of 126 MPN/100 mL. Because the WWII Memorial discharge is an intermittent comingled stormwater discharge, a best management practice (BMP) approach in accordance with 40 CFR §122.44(k) is taken in lieu of imposing a WQBEL to address the presence of *E. coli* in the discharge. Monitoring for *E. coli* will continue throughout the permit term with a special condition to complete a source tracking study to determine the source of *E. coli*. The results from the study will inform how the BMPs will be developed and implemented to reduce the presence of *E. coli* in the discharge.

Iron

The previous permit included a special condition requiring the permittee to complete and submit to EPA an iron study which assessed, evaluated, and recommended a course of action for addressing the elevated iron levels in its discharge. The study was completed within the required time frame and concluded that the primary source of elevated iron levels was groundwater infiltration through cracks in the slurry wall around the Storm Vault. The study recommended sealing the leaks near the pipe openings. A site visit in November of 2015 indicated the slurry wall was currently undergoing repairs; in March 2016 the National Park Service confirmed the repair was completed. Although the sampling data submitted with the application do not show iron concentrations above the D.C. water quality criterion of 1.0 mg/L, the discharge monitoring reports (DMR) over the previous permit term show elevated levels of iron. Review of the discharge monitoring reports *after* the repair of the slurry wall show iron concentrations at or below the D.C. water quality criterion of 1.0 mg/L. While the most recent DMR data indicate the repair of the slurry wall has helped reduce iron levels in the discharge, it is still not yet clear whether the repair will continue to keep groundwater infiltration out. Therefore, a monitoring requirement for iron remains in the permit with the accompanying special condition Part III.B until the permittee can maintain iron levels at or below the water quality criterion of 1.0 mg/L.

TMDL

The World War II Memorial discharges to the Tidal Basin, which eventually mixes with the Washington Ship Channel and ultimately the Potomac River. There are TMDLs for each of the three waterbodies affected by this discharge. Additionally, this discharge occurs within the Chesapeake Bay watershed and therefore affected by the Chesapeake Bay TMDL. The Bay TMDL is addressed separately below. In addition to the Bay TMDL, EPA has approved or established Total Maximum Daily Loads (TMDLs) for the following pollutants in the Tidal Basin which are discussed in more detail below:

- *E. coli* (approved December 2004, revised July 2014)
- Total PCBs (approved December 2004)
- pH (approved December 2010)

Tidal Basin and Middle Potomac River TMDL

E. coli

The bacteria TMDL was approved in 2004 and revised in 2014 to include a translation of the bacteria loads from fecal coliform to *E. coli*. This translator allows the bacteria loads to be consistent with the District's water quality standard. There is not a wasteload allocation given to the WWII Memorial discharge. Data submitted with the WWII Memorial application show their discharge has elevated levels of *E. coli*. Therefore, monitoring for *E. coli* will continue throughout the permit term to inform future revisions of the TMDL and to ensure that the facility does not contribute to the existing impairment of the Basin

pH

pH impairment is attributed to discharges from the combined sewer system and the separate storm sewer system. Page 6 of the TMDL states "the goal of the TMDL is to achieve a pH concentration that allows for meeting of water quality standards." Monitoring requirements for pH are included in this permit renewal to maintain consistency with the District's water quality standard and to ensure the discharge does not contribute to the existing pH impairment in the Tidal Basin.

PCB

There is no wasteload allocation assigned to this facility. Additionally, PCB is not a parameter of concern for the WWII Memorial, therefore, monitoring for PCBs will not be required in this permit.

Washington Ship Channel TMDLs

E. coli

Since the Tidal Basin flows to the Washington Ship Channel, the TMDL for *E. coli* in the Washington Ship Channel was considered for this discharge. The bacteria TMDL was approved in 2004 and revised in 2014 to include a translation of the bacteria loads from fecal coliform to *E. coli*. This translator allows the bacteria loads to be consistent with the District's water quality standard. There is not a wasteload allocation given to the WWII Memorial discharge. Data submitted with the WWII Memorial application show their discharge has elevated levels of *E. coli*. Therefore, monitoring for *E. coli* will continue throughout the permit term to inform future revisions of the TMDL and to ensure that the facility does not contribute to the existing impairment of the Basin.

pH

Since the Tidal Basin flows to the Washington Ship Channel, the TMDL for pH in the Washington Ship Channel was considered for this discharge. Impairment is attributed to discharges from the combined sewer system and the separate storm sewer system. Page 6 of the TMDL states "the goal of the TMDL is to achieve a pH concentration that allows for meeting of water quality standards." Monitoring requirements for pH are included in this permit renewal to maintain consistency with the District's water quality standard and to ensure the discharge does not contribute to the existing pH impairment in the Tidal Basin.

Chesapeake Bay TMDL

The Chesapeake Bay TMDL ("Bay TMDL") categorizes the WWII Memorial as a non-significant industrial discharger and is included in the aggregate wasteload allocations (WLAs) for TN, TP, and TSS. Due to a lack of data from nonsignificant dischargers for TN and TP, the aggregate WLAs were based on default assumptions regarding flow and concentrations (see section 8.3.3 *Assumptions Supporting the Allocations* of the Bay TMDL). The Bay TMDL also expects that renewed NPDES permits will require monitoring of TN, TP, and TSS to verify existing loads are consistent with the assumptions of the aggregate WLAs. Therefore, a quarterly monitoring requirement for TN and TP is imposed in the permit to meet the assumptions of the WLA and to inform future TMDL revisions.

Section 4.5.2 of the Bay TMDL *Sources of Nitrogen, Phosphorus, and Sediment To The Chesapeake Bay – Industrial Discharge Facilities* states that discharges from industrial facilities represent a *de minimis* source of sediment. The aggregate WLA for sediment was established based on the TSS effluent limits for each facility included in the aggregate. At the time the Bay TMDL was approved, the WWII Memorial had an existing TSS effluent limit of 30 mg/L. Therefore, a monthly average limit of 30 mg/L of TSS must not be exceeded for the WWII memorial's discharge to be consistent with the TMDL. A 30 mg/L effluent limit for TSS is maintained in the permit to meet the aggregate WLA assumptions of the TMDL for sediment.

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 habitat(s) that will be affected by the WWII Memorial discharge. The USFWS has indicated that there is a total of zero threatened, endangered, or candidate species located at the World War II project area as defined by the IPaC online tool.

Per the requirements under Section 7 of the Endangered Species Act (50 C.F.R. 402; 16 U.S.C. § 1536(c)) EPA submitted a Biological Evaluation and *Finding of No Effect* to the USFWS and The National Oceanic and Atmospheric Administration National Marine Fisheries Service (NOAA Fisheries). NOAA concurred with EPA's conclusion that this permit is not likely to adversely affect any ESA-listed species or designated critical habitat under their jurisdiction.

NATIONAL HISTORIC PRESERVATION ACT OF 1966

Consultation with the District of Columbia State Historic Preservation Officer (DC SHPO) in accordance with Section 106 of the National Historic Preservation Act and its implementing regulation at 36 C.F.R. Part 800 has resulted in a determination that the activities required by the permit will have no adverse effect on historic properties.

ANTI-BACKSLIDING PROVISIONS

Section 402(o) of the CWA and 40 CFR 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. All effluent limits in the permit are either identical to or more stringent than those in the previous permit.

ANTIDEGRADATION STATEMENT

The Tidal Basin, Middle Potomac River, and Washington Ship Channel are Tier 1 protection waters. Title 21 Chapter 1102.1 of the District's Water Quality Standard Antidegradation Policy defines a Tier 1 water as "Existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected." The permit contains water quality-based and technology-based effluent limits for pollutants as required by the approved District of Columbia Water Quality Standards and approved TMDLs. Based on this information, EPA concludes that the discharges from this facility will not downgrade the water quality of the Tidal Basin.

RECENT DISCHARGE MONITORING REPORT DATA

	pH (SU)	Iron (mg/L)	Oil & Grease (mg/L)	TSS (mg/L)	Total Residual Chlorine
01/31/2018	7.66	0.68	5.6	8.3	(b)
12/31/2017	7.44	0.43	5.6	4.2	(b)
11/30/2017	7.08	0.62	< 5.4	2.9	(b)
10/31/2017	7.57	0.74	5.4	5.1	(b)
09/30/2017	7.88	1.1	(b)	6.8	(b)
08/31/2017	7.66	1.4	5.9	9	(b)
07/31/2017	7.58	9.6	(b)	19	(b)
06/30/2017	(f)	(f)	(f)	(f)	(f)
05/31/2017	7.61	8.2	(b)	120	0
04/30/2017	7.57	6.3	(e)	1.8	0
03/31/2017	6.9	1.7	27.7	15	0
02/28/2017	(e)	(e)	(e)	(e)	(e)
12/31/2016	7	2.2	(b)	7.6	0
11/30/2016	(f)	(f)	(f)	(f)	(f)
10/31/2016	(f)	(f)	(f)	(f)	(f)
09/30/2016	7.2	1.6	(e)	17	0
08/31/2016	7	(e)	(e)	(e)	(e)
07/31/2016	7.48	0.94	6	15	0
06/30/2016	7.56	0.8	(b)	12	0
05/31/2016	(e)	(e)	(e)	(e)	(e)

(b) Below Detection Limit/No Detection
(e) Analysis Not Conducted/No Sample
(f) Insufficient Flow for Sampling

04/30/2016	7.58	0.49	(b)	3	0
03/31/2016	(e)	(e)	(e)	(e)	(e)
02/29/2016	7.2	(e)	(e)	(e)	(e)
01/31/2016	7.2	0.97	0	14	0
12/31/2015	7.1	0.76	0	6	0
11/30/2015	7.2	0.9	0	9.5	0
10/31/2015	7.1	0.72	0	2	0
09/30/2015	7.9	0.5	0	2	< .1
08/31/2015	7.6	1.1	28	5	< .1
07/31/2015	8.35	0.87	0	3.7	< .1
06/30/2015	817	1.2	0	24	< .1
05/31/2015	7.84	1.3	0	13	< .1
04/30/2015	7.4	1	0	9.3	< .1