

QUARTERLY OPERATIONS REPORT

DISTRICT OF COLUMBIA

COMBINED SEWER OVERFLOW FACILITIES

SECOND QUARTER, 2016

Prepared By:

D.C. Water and Sewer Authority
Department of Sewer Services
2nd & N Streets, SE
Washington, D.C. 20003



**DISTRICT OF COLUMBIA
WATER AND SEWER AUTHORITY**
Serving the Public • Protecting the Environment

**Monthly Operations Report
For
*Combined Sewer System***

Month: April 2016

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Monthly Operations Report for Combined Sewer System
Month: April 2016

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1. INTRODUCTION

The District of Columbia Water and Sewer Authority (DC Water) operates a wastewater collection system comprised of separate and combined sewers. Separate storm and sanitary sewers serve parts of the District. In the combined sewer system (CSS), there is a single sewer to convey storm water and sanitary wastes. The area served by combined sewers comprises about one-third of the District.

During dry weather, sanitary wastes collected in the CSS are conveyed to the DC Water's wastewater treatment plant at Blue Plains (BPWWTP or the Blue Plains WWTP). During periods of rainfall, the capacity of a combined sewer may be exceeded and the excess flow, which is a mixture of storm water and sanitary wastes, is discharged directly to the Anacostia River, Rock Creek or the Potomac River or their tributary waters. This report summarizes the operations of the combined sewer system for the month indicated.

2. OPERATION AND MAINTENANCE

2.1 Regulators

Regulators divert combined sewage to interceptors, which convey flow to BPWWTP for treatment. When flows exceed the capacities of the systems such as during significant rain events, regulators divert excess flow to CSO outfalls which discharge to receiving waters. The following table summarizes inspections of CSO regulators in the collection system.

**Table 2-1
Regulator Structures**

Structure Number	Location	Associated NPDES Outfall	Date Inspected	Condition		Work Needed	Work performed
				Good	Needs Work		
2	Bolling AFB, 2250 ft. north of the south line of the Base, SW	003	04/13/16	*			
4	Bolling AFB, 2250 ft. north of the south line of the Base, SW	003	04/13/16	*			
5	Poplar Point Pumping Station	004	04/18/16	*			
6	Chicago Street and Railroad Ave, SE	005	04/04/16	*			
7	W Street and Railroad Ave, SE	005	04/04/16	*			
8 ¹	Good Hope Rd, west of Nichols Ave, SE	006	N/A				
9	13 th Street and Ridge Place, SE	007	04/04/16	*			
11	"O" Street Pumping Station	011(a)	04/22/16	*			
12	Storm Pump Discharge at Main Pumping Station	011	04/13/16	*			
13	2 nd Street, 300 ft. north of N Place, SE	009	04/08/16	*			
14	2 nd Street, 250 ft. north of N Place, SE	011(a)	04/08/16	*			
15	South Capitol and E Streets	010	04/14/16	*			

Structure Number	Location	Associated NPDES Outfall	Date Inspected	Condition		Work Needed	Work performed
				Good	Needs Work		
15a	Half and L Streets, SE	010	04/14/16	*			
15b	South Capitol and I Streets	010	04/05/16	*			
15c	South Capitol and I Streets	010	04/05/16	*			
16	North of Main Sewage Pumping Station	012	04/08/16	*			
17	4 th and N Streets, SE, Both Extended	013	04/08/16	*			
17a	K Street between 6 th Street and 7 th Street, SE	013	04/08/16	*			
18	6 th and M Streets, SE	014	04/01/16	*			
19	9 th and M Streets, SE	015	04/04/16	*			
19a	9 th and M Streets, SE	015	04/04/16	*			
20	12 th and M Streets, SE	016	04/04/16	*			
20a	12 th and M Streets, SE	016	04/04/16	*			
21	14 th and M Streets, SE	017	04/04/16	*			
22a	Barney Circle and Pennsylvania Ave, SE	018	04/01/16	*			
22b	Barney Circle and Pennsylvania Ave, SE	018	04/01/16	*			
22c	Barney Circle and Pennsylvania Ave, SE	018	04/01/16	*			
22d	Kentucky Ave and Potomac Street, SE	018	04/01/16	*			
22e	14 th Street and Kentucky Ave, SE	018	04/01/16	*			
23	Independence Ave, 21 st Street, SE, Extended	019	04/05/16	*			
24a	East Capitol St, west of RFK stadium	019	04/05/16	*			
28	21 st and Constitution Ave, NW	020	04/15/16	*			
29	22 nd Street, between Constitution Ave and C St, NW	020	04/15/16	*			
30	17 th and D Streets, NW	020	04/05/16	*			
31	15 th Street and Pennsylvania Ave, NW	020	04/05/16	*			
33	10 th and F Streets, NW	020	04/05/16	*			
34	23 rd Street, north of Constitution Ave, NW	020	04/14/16	*			
34a	23 rd Street near C Street, NW	020	04/15/16	*			
35	Northeast of Roosevelt Bridge, NW	021					16-265684 No Access due to construction in vicinity of structure. The Kennedy Center contractor is constructing a platform

Structure Number	Location	Associated NPDES Outfall	Date Inspected	Condition		Work Needed	Work performed
				Good	Needs Work		
							to provide access by July
36	27 th and I Streets, NW	022	04/05/16	*			
36a	New Hampshire Ave and Eye Street, NW	022	04/05/16	*			
36b	19 th and L Streets, NW	022, 034	04/08/16	*			
36d	17 th and L Streets, NW	022, 034	04/08/16	*			
36g	18 th and M Streets, NW	022, 034	04/08/16	*			
36h	18 th and M Streets, NW	022, 034	04/08/16	*			
37	27 th and Eye Streets, NW	022	04/05/16	*			
38	29 th and K Streets, NW	024	04/04/16	*			
38a	30 th Street, south of K Street, NW	024	04/04/16	*			
39a	30 th and K Streets, NW	024	04/04/16	*			
39b	30 th and K Streets, NW	024	04/04/16	*			
41b	31 st and K Streets, NW	025	04/04/16	*			
41c	31 st and K Streets, NW	025	04/04/16	*			
42	Wisconsin Ave and K Street, NW	026	04/08/16	*			
43	Potomac and Water Streets, NW	027	04/08/16	*			
43a	Potomac and Water Streets, NW	027	04/08/16	*			
44	Water Street, west of Potomac St, NW	027	04/08/16	*			
45	36 th and M Streets, NW	028	04/01/16	*			
46	Canal Rd, 1000ft. east of Foxhall Rd, NW	029	04/01/16	*			
47	38 th Street and Reservoir Road, NW	029	04/01/16	*			
47a	37 th and T Streets, NW	029	04/01/16	*			
47b	37 th and T Streets, NW	029	04/01/16	*			
47c	38 th and W Streets, NW	029	04/01/16	*			
49 ¹	Pennsylvania Ave, east side of Rock Creek, NW	031	N/A				
50	26 and M Streets, NW	032	04/11/16	*			
51	N Street Extended, west of 25 th Street, NW	033	04/11/16	*			
52	22 nd Street between M and N Streets, NW	034	04/14/16	*			
52a	N Street between 22 nd and 23 rd Streets, NW	034	04/15/16	*			
53	22 nd and M Streets, NW	022, 034	04/15/16	*			
53a	22 nd and M Streets, NW	022, 034	04/15/16	*			

<i>Structure Number</i>	<i>Location</i>	<i>Associated NPDES Outfall</i>	<i>Date Inspected</i>	<i>Condition</i>		<i>Work Needed</i>	<i>Work performed</i>
				Good	Needs Work		
53b	L Street between 21 st Street and New Hampshire Ave, NW	022, 034	04/08/16	*			
53c	L and 22 nd Streets, NW	022	04/08/16	*			
54	23 rd and O Streets, NW	034	04/11/16	*			
55	22 nd Street, south of Q Street, NW	035	04/11/16	*			
55a	22 nd Street, south of Q Street, NW	035	04/11/16	*			
56	23 rd and Massachusetts Ave, NW	036	04/11/16	*			
57	23 rd Street, south of Q Street, NW	036	04/11/16	*			
58 ¹	Northwest of Belmont Road and Rock Creek and Potomac Parkway, NW	037	N/A				
59	North of Belmont Rd, east of Kalorama Cir, NW	038	04/01/16	*			
60	Connecticut Ave, east of Rock Creek, NW	039	04/01/16	*			
61	Biltmore St, Extended, east of Rock Creek, NW	040	04/01/16	*			
62	Ontario Rd, Extended, and Rock Creek Pkwy, NW	041	04/06/16	*			
63	Harvard Street and Rock Creek Parkway, NW	042	04/06/16	*			
64	Adams Mill Road, south of Irving Street, NW	043	04/06/16	*			
65	Kenyon Street and Adams Mill Road, NW	044	04/06/16	*			
65a	Kenyon Street and Adams Mill Road, NW	044	04/06/16	*			
66	Adams Mill Road and Lamont Street, NW	045	04/06/16	*			
67	Park Rd , south of Piney Branch Pkwy, NW	046	04/06/16	*			
68	Ingleside Terrance, Extended and Piney Branch Parkway, NW	047	04/06/16	*			
69	Mt. Pleasant Street, Extended and Piney Branch Parkway, NW	048	04/06/16	*			
70	Piney Branch Parkway, west of 16 th Street, NW	049	04/06/16	*			
70i	5 th and Quackenbos Streets, NW	049	04/05/16	*			
71	28 th Street, west of Rock Creek Parkway, NW	050	04/12/16	*			
72	Olive Street Extended and Rock Creek Pkwy, NW	051	04/11/16	*			
72a	Olive Street Extended and Rock Creek Pkwy, NW	051	04/11/16	*			
73	O Street Extended and Rock Creek Parkway, NW	052	04/11/16	*			
74 ¹	Q Street, west of Rock Creek, NW	053	N/A				
75	West side of Rock Creek, 300 ft. south of Massachusetts Ave, NW	054	04/12/16	*			
77	Normanstone Dr Extended, west of Rock Creek, NW	056	04/12/16	*			
77a	Normanstone Dr and Normanstone Lane, NW	056	04/12/16	*			
78 ¹	28th Street Extended, west of Rock Creek, NW	057	N/A				

Structure Number	Location	Associated NPDES Outfall	Date Inspected	Condition		Work Needed	Work performed
				Good	Needs Work		
79 ¹	Connecticut Ave and Rock Creek Parkway, NW	058	N/A				
84	26 th and P Streets, NW	060	04/11/16	*			
84a	26 th and P Streets, NW	060	04/11/16	*			

Notes:

1. Structure no longer functions as a combined sewer overflow regulator structure.
2. Where construction is indicated to be in progress at a regulator, the contractor maintains flow (i.e. prevents DWO) during construction by flow diversion, bypass pumping, fluming, sandbagging or other means.

2.2 Outfalls, Tide Gates and CSO Signs

The following table summarizes inspections, maintenance and work performed on outfall structures, tide gates and CSO signs in the collection system.

**Table 2-2
Outfalls and Tide Gates**

NPDES Outfall	Location	Date Inspected	Outfall Condition		Tide Gate Present?		Tide Gate Condition		CSO Sign		Notes, Work Needed or Performed
			OK	Needs Work	Yes	No	OK	Needs Work	OK	Needs Work	
003	Bolling Air Force Base, at Giavanolli and Chanute, SW	04/13/16	*		*		*		*		
005	Across from Navy Yard, aligned with Parsons Ave., SE	04/15/16	*		*		*		*		
006 ¹	Good Hope Road and Welsh Memorial Bridge	N/A									
007	Between 11 th St. and Anacostia Bridges, SE	04/15/16	*		*		*		*		
009	O St. Sewage Pumping Station, SE	04/13/16	*		*		*		*		
010	O St. Sewage Pumping Station, SE	04/13/16	*			*			*		
011	Main Sewage Pumping Station, SE	04/13/16	*			*			*		
011(a)	Main Sewage Pumping Station, SE	04/13/16	*		*		*		*		
012	Main Sewage Pumping Station, SE	04/13/16	*		*		*		*		
013	Southeast Federal Center, aligned with 4 th St.	04/13/16	*		*		*		*		
014	Navy Yard, aligned with 6 th St., SE	04/13/16	*		*		*		*		

NPDES Outfall	Location	Date Inspected	Outfall Condition		Tide Gate Present?		Tide Gate Condition		CSO Sign		Notes, Work Needed or Performed
			OK	Needs Work	Yes	No	OK	Needs Work	OK	Needs Work	
015	Navy Yard, aligned with 9th Street, SE	04/13/16	*			*			*		
016	12th and O Streets, SE	04/12/16	*		*		*		*		
017	M and Water Street, SE	04/12/16	*		*		*		*		
018	East of Barney Circle & South of Pennsylvania Avenue Bridge, SE	04/12/16	*		*		*		*		
019	Adjacent to Service Drive behind swirl facility & D.C. General Hospital	04/05/16	*		*		*		*		
020	Rock Creek Parkway and Independence, NW	04/07/16	*		*		*		*		
021	Rock Creek Parkway and C St., NW	04/17/16	*		*		*		*		
022	Rock Creek Parkway and G St., NW	04/07/16	*		*		*		*		
024	South of 30 th and K Streets, NW ¹	04/07/16	*		*		*		*		
025	South of 31st and K Streets, NW	04/07/16	*		*		*		*		
026	Wisconsin Avenue and Water Street, NW	04/07/16	*		*		*		*		
027	33 rd and Water Sts., NW	04/07/16	*			*			*		
028	Key Bridge and Whitehurst Freeway, NW	04/07/16	*			*			*		
029	Adjacent to C&O Canal, aligned with 38 th St. NW	04/07/16	*			*			*		
031 ¹	Rock Creek Pkwy & Pennsylvania Avenue, NW	N/A									
032	26th and M Street, NW.	04/11/16	*			*			*		
033	Across street from St. Francis Jr. High and aligned with N St., NW.	04/11/16	*		*		*		*		
034	Just west of St. Francis Jr. High and north of N St., NW	04/11/16	*			*			*		
035	P St. Bridge and Rock Creek Parkway	04/11/16	*		*		*		*		
036	22nd Street, South of Q Street NW.	04/12/16	*		*		*		*		
037 ¹	Waterside Dr. and Rock Creek Parkway	N/A									
038	Between arch footbridge and Connecticut Ave., north of Kalorama Circle, NW.	04/01/16	*		*		*		*		
039	Connecticut Avenue Bridge and Rock Creek Parkway, NW.	04/01/16	*		*		*		*		
040	Aligned with Biltmore Rd., between Connecticut Ave and Ellington Bridge.	04/01/16	*		*		*		*		
041	Beach Dr. and Ontario Pl., NW	04/13/16	*		*		*		*		
042	Harvard St. and Beach Dr NW.	04/13/13	*		*		*		*		
043	Upstream of Harvard St. and Beach Dr NW.	04/13/16	*		*		*		*		
044	Kenyon Street and Beach Dr., NW.	04/13/16	*		*		*		*		

NPDES Outfall	Location	Date Inspected	Outfall Condition		Tide Gate Present?		Tide Gate Condition		CSO Sign		Notes, Work Needed or Performed
			OK	Needs Work	Yes	No	OK	Needs Work	OK	Needs Work	
045	North of Beach Dr. and Walbridge Pl, NW.	04/13/16	*		*		*		*		
046	Piney Branch Parkway and Park Road, NW.	04/06/16	*			*			*		
047	Piney Branch Parkway and Ingleside Terrace	04/06/16	*		*		*		*		
048	South of Piney Branch Parkway and 17 th St.	04/06/16	*		*		*		*		
049	North of Piney Branch Parkway and 17 th St.	04/06/16	*		*		*		*		
050	Rock Creek Parkway and L St., NW	04/12/16	*		*		*		*		
051	Across Rock Creek Pkwy, aligned with Olive St., NW.	04/19/16	*		*		*		*		
052	Between P & Penna. Ave Bridges, aligned with O Street, NW.	04/19/16	*		*		*		*		
053 ¹	Q St. Bridge and Rock Creek Parkway, NW.	N/A									
054	Massachusetts Ave & Rock Creek Parkway, NW.	04/12/16	*		*		*		*		
056	Normanstone Dr. and Rock Creek Parkway, NW.	04/12/16	*		*		*		*		
057 ¹	28th Street and Rock Creek Parkway, NW	N/A									
058 ¹	Connecticut Ave & Rock Creek Parkway, NW.	N/A									
060	North of P St. Bridge & Rock Creek Pkwy, NW	04/12/16	*		*		*		*		

Notes:

1. Outfall no longer functions as a combined sewer outfall.

2.3 Pumping Stations

Pumping station operations are summarized in the table below.

**Table 2-3
Pumping Stations – Inspections and Equipment in Service**

Pumping Station	No. of Inspections	No. Screens	No. Pumps	Screens or Pumps Out of Service	Dates	Reason	Work Order Number	Schedule to Restore to Service ¹
Main	30	3	6	Screen #4	04/01/16-04/30/16	Screen repair	16-235069	07/31/16
				Pump #3	04/01/16-04/30/16	Contractor rehab		
Eastside	3	2	4	Screen #1	04/01/16-04/30/16	Screen repair	16-76407	05/14/16
				Pump #1	04/01/16-04/30/16	Pump repair	16-248765	06/15/16
Poplar Point	3	3	3	Screen #2	04/01/16-04/30/16	Screen repair	16-163875	07/15/16
Potomac	30	4	5	Pump #5	04/01/16-04/30/16	Potomac rehab work – Phase 3 Contractor Responsibility		06/06/16

Notes:

1. The schedule to restore to service is impacted by the type and age of equipment. In some cases, the condition of equipment and the lack of availability of replacement parts necessitate complete replacement of the unit or element or custom fabrication of needed parts to return the units to service. For these and other reasons, projects are underway for the rehabilitation of the pumping stations.

**Table 2-4
Pumping Stations – Preventive Maintenance**

<i>Pumping Station</i>	<i>Date Performed</i>	<i>Type of Preventive Maintenance Performed¹</i>	<i>Work Order Number</i>	<i>Comments</i>
Main	04/01/16	Group A	16-260519	Add oil, grease bearings and replace packing if needed.
O St	04/01/16	Group A	16-252417	Add oil, grease bearings and replace packing if needed.
Eastside	04/02/16	Group A	16-281452	Add oil, grease bearings and replace packing if needed.
Poplar Point	04/02/16	Group A	16-257059	Add oil, grease bearings and replace packing if needed.
Potomac	04/01/16	Group A	16-281630	Add oil, grease bearings and replace packing if needed.
Rock Creek	04/02/16	Group A	16-276130	Add oil, grease bearings and replace packing if needed.
Upper Anacostia	04/02/16	Group A	16-260533	Add oil, grease bearings and replace packing if needed.
Earl Place	04/02/16	Group A	16-295522	Add oil, grease bearings and replace packing if needed.

Notes:

1. Group A consists of:
 Exercise bar screens
 Exercise all sump pumps
 Drain condensation from air compressor storage tank
 Check depth of screening in the screen room and schedule Vactor truck as required
 Check all safety equipment
 Issue work order requests as required

**Table 2-5
Pumping Stations – Pumpage**

<i>Pumping Station</i>	<i>Sanitary Pumpage</i>		<i>Storm Water/CSO Pumped To Anacostia River</i>		
	<i>Total Wastewater (mg)</i>	<i>Daily Average Wastewater (mg)</i>	<i>Date</i>	<i>Volume (mg)</i>	<i>Screenings Collected (units)¹</i>
Main	2147.50	71.58	N/A	N/A	N/A
O St	105.30	3.51	04/07/16	11.13	Normal
Eastside	137.41	4.58	N/A	N/A	N/A
Poplar Point	503.65	16.79	N/A	N/A	N/A
Potomac	3182.02	106.07	N/A	N/A	N/A
Rock Creek	138.08	4.60	N/A	N/A	N/A
Upper Anacostia	34.58	1.15	N/A	N/A	N/A
Earl Place	0.152	0.005	N/A	N/A	N/A

Notes:

1. Screening consists of vertical trash racks, with no mechanical cleaning. Quantification of captured materials is not possible on monthly basis.

2.4 Northeast Boundary Swirl Facility

The Northeast Boundary Swirl Facility provides screening, swirl concentration, chlorination and dechlorination of CSO overflow from CSO 019. The capacity of the facility is 400 MGD. Facility operations are summarized below:

Table 2-6

Northeast Boundary Swirl Facility – Inspections and Equipment in Service

<i>Date Inspected</i>	<i>No. Screens</i>	<i>No. Swirls</i>	<i>Screens or Swirls Out of Service</i>	<i>Dates</i>	<i>Reason</i>	<i>Schedule to Restore to Service</i>
04/07/16	3	3	N/A	N/A		

Table 2-7

Northeast Boundary Swirl Facility – Preventive Maintenance

<i>Date Performed</i>	<i>Type of Preventive Maintenance Performed¹</i>	<i>Work Order Number</i>	<i>Comments</i>
04/07/16	Group A	16-286429	

Notes:

- Group A consists of:
 Exercise bar screens
 Exercise wash down system
 Exercise knife gates full travel both directions
 Check depth of grit in grit channel and schedule Vector truck as required
 Change chart paper on strip chart recorders at the end of each month
 Thoroughly clean each Swirl tank and channels
 Issue work order requests as required
 Drain condensation from air compress
 Check all safety equipment

Table 2-8

Northeast Boundary Swirl Facility – Wet Weather Operations

<i>Date</i>	<i>Approx. Storm Duration (hrs)¹</i>	<i>Total Influent Volume (mg)</i>	<i>Total Foul Sewer Volume (mg)</i>	<i>Total Effluent Volume (mg)</i>	<i>Approx. Screenings Volume (Cu. ft)</i>
04/07/16	4.5	17.49	7.38	10.11	72
04/23/16	1	0.29	0.29	0	40
04/28/16	5	8.49	4.50	3.99	36

Notes:

- Approx. length of time influent flow rate was above the 15 mgd threshold for allowing flow through the facility.

Chlorination/Dechlorination Systems

The table below summarizes the information about the operation of Swirl Facility chlorination and dechlorination systems during storm events. The chlorination feed system was not activated during the storm events in which flows were 15 mgd or greater due to a breakdown in our system of internal controls concerning the supply of Sodium Hypochlorite. This problem was corrected on July 26, 2016. DC Water is assessing its systems of controls to prevent a reoccurrence. We have taken interim measures to ensure the availability of Sodium Hypochlorite at all times to ensure compliance with the NPDES permit while we continue our assessment. All other chemical feed systems were not activated during these storm events. Included in the table are results of residual chlorine, enterococcus and fecal coliform testing for samples taken in the Swirl Facility mix chamber and at the facility effluent outfall to the Anacostia River.

Grab samples for residual chlorine are taken and immediately tested with a portable analyzing kit. Samples for fecal coliform and enterococcus are taken from the designated sample point, treated with sodium bisulfate to remove any residual chlorine, and conveyed to the Blue Plains Wastewater Treatment Plant Laboratory for testing.

**Table 2-9
Northeast Boundary Swirl Facility – Disinfection Performance**

<i>Date</i>	<i>Chlor/ Dechlor System Used?</i>	<i>Dosages</i>		<i>Residual Chlorine Test Results</i>		<i>E. Coli Test Results</i>	
		<i>NaOCl (mg/l)</i>	<i>NaHSO₃ (mg/l)</i>	<i>Location</i>	<i>Conc. (mg/l)</i>	<i>Site</i>	<i>Count Per 100ml</i>
04/07/16	No ²	0	0	Mix Chamber	0.0	Mix Chamber	66,000
				Anacostia River ¹	0.0	Anacostia River ¹	60,000

Notes:

1. River: River Outfall
2. The chlorination system was required but not operational during the storm event.

Table 2-10
Northeast Boundary Swirl Facility – Effluent Sampling Results

<i>Date</i>	<i>Flow Compositied Sample Results</i>						
	<i>Total suspended solids (mg/L)</i>	<i>Nitrite (NO2-N) mg/L</i>	<i>Nitrate (NO3-N) mg/L</i>	<i>Total Kjeldahl Nitrogen (mg/L as N)</i>	<i>Total Nitrogen (mg/L)</i>	<i>Total Phosphorus (mg/L)</i>	<i>Carbonaceous Biological Oxygen Demand (mg/L)</i>
4/07/16	258	0.08	0.34	7.65	8.07	1.07	71.9

2.5 Inflatable Dams

DC Water operates and maintains twelve inflatable dams at eight different locations. The structure number, location and number of dams per site are presented in Table 2-11. The inflatable dams consist of multi-ply elastomeric (i.e., “rubber”) fabric dams installed in major overflow conduits within the combined sewer system. The objective of the inflatable dam installation is to increase the effective depth to which the sewage must rise in the combined sewer before overflows occur. The effect of the installation is to retain a greater volume of combined sewage flow resulting from low to moderate intensity storms by maximizing storage within the CSS. During higher intensity storms, when the full carrying capacity of the overflow conduit is required to prevent upstream flooding, the dam is deflated automatically. Inflatable dam operations are summarized below:

**Table 2-11
Inflatable Dams – Inspections and Equipment in Service**

<i>Inflatable Dam Structure No</i>	<i>Date Inspected</i>	<i>Was Dam Out of Service During the Month?</i>	<i>Dates out of Service</i>	<i>Reason</i>	<i>Schedule to Restore to Service</i>
14 - East	04/14/16	No	N/A	N/A	N/A
14 - West	04/14/16	No	N/A	N/A	N/A
15	04/14/16	No	N/A	N/A	N/A
15A	04/14/16	No	N/A	N/A	N/A
16 - East	04/14/16	No	N/A	N/A	N/A
16 - West	04/14/16	No	N/A	N/A	N/A
24 - North	04/14/16	No	N/A	N/A	N/A
24 - Middle	04/14/16	No	N/A	N/A	N/A
24 - South	04/14/16	No	N/A	N/A	N/A
34	04/14/16	No	N/A	N/A	N/A
35	04/30/16 ¹	Yes	04/14/16-04/21/16	Power Cable Damage Compressor Repair	04/21/16
52	04/14/16	No	N/A	N/A	N/A

Notes:

1. Due to ongoing construction activity at the Kennedy Center, sewer access to Inflatable Dam structure 35 is considered unsafe by the DC Water Department of Safety and Health. The control vault and equipment were inspected during April prior to the entry conditions becoming hazardous. The Kennedy Center’s Contractor is constructing a platform to provide access during construction of the Kennedy Center’s Expansion Project.

On 04/04/16 and 04/06/16, Inflatable Dam structure 14 experienced temporary deflations due to the level sensor being disturbed by cleaning contractors entering and exiting the sewer.

On 04/14/16, power was lost at Inflatable Dam structure 35 after it was damaged by construction contractors not affiliated with DC Water. During this time, repairs were made to the air compressor. The dam was returned to service on 04/21/16. Structure 35 also experienced temporary deflations on 04/26/16 during dry weather.

In all instances, there were no flow conditions at the structures during these times capable of overflowing to the outfall.

**Table 2-12
Inflatable Dams & SCADA Sites - Wet Weather Operations**

<i>Inflatable Dam Structure No.</i>	<i>Overflow Dates</i>	<i>Estimated Duration of Overflow</i>
14 (E & W)	None	N/A
15	None	N/A
15A	04/07/16	1hr 53mins
16 (E & W)	None	N/A
24	04/07/16	14 mins
34	None	N/A
35	04/07/16	1 min
52	None	N/A
<i>Structures on Outfall Sewers</i>	<i>Overflow Dates</i>	<i>Estimated Duration of Overflow</i>
Outfall Structure 1	None	This structure has been bulk headed. Overflows are no longer possible.
Outfall Structure 1A	None	This structure has been bulk headed. Overflows are no longer possible.
Outfall Structure 2	None	None
<i>Outfall Sewer Control Gates</i>	<i>Operational Status</i>	<i>Position</i>
Outfall Sewer Control Gate No.1	Operational	Open
Outfall Sewer Control Gate No.2	Operational	This structure has been bulk headed. Overflows are no longer possible

3. DRY WEATHER OVERFLOWS

There was no dry weather combined sewer overflow during April 2016.

Sanitary Sewer Overflows:

Location	141 Chesapeake St SW
Cause	DC Water received a service call regarding a sewer customer complaint at 141 Chesapeake St SW regarding a sewer backup in home.
Date/ Time Discovered	April 5, 2016 at approximately 8:20 PM
Action Taken	The crew cleared the grease buildup in the line.
Date/Time Discharge Ceased	April 5, 2016 9:30 PM
Estimated Volume	20 gallons.
Did Overflow Reach Receiving water?	No
Action taken to prevent reoccurrence	A closed circuit television evaluation will be performed to ascertain if further action is needed to prevent a recurrence.

Location	Naylor Road and Southern Avenue SE
Cause	DC Water received a service call regarding a sewage flowing from Naylor Garden Apartments towards the 3600 Block of Naylor Road, SE. The DSS maintenance crew found an overflowing manhole in a wooded area near Naylor Road and Southern Ave SE.
Date/ Time Discovered	April 26, 2016 at approximately 9:51 AM
Action Taken	The crew was unable to clear the 10 inch sanitary sewer to stop the overflow. DC Water directed Anchor Contracting to the site to set up a by-pass pumping operation around the blockage in the pipeline. Anchor completed the installation of the temporary piping to effectively stop all flow for the sanitary sewer into the stream
Date/Time Discharge Ceased	April 26, 2016 at approximately 9:00 PM
Estimated Volume	10,000 gallons.
Did Overflow Reach Receiving water?	Yes
Action taken to prevent reoccurrence	A closed circuit television evaluation confirmed a collapse in the 10 inch sanitary sewer. Anchor will remain on site to replace all defective pipe to prevent occurrence.

4. SOLIDS AND FLOATABLES CONTROL

4.1 Catch Basin Cleaning

The following tables summarize catch basin cleaning in the Anacostia CSO area and in the entire sewer system:

Ward	Total CBs	CBs in CSS	Inspections			Cleaning					
			CBs in Anacostia CSS	Total Anacostia CBs Inspected Once this Year	Total Anacostia CBs Inspected Twice this Year	CBs Cleaned Thru Last Month		CB's Cleaned This Month		Total CBs Cleaned This Year to Date	
						Total	In CSS	Total	In CSS	Total	In CSS
1	1468	1451	661	99	3	102	102	28	28	130	130
2	2917	2855	606	353	45	438	361	105	105	543	466
3	3483	169	0	0	0	170	0	23	6	193	6
4	3329	1649	0	0	0	79	34	37	15	116	49
5	3832	1800	1742	158	4	1273	162	40	28	1313	190
6	3478	3058	3050	1499	61	1559	1288	231	198	1790	1486
7	3428	48	48	0	0	3507	0	268	0	3775	0
8	2621	268	268	150	2	72	55	1898	95	1970	150
Subtotal	24556	11298	6375	2259	115	7200	2002	2630	475	9830	2477
DDOT (via VMS) Subtotal											
Grand Total	24556	11298	6375	2259	115	7200	2002	2630	475	9830	2477
% Cleaned/Inspected to Date				35%		29%	18%			40%	22%

Totals have been updated per Ward due to data updates

4.2 BMP Demonstration Projects

DC WATER operates the following demonstration projects designed to remove solids and floatables from CSO prior to discharge.

- ◆ Netting system at CSO 018 to Anacostia River
- ◆ Bar Rack at CSO 040 and 041 to Rock Creek

Table 3-2
BMP Demonstration Projects – Report

<i>Facility</i>	<i>Date Inspected</i>	<i>Condition</i>	<i>Work Needed</i>	<i>Work performed</i>	<i>Material Removed (CY)</i>
Netting System CSO 018	4/21/2016	Good	Routine Cleaning	Routine Cleaning	None.
Bar Rack CSO 040	4/1/2016	Good	None	Routine Cleaning	(1)
Bar Rack CSO 041	4/13/2016	Good	None	Routine Cleaning	(1)

Notes:

(1) System is designed such that captured solids and floatable are conveyed to Blue Plains for treatment.

4.3 Anacostia River Floating Debris Removal Program

This program was initiated in October 1992 to remove floating debris from Anacostia and Potomac Rivers on a routine basis. The program has continued from that time and is now under the auspices of DC WATER, Department of Sewer Services. The floating debris removal program utilizes a skimmer boat and support boats to remove floatable debris from the Rivers as well as trash, which accumulates on the riverbanks and in the mud flats at low tides. Work for the most part is directed toward the Anacostia River. The boats pick up debris five days a week. Operations are summarized as follows:

**Table 3-3
Anacostia River Floating Debris Removal Program – Summary**

<i>Program Operation</i>	5-day work week, excluding holidays, weather permitting
<i>Work Days this month:</i>	22
<i>Days not Operating</i>	6
<i>Reason not Operating</i>	Environmental
<i># Skimmer in Fleet</i>	3 Skimmers
<i># Skimmers Out of Service</i>	1 Skimmer
<i>Dates</i>	B28: 4/1 - 4/30 B29: 4/14 - 4/21 & 4/26
<i>Reason</i>	B28: Front assembly catching on hull. B29: Number one screen jammed.
<i>Plan to Restore to Service</i>	B28: Sent to contractors for repair, ETR unknown. B29: Returned to operation 4/22 and 4/27.
<i>Volume Material Collected</i>	50 tons.
<i>Nature of Material</i>	Bottles, cans, natural debris and plastics.

4.4 CSS Litter Control

This section describes DC WATER’s efforts to coordinate litter control efforts with the National Park Service and D.C. Department of Public Works to maximize litter control efforts in the combined sewer system.

Status: no activities this month.

5. MONITORING

5.1 Condition Report Bar Racks at Main and O Street Storm Pumps

DC Water performs visual surveys of the bar racks at Main and O Street Pumping Stations to characterize the quantity and nature of floatable discharge. The physical condition of the bar racks and any maintenance requirements are also noted.

**Table 5-1
Bar Racks at Main & O Street Pumping Stations**

Inspector: Wayne Reed

Pumping Station	Inspector	Date Inspected	Condition		Work Needed	Work Performed or Schedule for Completion
			Good	Needs Work		
Bar Racks at O Street Storm Pumps (CSO 010)	WR	04/01/2016	X			
Bar Racks at Main Storm Pumps (CSO 011)	WR	04/01/2016	X			

5.2 Rain Data

Rain data from National Airport and from the rain gauges installed in the CSS are summarized below.

Date	Brentwood Pumping	Bryant Street Pumping Station	Main Pumping Station	Rock Creek Pumping Station	National Airport
4/1/2016	0.03	0.02	0.03	0.03	0.05
4/2/2016	0.13	0.16	0.11	0.04	0.10
4/3/2016	0.01	0	0.01	0	0
4/4/2016	0	0.06	0.06	0	0.07
4/5/2016	0	0	0	0	0
4/6/2016	0	0	0	0.01	0
4/7/2016	0.71	0.89	0.57	0.87	0.70
4/8/2016	0	0	0	0	0
4/9/2016	0.18	0.15	0.12	0.12	0.17
4/10/2016	0	0	0	0	0
4/11/2016	0.01	0.01	0.01	0.01	0.01
4/12/2016	0.07	0.06	0.02	0.07	0.05
4/13/2016	0	0	0	0	0
4/14/2016	0	0	0	0	0
4/15/2016	0	0	0	0	0
4/16/2016	0	0	0	0	0
4/17/2016	0	0	0	0	0
4/18/2016	0	0	0	0	0
4/19/2016	0	0	0	0	0
4/20/2016	0	0	0	0	0
4/21/2016	0	0	0	0	0
4/22/2016	0	0	0	0	0
4/23/2016	0.20	0.18	0.19	0.25	0.26
4/24/2016	0	0	0	0	0
4/25/2016	0	0	0	0	0
4/26/2016	0	0	0	0	0
4/27/2016	0.05	0.03	0.02	0.02	0.03
4/28/2016	0.52	0.57	0.50	0.51	0.58
4/29/2016	0.02	0	0.01	0	0.01
4/30/2016	0.01	0.01	0	0.02	0.02
TOTAL	1.94	2.14	1.65	1.95	2.05



**DISTRICT OF COLUMBIA
WATER AND SEWER AUTHORITY**
Serving the Public • Protecting the Environment

**Monthly Operations Report
For
*Combined Sewer System***

Month: May 2016

Prepared By:
District of Columbia
Water and Sewer Authority
Department of Sewer Services
Washington, D.C. 20003

DISTRICT OF COLUMBIA
WATER AND SEWER AUTHORITY
Washington, D.C.

Monthly Operations Report for Combined Sewer System
Month: May 2016

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1. INTRODUCTION

The District of Columbia Water and Sewer Authority (DC Water) operates a wastewater collection system comprised of separate and combined sewers. Separate storm and sanitary sewers serve parts of the District. In the combined sewer system (CSS), there is a single sewer to convey storm water and sanitary wastes. The area served by combined sewers comprises about one-third of the District.

During dry weather, sanitary wastes collected in the CSS are conveyed to the DC Water's wastewater treatment plant at Blue Plains (BPWWTP or the Blue Plains WWTP). During periods of rainfall, the capacity of a combined sewer may be exceeded and the excess flow, which is a mixture of storm water and sanitary wastes, is discharged directly to the Anacostia River, Rock Creek or the Potomac River or their tributary waters. This report summarizes the operations of the combined sewer system for the month indicated.

2. OPERATION AND MAINTENANCE

2.1 Regulators

Regulators divert combined sewage to interceptors, which convey flow to BPWWTP for treatment. When flows exceed the capacities of the systems such as during significant rain events, regulators divert excess flow to CSO outfalls which discharge to receiving waters. The following table summarizes inspections of CSO regulators in the collection system.

**Table 2-1
Regulator Structures**

Structure Number	Location	Associated NPDES Outfall	Date Inspected	Condition		Work Needed	Work performed
				Good	Needs Work		
2	Bolling AFB, 2250 ft. north of the south line of the Base, SW	003	05/18/16	*			
4	Bolling AFB, 2250 ft. north of the south line of the Base, SW	003	05/18/16	*			
5	Poplar Point Pumping Station	004	05/18/16	*			
6	Chicago Street and Railroad Ave, SE	005	05/02/16	*			
7	W Street and Railroad Ave, SE	005	05/02/16	*			
8 ¹	Good Hope Rd, west of Nichols Ave, SE	006	N/A				
9	13 th Street and Ridge Place, SE	007	05/02/16	*			
11	"O" Street Pumping Station	011(a)	05/19/16	*			
12	Storm Pump Discharge at Main Pumping Station	011	05/19/16	*			
13	2 nd Street, 300 ft. north of N Place, SE	009	05/18/16	*			
14	2 nd Street, 250 ft. north of N Place, SE	011(a)	05/18/16	*			
15	South Capitol and E Streets	010	05/24/16	*			

Structure Number	Location	Associated NPDES Outfall	Date Inspected	Condition		Work Needed	Work performed
				Good	Needs Work		
15a	Half and L Streets, SE	010	05/24/16	*			
15b	South Capitol and I Streets	010	05/12/16	*			
15c	South Capitol and I Streets	010	05/12/16	*			
16	North of Main Sewage Pumping Station	012	05/18/16	*			
17	4 th and N Streets, SE, Both Extended	013	05/13/16	*			
17a	K Street between 6 th Street and 7 th Street, SE	013	05/18/16	*			
18	6 th and M Streets, SE	014	05/02/16	*			
19	9 th and M Streets, SE	015	05/03/16	*			
19a	9 th and M Streets, SE	015	05/03/16	*			
20	12 th and M Streets, SE	016	05/03/16	*			
20a	12 th and M Streets, SE	016	05/03/16	*			
21	14 th and M Streets, SE	017	05/03/16	*			
22a	Barney Circle and Pennsylvania Ave, SE	018	05/16/16	*			
22b	Barney Circle and Pennsylvania Ave, SE	018	05/16/16	*			
22c	Barney Circle and Pennsylvania Ave, SE	018	05/16/16	*			
22d	Kentucky Ave and Potomac Street, SE	018	05/16/16	*			
22e	14 th Street and Kentucky Ave, SE	018	05/16/16	*			
23	Independence Ave, 21 st Street, SE, Extended	019	05/03/16	*			
24a	East Capitol St, west of RFK stadium	019	05/03/16	*			
28	21 st and Constitution Ave, NW	020	05/10/16	*			
29	22 nd Street, between Constitution Ave and C St, NW	020	05/10/16	*			
30	17 th and D Streets, NW	020	05/03/16	*			
31	15 th Street and Pennsylvania Ave, NW	020	05/03/16	*			
33	10 th and F Streets, NW	020	05/03/16	*			
34	23 rd Street, north of Constitution Ave, NW	020	05/24/16	*			
34a	23 rd Street near C Street, NW	020	05/10/16	*			
35	Northeast of Roosevelt Bridge, NW	021					16-311803 No Access due to construction in vicinity of structure. The Kennedy Center contractor is constructing a platform to provide access by July

<i>Structure Number</i>	<i>Location</i>	<i>Associated NPDES Outfall</i>	<i>Date Inspected</i>	<i>Condition</i>		<i>Work Needed</i>	<i>Work performed</i>
				<i>Good</i>	<i>Needs Work</i>		
36	27 th and I Streets, NW	022	05/10/16	*			
36a	New Hampshire Ave and Eye Street, NW	022	05/10/16	*			
36b	19 th and L Streets, NW	022, 034	05/16/16	*			
36d	17 th and L Streets, NW	022, 034	05/16/16	*			
36g	18 th and M Streets, NW	022, 034	05/16/16	*			
36h	18 th and M Streets, NW	022, 034	05/16/16	*			
37	27 th and Eye Streets, NW	022	05/10/16	*			
38	29 th and K Streets, NW	024	05/09/16	*			
38a	30 th Street, south of K Street, NW	024	05/09/16	*			
39a	30 th and K Streets, NW	024	05/09/16	*			
39b	30 th and K Streets, NW	024	05/09/16	*			
41b	31 st and K Streets, NW	025	05/09/16	*			
41c	31 st and K Streets, NW	025	05/09/16	*			
42	Wisconsin Ave and K Street, NW	026	05/09/16	*			
43	Potomac and Water Streets, NW	027	05/09/16	*			
43a	Potomac and Water Streets, NW	027	05/09/16	*			
44	Water Street, west of Potomac St, NW	027	05/09/16	*			
45	36 th and M Streets, NW	028	05/02/16	*			
46	Canal Rd, 1000ft. east of Foxhall Rd, NW	029	05/02/16	*			
47	38 th Street and Reservoir Road, NW	029	05/02/16	*			
47a	37 th and T Streets, NW	029	05/02/16	*			
47b	37 th and T Streets, NW	029	05/02/16	*			
47c	38 th and W Streets, NW	029	05/02/16	*			
49 ¹	Pennsylvania Ave, east side of Rock Creek, NW	031	N/A				
50	26 and M Streets, NW	032	05/16/16	*			
51	N Street Extended, west of 25 th Street, NW	033	05/16/16	*			
52	22 nd Street between M and N Streets, NW	034	05/24/16	*			
52a	N Street between 22 nd and 23 rd Streets, NW	034	05/24/16	*			
53	22 nd and M Streets, NW	022, 034	05/20/16	*			
53a	22 nd and M Streets, NW	022, 034	05/20/16	*			
53b	L Street between 21 st Street and New Hampshire Ave, NW	022, 034	05/18/16	*			
53c	L and 22 nd Streets, NW	022	05/18/16	*			

Structure Number	Location	Associated NPDES Outfall	Date Inspected	Condition		Work Needed	Work performed
				Good	Needs Work		
54	23 rd and O Streets, NW	034	05/13/16	*			
55	22 nd Street, south of Q Street, NW	035	05/13/16	*			
55a	22 nd Street, south of Q Street, NW	035	05/13/16	*			
56	23 rd and Massachusetts Ave, NW	036	05/13/16	*			
57	23 rd Street, south of Q Street, NW	036	05/13/16	*			
58 ¹	Northwest of Belmont Road and Rock Creek and Potomac Parkway, NW	037	N/A				
59	North of Belmont Rd, east of Kalorama Cir, NW	038	05/03/16	*			
60	Connecticut Ave, east of Rock Creek, NW	039	05/03/16	*			
61	Biltmore St, Extended, east of Rock Creek, NW	040	05/03/16	*			
62	Ontario Rd, Extended, and Rock Creek Pkwy, NW	041	05/04/16	*			
63	Harvard Street and Rock Creek Parkway, NW	042	05/04/16	*			
64	Adams Mill Road, south of Irving Street, NW	043	05/04/16	*			
65	Kenyon Street and Adams Mill Road, NW	044	05/04/16	*			
65a	Kenyon Street and Adams Mill Road, NW	044	05/04/16	*			
66	Adams Mill Road and Lamont Street, NW	045	05/04/16	*			
67	Park Rd , south of Piney Branch Pkwy, NW	046	05/04/16	*			
68	Ingleside Terrance, Extended and Piney Branch Parkway, NW	047	05/04/16	*			
69	Mt. Pleasant Street, Extended and Piney Branch Parkway, NW	048	05/04/16	*			
70	Piney Branch Parkway, west of 16 th Street, NW	049	05/04/16	*			
70i	5 th and Quackenbos Streets, NW	049	05/02/16	*			
71	28 th Street, west of Rock Creek Parkway, NW	050	05/20/16	*			
72	Olive Street Extended and Rock Creek Pkwy, NW	051	05/16/16	*			
72a	Olive Street Extended and Rock Creek Pkwy, NW	051	05/13/16	*			
73	O Street Extended and Rock Creek Parkway, NW	052	05/13/16	*			
74 ¹	Q Street, west of Rock Creek, NW	053	N/A				
75	West side of Rock Creek, 300 ft. south of Massachusetts Ave, NW	054	05/12/16	*			
77	Normanstone Dr Extended, west of Rock Creek, NW	056	05/12/16	*			
77a	Normanstone Dr and Normanstone Lane, NW	056	05/12/16	*			
78 ¹	28th Street Extended, west of Rock Creek, NW	057	N/A				
79 ¹	Connecticut Ave and Rock Creek Parkway, NW	058	N/A				
84	26 th and P Streets, NW	060	05/13/16	*			
84a	26 th and P Streets, NW	060	05/13/16	*			

Notes:

1. Structure no longer functions as a combined sewer overflow regulator.
2. Where construction is indicated to be in progress at a regulator, the contractor maintains flow (i.e. prevents DWO) during construction by flow diversion, bypass pumping, fluming, sandbagging or other means.

2.2 Outfalls, Tide Gates and CSO Signs

The following table summarizes inspections, maintenance and work performed on outfall structures, tide gates and CSO signs in the collection system.

**Table 2-2
Outfalls and Tide Gates**

NPDES Outfall	Location	Date Inspected	Outfall Condition		Tide Gate Present?		Tide Gate Condition		CSO Sign		Notes, Work Needed or Performed
			OK	Needs Work	Yes	No	OK	Needs Work	OK	Needs Work	
003	Bolling Air Force Base, at Giavanolli and Chanute, SW	05/18/16	*		*		*		*		
005	Across from Navy Yard, aligned with Parsons Ave., SE	05/10/16	*		*		*		*		
006 ¹	Good Hope Road and Welsh Memorial Bridge	N/A									
007	Between 11 th St. and Anacostia Bridges, SE	05/19/16	*		*		*		*		
009	O St. Sewage Pumping Station, SE	05/19/16	*		*		*		*		
010	O St. Sewage Pumping Station, SE	05/19/16	*			*			*		
011	Main Sewage Pumping Station, SE	05/19/16	*			*			*		
011(a)	Main Sewage Pumping Station, SE	05/19/16	*		*		*		*		
012	Main Sewage Pumping Station, SE	05/19/16	*		*		*		*		
013	Southeast Federal Center, aligned with 4 th St.	05/19/16	*		*		*		*		
014	Navy Yard, aligned with 6 th St., SE	05/19/16	*		*		*		*		
015	Navy Yard, aligned with 9th Street, SE	05/19/16	*			*			*		
016	12th and O Streets, SE	05/09/16	*		*		*		*		
017	M and Water Street, SE	05/19/16	*		*		*		*		
018	East of Barney Circle & South of Pennsylvania Avenue Bridge, SE	05/09/16	*		*		*		*		
019	Adjacent to Service Drive behind swirl facility & D.C. General Hospital	05/19/16	*		*		*		*		
020	Rock Creek Parkway and Independence, NW	05/20/16	*		*		*		*		
021	Rock Creek Parkway and C St., NW	05/20/16	*		*		*		*		

NPDES Outfall	Location	Date Inspected	Outfall Condition		Tide Gate Present?		Tide Gate Condition		CSO Sign		Notes, Work Needed or Performed
			OK	Needs Work	Yes	No	OK	Needs Work	OK	Needs Work	
022	Rock Creek Parkway and G St., NW	05/05/16	*		*		*		*		
024	South of 30 th and K Streets, NW ¹	05/05/16	*		*		*		*		
025	South of 31st and K Streets, NW	05/05/16	*		*		*		*		
026	Wisconsin Avenue and Water Street, NW	05/05/16	*		*		*		*		
027	33 rd and Water Sts., NW	05/05/16	*			*			*		
028	Key Bridge and Whitehurst Freeway, NW	05/05/16	*			*			*		
029	Adjacent to C&O Canal, aligned with 38 th St. NW	05/05/16	*			*			*		
031 ¹	Rock Creek Pkwy & Pennsylvania Avenue, NW	N/A									
032	26th and M Street, NW.	05/16/16	*			*			*		
033	Across street from St. Francis Jr. High and aligned with N St., NW.	05/16/16	*		*		*		*		
034	Just west of St. Francis Jr. High and north of N St., NW	05/13/16	*			*			*		
035	P St. Bridge and Rock Creek Parkway	05/13/16	*			*			*		
036	22nd Street, South of Q Street NW.	05/18/16	*		*		*		*		
037 ¹	Waterside Dr. and Rock Creek Parkway	N/A									
038	Between arch footbridge and Connecticut Ave., north of Kalorama Circle, NW.	05/03/16	*		*		*		*		
039	Connecticut Avenue Bridge and Rock Creek Parkway, NW.	05/03/16	*		*		*		*		
040	Aligned with Biltmore Rd., between Connecticut Ave and Ellington Bridge.	05/20/16	*		*		*		*		
041	Beach Dr. and Ontario Pl., NW	05/10/16	*		*		*		*		
042	Harvard St. and Beach Dr NW.	05/10/16	*		*		*		*		
043	Upstream of Harvard St. and Beach Dr NW.	05/10/16	*		*		*		*		
044	Kenyon Street and Beach Dr., NW.	05/10/16	*		*		*		*		
045	North of Beach Dr. and Walbridge Pl, NW.	05/10/16	*		*		*		*		
046	Piney Branch Parkway and Park Road, NW.	05/04/16	*			*			*		
047	Piney Branch Parkway and Ingleside Terrace	05/10/16	*		*		*		*		
048	South of Piney Branch Parkway and 17 th St.	05/04/16	*		*		*		*		
049	North of Piney Branch Parkway and 17 th St.	05/04/16	*		*		*		*		
050	Rock Creek Parkway and L St., NW	05/20/16	*		*		*		*		
051	Across Rock Creek Pkwy, aligned with Olive St., NW.	05/12/16	*		*		*		*		

NPDES Outfall	Location	Date Inspected	Outfall Condition		Tide Gate Present?		Tide Gate Condition		CSO Sign		Notes, Work Needed or Performed
			OK	Needs Work	Yes	No	OK	Needs Work	OK	Needs Work	
			052	Between P & Penna. Ave Bridges, aligned with O Street, NW.	05/12/16	*		*		*	
053 ¹	Q St. Bridge and Rock Creek Parkway, NW.	N/A									
054	Massachusetts Ave & Rock Creek Parkway, NW.	05/12/16	*		*		*		*		
056	Normanstone Dr. and Rock Creek Parkway, NW.	05/12/16	*		*		*		*		
057 ¹	28th Street and Rock Creek Parkway, NW	N/A									
058 ¹	Connecticut Ave & Rock Creek Parkway, NW.	N/A									
060	North of P St. Bridge & Rock Creek Pkwy, NW	05/18/16	*		*		*		*		

Notes:

1. Outfall no longer functions as a combined sewer outfall.

2.3 Pumping Stations

Pumping station operations are summarized in the table below.

**Table 2-3
Pumping Stations – Inspections and Equipment in Service**

Pumping Station	No. of Inspections	No. Screens	No. Pumps	Screens or Pumps Out of Service	Dates	Reason	Work Order Number	Schedule to Restore to Service ¹
Main	31	3	6	Screen #4 Pump #3	05/01/16-05/31/16 05/01/16-05/31/16	Screen rebuild Contractor rehab	16-235069	07/31/16
Eastside	2	2	4	Screen #1 Screen #2 Pump #1	05/01/16-05/14/16 05/14/16-05/31/16 05/01/16-05/31/16	Screen rebuild Screen rebuild Check valve issue	16-76407 16-346314 16-248765	Returned to service on 05/14/16 07/15/16 06/15/16
Poplar Point	2	3	3	Screen #2	05/01/16-05/31/16	Screen rebuild	16-169379	07/15/16
Potomac	31	4	5	Pump #5	05/01/16-05/31/16	Potomac rehab work – Phase 3 Contractor Responsibility		06/06/16

Notes:

1. The schedule to restore to service is impacted by the type and age of equipment. In some cases, the condition of equipment and the lack of availability of replacement parts necessitate complete replacement of the unit or element or custom fabrication of needed parts to return the units to service. For these and other reasons, projects are underway for the rehabilitation of the pumping stations.

**Table 2-4
Pumping Stations – Preventive Maintenance**

<i>Pumping Station</i>	<i>Date Performed</i>	<i>Type of Preventive Maintenance Performed¹</i>	<i>Work Order Number</i>	<i>Comments</i>
Main	05/01/16	Group A	16-305437	Add oil, grease bearings and replace packing if needed.
O St	05/01/16	Group A	16-297299	Add oil, grease bearings and replace packing if needed.
Eastside	05/14/16	Group A	16-329220	Add oil, grease bearings and replace packing if needed.
Poplar Point	05/14/16	Group A	16-300567	Add oil, grease bearings and replace packing if needed.
Potomac	05/01/16	Group A	16-329699	Add oil, grease bearings and replace packing if needed.
Rock Creek	05/14/16	Group A	16-321653	Add oil, grease bearings and replace packing if needed.
Upper Anacostia	05/14/16	Group A	16-305451	Add oil, grease bearings and replace packing if needed.
Earl Place	05/14/16	Group A	16-336209	Add oil, grease bearings and replace packing if needed.

Notes:

- Group A consists of:
Exercise bar screens
Exercise all sump pumps
Drain condensation from air compressor storage tank
Check depth of screening in the screen room and schedule Vactor truck as required
Check all safety equipment
Issue work order requests as required

**Table 2-5
Pumping Stations – Pumpage**

<i>Pumping Station</i>	<i>Sanitary Pumpage</i>		<i>Storm Water/CSO Pumped To Anacostia River</i>		
	<i>Total Wastewater (mg)</i>	<i>Daily Average Wastewater (mg)</i>	<i>Date</i>	<i>Volume (mg)</i>	<i>Screenings Collected (units)¹</i>
Main	2417.07	77.97	N/A	N/A	N/A
O St	127.29	4.11	05/02/16	35.14	Normal
			05/06/16	15.33	Normal
			05/21/16	3.99	Normal
Eastside	214.18	6.91	N/A	N/A	N/A
Poplar Point	555.27	17.91	N/A	N/A	N/A
Potomac	3729.22	120.30	N/A	N/A	N/A
Rock Creek	155.13	5.00	N/A	N/A	N/A
Upper Anacostia	42.33	1.37	N/A	N/A	N/A
Earl Place	0.165	0.005	N/A	N/A	N/A

Notes:

- Screening consists of vertical trash racks, with no mechanical cleaning. Quantification of captured materials is not possible on monthly basis.

2.4 Northeast Boundary Swirl Facility

The Northeast Boundary Swirl Facility provides screening, swirl concentration, chlorination and dechlorination of CSO overflow from CSO 019. The capacity of the facility is 400 MGD. Facility operations are summarized below:

Table 2-6

Northeast Boundary Swirl Facility – Inspections and Equipment in Service

<i>Date Inspected</i>	<i>No. Screens</i>	<i>No. Swirls</i>	<i>Screens or Swirls Out of Service</i>	<i>Dates</i>	<i>Reason</i>	<i>Schedule to Restore to Service</i>
05/01/16	3	3	Screen #1 Screen #2 Screen #3	05/06/16 05/06/16 05/06/16	Maintenance	Returned to service for event on 05/17/16

Table 2-7

Northeast Boundary Swirl Facility – Preventive Maintenance

<i>Date Performed</i>	<i>Type of Preventive Maintenance Performed¹</i>	<i>Work Order Number</i>	<i>Comments</i>
05/01/16	Group A	16-332330	

Notes:

- Group A consists of:
Exercise bar screens
Exercise wash down system
Exercise knife gates full travel both directions
Check depth of grit in grit channel and schedule Vactor truck as required
Change chart paper on strip chart recorders at the end of each month
Thoroughly clean each Swirl tank and channels
Issue work order requests as required
Drain condensation from air compress
Check all safety equipment

Table 2-8

Northeast Boundary Swirl Facility – Wet Weather Operations

<i>Date</i>	<i>Approx. Storm Duration (hrs)¹</i>	<i>Total Influent Volume (mg)</i>	<i>Total Foul Sewer Volume (mg)</i>	<i>Total Effluent Volume (mg)</i>	<i>Approx. Screenings Volume (Cu. ft)</i>
05/01/16	6	3.01	3.01	0	52
05/02/16 – 05/03/16	8.5	16.41	5.07	11.34	72
05/06/16	12.5	19.67	5.92	13.76	168
05/17/16	6.5	1.16	1.16	0	36
05/21/16	6	11.19	4.25	6.94	48
05/29/16 – 05/30/16	7	13.64	5.60	8.03	48

Notes:

- Approx. length of time influent flow rate was above the 15 mgd threshold for allowing flow through the facility.

Chlorination/Dechlorination Systems

The table below summarizes the information about the operation of Swirl Facility chlorination and dechlorination systems during storm events. The chlorination feed system was not activated during the storm events in which flows were 15 mgd or greater due to a breakdown in our system of internal controls concerning the supply of Sodium Hypochlorite. This problem was corrected on July 26, 2016. DC Water is assessing its systems of controls to prevent a reoccurrence. We have taken interim measures to ensure the availability of Sodium Hypochlorite at all times to ensure compliance with the NPDES permit while we continue our assessment. All other chemical feed systems were not activated during these storm events. Included in the table are results of residual chlorine, enterococcus and fecal coliform testing for samples taken in the Swirl Facility mix chamber and at the facility effluent outfall to the Anacostia River.

Grab samples for residual chlorine are taken and immediately tested with a portable analyzing kit. Samples for fecal coliform and enterococcus are taken from the designated sample point, treated with sodium bisulfate to remove any residual chlorine, and conveyed to the Blue Plains Wastewater Treatment Plant Laboratory for testing.

**Table 2-9
Northeast Boundary Swirl Facility – Disinfection Performance**

<i>Date</i>	<i>Chlor/ Dechlor System Used?</i>	<i>Dosages</i>		<i>Residual Chlorine Test Results</i>		<i>E. Coli Test Results</i>	
		<i>NaOCl (mg/l)</i>	<i>NaHSO₃ (mg/l)</i>	<i>Location</i>	<i>Conc. (mg/l)</i>	<i>Site</i>	<i>Count Per 100ml</i>
05/02/16	No ²	0	0	Mix Chamber	0.0	Mix Chamber	45,000
				Anacostia River ¹	0.0	Anacostia River ¹	51,000
05/06/16	No ²	0	0	Mix Chamber	0.0	Mix Chamber	470,000
				Anacostia River ¹	0.0	Anacostia River ¹	310,000
05/21/16	No	0	0	Mix Chamber	0.0	Mix Chamber	440,000
				Anacostia River ¹	0.0	Anacostia River ¹	4,200
05/29/16	No	0	0	Mix Chamber	0.0	Mix Chamber	310
				Anacostia River ¹	0.0	Anacostia River ¹	320,000

Notes:

1. River: River Outfall
2. The chlorination system was required but not operational during these storm events.

Table 2-10
Northeast Boundary Swirl Facility – Effluent Sampling Results

<i>Date</i>	<i>Flow Composited Sample Results</i>						
	<i>Total suspended solids (mg/L)</i>	<i>Nitrite (NO₂-N) mg/L</i>	<i>Nitrate (NO₃-N) mg/L</i>	<i>Total Kjeldahl Nitrogen (mg/L as N)</i>	<i>Total Nitrogen (mg/L)</i>	<i>Total Phosphorus (mg/L)</i>	<i>Carbonaceous Biological Oxygen Demand (mg/L)</i>
05/02/16	160	0.03	0.52	2.61	3.16	0.49	28.4
05/06/16	64.0	0.03	0.60	10.7	11.3	1.13	56.6
05/21/16	66.0	0.00	0.49	16.0	16.5	0.47	18.2
05/29/16	10.0	0.00	0.30	1.53	1.83	0.16	2.82

2.5 Inflatable Dams

DC Water operates and maintains twelve inflatable dams at eight different locations. The structure number, location and number of dams per site are presented in Table 2-11. The inflatable dams consist of multi-ply elastomeric (i.e., “rubber”) fabric dams installed in major overflow conduits within the combined sewer system. The objective of the inflatable dam installation is to increase the effective depth to which the sewage must rise in the combined sewer before overflows occur. The effect of the installation is to retain a greater volume of combined sewage flow resulting from low to moderate intensity storms by maximizing storage within the CSS. During higher intensity storms, when the full carrying capacity of the overflow conduit is required to prevent upstream flooding, the dam is deflated automatically. Inflatable dam operations are summarized below:

**Table 2-11
Inflatable Dams – Inspections and Equipment in Service**

<i>Inflatable Dam Structure No</i>	<i>Date Inspected</i>	<i>Was Dam Out of Service During the Month?</i>	<i>Dates out of Service</i>	<i>Reason</i>	<i>Schedule to Restore to Service</i>
14 - East	05/24/16	No	N/A	N/A	N/A
14 - West	05/24/16	No	N/A	N/A	N/A
15	05/24/16	Yes	05/18/16-05/19/16	Failed Air Compressor	05/19/16
15A	05/24/16	No	N/A	N/A	N/A
16 - East	05/24/16	No	N/A	N/A	N/A
16 - West	05/24/16	No	N/A	N/A	N/A
24 - North	05/24/16	No	N/A	N/A	N/A
24 - Middle	05/24/16	No	N/A	N/A	N/A
24 - South	05/24/16	No	N/A	N/A	N/A
34	05/24/16	No	N/A	N/A	N/A
35	05/09/16	Yes	05/08/16-05/09/16	Valve Malfunction	05/09/16
52	05/24/16	No	N/A	N/A	N/A

Notes:

On 05/08/16, a valve malfunction at Inflatable Dam Structure 35 caused the dam to deflate. Repairs were made on 05/09/16.

Between 05/16/16-05/18/16, Inflatable Dam Structure 14 experienced a series of deflations due to a malfunction with the level sensor. Repairs were made on 05/18/16.

On 05/18/16, Inflatable Dam Structure 15 deflated due to a malfunction with the air compressor. It was repaired on 05/19/16.

In all instances, there were no flow conditions at the structures during these times capable of overflowing to the outfall.

**Table 2-12
Inflatable Dams & SCADA Sites - Wet Weather Operations**

<i>Inflatable Dam Structure No.</i>	<i>Overflow Dates</i>	<i>Estimated Duration of Overflow</i>
14 (E & W)	<i>None</i>	<i>N/A</i>
15	<i>None</i>	<i>N/A</i>
15A	<i>05/02/16</i> <i>05/06/16</i> <i>05/21/16</i> <i>05/29/16</i>	<i>1hr 53 mins</i> <i>3 hrs 6 mins</i> <i>1 hr 5 mins</i> <i>1hr 24 mins</i>
16 (E & W)	<i>None</i>	<i>N/A</i>
24	<i>05/02/16</i> <i>05/29/16</i>	<i>10 mins</i> <i>4 mins</i>
34	<i>None</i>	<i>N/A</i>
35	<i>05/02/16</i>	<i>23 mins</i>
52	<i>None</i>	<i>N/A</i>
<i>Structures on Outfall Sewers</i>	<i>Overflow Dates</i>	<i>Estimated Duration of Overflow</i>
Outfall Structure 1	<i>None</i>	<i>This structure has been bulk headed. Overflows are no longer possible.</i>
Outfall Structure 1A	<i>None</i>	<i>This structure has been bulk headed. Overflows are no longer possible.</i>
Outfall Structure 2	<i>None</i>	<i>None</i>
<i>Outfall Sewer Control Gates</i>	<i>Operational Status</i>	<i>Position</i>
Outfall Sewer Control Gate No.1	<i>Operational</i>	<i>Open</i>
Outfall Sewer Control Gate No.2	<i>Operational</i>	<i>This structure has been bulk headed. Overflows are no longer possible</i>

3. DRY WEATHER OVERFLOWS

There was no dry weather combined sewer overflow during May 2016.

Sanitary Sewer Overflows:

Location	Alabama Ave SE & Stanton Rd SE
Cause	DC Water received a service call about an overflowing sewer manhole at the intersection of Alabama Ave SE & Stanton Rd SE, and dispatched a maintenance crew from DSS to investigate the report.
Date/ Time Discovered	May 16 th , 2016 approximately 9:53 AM
Action Taken	The crew cleared the grease and debris buildup in the 10” sanitary sewer line.
Date/Time Discharge Ceased	May 16 th , 2016 1:30 PM
Estimated Volume	4,500 gallons.
Did Overflow Reach Receiving water?	Yes
Action taken to prevent reoccurrence	DSS plans to inspect the 10” Sewer by closed circuit television camera (CCTV) to determine whether additional action is needed to prevent a recurrence.

4. SOLIDS AND FLOATABLES CONTROL

4.1 Catch Basin Cleaning

The following tables summarize catch basin cleaning in the Anacostia CSO area and in the entire sewer system:

Ward	Total CBs	CBs in CSS	Inspections			Cleaning					
			CBs in Anacostia CSS	Total Anacostia CBs Inspected Once this Year	Total Anacostia CBs Inspected Twice this Year	CBs Cleaned Thru Last Month		CB's Cleaned This Month		Total CBs Cleaned This Year to Date	
				Total	In CSS	Total	In CSS	Total	In CSS		
1	1465	1424	653	99	3	130	130	11	11	141	141
2	2930	2665	529	353	45	543	466	14	14	557	480
3	3506	168	0	0	0	193	6	15	1	208	7
4	3329	1730	0	0	0	116	49	1237	908	1353	957
5	3845	1720	1662	158	4	1313	190	39	38	1352	228
6	3557	2888	2877	1499	61	1790	1486	97	48	1887	1534
7	3463	27	27	0	0	3775	0	34	0	3809	0
8	2662	206	206	150	2	1970	150	31	13	2001	163
Subtotal	24757	10828	5954	2259	115	9830	2477	1478	1033	11308	3510
DDOT (via VMS) Subtotal											
Grand Total	24757	10828	5954	2259	115	9830	2477	1478	1033	11308	3510
% Cleaned/Inspected to Date				38%		40%	23%			46%	32%

Note: In preparation for the deployment of the Catch Basin Cleaning Application, an exercise was completed to verify and update the catch basin data for those catch basins that flowed to the Anacostia. DC Water originally was managing the catch basin cleaning at the counter map level, and then progressed to a cluster and with the deployment in May of the Catch Basin Cleaning Application, DC Water is now tracking cleaning at the individual catch basin level – against the asset itself. The totals have changed due to information that is more accurate.

4.2 BMP Demonstration Projects

DC WATER operates the following demonstration projects designed to remove solids and floatables from CSO prior to discharge.

- ◆ Netting system at CSO 018 to Anacostia River
- ◆ Bar Rack at CSO 040 and 041 to Rock Creek

**Table 4-2
BMP Demonstration Projects – Report**

<i>Facility</i>	<i>Date Inspected</i>	<i>Condition</i>	<i>Work Needed</i>	<i>Work performed</i>	<i>Material Removed (CY)</i>
Netting System CSO 018	5/23/2016	Good	Routine Cleaning	Routine Cleaning	None.
Bar Rack CSO 040	5/20/2016	Good	None	Routine Cleaning	(1)
Bar Rack CSO 041	5/10/2016	Good	None	Routine Cleaning	(1)

Notes: (1) System is designed such that captured solids and floatable are conveyed to Blue Plains for treatment.

4.3

Anacostia River Floating Debris Removal Program

This program was initiated in October 1992 to remove floating debris from Anacostia and Potomac Rivers on a routine basis. The program has continued from that time and is now under the auspices of DC WATER, Department of Sewer Services. The floating debris removal program utilizes a skimmer boat and support boats to remove floatable debris from the Rivers as well as trash, which accumulates on the riverbanks and in the mud flats at low tides. Work for the most part is directed toward the Anacostia River. The boats pick up debris five days a week. Operations are summarized as follows:

**Table 4-3
Anacostia River Floating Debris Removal Program – Summary**

<i>Program Operation</i>	5-day work week, excluding holidays, weather permitting
<i>Work Days this month:</i>	21
<i>Days not Operating</i>	2
<i>Reason not Operating</i>	Environmental
<i># Skimmer in Fleet</i>	3 Skimmers
<i># Skimmers Out of Service</i>	1 Skimmer
<i>Dates</i>	B28: 5/1 - 5/31 B29: 5/4, 5/6 - 5/12, 5/16 - 5/19
<i>Reason</i>	B28: Front assembly catching on hull. B29: Hydraulic oil leak and starboard wing broken off.
<i>Plan to Restore to Service</i>	B28: Sent to contractors for repair, ETR unknown. B29: Returned to service on 5/5, 5/13, and 5/20.
<i>Volume Material Collected</i>	60 tons.
<i>Nature of Material</i>	Bottles, cans, natural debris and plastics.

4.4 **CSS Litter Control**

This section describes DC WATER’s efforts to coordinate litter control efforts with the National Park Service and D.C. Department of Public Works to maximize litter control efforts in the combined sewer system.

Status: no activities this month.

5. MONITORING

5.1 Condition Report Bar Racks at Main and O Street Storm Pumps

DC Water performs visual surveys of the bar racks at Main and O Street Pumping Stations to characterize the quantity and nature of floatable discharge. The physical condition of the bar racks and any maintenance requirements are also noted.

**Table 5-1
Bar Racks at Main & O Street Pumping Stations**

Inspector: Wayne Reed

Pumping Station	Inspector	Date Inspected	Condition		Work Needed	Work Performed or Schedule for Completion
			Good	Needs Work		
Bar Racks at O Street Storm Pumps (CSO 010)	WR	05/01/2016	X			
Bar Racks at Main Storm Pumps (CSO 011)	WR	05/01/2016	X			

5.2 Rain Data

Rain data from National Airport and from the rain gauges installed in the CSS are summarized below.

Date	Brentwood Pumping Station	Bryant Street Pumping Station	Main Pumping Station	Rock Creek Pumping Station	National Airport
5/1/2016	0.36	0.41	0.42	0.41	0.48
5/2/2016	0.91	0.88	1.01	1.17	1.24
5/3/2016	0.06	0.09	0.10	0.08	0.17
5/4/2016	0.01	0.03	0.06	0.03	0.03
5/5/2016	0.04	0.04	0.01	0.01	0.02
5/6/2016	0.72	0.97	0.88	0.78	0.79
5/7/2016	0.17	0.19	0.07	0.10	0.14
5/8/2016	0.10	0.06	0.05	0.07	0.04
5/9/2016	0.03	0.05	0.04	0.03	0.06
5/10/2016	0.04	0	0.07	0.01	0.01
5/11/2016	0.12	0.15	0.33	0.15	0.41
5/12/2016	0.01	0	0	0.01	0
5/13/2016	0.09	0.09	0.06	0.07	0.08
5/14/2016	0.11	0.14	0.10	0.14	0.13
5/15/2016	0	0	0	0	0
5/16/2016	0	0	0	0	0
5/17/2016	0.27	0.36	0.40	0.38	0.41
5/18/2016	0	0	0	0	0
5/19/2016	0	0	0	0	0.01
5/20/2016	0	0	0	0	0
5/21/2016	0.57	0.57	0.59	0.61	0.65
5/22/2016	0.35	0.31	0.35	0.37	0.37
5/23/2016	0.27	0.22	0.24	0.21	0.18
5/24/2016	0.02	0.01	0	0.01	0
5/25/2016	0	0	0	0	0
5/26/2016	0	0	0	0	0
5/27/2016	0	0	0	0	0
5/28/2016	0	0	0	0	0
5/29/2016	0.79	0.65	0.83	0.58	0.43
5/30/2016	0	0	0	0	0
5/31/2016	0	0	0	0	0
TOTAL	5.04	5.22	5.61	5.22	5.65



**DISTRICT OF COLUMBIA
WATER AND SEWER AUTHORITY**
Serving the Public • Protecting the Environment

**Monthly Operations Report
For
*Combined Sewer System***

Month: June 2016

Prepared By:
District of Columbia
Water and Sewer Authority
Department of Sewer Services
Washington, D.C. 20003

DISTRICT OF COLUMBIA
WATER AND SEWER AUTHORITY
Washington, D.C.

Monthly Operations Report for Combined Sewer System
Month: June 2016

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 - 5.2 Rainfall Data

1. INTRODUCTION

The District of Columbia Water and Sewer Authority (DC Water) operates a wastewater collection system comprised of separate and combined sewers. Separate storm and sanitary sewers serve parts of the District. In the combined sewer system (CSS), there is a single sewer to convey storm water and sanitary wastes. The area served by combined sewers comprises about one-third of the District.

During dry weather, sanitary wastes collected in the CSS are conveyed to the DC Water's wastewater treatment plant at Blue Plains (BPWWTP or the Blue Plains WWTP). During periods of rainfall, the capacity of a combined sewer may be exceeded and the excess flow, which is a mixture of storm water and sanitary wastes, is discharged directly to the Anacostia River, Rock Creek or the Potomac River or their tributary waters. This report summarizes the operations of the combined sewer system for the month indicated.

2. OPERATION AND MAINTENANCE

2.1 Regulators

Regulators divert combined sewage to interceptors, which convey flow to BPWWTP for treatment. When flows exceed the capacities of the systems such as during significant rain events, regulators divert excess flow to CSO outfalls which discharge to receiving waters. The following table summarizes inspections of CSO regulators in the collection system.

**Table 2-1
Regulator Structures**

Structure Number	Location	Associated NPDES Outfall	Date Inspected	Condition		Work Needed	Work performed
				Good	Needs Work		
2	Bolling AFB, 2250 ft. north of the south line of the Base, SW	003	06/13/16	*			
4	Bolling AFB, 2250 ft. north of the south line of the Base, SW	003	06/14/16	*			
5	Poplar Point Pumping Station	004	06/17/16	*			
6	Chicago Street and Railroad Ave, SE	005	06/01/16	*			
7	W Street and Railroad Ave, SE	005	06/01/16	*			
8 ¹	Good Hope Rd, west of Nichols Ave, SE	006	N/A				
9	13 th Street and Ridge Place, SE	007	06/01/16	*			
11	"O" Street Pumping Station	011(a)	06/17/16	*			
12	Storm Pump Discharge at Main Pumping Station	011	06/20/16	*			
13	2 nd Street, 300 ft. north of N Place, SE	009	06/15/16	*			
14	2 nd Street, 250 ft. north of N Place, SE	011(a)	06/15/16	*			
15	South Capitol and E Streets	010	06/21/16	*			
15a	Half and L Streets, SE	010	06/21/16	*			
15b	South Capitol and I Streets	010	06/06/16	*			
15c	South Capitol and I Streets	010	06/06/16	*			
16	North of Main Sewage Pumping Station	012	06/16/16	*			
17	4 th and N Streets, SE, Both Extended	013	06/06/16	*			
17a	K Street between 6 th Street and 7 th Street, SE	013	06/15/16	*			
18	6 th and M Streets, SE	014	06/07/16	*			
19	9 th and M Streets, SE	015	06/01/16	*			
19a	9 th and M Streets, SE	015	06/01/16	*			
20	12 th and M Streets, SE	016	06/01/16	*			
20a	12 th and M Streets, SE	016	06/01/16	*			
21	14 th and M Streets, SE	017	06/01/16	*			
22a	Barney Circle and Pennsylvania Ave, SE	018	06/03/16	*			

Structure Number	Location	Associated NPDES Outfall	Date Inspected	Condition		Work Needed	Work performed
				Good	Needs Work		
22b	Barney Circle and Pennsylvania Ave, SE	018	06/03/16	*			
22c	Barney Circle and Pennsylvania Ave, SE	018	06/03/16	*			
22d	Kentucky Ave and Potomac Street, SE	018	06/03/16	*			
22e	14 th Street and Kentucky Ave, SE	018	06/03/16	*			
23	Independence Ave, 21 st Street, SE, Extended	019	06/07/16	*			
24a	East Capitol St, west of RFK stadium	019	06/07/16	*			
28	21 st and Constitution Ave, NW	020	06/03/16	*			
29	22 nd Street, between Constitution Ave and C St, NW	020	06/03/16	*			
30	17 th and D Streets, NW	020	06/06/16	*			
31	15 th Street and Pennsylvania Ave, NW	020	06/06/16	*			
33	10 th and F Streets, NW	020	06/06/16	*			
34	23 rd Street, north of Constitution Ave, NW	020	06/14/16	*			
34a	23 rd Street near C Street, NW	020	06/03/16	*			
35	Northeast of Roosevelt Bridge, NW	021					16-363491 No Access due to construction in vicinity of structure. The Kennedy Center contractor is constructing a platform to provide access in July.
36	27 th and I Streets, NW	022	06/03/16	*			
36a	New Hampshire Ave and Eye Street, NW	022	06/03/16	*			
36b	19 th and L Streets, NW	022, 034	06/10/16	*			
36d	17 th and L Streets, NW	022, 034	06/10/16	*			
36g	18 th and M Streets, NW	022, 034	06/10/16	*			
36h	18 th and M Streets, NW	022, 034	06/10/16	*			
37	27 th and Eye Streets, NW	022	06/03/16	*			
38	29 th and K Streets, NW	024	06/06/16	*			
38a	30 th Street, south of K Street, NW	024	06/06/16	*			
39a	30 th and K Streets, NW	024	06/06/16	*			
39b	30 th and K Streets, NW	024	06/06/16	*			
41b	31 st and K Streets, NW	025	06/06/16	*			
41c	31 st and K Streets, NW	025	06/06/16	*			
42	Wisconsin Ave and K Street, NW	026	06/07/16	*			
43	Potomac and Water Streets, NW	027	06/07/16	*			
43a	Potomac and Water Streets, NW	027	06/07/16	*			
44	Water Street, west of Potomac St, NW	027	06/07/16	*			
45	36 th and M Streets, NW	028	06/01/16	*			
46	Canal Rd, 1000ft. east of Foxhall Rd, NW	029	06/01/16	*			
47	38 th Street and Reservoir Road, NW	029	06/01/16	*			
47a	37 th and T Streets, NW	029	06/01/16	*			
47b	37 th and T Streets, NW	029	06/01/16	*			
47c	38 th and W Streets, NW	029	06/01/16	*			
49 ¹	Pennsylvania Ave, east side of Rock Creek, NW	031	N/A				
50	26 and M Streets, NW	032	06/09/16	*			
51	N Street Extended, west of 25 th Street, NW	033	06/09/16	*			
52	22 nd Street between M and N Streets, NW	034	06/22/16	*			
52a	N Street between 22 nd and 23 rd Streets, NW	034	06/22/16	*			
53	22 nd and M Streets, NW	022, 034	06/21/16	*			
53a	22 nd and M Streets, NW	022, 034	06/21/16	*			

Structure Number	Location	Associated NPDES Outfall	Date Inspected	Condition		Work Needed	Work performed
				Good	Needs Work		
53b	L Street between 21 st Street and New Hampshire Ave, NW	022, 034	06/17/16	*			
53c	L and 22 nd Streets, NW	022	06/17/16	*			
54	23 rd and O Streets, NW	034	06/14/16	*			
55	22 nd Street, south of Q Street, NW	035	06/14/16	*			
55a	22 nd Street, south of Q Street, NW	035	06/14/16	*			
56	23 rd and Massachusetts Ave, NW	036	06/14/16	*			
57	23 rd Street, south of Q Street, NW	036	06/14/16	*			
58 ¹	Northwest of Belmont Road and Rock Creek and Potomac Parkway, NW	037	N/A				
59	North of Belmont Rd, east of Kalorama Cir, NW	038	06/01/16	*			
60	Connecticut Ave, east of Rock Creek, NW	039	06/01/16	*			
61	Biltmore St, Extended, east of Rock Creek, NW	040	06/01/16	*			
62	Ontario Rd, Extended, and Rock Creek Pkwy, NW	041	06/15/16	*			
63	Harvard Street and Rock Creek Parkway, NW	042	06/15/16	*			
64	Adams Mill Road, south of Irving Street, NW	043	06/15/16	*			
65	Kenyon Street and Adams Mill Road, NW	044	06/15/16	*			
65a	Kenyon Street and Adams Mill Road, NW	044	06/15/16	*			
66	Adams Mill Road and Lamont Street, NW	045	06/15/16	*			
67	Park Rd , south of Piney Branch Pkwy, NW	046	06/15/16	*			
68	Ingleside Terrace, Extended and Piney Branch Parkway, NW	047	06/15/16	*			
69	Mt. Pleasant Street, Extended and Piney Branch Parkway, NW	048	06/15/16	*			
70	Piney Branch Parkway, west of 16 th Street, NW	049	06/03/16	*			
70i	5 th and Quackenbos Streets, NW	049	06/03/16	*			
71	28 th Street, west of Rock Creek Parkway, NW	050	06/03/16	*			
72	Olive Street Extended and Rock Creek Pkwy, NW	051	06/14/16	*			
72a	Olive Street Extended and Rock Creek Pkwy, NW	051	06/14/16	*			
73	O Street Extended and Rock Creek Parkway, NW	052	06/14/16	*			
74 ¹	Q Street, west of Rock Creek, NW	053	N/A				
75	West side of Rock Creek, 300 ft. south of Massachusetts Ave, NW	054	06/07/16	*			
77	Normanstone Dr Extended, west of Rock Creek, NW	056	06/07/16	*			
77a	Normanstone Dr and Normanstone Lane, NW	056	06/07/16	*			
78 ¹	28th Street Extended, west of Rock Creek, NW	057	N/A				
79 ¹	Connecticut Ave and Rock Creek Parkway, NW	058	N/A				
84	26 th and P Streets, NW	060	06/14/16	*			
84a	26 th and P Streets, NW	060	06/14/16	*			

Notes:

1. Structure no longer functions as a combined sewer overflow regulator structure.
2. Where construction is indicated to be in progress at a regulator, the contractor maintains flow (i.e. prevents DWO) during construction by flow diversion, bypass pumping, fluming, sandbagging or other means.

2.2 Outfalls, Tide Gates and CSO Signs

The following table summarizes inspections, maintenance and work performed on outfall structures, tide gates and CSO signs in the collection system.

**Table 2-2
Outfalls and Tide Gates**

NPDES Outfall	Location	Date Inspected	Outfall Condition		Tide Gate Present?		Tide Gate Condition		CSO Sign		Notes, Work Needed or Performed
			OK	Needs Work	Yes	No	OK	Needs Work	OK	Needs Work	
003	Bolling Air Force Base, at Giavanolli and Chanute, SW	06/13/16	*		*		*		*		
005	Across from Navy Yard, aligned with Parsons Ave., SE	06/02/16	*		*		*		*		
006 ¹	Good Hope Road and Welsh Memorial Bridge	N/A									
007	Between 11 th St. and Anacostia Bridges, SE	06/02/16	*		*		*		*		
009	O St. Sewage Pumping Station, SE	06/20/16	*		*		*		*		
010	O St. Sewage Pumping Station, SE	06/20/16	*			*			*		
011	Main Sewage Pumping Station, SE	06/20/16	*			*			*		
011(a)	Main Sewage Pumping Station, SE	06/20/16	*		*		*		*		
012	Main Sewage Pumping Station, SE	06/20/16	*		*		*		*		
013	Southeast Federal Center, aligned with 4 th St.	06/20/16	*		*		*		*		
014	Navy Yard, aligned with 6 th St., SE	06/20/16	*		*		*		*		
015	Navy Yard, aligned with 9th Street, SE	06/20/16	*			*			*		
016	12th and O Streets, SE	06/15/16	*		*		*		*		
017	M and Water Street, SE	06/20/16	*		*		*		*		
018	East of Barney Circle & South of Pennsylvania Avenue Bridge, SE	06/14/16	*		*		*		*		
019	Adjacent to Service Drive behind swirl facility & D.C. General Hospital	06/02/16	*		*		*		*		
020	Rock Creek Parkway and Independence, NW	06/02/16	*		*		*		*		
021	Rock Creek Parkway and C St., NW	06/02/16	*		*		*		*		
022	Rock Creek Parkway and G St., NW	06/02/16	*		*		*		*		
024	South of 30 th and K Streets, NW ¹	06/02/16	*		*		*		*		
025	South of 31st and K Streets, NW	06/02/16	*		*		*		*		
026	Wisconsin Avenue and Water Street, NW	06/02/16	*		*		*		*		
027	33 rd and Water Sts., NW	06/02/16	*			*			*		
028	Key Bridge and Whitehurst Freeway, NW	06/02/16	*			*			*		
029	Adjacent to C&O Canal, aligned with 38 th St. NW	06/02/16	*			*			*		
031 ¹	Rock Creek Pkwy & Pennsylvania Avenue, NW	N/A									
032	26th and M Street, NW.	06/09/16	*			*			*		
033	Across street from St. Francis Jr. High and aligned with N St., NW.	06/09/16	*		*		*		*		
034	Just west of St. Francis Jr. High and north of N St., NW	06/14/16	*		*		*		*		
035	P St. Bridge and Rock Creek Parkway	06/14/16	*		*		*		*		
036	22nd Street, South of Q Street NW.	06/09/16	*		*		*		*		
037 ¹	Waterside Dr. and Rock Creek Parkway	N/A									
038	Between arch footbridge and Connecticut Ave., north of Kalorama Circle, NW.	06/01/16	*		*		*		*		
039	Connecticut Avenue Bridge and Rock Creek Parkway, NW.	06/01/16	*		*		*		*		
040	Aligned with Biltmore Rd., between Connecticut Ave and Ellington Bridge.	06/01/16	*		*		*		*		
041	Beach Dr. and Ontario Pl., NW	06/09/16	*			*			*		

NPDES Outfall	Location	Date Inspected	Outfall Condition		Tide Gate Present?		Tide Gate Condition		CSO Sign		Notes, Work Needed or Performed
			OK	Needs Work	Yes	No	OK	Needs Work	OK	Needs Work	
042	Harvard St. and Beach Dr NW.	06/09/16	*		*		*		*		
043	Upstream of Harvard St. and Beach Dr NW.	06/09/16	*		*		*		*		
044	Kenyon Street and Beach Dr., NW.	06/09/16	*		*		*		*		
045	North of Beach Dr. and Walbridge Pl, NW.	06/09/16	*		*		*		*		
046	Piney Branch Parkway and Park Road, NW.	06/15/16	*			*			*		
047	Piney Branch Parkway and Ingleside Terrace	06/15/16	*		*		*		*		
048	South of Piney Branch Parkway and 17 th St.	06/15/16	*		*		*		*		
049	North of Piney Branch Parkway and 17 th St.	06/15/16	*		*		*		*		
050	Rock Creek Parkway and L St., NW	06/03/16	*		*		*		*		
051	Across Rock Creek Pkwy, aligned with Olive St., NW.	06/16/16	*		*		*		*		
052	Between P & Penna. Ave Bridges, aligned with O Street, NW.	06/16/16	*		*		*		*		
053 ¹	Q St. Bridge and Rock Creek Parkway, NW.	N/A									
054	Massachusetts Ave & Rock Creek Parkway, NW.	06/07/16	*		*		*		*		
056	Normanstone Dr. and Rock Creek Parkway, NW.	06/07/16	*		*		*		*		
057 ¹	28th Street and Rock Creek Parkway, NW	N/A									
058 ¹	Connecticut Ave & Rock Creek Parkway, NW.	N/A									
060	North of P St. Bridge & Rock Creek Pkwy, NW	06/09/16	*		*		*		*		

Notes:

1. Outfall no longer functions as a combined sewer outfall.

2.3 Pumping Stations

Pumping station operations are summarized in the table below.

Table 2-3

Pumping Stations – Inspections and Equipment in Service

Pumping Station	No. of Inspections	No. Screens	No. Pumps	Screens or Pumps Out of Service	Dates	Reason	Work Order Number	Schedule to Restore to Service ¹
Main	30	3	6	Screen #4 Pump #3	06/01/16-06/30/16 06/01/16-06/30/16	Screen rebuild Contractor rehab	16-235069	07/31/16
Eastside	2	2	4	Screen #2 Pump #1	06/01/16-06/30/16 06/01/16-06/15/16	Screen rebuild Check valve issue	16-346314 16-248765	07/15/16 Returned to service on 06/15/16
Poplar Point	2	3	3	Screen #2	06/01/16-06/30/16	Screen rebuild	16-169379	07/15/16
Potomac	31	4	5	Pump #5 Pump #4	06/01/16-06/06/16 06/06/16-06/30/16 ²	Potomac rehab work – Phase 3 Contractor Responsibility		Returned to service on 06/06/16

Notes:

1. The schedule to restore to service is impacted by the type and age of equipment. In some cases, the condition of equipment and the lack of availability of replacement parts necessitate complete replacement of the unit or element or custom fabrication of needed parts to return the units to service. For these and other reasons, projects are underway for the rehabilitation of the pumping stations.
2. At Potomac Pump Station, Pump #5 was tested by the contractor for the Potomac Pump Station Phase 3 upgrade in coordination and with operational input from DC Water. Upon completion of testing, Pump #5 was turned over to DC Water and placed back into service by DC Water Operations prior to taking Pump #4 out of service for similar rehab work.

**Table 2-4
Pumping Stations – Preventive Maintenance**

<i>Pumping Station</i>	<i>Date Performed</i>	<i>Type of Preventive Maintenance Performed¹</i>	<i>Work Order Number</i>	<i>Comments</i>
Main	06/01/16	Group A	16-343517	Add oil, grease bearings and replace packing if needed.
O St	06/01/16	Group A	16-339678	Add oil, grease bearings and replace packing if needed.
Eastside	06/11/16	Group A	16-346807	Add oil, grease bearings and replace packing if needed.
Poplar Point	06/11/16	Group A	16-343919	Add oil, grease bearings and replace packing if needed.
Potomac	06/01/16	Group A	16-347014	Add oil, grease bearings and replace packing if needed.
Rock Creek	06/11/16	Group A	16-354492	Add oil, grease bearings and replace packing if needed.
Upper Anacostia	06/11/16	Group A	16-344156	Add oil, grease bearings and replace packing if needed.
Earl Place	06/11/16	Group A	16-346821	Add oil, grease bearings and replace packing if needed.

Notes:

- Group A consists of:
Exercise bar screens
Exercise all sump pumps

Drain condensation from air compressor storage tank
Check depth of screening in the screen room and schedule Vactor truck as required
Check all safety equipment
Issue work order requests as required

**Table 2-5
Pumping Stations – Pumpage**

<i>Pumping Station</i>	<i>Sanitary Pumpage</i>		<i>Storm Water/CSO Pumped To Anacostia River</i>		
	<i>Total Wastewater (mg)</i>	<i>Daily Average Wastewater (mg)</i>	<i>Date</i>	<i>Volume (mg)</i>	<i>Screenings Collected (units)¹</i>
Main	2179.64	72.65	N/A	N/A	N/A
O St	129.63	4.32	6/17/16	29.89	Normal
			6/21/16	34.02	Normal
			6/23/16	17.57	Normal
			6/28/16 - 6/29/16	28.98	Normal
Eastside	166.05	5.54	N/A	N/A	N/A
Poplar Point	503.70	16.79	N/A	N/A	N/A
Potomac	3309.72	110.32	N/A	N/A	N/A
Rock Creek	134.42	4.48	N/A	N/A	N/A
Upper Anacostia	39.71	1.32	N/A	N/A	N/A
Earl Place	0.153	0.005	N/A	N/A	N/A

Notes:

- Screening consists of vertical trash racks, with no mechanical cleaning. Quantification of captured materials is not possible on monthly basis.

2.4 Northeast Boundary Swirl Facility

The Northeast Boundary Swirl Facility provides screening, swirl concentration, chlorination and dechlorination of CSO overflow from CSO 019. The capacity of the facility is 400 MGD. Facility operations are summarized below:

**Table 2-6
Northeast Boundary Swirl Facility – Inspections and Equipment in Service**

<i>Date Inspected</i>	<i>No. Screens</i>	<i>No. Swirls</i>	<i>Screens or Swirls Out of Service</i>	<i>Dates</i>	<i>Reason</i>	<i>Schedule to Restore to Service</i>
06/11/16	3	3	N/A	N/A		

**Table 2-7
Northeast Boundary Swirl Facility – Preventive Maintenance**

<i>Date Performed</i>	<i>Type of Preventive Maintenance Performed¹</i>	<i>Work Order Number</i>	<i>Comments</i>
06/11/16	Group A	16-354624	

Notes:

- Group A consists of:
Exercise bar screens
Exercise wash down system
Exercise knife gates full travel both directions
Check depth of grit in grit channel and schedule Vector truck as required
Change chart paper on strip chart recorders at the end of each month
Thoroughly clean each Swirl tank and channels
Issue work order requests as required
Drain condensation from air compress
Check all safety equipment

**Table 2-8
Northeast Boundary Swirl Facility – Wet Weather Operations**

<i>Date</i>	<i>Approx. Storm Duration (hrs)¹</i>	<i>Total Influent Volume (mg)</i>	<i>Total Foul Sewer Volume (mg)</i>	<i>Total Effluent Volume (mg)</i>	<i>Approx. Screenings Volume (Cu. ft)</i>
06/03/16	7	8.15 ³	4.32	3.83	40
06/16/16	9	10.42 ³	1.43	8.99	40
06/17/16	4	5.57 ³	4.83	0.74	16 ²
06/21/16	8	15.62	5.79	9.83	96
06/23/16	6.5	12.69	4.65	8.04	76 ²
06/28/16 AM	3.5	2.47	2.47	0	80
06/28/16 PM	5	8.03	6.04	1.99	60

Notes:

- Approx. length of time influent flow rate was above the 15 mgd threshold for allowing flow through the facility.
- Screenings estimated for event based on inflow.
- Volume estimated due to malfunction of influent meter

Chlorination/Dechlorination Systems.

The table below summarizes the information about the operation of Swirl Facility chlorination and dechlorination systems during storm events. The chlorination feed system was not activated during the storm events in which flows were 15 mgd or greater due to a breakdown in our system of internal controls concerning the supply of Sodium Hypochlorite. This problem was corrected on July 26, 2016. DC Water is assessing its systems of controls to prevent a reoccurrence. We have taken interim measures to ensure the availability of Sodium Hypochlorite at all times to ensure compliance with the NPDES permit while we continue our assessment. All other chemical feed systems were not activated during these storm events. Included in the table are results of residual chlorine, enterococcus and fecal coliform testing for samples taken in the Swirl Facility mix chamber and at the facility effluent outfall to the Anacostia River.

Grab samples for residual chlorine are taken and immediately tested with a portable analyzing kit. Samples for fecal coliform and enterococcus are taken from the designated sample point, treated with sodium bisulfate to remove any residual chlorine, and conveyed to the Blue Plains Wastewater Treatment Plant Laboratory for testing.

**Table 2-9
Northeast Boundary Swirl Facility – Disinfection Performance**

<i>Date</i>	<i>Chlor/ Dechlor System Used?</i>	<i>Dosages</i>		<i>Residual Chlorine Test Results</i>		<i>E. Coli Test Results</i>	
		<i>NaOCl (mg/l)</i>	<i>NaHSO₃ (mg/l)</i>	<i>Location</i>	<i>Conc. (mg/l)</i>	<i>Site</i>	<i>Count Per 100ml</i>
06/16/16	No	0	0	Mix Chamber	0.0	Mix Chamber	320,000
				Anacostia River ¹	0.0	Anacostia River ¹	350,000
06/21/16	No ²	0	0	Mix Chamber	0.0	Mix Chamber	410,000
				Anacostia River ¹	0.0	Anacostia River ¹	3,800
06/23/16	No	0	0	Mix Chamber	0.0	Mix Chamber	310,000
				Anacostia River ¹	0.0	Anacostia River ¹	260,000
06/28/16	No	0	0	Mix Chamber	0.0	Mix Chamber	240,000
				Anacostia River ¹	0.0	Anacostia River ¹	280,000

Notes:

1. River: River Outfall
2. The chlorination system was required but not operational during the storm event.

**Table 2-10
Northeast Boundary Swirl Facility – Effluent Sampling Results**

<i>Date</i>	<i>Flow Composited Sample Results</i>						
	<i>Total suspended solids (mg/L)</i>	<i>Nitrite (NO₂-N) mg/L</i>	<i>Nitrate (NO₃-N) mg/L</i>	<i>Total Kjeldahl Nitrogen (mg/L as N)</i>	<i>Total Nitrogen (mg/L)</i>	<i>Total Phosphoru s (mg/L)</i>	<i>Carbonaceous Biological Oxygen Demand (mg/L)</i>
06/16/16	290	0.09	0.70	14.6	15.4	2.18	77.8
06/21/16	23.0	0.05	0.27	1.03	1.35	0.05	6.99
06/23/16	35.0	0.00	0.37	2.72	3.09	0.33	12.2
06/28/16	130	0.00	0.43	3.53	3.96	0.50	20.1

2.5 Inflatable Dams

DC Water operates and maintains twelve inflatable dams at eight different locations. The structure number, location and number of dams per site are presented in Table 2-11. The inflatable dams consist of multi-ply elastomeric (i.e., “rubber”) fabric dams installed in major overflow conduits within the combined sewer system. The objective of the inflatable dam installation is to increase the effective depth to which the sewage must rise in the combined sewer before overflows occur. The effect of the installation is to retain a greater volume of combined sewage flow resulting from low to moderate intensity storms by maximizing storage within the CSS. During higher intensity storms, when the full carrying capacity of the overflow conduit is required to prevent upstream flooding, the dam is deflated automatically. Inflatable dam operations are summarized below:

**Table 2-11
Inflatable Dams – Inspections and Equipment in Service**

<i>Inflatable Dam Structure No</i>	<i>Date Inspected</i>	<i>Was Dam Out of Service During the Month?</i>	<i>Dates out of Service</i>	<i>Reason</i>	<i>Schedule to Restore to Service</i>
14 - East	06/15/16	No	N/A	N/A	N/A
14 - West	06/15/16	No	N/A	N/A	N/A
15	06/21/16	No	N/A	N/A	N/A
15A	06/21/16	No	N/A	N/A	N/A
16 - East	06/21/16	No	N/A	N/A	N/A
16 - West	06/21/16	No	N/A	N/A	N/A
24 - North	06/25/16	No	N/A	N/A	N/A
24 - Middle	06/25/16	No	N/A	N/A	N/A
24 - South	06/25/16	No	N/A	N/A	N/A
34	06/21/16	No	N/A	N/A	N/A
35	06/15/16	Yes	6/09/16- 6/21/16	Level Switch Malfunction	6/21/16
52	06/21/16	No	N/A	N/A	N/A

Notes:

Between 06/09/16-06/21/16 Inflatable Dam Structure 35 experienced a malfunction causing it to deflate. Due to unsafe conditions at the site, repairs could not be made until 06/21/16. During this time, there were two occasions where flow conditions overflowed to the outfall. They are noted in Table 2-12 below.

On 06/16/16, Inflatable Dam Structure 14 deflated during dry weather due to an air line leakage. The issue was resolved the same day.

**Table 2-12
Inflatable Dams & SCADA Sites - Wet Weather Operations**

<i>Inflatable Dam Structure No.</i>	<i>Overflow Dates</i>	<i>Estimated Duration of Overflow</i>
14 (E & W)	None	N/A
15	06/21/16 06/28/16	1 hr 35mins 54 mins
15A	06/16/16- 06/17/16 06/21/16 06/23/16 06/28/16	10 hrs 12 mins 2 hrs 6 hrs 30 mins 2 hrs 58 mins
16 (E & W)	None	N/A
24	06/16/16 06/21/16 06/28/16	9 mins 20 mins 9 mins
34	None	N/A
35	06/16/16 ¹ 06/21/16 ¹ 06/21/16 06/28/16 ²	1 hr 25 mins 45 mins 36 mins 22 mins
52	None	N/A
<i>Structures on Outfall Sewers</i>	<i>Overflow Dates</i>	<i>Estimated Duration of Overflow</i>
Outfall Structure 1	None	This structure has been bulk headed. Overflows are no longer possible.
Outfall Structure 1A	None	This structure has been bulk headed. Overflows are no longer possible.
Outfall Structure 2	None	None
<i>Outfall Sewer Control Gates</i>	<i>Operational Status</i>	<i>Position</i>
Outfall Sewer Control Gate No.1	Operational	Open
Outfall Sewer Control Gate No.2	Operational	This structure has been bulk headed. Overflows are no longer possible

Notes:

1. During structure 35 malfunction.
2. Overflow occurred during malfunction of Pump #5 due to contractor work on Pump #4 motor starter upgrades.

3. DRY WEATHER OVERFLOWS

There was no dry weather combined sewer overflow during June 2016.

Sanitary Sewer Overflows:

Location	1509 Anacostia Ave, NE
Cause	DC Water received a service call from a contractor working in the area to identify an unmarked sewer in his excavation. Department of Sewer Services dispatched crew to investigate. The crew did not observe an ongoing sanitary discharge but found evidence of a prior overflow, which they attributed to a partially failed bulkhead at a manhole on an 18-inch sanitary main.
Date/ Time Discovered	June 2, 2016 approximately 12:00 PM
Action Taken	A repair crew was dispatched to fix the failed bulkhead.
Date/Time Discharge Ceased	June 2, 2016 approximately 1:00 PM
Estimated Volume	1,000 gallons.
Did Overflow Reach Receiving water?	Yes
Action taken to prevent reoccurrence	DSS plan to inspect the sewer by closed circuit television camera (CCTV) to determine whether additional action would be needed to prevent a recurrence.

Location	South Capitol St., & Galveston Rd., SW
Cause	DC Water received a service call from a customer regarding sewage flowing near South Capitol St., and Forester St., SW. DSS maintenance was dispatched and found an overflowing manhole in a grassy area near South Capitol St and Galveston Rd SW.
Date/ Time Discovered	June 8, 2016 approximately 1:00 PM
Action Taken	The crew was able to clear a buildup of grease and rap in the 10-inch sanitary sewer and stop all overflow.
Date/Time Discharge Ceased	June 8, 2016 approximately 2:20 PM
Estimated Volume	200 gallons.
Did Overflow Reach Receiving water?	No
Action taken to prevent reoccurrence	DSS plan to inspect the sewer by closed circuit television camera (CCTV) the 10-inch sewer to determine whether additional action would be needed to prevent a recurrence.

Location	2321 First Street NW
Cause	DC Water received a service call from a homeowner regarding a sewer back up in their home. A maintenance crew from Department of Sewer Services (DSS) was dispatched to investigate the report. Crew found stagnant flow in a 12 inch combined sewer that serves the property.
Date/ Time Discovered	June 16, 2016 approximately 11:30 PM
Action Taken	The maintenance crew was able to clear the blockage and relieve the resident. The backup was caused by a buildup of roots in the sewer.
Date/Time Discharge Ceased	June 17, 2016 approximately 12:30 AM
Estimated Volume	20 gallons.
Did Overflow Reach Receiving water?	No
Action taken to prevent reoccurrence	DSS plan to inspect the 12-inch sewer by closed circuit television camera (CCTV) to determine whether additional action would be needed to prevent a recurrence.

4. SOLIDS AND FLOATABLES CONTROL

4.1 Catch Basin Cleaning

The following tables summarize catch basin cleaning in the Anacostia CSO area and in the entire sewer system:

Ward	Total CBs	CBs in CSS	Inspections			Cleaning					
			CBs in Anacostia CSS	Total Anacostia CBs Inspected Once this Year	Total Anacostia CBs Inspected Twice this Year	CBs Cleaned Thru Last Month		CB's Cleaned This Month		Total CBs Cleaned This Year to Date	
						Total	In CSS	Total	In CSS	Total	In CSS
1	1465	1424	653	103	3	141	141	6	6	147	147
2	2930	2662	526	354	45	557	480	12	12	569	492
3	3506	232	0	0	0	208	7	325	62	533	69
4	3329	1752	0	0	0	1353	957	1511	651	2864	1608
5	3845	1720	1662	161	4	1352	228	9	7	1361	235
6	3557	2888	2877	1505	61	1887	1534	6	6	1893	1540
7	3463	27	27	0	0	3809	0	14	0	3823	0
8	2662	206	206	150	2	2001	163	4	0	2005	163
Subtotal	24757	10911	5951	2259	115	11308	3510	1887	744	13195	4254
DDOT (via VMS) Subtotal											
Grand Total	24757	10911	5951	2259	115	11308	3510	1887	744	13195	4254
% Cleaned/ Inspected to Date				38%		46%	32%			53%	39%

Note: In preparation for the deployment of the Catch Basin Cleaning Application, an exercise was completed to verify and update the catch basin data for those catch basins that flowed to the Anacostia. DC Water originally was managing the catch basin cleaning at the counter map level, and then progressed to a cluster and with the deployment in May of the Catch Basin Cleaning Application, DC Water is now tracking cleaning at the individual catch basin level – against the asset itself. The totals have changed due to information that is more accurate.

4.2 BMP Demonstration Projects

DC WATER operates the following demonstration projects designed to remove solids and floatables from CSO prior to discharge.

- ◆ Netting system at CSO 018 to Anacostia River
- ◆ Bar Rack at CSO 040 and 041 to Rock Creek

Table 4-2
BMP Demonstration Projects – Report

<i>Facility</i>	<i>Date Inspected</i>	<i>Condition</i>	<i>Work Needed</i>	<i>Work performed</i>	<i>Material Removed (CY)</i>
Netting System CSO 018	6/14/2016	Good	Replace nets.	Nets replaced.	350 pounds.
Bar Rack CSO 040	6/1/2016	Good	None	Routine Cleaning	(1)
Bar Rack CSO 041	6/9/2016	Good	None	Routine Cleaning	(1)

Notes:

(1) System was designed so that captured solids and floatable are conveyed to Blue Plains for treatment.

4.3 Anacostia River Floating Debris Removal Program

This program was initiated in October 1992 to remove floating debris from Anacostia and Potomac Rivers on a routine basis. The program has continued from that time and is now under the auspices of DC WATER, Department of Sewer Services. The floating debris removal program utilizes a skimmer boat and support boats to remove floatable debris from the Rivers as well as trash, which accumulates on the riverbanks and in the mud flats at low tides. Work for the most part is directed toward the Anacostia River. The boats pick up debris five days a week. Operations are summarized as follows:

**Table 4-3
Anacostia River Floating Debris Removal Program – Summary**

<i>Program Operation</i>	5-day work week, excluding holidays, weather permitting
<i>Work Days this month:</i>	22
<i>Days not Operating</i>	5
<i>Reason not Operating</i>	Environmental (4) Fleet troubleshooting and maintenance (1).
<i># Skimmer in Fleet</i>	3 Skimmers
<i># Skimmers Out of Service</i>	3 Skimmers (on the last day of the month)
<i>Dates</i>	B28: 6/1 - 6/30 B29: 6/6 - 6/23, 6/30 B32: 6/30
<i>Reason</i>	B28: Front assembly catching on hull. B29: No. 1 screen jammed loss of power port prop. B32: Possible fuel leak around fuel tank.
<i>Plan to Restore to Service</i>	B28: Sent to contractors for repair, ETR unknown. B29: Fleet troubleshooting. ETR unknown. B32: Fleet troubleshooting. ETR unknown.
<i>Volume Material Collected</i>	30 tons.
<i>Nature of Material</i>	Bottles, cans, natural debris and plastics.

4.4 CSS Litter Control

This section describes DC WATER’s efforts to coordinate litter control efforts with the National Park Service and D.C. Department of Public Works to maximize litter control efforts in the combined sewer system.

Status: no activities this month.

5. MONITORING

5.1 Condition Report Bar Racks at Main and O Street Storm Pumps

DC Water performs visual surveys of the bar racks at Main and O Street Pumping Stations to characterize the quantity and nature of floatable discharge. The physical condition of the bar racks and any maintenance requirements are also noted.

**Table 5-1
Bar Racks at Main & O Street Pumping Stations**

Inspector: Wayne Reed

Pumping Station	Inspector	Date Inspected	Condition		Work Needed	Work Performed or Schedule for Completion
			Good	Needs Work		
Bar Racks at O Street Storm Pumps (CSO 010)	WR	06/01/2016	X			
Bar Racks at Main Storm Pumps (CSO 011)	WR	06/01/2016	X			

5.2 Rain Data

Rain data from National Airport and from the rain gauges installed in the CSS are summarized below.

Date	Brentwood Pumping Station	Bryant Street Pumping Station	Main Pumping Station	Rock Creek Pumping Station	National Airport
6/1/2016	0	0	0	0	0
6/2/2016	0	0	0	0	0
6/3/2016	0.36	0.34	0.23	0.28	0.32
6/4/2016	0	0	0	0	0
6/5/2016	0.08	0.09	0.07	0.08	0.16
6/6/2016	0	0	0	0	0
6/7/2016	0	0.01	0	0	0
6/8/2016	0	0	0	0	0
6/9/2016	0	0	0	0	0
6/10/2016	0	0	0	0	0
6/11/2016	0	0	0	0	0
6/12/2016	0	0	0	0	0
6/13/2016	0	0	0	0	0
6/14/2016	0	0	0	0	0
6/15/2016	0	0.01	0	0	0
6/16/2016	0.34	0.31	0.47	0.55	0.46
6/17/2016	0	0.16	0.01	0	0
6/18/2016	0	0.01	0	0	0
6/19/2016	0	0	0	0	0
6/20/2016	0	0	0	0	0
6/21/2016	0.87	0.76	0.79	1.00	0.99
6/22/2016	0	0.03	0	0	0
6/23/2016	0.45	0.39	0.53	0.50	0.53
6/24/2016	0	0.01	0	0.01	0
6/25/2016	0	0.01	0	0	0
6/26/2016	0	0	0	0	0
6/27/2016	0.10	0.12	0.11	0.11	0.35
6/28/2016	1.09	1.11	0.81	1.34	0.87
6/29/2016	0	0	0	0	0
6/30/2016	0	0.01	0	0	0
TOTAL	3.29	3.37	3.02	3.87	3.68

District of Columbia Water and Sewer Authority

Combined Sewer System Model Results
Period: April, May June 2016

SCENARIO: PCCM_Y2016_Q2, produced July 8, 2016

NPDES No.	Description	Number of Overflows (Occurrences)	CSO Overflow Volume (mg)	Total Duration of Overflow (hrs)	Avg Duration of Overflow (hrs)	Maximum Duration of Overflow (hrs)	Minimum Duration of Overflow (hrs)
Anacostia CSOs							
005	Chicago St and Railroad Station SE	19	3.13	51.25	2.70	8.50	0.50
006	Good Hope Road, West of Nichols Ave., SE	separated					
007	13 th Street and Ridge Place, SE	9	2.56	9.75	1.08	2.00	0.25
009	2nd Street, 300 feet North of N Place, SE	10	1.76	15.75	1.58	2.25	0.50
010	O Street Sewage Pumping Station, SE (pumped Overflow)	12	40.21	9.75	0.81	2.75	0.25
011	South of Main Sewage Pumping Station, SE (pumped overflow)	0	0.00	0.00	0.00	0.00	0.00
011a	South of Main Sewage Pumping Station, SE (gravity overflow)	0	0.00	0.00	0.00	0.00	0.00
012	North of Main Sewage Pumping Station, SE (Tiber Creek)	0	0.00	0.00	0.00	0.00	0.00
013	4th and N Streets, SE	10	2.11	20.00	2.00	4.50	0.25
014	6th and M Streets, SE	10	3.40	17.00	1.70	3.00	0.50
015	9th and M Streets, SE	8	0.67	8.25	1.03	1.75	0.50
016	12th and M Streets, SE	7	2.15	7.75	1.11	2.00	0.25
017	14th and M Streets, SE	14	7.58	36.50	2.61	6.50	0.50
018	Barney Circle and Pennsylvania Ave, SE	10	4.04	15.75	1.58	2.75	0.25
019	Northeast Boundary - Swirl Effluent	12	133.78	61.50	5.13	12.00	1.25
019	Northeast Bound. - Swirl Bypass	4	35.01	3.25	0.81	1.25	0.50
	SUBTOTAL		236.39				
Potomac CSOs							
003	Bolling AFB	0	0.00	0.00	0.00	0.00	0.00
020	23rd Street, North of Constitution Ave, NW (Easby Point)	5	0.40	8.00	1.60	2.50	0.50
021	Northeast of Roosevelt Bridge, NW	11	126.78	26.00	2.36	4.25	0.25
022	27th and K Streets, NW	11	2.51	20.50	1.86	3.50	0.25
024	30th and K Streets, NW	5	6.69	12.75	2.55	4.25	1.00
025	31st & K St NW	4	0.32	2.75	0.69	1.00	0.25
026	Wisconsin Avenue and K St., NW	0	0.00	0.00	0.00	0.00	0.00
027	Water Street West of Street, NW	5	3.33	6.00	1.20	1.75	0.25
028	36th and M Streets, NW	12	1.22	17.50	1.46	2.25	0.50
029	Canal Road 1000 feet east of Rock Creek, NW	7	3.63	6.50	0.93	1.75	0.25
	SUBTOTAL		144.87				
Rock Creek							
031	Pennsylvania Avenue, East Rock Creek, NW	separated					
032	26th and M Streets, NW	0	0.00	0.00	0.00	0.00	0.00
033	N Street extended west of 25th Street, NW	0	0.00	0.00	0.00	0.00	0.00
034	23rd and O Streets, SW	0	0.00	0.00	0.00	0.00	0.00
035	22nd Street south of Q Street, NW	0	0.00	0.00	0.00	0.00	0.00
036	22nd Street South of Q Street, NW	7	0.160	8.25	1.18	2.00	0.25
037	Northwest of Belmont and Rock Creek and Potomac Parkway	separated					
038	North of Belmont Road, east of Kalorama Circle, NW	0	0.00	0.00	0.00	0.00	0.00
039	Connecticut Avenue east of Rock Creek, NW	0	0.00	0.00	0.00	0.00	0.00
040	Biltmore Street extended east of Rock Creek, NW	0	0.00	0.00	0.00	0.00	0.00
041	Ontario extended and Rock Creek Parkway	0	0.00	0.00	0.00	0.00	0.00

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042	Harvard Street and RockCreek Parkway, NW	0	0.00	0.00	0.00	0.00	0.00
043	Adams Mill Road South of Irving Street, NW	3	0.14	1.00	0.33	0.50	0.25
044	Kenyon Street and Adams Mill Road, NW	0	0.00	0.00	0.00	0.00	0.00
045	Adams Mill Road and Lamont Street, NW	3	0.01	1.00	0.33	0.50	0.25
046	Park Road south of Piney Branch Parkway, NW	0	0.00	0.00	0.00	0.00	0.00
047	Ingleside Terrace extended and Piney Branch Parkway	0	0.00	0.00	0.00	0.00	0.00
048	Mt. Pleasant Street extended and Piney Branch Parkway	2	0.02	0.50	0.25	0.25	0.25
049	Piney Branch and LamontStreet, NW	10	8.061	15.00	1.50	2.50	0.25
050	28th Street west of 16th Street, NW	0	0.00	0.00	0.00	0.00	0.00
051	Olive Street extended and Rock Creek Parkway, NW	0	0.00	0.00	0.00	0.00	0.00
052	O Street extended and Rock Creek Parkway, NW	0	0.00	0.00	0.00	0.00	0.00
053	O Street west of Rock Creek Parkway, NW	separated					
054	West Side of Rock Creek300 ft. south of Mass. Ave, NW	0	0.00	0.00	0.00	0.00	0.00
056	Normanstone Drive extended west of Rock Creek, NW	0	0.00	0.00	0.00	0.00	0.00
057	28th Street extended west of Rock Creek, NW	separated					
058	Connecticut Avenue and Rock Creek Parkway, NW	separated					
060	P St and 26 th St, NW	0	0.00	0.00	0.00	0.00	0.00
	SUBTOTAL		8.39				
	TOTAL		389.66				

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Prepared by: Greeley and Hansen LLC and Limno-Tech, Inc.

District of Columbia Water and Sewer Authority

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Anacostia CSOs							
005	Chicago St and Railroad Station SE	19	3.13	51.25	2.70	8.50	0.50
006	Good Hope Road, West of Nichols Ave., SE	separated					
007	13 th Street and Ridge Place, SE	9	2.56	9.75	1.08	2.00	0.25
009	2nd Street, 300 feet North of N Place, SE	10	1.76	15.75	1.58	2.25	0.50
010	O Street Sewage Pumping Station, SE (pumped Overflow)	12	40.21	9.75	0.81	2.75	0.25
011	South of Main Sewage Pumping Station, SE (pumped overflow)	0	0.00	0.00	0.00	0.00	0.00
011a	South of Main Sewage Pumping Station, SE (gravity overflow)	0	0.00	0.00	0.00	0.00	0.00
012	North of Main Sewage Pumping Station, SE (Tiber Creek)	0	0.00	0.00	0.00	0.00	0.00
013	4th and N Streets, SE	10	2.11	20.00	2.00	4.50	0.25
014	6th and M Streets, SE	10	3.40	17.00	1.70	3.00	0.50
015	9th and M Streets, SE	8	0.67	8.25	1.03	1.75	0.50
016	12th and M Streets, SE	7	2.15	7.75	1.11	2.00	0.25
017	14th and M Streets, SE	14	7.58	36.50	2.61	6.50	0.50
018	Barney Circle and Pennsylvania Ave, SE	10	4.04	15.75	1.58	2.75	0.25
019	Northeast Boundary - Swirl Effluent	12	133.78	61.50	5.13	12.00	1.25
019	Northeast Bound. - Swirl Bypass	4	35.01	3.25	0.81	1.25	0.50
	SUBTOTAL		236.39				
Potomac CSOs							
003	Bolling AFB	0	0.00	0.00	0.00	0.00	0.00
020	23rd Street, North of Constitution Ave, NW (Easby Point)	5	0.40	8.00	1.60	2.50	0.50
021	Northeast of Roosevelt Bridge, NW	11	126.78	26.00	2.36	4.25	0.25
022	27th and K Streets, NW	11	2.51	20.50	1.86	3.50	0.25
024	30th and K Streets, NW	5	6.69	12.75	2.55	4.25	1.00
025	31st & K St NW	4	0.32	2.75	0.69	1.00	0.25
026	Wisconsin Avenue and K St., NW	0	0.00	0.00	0.00	0.00	0.00
027	Water Street West of Street, NW	5	3.33	6.00	1.20	1.75	0.25
028	36th and M Streets, NW	12	1.22	17.50	1.46	2.25	0.50
029	Canal Road 1000 feet east of Rock Creek, NW	7	3.63	6.50	0.93	1.75	0.25
	SUBTOTAL		144.87				
Rock Creek							
031	Pennsylvania Avenue, East Rock Creek, NW	separated					
032	26th and M Streets, NW	0	0.00	0.00	0.00	0.00	0.00
033	N Street extended west of 25th Street, NW	0	0.00	0.00	0.00	0.00	0.00
034	23rd and O Streets, SW	0	0.00	0.00	0.00	0.00	0.00
035	22nd Street south of Q Street, NW	0	0.00	0.00	0.00	0.00	0.00
036	22nd Street South of Q Street, NW	7	0.160	8.25	1.18	2.00	0.25
037	Northwest of Belmont and Rock Creek and Potomac Parkway	separated					
038	North of Belmont Road, east of Kalorama Circle, NW	0	0.00	0.00	0.00	0.00	0.00
039	Connecticut Avenue east of Rock Creek, NW	0	0.00	0.00	0.00	0.00	0.00
040	Biltmore Street extended east of Rock Creek, NW	0	0.00	0.00	0.00	0.00	0.00
041	Ontario extended and Rock Creek Parkway	0	0.00	0.00	0.00	0.00	0.00
042	Harvard Street and Rock Creek Parkway, NW	0	0.00	0.00	0.00	0.00	0.00

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043	Adams Mill Road South of Irving Street, NW	3	0.14	1.00	0.33	0.50	0.25	
044	Kenyon Street and Adams Mill Road, NW	0	0.00	0.00	0.00	0.00	0.00	
045	Adams Mill Road and Lamont Street, NW	3	0.01	1.00	0.33	0.50	0.25	
046	Park Road south of Piney Branch Parkway, NW	0	0.00	0.00	0.00	0.00	0.00	
047	Ingleside Terrace extended and Piney Branch Parkway	0	0.00	0.00	0.00	0.00	0.00	
048	Mt. Pleasant Street extended and Piney Branch Parkway	2	0.02	0.50	0.25	0.25	0.25	
049	Piney Branch and Lamont Street, NW	10	8.061	15.00	1.50	2.50	0.25	
050	28th Street west of 16th Street, NW	0	0.00	0.00	0.00	0.00	0.00	
051	Olive Street extended and Rock Creek Parkway, NW	0	0.00	0.00	0.00	0.00	0.00	
052	O Street extended and Rock Creek Parkway, NW	0	0.00	0.00	0.00	0.00	0.00	
053	O Street west of Rock Creek Parkway, NW	separated						
054	West Side of Rock Creek 300 ft. south of Mass. Ave, NW	0	0.00	0.00	0.00	0.00	0.00	
056	Normanstone Drive extended west of Rock Creek, NW	0	0.00	0.00	0.00	0.00	0.00	
057	28th Street extended west of Rock Creek, NW	separated						
058	Connecticut Avenue and Rock Creek Parkway, NW	separated						
060	P St and 26 th St, NW	0	0.00	0.00	0.00	0.00	0.00	
	SUBTOTAL		8.39					
	TOTAL		389.66					

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Prepared by: Greeley and Hansen LLC and Limno-Tech, Inc.