

QUARTERLY OPERATIONS REPORT

DISTRICT OF COLUMBIA

COMBINED SEWER OVERFLOW FACILITIES

THIRD 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: July 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: July 2016*

Table of Contents

- 1. INTRODUCTION**
- 2. OPERATION AND MAINTENANCE**
 - 2.1 Regulators
 - 2.2 Outfalls, Tide Gates and CSO Signs
 - 2.3 Pumping Stations
 - 2.4 Northeast Boundary Swirl Facility
 - 2.5 Inflatable Dams
- 3. DRY WEATHER OVERFLOWS**
- 4. SOLIDS AND FLOATABLES CONTROL**
 - 4.1 Catch Basin Cleaning
 - 4.2 BMP Demonstration Projects
 - 4.3 Skimmer Boat Programs
 - 4.4 CSS Litter Control
- 5. MONITORING**
 - 5.1 Bar Racks at Main & O Street
 - 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	07/22/16	*			
4	Bolling AFB, 2250 ft. north of the south line of the Base, SW	003	07/22/16	*			
5	Poplar Point Pumping Station	004	07/27/16	*			
6	Chicago Street and Railroad Ave, SE	005	07/06/16	*			
7	W Street and Railroad Ave, SE	005	07/06/16	*			
8 ¹	Good Hope Rd, west of Nichols Ave, SE	006	N/A				
9	13 th Street and Ridge Place, SE	007	07/06/16	*			
11	"O" Street Pumping Station	011(a)	07/25/16	*			
12	Storm Pump Discharge at Main Pumping Station	011	07/21/16	*			
13	2 nd Street, 300 ft. north of N Place, SE	009	07/20/16	*			
14	2 nd Street, 250 ft. north of N Place, SE	011(a)	07/20/16	*			
15	South Capitol and E Streets	010	07/14/16	*			
15a	Half and L Streets, SE	010	07/14/16	*			
15b	South Capitol and I Streets	010	07/27/16	*			
15c	South Capitol and I Streets	010	07/27/16	*			

Structure Number	Location	Associated NPDES Outfall	Date Inspected	Condition		Work Needed	Work performed
				Good	Needs Work		
16	North of Main Sewage Pumping Station	012	07/14/16	*			
17	4 th and N Streets, SE, Both Extended	013	07/12/16	*			
17a	K Street between 6 th Street and 7 th Street, SE	013	07/19/16	*			
18	6 th and M Streets, SE	014	07/12/16	*			
19	9 th and M Streets, SE	015	07/11/16	*			
19a	9 th and M Streets, SE	015	07/11/16	*			
20	12 th and M Streets, SE	016	07/11/16	*			
20a	12 th and M Streets, SE	016	07/11/16	*			
21	14 th and M Streets, SE	017	07/11/16	*			
22a	Barney Circle and Pennsylvania Ave, SE	018	07/11/16	*			
22b	Barney Circle and Pennsylvania Ave, SE	018	07/11/16	*			
22c	Barney Circle and Pennsylvania Ave, SE	018	07/11/16	*			
22d	Kentucky Ave and Potomac Street, SE	018	07/11/16	*			
22e	14 th Street and Kentucky Ave, SE	018	07/11/16	*			
23	Independence Ave, 21 st Street, SE, Extended	019	07/19/16	*			
24a	East Capitol St, west of RFK stadium	019	07/19/16	*			
28	21 st and Constitution Ave, NW	020	07/15/16	*			
29	22 nd Street, between Constitution Ave and C St, NW	020	07/15/16	*			
30	17 th and D Streets, NW	020	07/12/16	*			
31	15 th Street and Pennsylvania Ave, NW	020	07/12/16	*			
33	10 th and F Streets, NW	020	07/12/16	*			
34	23 rd Street, north of Constitution Ave, NW	020	07/26/16	*			
34a	23 rd Street near C Street, NW	020	07/15/16	*			
35	Northeast of Roosevelt Bridge, NW	021	07/29/16	*			See note #3
36	27 th and I Streets, NW	022	07/15/16	*			
36a	New Hampshire Ave and Eye Street, NW	022	07/15/16	*			
36b	19 th and L Streets, NW	022, 034	07/08/16	*			
36d	17 th and L Streets, NW	022, 034	07/08/16	*			
36g	18 th and M Streets, NW	022, 034	07/08/16	*			
36h	18 th and M Streets, NW	022, 034	07/08/16	*			
37	27 th and Eye Streets, NW	022	07/15/16	*			
38	29 th and K Streets, NW	024	07/08/16	*			
38a	30 th Street, south of K Street, NW	024	07/08/16	*			
39a	30 th and K Streets, NW	024	07/08/16	*			

Structure Number	Location	Associated NPDES Outfall	Date Inspected	Condition		Work Needed	Work performed
				Good	Needs Work		
39b	30 th and K Streets, NW	024	07/08/16	*			
41b	31 st and K Streets, NW	025	07/08/16	*			
41c	31 st and K Streets, NW	025	07/08/16	*			
42	Wisconsin Ave and K Street, NW	026	07/08/16	*			
43	Potomac and Water Streets, NW	027	07/08/16	*			
43a	Potomac and Water Streets, NW	027	07/08/16	*			
44	Water Street, west of Potomac St, NW	027	07/08/16	*			
45	36 th and M Streets, NW	028	07/19/16	*			
46	Canal Rd, 1000ft. east of Foxhall Rd, NW	029	07/19/16	*			
47	38 th Street and Reservoir Road, NW	029	07/19/16	*			
47a	37 th and T Streets, NW	029	07/19/16	*			
47b	37 th and T Streets, NW	029	07/19/16	*			
47c	38 th and W Streets, NW	029	07/19/16	*			
49 ^l	Pennsylvania Ave, east side of Rock Creek, NW	031	N/A				
50	26 and M Streets, NW	032	07/25/16	*			
51	N Street Extended, west of 25 th Street, NW	033	07/25/16	*			
52	22 nd Street between M and N Streets, NW	034	07/26/16	*			
52a	N Street between 22 nd and 23 rd Streets, NW	034	07/26/16	*			
53	22 nd and M Streets, NW	022, 034	07/26/16	*			
53a	22 nd and M Streets, NW	022, 034	07/26/16	*			
53b	L Street between 21 st Street and New Hampshire Ave, NW	022, 034	07/25/16	*			
53c	L and 22 nd Streets, NW	022	07/25/16	*			
54	23 rd and O Streets, NW	034	07/20/16	*			
55	22 nd Street, south of Q Street, NW	035	07/20/16	*			
55a	22 nd Street, south of Q Street, NW	035	07/20/16	*			
56	23 rd and Massachusetts Ave, NW	036	07/20/16	*			
57	23 rd Street, south of Q Street, NW	036	07/20/16	*			
58 ^l	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	07/06/16	*			
60	Connecticut Ave, east of Rock Creek, NW	039	07/06/16	*			
61	Biltmore St, Extended, east of Rock Creek, NW	040	07/06/16	*			
62	Ontario Rd, Extended, and Rock Creek Pkwy, NW	041	07/13/16	*			
63	Harvard Street and Rock Creek Parkway, NW	042	07/13/16	*			
64	Adams Mill Road, south of Irving Street, NW	043	07/13/16	*			

Structure Number	Location	Associated NPDES Outfall	Date Inspected	Condition		Work Needed	Work performed
				Good	Needs Work		
65	Kenyon Street and Adams Mill Road, NW	044	07/13/16	*			
65a	Kenyon Street and Adams Mill Road, NW	044	07/13/16	*			
66	Adams Mill Road and Lamont Street, NW	045	07/13/16	*			
67	Park Rd , south of Piney Branch Pkwy, NW	046	07/13/16	*			
68	Ingleside Terrance, Extended and Piney Branch Parkway, NW	047	07/13/16	*			
69	Mt. Pleasant Street, Extended and Piney Branch Parkway, NW	048	07/13/16	*			
70	Piney Branch Parkway, west of 16 th Street, NW	049	07/13/16	*			
70i	5 th and Quackenbos Streets, NW	049	07/06/16	*			
71	28 th Street, west of Rock Creek Parkway, NW	050	07/27/16	*			
72	Olive Street Extended and Rock Creek Pkwy, NW	051	07/20/16	*			
72a	Olive Street Extended and Rock Creek Pkwy, NW	051	07/20/16	*			
73	O Street Extended and Rock Creek Parkway, NW	052	07/20/16	*			
74 ^l	Q Street, west of Rock Creek, NW	053	N/A				
75	West side of Rock Creek, 300 ft. south of Massachusetts Ave, NW	054	07/07/16	*			
77	Normanstone Dr Extended, west of Rock Creek, NW	056	07/07/16	*			
77a	Normanstone Dr and Normanstone Lane, NW	056	07/07/16	*			
78 ^l	28th Street Extended, west of Rock Creek, NW	057	N/A				
79 ^l	Connecticut Ave and Rock Creek Parkway, NW	058	N/A				
84	26 th and P Streets, NW	060	07/20/16	*			
84a	26 th and P Streets, NW	060	07/20/16	*			

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.
3. Inspection was conducted via a closed circuit television camera lowered into structure 35 to record inside conditions. Construction in the area prevents safe access into the structure.

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	07/22/16	*		*		*		*		
005	Across from Navy Yard, aligned with Parsons Ave., SE	07/18/16	*		*		*		*		
006 ¹	Good Hope Road and Welsh Memorial Bridge	N/A									
007	Between 11 th St. and Anacostia Bridges, SE	07/18/16	*		*		*		*		
009	O St. Sewage Pumping Station, SE	07/21/16	*		*		*		*		
010	O St. Sewage Pumping Station, SE	07/21/16	*			*			*		
011	Main Sewage Pumping Station, SE	07/21/16	*			*			*		
011(a)	Main Sewage Pumping Station, SE	07/21/16	*		*		*		*		
012	Main Sewage Pumping Station, SE	07/21/16	*		*		*		*		
013	Southeast Federal Center, aligned with 4 th St.	07/21/16	*		*		*		*		
014	Navy Yard, aligned with 6 th St., SE	07/21/16	*		*		*		*		
015	Navy Yard, aligned with 9th Street, SE	07/21/16	*			*			*		
016	12th and O Streets, SE	07/18/16	*		*		*		*		
017	M and Water Street, SE	07/06/16	*		*		*		*		
018	East of Barney Circle & South of Pennsylvania Avenue Bridge, SE	07/18/16	*		*		*		*		
019	Adjacent to Service Drive behind swirl facility & D.C. General Hospital	07/07/16	*		*		*		*		
020	Rock Creek Parkway and Independence, NW	07/28/16	*		*		*		*		
021	Rock Creek Parkway and C St., NW	07/28/16	*		*		*		*		
022	Rock Creek Parkway and G St., NW	07/28/16	*		*		*		*		
024	South of 30 th and K Streets, NW ¹	07/28/16	*		*		*		*		
025	South of 31st and K Streets, NW	07/28/16	*		*		*		*		
026	Wisconsin Avenue and Water Street, NW	07/28/16	*		*		*		*		
027	33 rd and Water Sts., NW	07/28/16	*			*			*		
028	Key Bridge and Whitehurst Freeway, NW	07/28/16	*			*			*		
029	Adjacent to C&O Canal, aligned with 38 th St. NW	07/28/16	*			*			*		
031 ¹	Rock Creek Pkwy & Pennsylvania Avenue, NW	N/A									
032	26th and M Street, NW.	07/25/16	*			*			*		
033	Across street from St. Francis Jr. High and aligned with N St., NW.	07/25/16	*		*		*		*		

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	
034	Just west of St. Francis Jr. High and north of N St., NW	07/20/16	*			*			*		
035	P St. Bridge and Rock Creek Parkway	07/20/16	*			*			*		
036	22nd Street, South of Q Street NW.	07/28/16	*		*		*		*		
037 ¹	Waterside Dr. and Rock Creek Parkway	N/A									
038	Between arch footbridge and Connecticut Ave., north of Kalorama Circle, NW.	07/06/16	*		*		*		*		
039	Connecticut Avenue Bridge and Rock Creek Parkway, NW.	07/06/16	*		*		*		*		
040	Aligned with Biltmore Rd., between Connecticut Ave and Ellington Bridge.	07/06/16	*		*		*		*		
041	Beach Dr. and Ontario Pl., NW	07/07/16	*		*		*		*		
042	Harvard St. and Beach Dr NW.	07/07/16	*		*		*		*		
043	Upstream of Harvard St. and Beach Dr NW.	07/07/16	*		*		*		*		
044	Kenyon Street and Beach Dr., NW.	07/07/16	*		*		*		*		
045	North of Beach Dr. and Walbridge Pl, NW.	07/07/16	*		*		*		*		
046	Piney Branch Parkway and Park Road, NW.	07/13/16	*		*		*		*		
047	Piney Branch Parkway and Ingleside Terrace	07/13/16	*		*		*		*		
048	South of Piney Branch Parkway and 17 th St.	07/13/16	*		*		*		*		
049	North of Piney Branch Parkway and 17 th St.	07/13/16	*		*		*		*		
050	Rock Creek Parkway and L St., NW	07/27/16	*		*		*		*		
051	Across Rock Creek Pkwy, aligned with Olive St., NW.	07/28/16	*		*		*		*		
052	Between P & Penna. Ave Bridges, aligned with O Street, NW.	07/28/16	*		*		*		*		
053 ¹	Q St. Bridge and Rock Creek Parkway, NW.	N/A									
054	Massachusetts Ave & Rock Creek Parkway, NW.	07/07/16	*		*		*		*		
056	Normanstone Dr. and Rock Creek Parkway, NW.	07/07/16	*		*		*		*		
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	07/28/16	*		*		*		*		

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**

<i>Pumping Station</i>	<i>No. of Inspections</i>	<i>No. Screens</i>	<i>No. Pumps</i>	<i>Screens or Pumps Out of Service</i>	<i>Dates</i>	<i>Reason</i>	<i>Work Order Number</i>	<i>Schedule to Restore to Service¹</i>
Main	31	3	4 ²	Screen #4	07/01/16-07/31/16	Screen rebuild	16-235069	09/09/16
				Pump #3	07/01/16-07/21/16	Contractor rehab		Returned to service on 07/21/16
				Screen #2	07/20/16-07/23/16	Gear box failure	16-445680	Returned to service on 07/23/16
				Screen #1	07/30/16-07/31/16	Chain link broke and offset	16-459887	08/02/16
Eastside	2	2	4	Screen #2	07/01/16-07/31/16	Screen rebuild	16-346314	09/09/16
Poplar Point	2	2	3	Screen #2	07/01/16-07/31/16	Screen rebuild	16-169379	09/12/16
				Pump #2	07/30/16-07/31/16	Soft start repair	16-446551	10/31/16
Potomac	31	4	5	Pump #4	07/01/16-07/31/16	Contractor lock out tag out of pump; replace seal water switch & solenoid	Contractor work	08/10/16

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, including replacement of mechanical screens. The Potomac Pumping Station Phase 3 upgrade project is currently ongoing and replacement of the mechanical screens, sluice gates, and discharge isolations valves will begin in September 2016.
2. Number of pumps revised to reflect pumps that directly discharge from the station.

**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	07/14/16	Group A	16-384556	Add oil, grease bearings and replace packing if needed.
O St	07/14/16	Group A	16-401983	Add oil, grease bearings and replace packing if needed.
Eastside	07/18/16	Group A	16-391786	Add oil, grease bearings and replace packing if needed.
Poplar Point	07/07/16	Group A	16-377127	Add oil, grease bearings and replace packing if needed.
Potomac	07/20/16	Group A	16-391941	Add oil, grease bearings and replace packing if needed.
Rock Creek	07/09/16	Group A	16-384570	Add oil, grease bearings and replace packing if needed.
Upper Anacostia	07/09/16	Group A	16-384584	Add oil, grease bearings and replace packing if needed.
Earl Place	07/09/16	Group A	16-469774	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 Vector 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	2321.31	74.88	N/A	N/A	N/A
O St	168.61	5.44	7/18/16	17.01	Normal
			7/19/16	6.25	Normal
			7/20/16	58.0	Normal
			7/29/16	37.45	Normal
			7/30/16	5.18	Normal
Eastside	177.47	5.72	N/A	N/A	N/A
Poplar Point	517.35	16.69	N/A	N/A	N/A
Potomac	3113.08	100.42	N/A	N/A	N/A
Rock Creek	145.30	4.69	N/A	N/A	N/A
Upper Anacostia	42.03	1.36	N/A	N/A	N/A
Earl Place	0.152	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 to 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>
07/18/16	3	3	Screen #1 Screen #3	07/28/16-07/31/16 07/30/16-07/31/16	Screen lost power Bent bars & back plate	Returned to service on 7/31/16 11/30/16

**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>
07/18/16	Group A	16-393642	

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>
07/01/16	3.5	6.64	4.25	2.39	120
07/04/16	5.6	3.88	3.55	0.33	96
07/05/16	7.5	6.84	5.98	0.86	96
07/18/16	4.3	5.00	3.98	1.03	56
07/20/16	2	20.0 ²	10.54	14.0 ²	56
07/28/16	6	6.22	3.52	2.70	32
07/29/16	6	17.14	6.12	11.02	24
07/30/16	3.6	7.11	4.83	2.28	48

07/31/16	4.4	7.92	5.21	2.71	28
----------	-----	------	------	------	----

Notes:

1. Approx. length of time influent flow rate was above the 15 mgd threshold for allowing flow through the facility.
2. Flows estimated due to flash flooding at the facility. See letter sent to EPA dated 07/25/16 describing the event.

Chlorination/Dechlorination Systems.

The table below summarizes the information about operation of Swirl Facility chlorination and dechlorination systems during storm events. The chlorination feed system was not activated during the July 4, 2016 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. After July 26, 2016 the Sodium Hypochlorite system was activated during the storms in which flows were substantial enough to overflow the mix chamber weir. The Sodium Bisulfite system was not activated during the below storm events because it was out of service due to power and valve issues. During the storm events on July 29-31, 2016, residual chlorine levels were controlled by adjusting the dosage rate of Sodium Hypochlorite.

A grab sample is collected and immediately tested with a portable analyzing kit to obtain test results for residual chlorine. Samples for fecal coliform are taken from the designated sample point 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>
07/04/16	No	0	0	Mix Chamber	0.0	Mix Chamber	680,000
				Anacostia River ¹	0.0	Anacostia River ¹	26,000
07/29/16	Yes	5.3	0	Mix Chamber	0.3	Mix Chamber	<100
				Anacostia River ¹	0.0	Anacostia River ¹	60,000
07/30/16	Yes	19.7	0	Mix Chamber	0.5	Mix Chamber	34,000
				Anacostia River ¹	0.2 ²	Anacostia River ¹	70,000
07/31/16	Yes	11.1	0	Mix Chamber	0.0	Mix Chamber	171
				Anacostia River ¹	0.0	Anacostia River ¹	390

Notes:

1. River: River Outfall
2. Effluent flow stopped 7 minutes after initial sample; follow up sample could not be taken. See letter sent to EPA dated 08/04/16 describing the 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 Phosphorus (mg/L)</i>	<i>Carbonaceous Biological Oxygen Demand (mg/L)</i>
7/04/16	15.0	0.03	0.25	2.47	2.75	0.26	6.69
7/29/16	60.0	0.00	0.31	0.85	1.16	0.20	10.9
7/30/16	24.0	0.03	0.41	2.64	3.08	0.27	14.1
7/31/16	29.0	0.06	0.26	0.67	0.99	0.06	10.6

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 2-10. 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	07/30/16	No	N/A	N/A	N/A
14 - West	07/30/16	No	N/A	N/A	N/A
15	07/14/16	No	N/A	N/A	N/A
15A	07/14/16	No	N/A	N/A	N/A
16 - East	07/14/16	No	N/A	N/A	N/A
16 - West	07/14/16	No	N/A	N/A	N/A
24 - North	07/14/16	Yes	07/19/16-07/20/16	Level sensor damage	Returned to service on 7/20/16
24 - Middle	07/14/16	Yes	07/19/16-07/20/16	Level sensor damage	Returned to service on 7/20/16
24 - South	07/14/16	Yes	07/19/16-07/20/16	Level sensor damage	Returned to service on 7/20/16
34	07/26/16	No	N/A	N/A	N/A
35	07/29/16 ¹	Yes	07/19/16-07/20/16	Level sensor damage	Returned to service on 7/20/16
52	07/26/16	No	N/A	N/A	N/A

Notes:

1. A CCTV inspection was performed on 07/29/16 that confirmed fully functional operational condition of the inflatable dam at Structure 35.
2. The upstream level sensor at structure 35 was damaged during the storm event on 07/19/16 at 11:35pm. The dam was returned to service at 6:33am on 07/20/16. See letter sent to EPA dated 07/25/16 describing the event.
3. The level sensors at structure 24 were damaged during the storm event on 07/19/16 at 11:18pm. The dams were returned to service at 10:17pm on 07/20/16. See letter sent to EPA dated 07/25/16 describing the event.

**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)	7/19/16	24 mins (est) ¹
	7/20/16	1 hr 22 mins (est) ¹
15	7/19/16	4 mins
	7/20/16	56 mins
	7/29/16	49 mins
15A	7/18/16	3 hrs 33 mins
	7/19/16	4 mins
	7/20/16	2 hrs 56 mins
	7/29/16	3 hrs 25 mins
	7/30/16	16 mins
16 (E & W)	7/19/16	24 mins (est) ¹
	7/20/16	1 hr 22 mins (est) ¹
	7/29/16	35 mins
24	7/18/16	24 mins
	7/19/16	37 mins
	7/20/16	1 hr 20 mins (est) ²
	7/28/16	55 mins
	7/29/16	1 hr 34 mins
	7/31/16	6 mins
34	7/19/16	4 mins
	7/20/16	30 mins
35	7/19/16	23 mins
	7/20/16	1 hr 10 mins
	7/28/16	24 mins
	7/29/16	39 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. Unable to determine duration of potential overflow during overnight storm on 7/19/16-7/20/16 due to power and communications loss at structures 14 and 16. See letter sent to EPA dated 07/25/16 describing the event.

2. Unable to determine duration of overflow during overnight storm on 7/19/16-7/20/16 due to level sensor damage at structure 24. See letter sent to EPA dated 07/25/16 describing the event.

3. DRY WEATHER OVERFLOWS

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

Sanitary Sewer Overflows:

Location	4 th Street and Wayne Place SE
Cause	DC Water dispatched a sewer maintenance crew to investigate a service call regarding an overflowing sewer manhole at the intersection of 4 th Street and Wayne Place SE. The crew found one manhole overflowing into a nearby storm sewer that discharges into Oxon Run.
Date/ Time Discovered	July 5, 2016 approximately 11:30 AM
Action Taken	DC Water was able to clear the sewer from a buildup of grease and debris in the line. They then flushed the line with a degreasing chemical.
Date/Time Discharge Ceased	July 5, 2016 approximately 2:00 PM
Estimated Volume	2,000 gallons.
Did Overflow Reach Receiving water?	Yes
Action taken to prevent reoccurrence	DSS plan to inspect the 10 inch sewer by closed circuit television camera (CCTV) to determine whether additional action would be needed to prevent a recurrence.

Location	2528 Sheridan Road Se
Cause	DC Water sewer maintenance crew was dispatched to investigate a service call regarding a leak in the street. The crew found a manhole, on a 10 inch sanitary sewer, overflowing on to the street and into a nearby storm sewer that discharges into Anacostia River.
Date/ Time Discovered	July 12, 2016 approximately 11:30 PM
Action Taken	DC Water was able to clear the sewer from a buildup of grease in the line.
Date/Time Discharge Ceased	July 13, 2016 approximately 1:15 AM
Estimated Volume	1,000 gallons.
Did Overflow Reach Receiving water?	Yes
Action taken to prevent reoccurrence	DSS plan to inspect the 10 inch sewer by closed circuit television camera (CCTV) to determine whether additional action would be needed to prevent a recurrence.

SOLIDS AND FLOATABLES CONTROL

3.1 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	1426	651	103	3	147	147	6	6	153	153
2	2941	2675	530	444	45	569	492	126	126	695	618
3	3599	184	0	0	0	533	69	1359	4	1892	73
4	3493	1721	0	0	0	2864	1608	90	30	2954	1638
5	3846	1721	1662	171	6	1361	235	13	13	1374	248
6	3568	2889	2872	1545	61	1893	1540	48	41	1941	1581
7	3472	27	27	0	0	3823	0	6	0	3829	0
8	2677	206	206	150	2	2005	163	3	0	2008	163
Subtotal	25064	10849	5948	2313	117	13195	4254	1651	220	14846	4474
DDOT (via VMS) Subtotal											
Grand Total	25064	10849	5948	2313	117	13195	4254	1651	220	14846	4474
% Cleaned/Inspected to Date				39%		53%	39%			59%	41%

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.

3.2 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	7/19/2016	Good	Routine cleaning.	Routine cleaning.	None.
Bar Rack CSO 040	7/6/2016	Good	None	Routine Cleaning	(1)
Bar Rack CSO 041	7/7/2016	Good	None	Routine Cleaning	(1)

Notes:

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

3.3 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>	20
<i>Days not Operating</i>	12
<i>Reason not Operating</i>	Fleet troubleshooting and maintenance (12). Offloading conveyor down due to pontoon leak from 7/18.
<i># Skimmer in Fleet</i>	3 Skimmers
<i># Skimmers Out of Service</i>	1 Skimmer (on the last day of the month)
<i>Dates</i>	B28: 7/1 - 7/31 B29: 7/1 - 7/19 B32: 7/1 - 7/7
<i>Reason</i>	B28: Front assembly catching on hull. B29: Loss of propulsion power. B32: Fuel tank leak.
<i>Plan to Restore to Service</i>	B28: Sent to contractors for repair, ETR unknown. B29: Returned to service 7/20. B32: Returned to service 7/8.
<i>Volume Material Collected</i>	5 tons.
<i>Nature of Material</i>	Bottles, cans, natural debris and plastics.

3.4 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.

4. MONITORING

4.1 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 4-1
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	07/14/2016	X			
Bar Racks at Main Storm Pumps (CSO 011)	WR	07/14/2016	X			

4.2 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
7/1/2016	0.12	0.01	0.13	0.05	0.24
7/2/2016	0	0	0	0	0
7/3/2016	0	0	0.04	0.01	0.07
7/4/2016	0.33	0.21	0.27	0.34	0.31
7/5/2016	0.45	0.22	0.28	0.33	0.27
7/6/2016	0	0	0	0	0
7/7/2016	0	0	0	0	0
7/8/2016	0.16	0.22	0.17	0.09	0.03
7/9/2016	0	0	0	0	0.18
7/10/2016	0	0	0	0	0
7/11/2016	0	0	0	0	0
7/12/2016	0	0	0	0	0
7/13/2016	0	0	0.04	0	0
7/14/2016	0	0	0	0	0
7/15/2016	0	0	0	0	0
7/16/2016	0.17	0.18	0.18	0.12	0.43
7/17/2016	0	0	0	0	0
7/18/2016	0.32	0.47	0.39	0.39	0.44
7/19/2016	0.84	0.54	0.98	0.53	0.46
7/20/2016	0	0	0	0	0
7/21/2016	0	0	0	0	0
7/22/2016	0	0	0	0	0
7/23/2016	0	0.01	0	0	0
7/24/2016	0.06	0.11	0.09	0.06	0
7/25/2016	0.03	0.02	0.02	0	0
7/26/2016	0	0	0	0	0
7/27/2016	0	0	0	0	0
7/28/2016	0.88	1.06	0.61	1.03	0.27
7/29/2016	0.55	0.56	0.30	0.51	0.10
7/30/2016	0.44	0.44	0.41	0.50	0.33
7/31/2016	0.24	0.11	0.17	0.23	0
TOTAL	4.59	4.16	4.08	4.19	3.13



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

**Monthly Operations Report
For
Combined Sewer System
Month: Aug 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: Aug 2016

Table of Contents

- 1. INTRODUCTION**
- 2. OPERATION AND MAINTENANCE**
 - 2.1 Regulators
 - 2.2 Outfalls, Tide Gates and CSO Signs
 - 2.3 Pumping Stations
 - 2.4 Northeast Boundary Swirl Facility
 - 2.5 Inflatable Dams
- 3. DRY WEATHER OVERFLOWS**
- 4. SOLIDS AND FLOATABLES CONTROL**
 - 4.1 Catch Basin Cleaning
 - 4.2 BMP Demonstration Projects
 - 4.3 Skimmer Boat Programs
 - 4.4 CSS Litter Control
- 5. MONITORING**
 - 5.1 Bar Racks at Main & O Street
 - 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	08/19/16	*			
4	Bolling AFB, 2250 ft. north of the south line of the Base, SW	003	08/19/16	*			
5	Poplar Point Pumping Station	004	08/16/16	*			
6	Chicago Street and Railroad Ave, SE	005	08/02/16	*			
7	W Street and Railroad Ave, SE	005	08/02/16	*			
8 ¹	Good Hope Rd, west of Nichols Ave, SE	006	N/A				
9	13 th Street and Ridge Place, SE	007	08/02/16	*			
11	"O" Street Pumping Station	011(a)	08/19/16	*			
12	Storm Pump Discharge at Main Pumping Station	011	08/22/16	*			
13	2 nd Street, 300 ft. north of N Place, SE	009	08/19/16	*			
14	2 nd Street, 250 ft. north of N Place, SE	011(a)	08/05/16	*			
15	South Capitol and E Streets	010	08/16/16	*			
15a	Half and L Streets, SE	010	08/16/16	*			
15b	South Capitol and I Streets	010	08/10/16	*			
15c	South Capitol and I Streets	010	08/10/16	*			

Structure Number	Location	Associated NPDES Outfall	Date Inspected	Condition		Work Needed	Work performed
				Good	Needs Work		
16	North of Main Sewage Pumping Station	012	08/05/16	*			
17	4 th and N Streets, SE, Both Extended	013	08/08/16	*			
17a	K Street between 6 th Street and 7 th Street, SE	013	08/19/16	*			
18	6 th and M Streets, SE	014	08/05/16	*			
19	9 th and M Streets, SE	015	08/03/16	*			
19a	9 th and M Streets, SE	015	08/03/16	*			
20	12 th and M Streets, SE	016	08/03/16	*			
20a	12 th and M Streets, SE	016	08/03/16	*			
21	14 th and M Streets, SE	017	08/03/16	*			
22a	Barney Circle and Pennsylvania Ave, SE	018	08/10/16	*			
22b	Barney Circle and Pennsylvania Ave, SE	018	08/10/16	*			
22c	Barney Circle and Pennsylvania Ave, SE	018	08/10/16	*			
22d	Kentucky Ave and Potomac Street, SE	018	08/03/16	*			
22e	14 th Street and Kentucky Ave, SE	018	08/03/16	*			
23	Independence Ave, 21 st Street, SE, Extended	019	08/08/16	*			
24a	East Capitol St, west of RFK stadium	019	08/08/16	*			
28	21 st and Constitution Ave, NW	020	08/09/16	*			
29	22 nd Street, between Constitution Ave and C St, NW	020	08/09/16	*			
30	17 th and D Streets, NW	020	08/03/16	*			
31	15 th Street and Pennsylvania Ave, NW	020	08/03/16	*			
33	10 th and F Streets, NW	020	08/03/16	*			
34	23 rd Street, north of Constitution Ave, NW	020	08/16/16	*			
34a	23 rd Street near C Street, NW	020	08/09/16	*			
35	Northeast of Roosevelt Bridge, NW	021	08/18/16	*			See Note #3
36	27 th and I Streets, NW	022	08/08/16	*			
36a	New Hampshire Ave and Eye Street, NW	022	08/08/16	*			
36b	19 th and L Streets, NW	022, 034	08/08/16	*			
36d	17 th and L Streets, NW	022, 034	08/08/16	*			
36g	18 th and M Streets, NW	022, 034	08/08/16	*			
36h	18 th and M Streets, NW	022, 034	08/08/16	*			
37	27 th and Eye Streets, NW	022	08/08/16	*			
38	29 th and K Streets, NW	024	08/05/16	*			
38a	30 th Street, south of K Street, NW	024	08/05/16	*			
39a	30 th and K Streets, NW	024	08/05/16	*			

Structure Number	Location	Associated NPDES Outfall	Date Inspected	Condition		Work Needed	Work performed
				Good	Needs Work		
39b	30 th and K Streets, NW	024	08/05/16	*			
41b	31 st and K Streets, NW	025	08/05/16	*			
41c	31 st and K Streets, NW	025	08/05/16	*			
42	Wisconsin Ave and K Street, NW	026	08/15/16	*			
43	Potomac and Water Streets, NW	027	08/15/16	*			
43a	Potomac and Water Streets, NW	027	08/15/16	*			
44	Water Street, west of Potomac St, NW	027	08/15/16	*			
45	36 th and M Streets, NW	028	08/01/16	*			
46	Canal Rd, 1000ft. east of Foxhall Rd, NW	029	08/01/16	*			
47	38 th Street and Reservoir Road, NW	029	08/01/16	*			
47a	37 th and T Streets, NW	029	08/01/16	*			
47b	37 th and T Streets, NW	029	08/01/16	*			
47c	38 th and W Streets, NW	029	08/01/16	*			
49 ^l	Pennsylvania Ave, east side of Rock Creek, NW	031	N/A				
50	26 and M Streets, NW	032	08/15/16	*			
51	N Street Extended, west of 25 th Street, NW	033	08/15/16	*			
52	22 nd Street between M and N Streets, NW	034	08/16/16	*			
52a	N Street between 22 nd and 23 rd Streets, NW	034	08/16/16	*			
53	22 nd and M Streets, NW	022, 034	08/16/16	*			
53a	22 nd and M Streets, NW	022, 034	08/16/16	*			
53b	L Street between 21 st Street and New Hampshire Ave, NW	022, 034	08/08/16	*			
53c	L and 22 nd Streets, NW	022	08/08/16	*			
54	23 rd and O Streets, NW	034	08/12/16	*			
55	22 nd Street, south of Q Street, NW	035	08/12/16	*			
55a	22 nd Street, south of Q Street, NW	035	08/12/16	*			
56	23 rd and Massachusetts Ave, NW	036	08/12/16	*			
57	23 rd Street, south of Q Street, NW	036	08/12/16	*			
58 ^l	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	08/02/16	*			
60	Connecticut Ave, east of Rock Creek, NW	039	08/02/16	*			
61	Biltmore St, Extended, east of Rock Creek, NW	040	08/02/16	*			
62	Ontario Rd, Extended, and Rock Creek Pkwy, NW	041	08/10/16	*			
63	Harvard Street and Rock Creek Parkway, NW	042	08/10/16	*			
64	Adams Mill Road, south of Irving Street, NW	043	08/10/16	*			

Structure Number	Location	Associated NPDES Outfall	Date Inspected	Condition		Work Needed	Work performed
				Good	Needs Work		
65	Kenyon Street and Adams Mill Road, NW	044	08/10/16	*			
65a	Kenyon Street and Adams Mill Road, NW	044	08/10/16	*			
66	Adams Mill Road and Lamont Street, NW	045	08/10/16	*			
67	Park Rd , south of Piney Branch Pkwy, NW	046	08/10/16	*			
68	Ingleside Terrance, Extended and Piney Branch Parkway, NW	047	08/10/16	*			
69	Mt. Pleasant Street, Extended and Piney Branch Parkway, NW	048	08/10/16	*			
70	Piney Branch Parkway, west of 16 th Street, NW	049	08/10/16	*			
70i	5 th and Quackenbos Streets, NW	049	08/01/16	*			
71	28 th Street, west of Rock Creek Parkway, NW	050	08/15/16	*			
72	Olive Street Extended and Rock Creek Pkwy, NW	051	08/12/16	*			
72a	Olive Street Extended and Rock Creek Pkwy, NW	051	08/12/16	*			
73	O Street Extended and Rock Creek Parkway, NW	052	08/12/16	*			
74 ^l	Q Street, west of Rock Creek, NW	053	N/A				
75	West side of Rock Creek, 300 ft. south of Massachusetts Ave, NW	054	08/15/16	*			
77	Normanstone Dr Extended, west of Rock Creek, NW	056	08/15/16	*			
77a	Normanstone Dr and Normanstone Lane, NW	056	08/15/16	*			
78 ^l	28th Street Extended, west of Rock Creek, NW	057	N/A				
79 ^l	Connecticut Ave and Rock Creek Parkway, NW	058	N/A				
84	26 th and P Streets, NW	060	08/12/16	*			
84a	26 th and P Streets, NW	060	08/12/16	*			

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.
3. Inspection was conducted via a closed circuit television camera lowered into structure 35 to record inside conditions. Construction in the area prevents safe access into the structure.

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	08/19/16	*		*		*		*		
005	Across from Navy Yard, aligned with Parsons Ave., SE	08/04/16	*		*		*		*		
006 ¹	Good Hope Road and Welsh Memorial Bridge	N/A									
007	Between 11 th St. and Anacostia Bridges, SE	08/04/16	*		*		*		*		
009	O St. Sewage Pumping Station, SE	08/26/16	*		*		*		*		
010	O St. Sewage Pumping Station, SE	08/22/16	*			*			*		
011	Main Sewage Pumping Station, SE	08/22/16	*			*			*		
011(a)	Main Sewage Pumping Station, SE	08/22/16	*		*		*		*		
012	Main Sewage Pumping Station, SE	08/22/16	*		*		*		*		
013	Southeast Federal Center, aligned with 4 th St.	08/22/16	*		*		*		*		
014	Navy Yard, aligned with 6 th St., SE	08/22/16	*		*		*		*		
015	Navy Yard, aligned with 9th Street, SE	08/22/16	*			*			*		
016	12th and O Streets, SE	08/22/16	*		*		*		*		
017	M and Water Street, SE	08/22/16	*		*		*		*		
018	East of Barney Circle & South of Pennsylvania Avenue Bridge, SE	08/22/16	*		*		*		*		
019	Adjacent to Service Drive behind swirl facility & D.C. General Hospital	08/23/16	*		*		*		*		
020	Rock Creek Parkway and Independence, NW	08/11/16	*		*		*		*		
021	Rock Creek Parkway and C St., NW	08/11/16	*		*		*		*		
022	Rock Creek Parkway and G St., NW	08/11/16	*		*		*		*		
024	South of 30 th and K Streets, NW ¹	08/11/16	*		*		*		*		
025	South of 31st and K Streets, NW	08/11/16	*		*		*		*		
026	Wisconsin Avenue and Water Street, NW	08/11/16	*		*		*		*		
027	33 rd and Water Sts., NW	08/11/16	*			*			*		
028	Key Bridge and Whitehurst Freeway, NW	08/11/16	*			*			*		
029	Adjacent to C&O Canal, aligned with 38 th St. NW	08/11/16	*			*			*		
031 ¹	Rock Creek Pkwy & Pennsylvania Avenue, NW	N/A									
032	26th and M Street, NW.	08/15/16	*			*			*		
033	Across street from St. Francis Jr. High and aligned with N St., NW.	08/15/16	*		*		*		*		

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	
034	Just west of St. Francis Jr. High and north of N St., NW	08/12/16	*			*			*		
035	P St. Bridge and Rock Creek Parkway	08/12/16	*			*			*		
036	22nd Street, South of Q Street NW.	08/04/16	*		*		*		*		
037 ¹	Waterside Dr. and Rock Creek Parkway	N/A									
038	Between arch footbridge and Connecticut Ave., north of Kalorama Circle, NW.	08/02/16	*		*		*		*		
039	Connecticut Avenue Bridge and Rock Creek Parkway, NW.	08/02/16	*		*		*		*		
040	Aligned with Biltmore Rd., between Connecticut Ave and Ellington Bridge.	08/02/16	*		*		*		*		
041	Beach Dr. and Ontario Pl., NW	08/22/16	*		*		*		*		
042	Harvard St. and Beach Dr NW.	08/22/16	*		*		*		*		
043	Upstream of Harvard St. and Beach Dr NW.	08/22/16	*		*		*		*		
044	Kenyon Street and Beach Dr., NW.	08/22/16	*		*		*		*		
045	North of Beach Dr. and Walbridge Pl, NW.	08/22/16	*		*		*		*		
046	Piney Branch Parkway and Park Road, NW.	08/10/16	*		*		*		*		
047	Piney Branch Parkway and Ingleside Terrace	08/10/16	*		*		*		*		
048	South of Piney Branch Parkway and 17 th St.	08/10/16	*		*		*		*		
049	North of Piney Branch Parkway and 17 th St.	08/10/16	*		*		*		*		
050	Rock Creek Parkway and L St., NW	08/15/16	*		*		*		*		
051	Across Rock Creek Pkwy, aligned with Olive St., NW.	08/04/16	*		*		*		*		
052	Between P & Penna. Ave Bridges, aligned with O Street, NW.	08/04/16	*		*		*		*		
053 ¹	Q St. Bridge and Rock Creek Parkway, NW.	N/A									
054	Massachusetts Ave & Rock Creek Parkway, NW.	08/15/16	*		*		*		*		
056	Normanstone Dr. and Rock Creek Parkway, NW.	08/15/16	*		*		*		*		
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	08/04/16	*		*		*		*		

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**

<i>Pumping Station</i>	<i>No. of Inspections</i>	<i>No. Screens</i>	<i>No. Pumps</i>	<i>Screens or Pumps Out of Service</i>	<i>Dates</i>	<i>Reason</i>	<i>Work Order Number</i>	<i>Schedule to Restore to Service¹</i>
Main	31	3	4	Screen #4	08/01/16-08/31/16	Screen rebuild	16-235069	09/09/16
				Screen #1	08/01/16-08/02/16	Chain link broke and offset	16-459887	Returned to service on 08/02/16
Eastside	2	2	4	Screen #2	08/01/16-08/31/16	Rake assembly repair	16-346314	09/09/16
Poplar Point	2	2	3	Screen #2	08/01/16-08/31/16	Screen rebuild	16-169379	09/12/16
				Pump #2	08/01/16-08/31/16	Soft start repair	16-446551	10/31/16
Potomac	31	4	5	Pump #4	08/01/16-08/10/16	Contractor lock out tag out; seal water switch & solenoid	Contractor work	Returned to service on 08/10/16
				Pump #1	08/05/16-08/31/16	Vibration issue	16-466206	10/04/16

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, including replacement of mechanical screens. The Potomac Pumping Station Phase 3 upgrade project is currently ongoing and replacement of the mechanical screens, sluice gates, and discharge isolations valves will begin in September 2016.

**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	08/01/16	Group A	16-426576	Add oil, grease bearings and replace packing if needed.
O St	08/01/16	Group A	16-442713	Add oil, grease bearings and replace packing if needed.
Eastside	08/06/16	Group A	16-441249	Add oil, grease bearings and replace packing if needed.
Poplar Point	08/06/16	Group A	16-417041	Add oil, grease bearings and replace packing if needed.
Potomac	08/01/16	Group A	16-441371	Add oil, grease bearings and replace packing if needed.
Rock Creek	08/06/16	Group A	16-426590	Add oil, grease bearings and replace packing if needed.
Upper Anacostia	08/06/16	Group A	16-426604	Add oil, grease bearings and replace packing if needed.
Earl Place	08/06/16	Group A	16-399169	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 Vector 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	2035.08	65.65	N/A	N/A	N/A
O St	132.47	4.27	8/15/16	39.83	Normal
			8/16/16	4.9	Normal
			8/17/16	24.43	Normal
			8/21/16	14.0	Normal
Eastside	132.37	4.27	N/A	N/A	N/A
Poplar Point	507.63	16.38	N/A	N/A	N/A
Potomac	2968.98	95.77	N/A	N/A	N/A
Rock Creek	127.89	4.13	N/A	N/A	N/A
Upper Anacostia	39.89	1.29	N/A	N/A	N/A
Earl Place	0.319	0.01	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 to 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>
08/06/16	3	3	Screen #3	08/01/16-08/31/16	Bent bars & back plate	11/30/16

**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>
08/06/16	Group A	16-442831	

Notes:

1. 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>
08/15/16	4	15.92	2.96	12.96	40
08/16/16 ²	4	2.15	2.0	0.15 ³	16
08/17/16	2.5	4.43	2.50	1.93	76
08/18/16	4	1.75	1.75	0	48
08/21/16	6	9.59	4.64	4.95	156

Notes:

1. Approx. length of time influent flow rate was above the 15 mgd threshold for allowing flow through the facility.
2. Event started on night of 08/15/16, continued into 08/16/16.
3. Volume calculated for this event using weir level data.

Chlorination/Dechlorination Systems.

The table below summarizes the information about operation of Swirl Facility chlorination and dechlorination systems during storm events. The Sodium Hypochlorite system was activated during the storms in which flows were substantial enough to overflow the mix chamber weir. The Sodium Bisulfite system was out of service due to power and valve issues. Residual chlorine levels were controlled by adjusting the dosage rate of Sodium Hypochlorite. Included in the table are results of residual chlorine and fecal coliform testing for samples taken in the Swirl Facility mix chamber and at the facility effluent outfall to the Anacostia River.

A grab sample is collected and immediately tested with a portable analyzing kit to obtain test results for residual chlorine. Samples for fecal coliform are taken from the designated sample point 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>
08/15/16	Yes	1.3 ²	0	Mix Chamber	0.0	Mix Chamber	32,000
				Anacostia River ¹	0.0	Anacostia River ¹	46,000
08/16/16	Yes	1.3 ²	0	Mix Chamber	0.2	Mix Chamber	44,000
				Anacostia River ¹	0.0	Anacostia River ¹	37,000
08/17/16	Yes	6.3	0	Mix Chamber	0.0	Mix Chamber	35,000
				Anacostia River ¹	0.0	Anacostia River ¹	42,000
08/21/16	Yes	2.0	0	Mix Chamber	0.3	Mix Chamber	52,000
				Anacostia River ¹	0.0	Anacostia River ¹	2,900

Notes:

1. River: River Outfall
2. Partial dosing during event due to solenoid valve malfunction. Repair was diagnosed and completed during August 15, 2016 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 Phosphorus (mg/L)</i>	<i>Carbonaceous Biological Oxygen Demand (mg/L)</i>
8/15/16	16.0	0.05	0.46	0.76	1.27	0.30	15.6
8/17/16	96.0	0.00	0.46	2.07	2.53	0.48	15.5
8/21/16	114	0.00	0.21	3.09	3.30	0.56	23.5

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 2-10. 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	08/15/16	No	N/A	N/A	N/A
14 - West	08/15/16	No	N/A	N/A	N/A
15	08/15/16	No	N/A	N/A	N/A
15A	08/15/16	No	N/A	N/A	N/A
16 - East	08/15/16	No	N/A	N/A	N/A
16 - West	08/15/16	No	N/A	N/A	N/A
24 - North	08/16/16	No	N/A	N/A	N/A
24 - Middle	08/16/16	No	N/A	N/A	N/A
24 - South	08/16/16	No	N/A	N/A	N/A
34	08/15/16	No	N/A	N/A	N/A
35	08/18/16 ¹	No	N/A	N/A	N/A
52	08/15/16	No	N/A	N/A	N/A

Notes:

1. A CCTV inspection was performed on 08/18/16 that confirmed fully functional operational condition of the inflatable dam at Structure 35. The control vault was inspected on 08/25/2016.

**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	08/17/16	14 mins
15A	08/15/16	2 hrs 41 mins
	08/16/16	1 hr 6 mins
	08/17/16	2 hrs 12 mins
	08/18/16	10 mins
	08/21/16	2 hrs 1 min
16 (E & W)	08/15/16	47 mins
	08/17/16	39 mins
24	08/15/16	1 hr 6 mins
	08/17/16	1 hr 9 mins
	08/21/16	45 mins
34	08/15/16	1 hr 17 mins
	08/17/16	38 mins
35	08/15/16	2 hr 16 mins
	08/17/16	55 mins
	08/21/16	57 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

3. DRY WEATHER OVERFLOWS

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

Sanitary Sewer Overflows:

Location	3350 D Street SE
Cause	DC Water received a complaint from homeowner at 3350 D St SE regarding a sewer back up in their home. A maintenance crew from the Department of Sewer Services was dispatched to investigate the report. The crew found stagnant flow in 10 inch sanitary sewer that back up several residents' basements.
Date/ Time Discovered	August 2, 2016 approximately 2:15 PM
Action Taken	The crew cleared the grease buildup in the line.
Date/Time Discharge Ceased	August 2, 2016 approximately 5:30 PM
Estimated Volume	200 gallons.
Did Overflow Reach Receiving water?	No
Action taken to prevent reoccurrence	DSS plan to inspect the 10 inch sewer by closed circuit television camera (CCTV) to determine whether additional action would be needed to prevent a recurrence.

Location	15 th Street and Mississippi Ave., SE
Cause	This is a follow up report of the August 17, 2016 voice message regarding a Sanitary Sewer Overflow. DC Water received notice from one of our consultants inspecting sewer crossings in stream beds that a manhole structure in Oxon Run was washed away, most likely caused by the heavy storms during week, and sanitary sewage was seeping into the creek.
Date/ Time Discovered	August 17, 2016 approximately 3:35 PM
Action Taken	Anchor Contracting will clean the debris from the pipe and perform the permanent pipe repairs.
Date/Time Discharge Ceased	August 17, 2016 approximately 9:00 PM
Estimated Volume	10,000 gallons.
Did Overflow Reach Receiving water?	Yes
Action taken to prevent reoccurrence	We plan to abandon the collapsed manhole, install PVC pipe through the manhole and encase it with concrete to prevent any further overflows into Oxon Run. The flow is currently contained in the pipe through the collapsed manhole eliminating the need for a pump at this time. Work will continue until completed. We will provide a follow up notice to EPA when the work is completed.

SOLIDS AND FLOATABLES CONTROL

3.1 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	1471	1429	601	601	103	153	153	267	266	420	419
2	2944	2679	539	539	78	695	618	249	244	944	862
3	3634	168	0	0	0	1892	73	598	0	2490	73
4	3488	1719	0	0	0	2954	1638	32	23	2986	1661
5	3871	1746	1688	1688	410	1374	248	595	577	1969	825
6	3569	2894	2886	2886	207	1941	1581	391	390	2332	1971
7	3474	27	27	27	0	3829	0	232	24	4061	24
8	2678	206	206	206	111	2008	163	26	19	2034	182
Subtotal	25129	10868	5947	5947	809	14846	4474	2390	1543	17236	6017
DDOT (via VMS) Subtotal											
Grand Total	25129	10868	5947	5947	809	14846	4474	2390	1543	17236	6017
% Cleaned/Inspected to Date				100%	14%	59%	41%			69%	53%

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.

3.2 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	8/24/2016	Good	Routine cleaning.	Routine cleaning.	5 pounds.
Bar Rack CSO 040	8/2/2016	Good	None	Routine Cleaning	(1)
Bar Rack CSO 041	8/22/2016	Good	None	Routine Cleaning	(1)

Notes:

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

3.3 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>	23
<i>Days not Operating</i>	18
<i>Reason not Operating</i>	Fleet troubleshooting and maintenance (18). Offloading conveyor down due to pontoon leak for 17 workdays.
<i># Skimmer in Fleet</i>	3 Skimmers
<i># Skimmers Out of Service</i>	1 Skimmer (on the last day of the month)
<i>Dates</i>	B28: 8/1 - 8/31 B29: 8/4, 8/19 - 8/22 B32: 8/4 - 8/8, 8/19
<i>Reason</i>	B28: Front assembly catching on hull. B29: Low hydraulic oil, number one screens broken. B32: Hydraulic oil leak, fuel oil leak.
<i>Plan to Restore to Service</i>	B28: Sent to contractors for repair, ETR unknown. B29: Returned to service 8/23. B32: Returned to service 8/20.
<i>Volume Material Collected</i>	15 tons.
<i>Nature of Material</i>	Bottles, cans, natural debris and plastics.

3.4 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.

4. MONITORING

4.1 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 4-1
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	08/11/2016		X	Cleaning	Performed on 08/11/2016
Bar Racks at Main Storm Pumps (CSO 011)	WR	08/11/2016	X			

4.2 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
8/1/2016	0	0	0	0	0
8/2/2016	0	0.01	0	0	0
8/3/2016	0	0	0	0	0
8/4/2016	0	0	0	0	0
8/5/2016	0	0	0	0	0
8/6/2016	0	0	0	0.07	0.06
8/7/2016	0	0.01	0	0	0
8/8/2016	0	0	0	0	0
8/9/2016	0	0	0	0	0
8/10/2016	0	0	0	0	0
8/11/2016	0	0	0	0	0
8/12/2016	0	0	0	0	0
8/13/2016	0	0	0	0	0
8/14/2016	0	0	0	0.03	0
8/15/2016	1.22	1.05	0.74	1.83	1.16
8/16/2016	0	0.01	0	0	0
8/17/2016	0.74	0.79	0.72	0.87	0.88
8/18/2016	0	0.01	0	0	0
8/19/2016	0.01	0	0	0	0
8/20/2016	0	0	0	0	0
8/21/2016	0.52	0.54	0.72	0.75	0.69
8/22/2016	0	0	0	0	0
8/23/2016	0.02	0.01	0	0	0
8/24/2016	0	0	0	0	0
8/25/2016	0	0	0	0	0
8/26/2016	0	0	0	0	0
8/27/2016	0	0	0	0	0
8/28/2016	0	0	0	0	0
8/29/2016	0	0	0	0	0
8/30/2016	0	0	0	0	0
8/31/2016	0.03	0	0	0	0
TOTAL	2.54	2.43	2.18	3.55	2.79



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

**Monthly Operations Report
For
Combined Sewer System
Month: Sept 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: Sept 2016*

Table of Contents

- 1. INTRODUCTION**
- 2. OPERATION AND MAINTENANCE**
 - 2.1 Regulators
 - 2.2 Outfalls, Tide Gates and CSO Signs
 - 2.3 Pumping Stations
 - 2.4 Northeast Boundary Swirl Facility
 - 2.5 Inflatable Dams
- 3. DRY WEATHER OVERFLOWS**
- 4. SOLIDS AND FLOATABLES CONTROL**
 - 4.1 Catch Basin Cleaning
 - 4.2 BMP Demonstration Projects
 - 4.3 Skimmer Boat Programs
 - 4.4 CSS Litter Control
- 5. MONITORING**
 - 5.1 Bar Racks at Main & O Street
 - 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	09/26/16	*			
4	Bolling AFB, 2250 ft. north of the south line of the Base, SW	003	09/26/16	*			
5	Poplar Point Pumping Station	004	09/27/16	*			
6	Chicago Street and Railroad Ave, SE	005	09/11/16	*			
7	W Street and Railroad Ave, SE	005	09/12/16	*			
8 ¹	Good Hope Rd, west of Nichols Ave, SE	006	N/A				
9	13 th Street and Ridge Place, SE	007	09/11/16	*			
11	"O" Street Pumping Station	011(a)	09/26/16	*			
12	Storm Pump Discharge at Main Pumping Station	011	09/22/16	*			
13	2 nd Street, 300 ft. north of N Place, SE	009	09/21/16	*			
14	2 nd Street, 250 ft. north of N Place, SE	011(a)	09/21/16	*			
15	South Capitol and E Streets	010	09/12/16	*			
15a	Half and L Streets, SE	010	09/12/16	*			
15b	South Capitol and I Streets	010	09/15/16	*			
15c	South Capitol and I Streets	010	09/15/16	*			

Structure Number	Location	Associated NPDES Outfall	Date Inspected	Condition		Work Needed	Work performed
				Good	Needs Work		
16	North of Main Sewage Pumping Station	012	09/26/16	*			
17	4 th and N Streets, SE, Both Extended	013	09/15/16	*			
17a	K Street between 6 th Street and 7 th Street, SE	013	09/21/16	*			
18	6 th and M Streets, SE	014	09/15/16	*			
19	9 th and M Streets, SE	015	09/21/16	*			
19a	9 th and M Streets, SE	015	09/22/16	*			
20	12 th and M Streets, SE	016	09/22/16	*			
20a	12 th and M Streets, SE	016	09/22/16	*			
21	14 th and M Streets, SE	017	09/22/16	*			
22a	Barney Circle and Pennsylvania Ave, SE	018	09/22/16	*			
22b	Barney Circle and Pennsylvania Ave, SE	018	09/22/16	*			
22c	Barney Circle and Pennsylvania Ave, SE	018	09/22/16	*			
22d	Kentucky Ave and Potomac Street, SE	018	09/15/16	*			
22e	14 th Street and Kentucky Ave, SE	018	09/15/16	*			
23	Independence Ave, 21 st Street, SE, Extended	019	09/15/16	*			
24a	East Capitol St, west of RFK stadium	019	09/15/16	*			
28	21 st and Constitution Ave, NW	020	09/15/16	*			
29	22 nd Street, between Constitution Ave and C St, NW	020	09/15/16	*			
30	17 th and D Streets, NW	020	09/15/16	*			
31	15 th Street and Pennsylvania Ave, NW	020	09/15/16	*			
33	10 th and F Streets, NW	020	09/15/16	*			
34	23 rd Street, north of Constitution Ave, NW	020	09/15/16	*			
34a	23 rd Street near C Street, NW	020	09/15/16	*			
35	Northeast of Roosevelt Bridge, NW	021	09/09/16	*			See Note 3
36	27 th and I Streets, NW	022	09/15/16	*			
36a	New Hampshire Ave and Eye Street, NW	022	09/15/16	*			
36b	19 th and L Streets, NW	022, 034	09/15/16	*			
36d	17 th and L Streets, NW	022, 034	09/15/16	*			
36g	18 th and M Streets, NW	022, 034	09/15/16	*			
36h	18 th and M Streets, NW	022, 034	09/15/16	*			
37	27 th and Eye Streets, NW	022	09/15/16	*			
38	29 th and K Streets, NW	024	09/15/16	*			
38a	30 th Street, south of K Street, NW	024	09/15/16	*			
39a	30 th and K Streets, NW	024	09/15/16	*			

Structure Number	Location	Associated NPDES Outfall	Date Inspected	Condition		Work Needed	Work performed
				Good	Needs Work		
39b	30 th and K Streets, NW	024	09/15/16	*			
41b	31 st and K Streets, NW	025	09/15/16	*			
41c	31 st and K Streets, NW	025	09/15/16	*			
42	Wisconsin Ave and K Street, NW	026	09/15/16	*			
43	Potomac and Water Streets, NW	027	09/15/16	*			
43a	Potomac and Water Streets, NW	027	09/15/16	*			
44	Water Street, west of Potomac St, NW	027	09/15/16	*			
45	36 th and M Streets, NW	028	09/15/16	*			
46	Canal Rd, 1000ft. east of Foxhall Rd, NW	029	09/06/16	*			
47	38 th Street and Reservoir Road, NW	029	09/15/16	*			
47a	37 th and T Streets, NW	029	09/15/16	*			
47b	37 th and T Streets, NW	029	09/06/16	*			
47c	38 th and W Streets, NW	029	09/15/16	*			
49 ^l	Pennsylvania Ave, east side of Rock Creek, NW	031	N/A				
50	26 and M Streets, NW	032	09/21/16	*			
51	N Street Extended, west of 25 th Street, NW	033	09/21/16	*			
52	22 nd Street between M and N Streets, NW	034	09/15/16	*			
52a	N Street between 22 nd and 23 rd Streets, NW	034	09/15/16	*			
53	22 nd and M Streets, NW	022, 034	09/15/16	*			
53a	22 nd and M Streets, NW	022, 034	09/15/16	*			
53b	L Street between 21 st Street and New Hampshire Ave, NW	022, 034	09/26/16	*			
53c	L and 22 nd Streets, NW	022	09/26/16	*			
54	23 rd and O Streets, NW	034	09/21/16	*			
55	22 nd Street, south of Q Street, NW	035	09/21/16	*			
55a	22 nd Street, south of Q Street, NW	035	09/21/16	*			
56	23 rd and Massachusetts Ave, NW	036	09/21/16	*			
57	23 rd Street, south of Q Street, NW	036	09/21/16	*			
58 ^l	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	09/12/16	*			
60	Connecticut Ave, east of Rock Creek, NW	039	09/15/16	*			
61	Biltmore St, Extended, east of Rock Creek, NW	040	09/15/16	*			
62	Ontario Rd, Extended, and Rock Creek Pkwy, NW	041	09/15/16	*			
63	Harvard Street and Rock Creek Parkway, NW	042	09/11/16	*			
64	Adams Mill Road, south of Irving Street, NW	043	09/11/16	*			

Structure Number	Location	Associated NPDES Outfall	Date Inspected	Condition		Work Needed	Work performed
				Good	Needs Work		
65	Kenyon Street and Adams Mill Road, NW	044	09/12/16	*			
65a	Kenyon Street and Adams Mill Road, NW	044	09/12/16	*			
66	Adams Mill Road and Lamont Street, NW	045	09/12/16	*			
67	Park Rd , south of Piney Branch Pkwy, NW	046	09/12/16	*			
68	Ingleside Terrance, Extended and Piney Branch Parkway, NW	047	09/11/16	*			
69	Mt. Pleasant Street, Extended and Piney Branch Parkway, NW	048	09/12/16	*			
70	Piney Branch Parkway, west of 16 th Street, NW	049	09/12/16	*			
70i	5 th and Quackenbos Streets, NW	049	09/26/16	*			
71	28 th Street, west of Rock Creek Parkway, NW	050	09/15/16	*			
72	Olive Street Extended and Rock Creek Pkwy, NW	051	09/15/16	*			
72a	Olive Street Extended and Rock Creek Pkwy, NW	051	09/15/16	*			
73	O Street Extended and Rock Creek Parkway, NW	052	09/15/16	*			
74 ^l	Q Street, west of Rock Creek, NW	053	N/A				
75	West side of Rock Creek, 300 ft. south of Massachusetts Ave, NW	054	09/21/16	*			
77	Normanstone Dr Extended, west of Rock Creek, NW	056	09/21/16	*			
77a	Normanstone Dr and Normanstone Lane, NW	056	09/22/16	*			
78 ^l	28th Street Extended, west of Rock Creek, NW	057	N/A				
79 ^l	Connecticut Ave and Rock Creek Parkway, NW	058	N/A				
84	26 th and P Streets, NW	060	09/15/16	*			
84a	26 th and P Streets, NW	060	09/15/16	*			

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.
3. Contractors have compacted soil/gravel around the access manhole. DSS crews have access to enter structure safely and conduct their routine inspections without lowering a camera into manhole.

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	09/26/16	*		*		*		*		
005	Across from Navy Yard, aligned with Parsons Ave., SE	09/26/16	*		*		*		*		
006 ¹	Good Hope Road and Welsh Memorial Bridge	N/A									
007	Between 11 th St. and Anacostia Bridges, SE	09/09/16	*		*		*		*		
009	O St. Sewage Pumping Station, SE	09/22/16	*		*		*		*		
010	O St. Sewage Pumping Station, SE	09/22/16	*			*			*		
011	Main Sewage Pumping Station, SE	09/22/16	*			*			*		
011(a)	Main Sewage Pumping Station, SE	09/22/16	*		*		*		*		
012	Main Sewage Pumping Station, SE	09/22/16	*		*		*		*		
013	Southeast Federal Center, aligned with 4 th St.	09/22/16	*		*		*		*		
014	Navy Yard, aligned with 6 th St., SE	09/22/16	*		*		*		*		
015	Navy Yard, aligned with 9th Street, SE	09/22/16	*			*			*		
016	12th and O Streets, SE	09/22/16	*		*		*		*		
017	M and Water Street, SE	09/22/16	*		*		*		*		
018	East of Barney Circle & South of Pennsylvania Avenue Bridge, SE	09/22/16	*		*		*		*		
019	Adjacent to Service Drive behind swirl facility & D.C. General Hospital	09/09/16	*		*		*		*		
020	Rock Creek Parkway and Independence, NW	09/22/16	*		*		*		*		
021	Rock Creek Parkway and C St., NW	09/22/16	*		*		*		*		
022	Rock Creek Parkway and G St., NW	09/22/16	*		*		*		*		
024	South of 30 th and K Streets, NW ¹	09/22/16	*		*		*		*		
025	South of 31st and K Streets, NW	09/22/16	*		*		*		*		
026	Wisconsin Avenue and Water Street, NW	09/22/16	*		*		*		*		
027	33 rd and Water Sts., NW	09/22/16	*			*			*		
028	Key Bridge and Whitehurst Freeway, NW	09/22/16	*			*			*		
029	Adjacent to C&O Canal, aligned with 38 th St. NW	09/22/16	*			*			*		
031 ¹	Rock Creek Pkwy & Pennsylvania Avenue, NW	N/A									
032	26th and M Street, NW.	09/21/16	*			*			*		
033	Across street from St. Francis Jr. High and aligned with N St., NW.	09/21/16	*		*		*		*		
034	Just west of St. Francis Jr. High and north of N St., NW	09/21/16	*			*			*		
035	P St. Bridge and Rock Creek Parkway	09/21/16	*			*			*		

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	
036	22nd Street, South of Q Street NW.	09/26/16	*		*		*		*		
037 ¹	Waterside Dr. and Rock Creek Parkway	N/A									
038	Between arch footbridge and Connecticut Ave., north of Kalorama Circle, NW.	09/11/16	*		*		*		*		
039	Connecticut Avenue Bridge and Rock Creek Parkway, NW.	09/09/16	*		*		*		*		
040	Aligned with Biltmore Rd., between Connecticut Ave and Ellington Bridge.	09/11/16	*		*		*		*		
041	Beach Dr. and Ontario Pl., NW	09/11/16	*		*		*		*		
042	Harvard St. and Beach Dr NW.	09/11/16	*		*		*		*		
043	Upstream of Harvard St. and Beach Dr NW.	09/11/16	*		*		*		*		
044	Kenyon Street and Beach Dr., NW.	09/11/16	*		*		*		*		
045	North of Beach Dr. and Walbridge Pl, NW.	09/09/16	*		*		*		*		
046	Piney Branch Parkway and Park Road, NW.	09/09/16	*			*			*		
047	Piney Branch Parkway and Ingleside Terrace	09/09/16	*		*		*		*		
048	South of Piney Branch Parkway and 17 th St.	09/09/16	*		*		*		*		
049	North of Piney Branch Parkway and 17 th St.	09/09/16	*		*		*		*		
050	Rock Creek Parkway and L St., NW	09/09/16	*		*		*		*		
051	Across Rock Creek Pkwy, aligned with Olive St., NW.	09/12/16	*		*		*		*		
052	Between P & Penna. Ave Bridges, aligned with O Street, NW.	09/11/16	*		*		*		*		
053 ¹	Q St. Bridge and Rock Creek Parkway, NW.	N/A									
054	Massachusetts Ave & Rock Creek Parkway, NW.	09/21/16	*		*		*		*		
056	Normanstone Dr. and Rock Creek Parkway, NW.	09/21/16	*		*		*		*		
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	09/26/16	*		*		*		*		

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**

<i>Pumping Station</i>	<i>No. of Inspections</i>	<i>No. Screens</i>	<i>No. Pumps</i>	<i>Screens or Pumps Out of Service</i>	<i>Dates</i>	<i>Reason</i>	<i>Work Order Number</i>	<i>Schedule to Restore to Service¹</i>
Main	30	3	4	Screen #4	09/01/16-09/09/16	Screen rebuild	16-235069	Returned to service on 09/09/16
Eastside	2	2	4	Screen #2	09/01/16-09/09/16	Rake assembly repair	16-346314	Returned to service on 09/09/16
				Pump #2	09/23/16-09/30/16	Trip during storm	16-534347	10/05/16
				All Pumps & Screens	09/27/16-09/30/16	Station flooding ²	16-552984	10/05/16
Poplar Point	2	2	3	Screen #2	09/01/16-09/12/16	Screen rebuild	16-169379	Returned to service on 09/12/16
				Pump #2	09/01/16-09/30/16	Soft start repair	16-313657	10/31/16
Potomac	30	4	5	Pump #1	09/01/16-09/30/16	Vibration issue	16-466206	10/04/16
				Screen #1	09/22/16-09/30/16	Screen replacement ³	Contractor	11/18/16

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, including replacement of mechanical screens. The Potomac Pumping Station Phase 3 upgrade project is currently ongoing and replacement of the mechanical screens, sluice gates, and discharge isolations valves will begin in September 2016.
2. The drywell of Eastside Pumping Station flooded on September 27, 2016 while a check valve in the discharge piping was being serviced. As a result, the station was out of service between September 27 and October 5, 2016. DC Water is currently investigating the cause of the event. During dry weather, flow was diverted using bypass pumping from the Eastside Interceptor Relief Sewer to the Northeast Boundary Sewer and Lower Eastside Interceptor for conveyance by gravity to the Main Pumping Station and conveyance to Blue Plains. During the wet weather events that occurred during this period, the diversion operation remained in use, and excess wet weather flows were processed through the Northeast Boundary Swirl Facility. As the wet wells at Eastside Pumping Station were out of service, the foul sewer diversion lines from each concentrator in the Northeast Boundary Swirl were closed, and all flow entering the Northeast Boundary Swirl Facility was treated and then discharged through the mixing chamber to CSO 019.
3. This is part of the Potomac Pumping Station Phase 3 upgrade project.

**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	09/01/16	Group A	16-478552	Add oil, grease bearings and replace packing if needed.
O St	09/01/16	Group A	16-494652	Add oil, grease bearings and replace packing if needed.
Eastside	09/17/16	Group A	16-485430	Add oil, grease bearings and replace packing if needed.
Poplar Point	09/17/16	Group A	16-472564	Add oil, grease bearings and replace packing if needed.
Potomac	09/01/16	Group A	16-485550	Add oil, grease bearings and replace packing if needed.
Rock Creek	09/17/16	Group A	16-478566	Add oil, grease bearings and replace packing if needed.
Upper Anacostia	09/17/16	Group A	16-478580	Add oil, grease bearings and replace packing if needed.
Earl Place	09/17/16	Group A	16-446742	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 Vector 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	1887.02	62.90	N/A	N/A	N/A
O St	120.92	4.03	9/29/16	22.47	Normal
Eastside	101.32	3.38	N/A	N/A	N/A
Poplar Point	498.27	16.61	N/A	N/A	N/A
Potomac	2966.35	98.88	N/A	N/A	N/A
Rock Creek	134.27	4.48	N/A	N/A	N/A
Upper Anacostia	38.68	1.29	N/A	N/A	N/A
Earl Place	0.14	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>
09/17/16	3	3	Screen #3	09/01/16-09/30/16	Bent bars & back plate	11/30/16

**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>
09/17/16	Group A	16-486780	

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>
09/19/16	6	2.09	2.09	0	12
09/27/16	3	3.00	2.73	0.27 ³	56
09/28/16 ²	12	2.79	0	2.79	16
09/29/16 ²	16	24.92	0	24.92	28
09/30/16 ²	24	15.64	0	15.64	52

Notes:

- Approx. length of time influent flow rate was above the 15 mgd threshold for allowing flow through the facility.
- Per Note 2 for Table 2-3, the foul sewer diversion lines carrying flow to Eastside Pumping Station were closed during wet weather events on these days. All recorded influent flow was treated through the Northeast Boundary Swirl Facility and discharged as effluent at CSO 019.
- Volume calculated for this event using weir level data.

Chlorination/Dechlorination Systems.

The table below summarizes the information about operation of Swirl Facility chlorination and dechlorination systems during storm events. Chemical feed systems were activated during the storms in which flows were substantial enough to overflow the mix chamber weir. Included in the table are results of residual chlorine and fecal coliform testing for samples taken in the Swirl Facility mix chamber and at the facility effluent outfall to the Anacostia River.

A grab sample is collected and immediately tested with an AutoCat 9000 chlorine residual titrator to obtain test results for residual chlorine. Samples for fecal coliform 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**

Date	Chlor/ Dechlor System Used?	Dosages ²		Residual Chlorine Test Results		E. Coli Test Results	
		NaOCl (mg/l)	NaHSO ₃ (mg/l)	Location	Conc. (mg/l)	Site	Count Per 100ml
09/27/16	Yes	12 ²	5 ²	Mix Chamber	0.3	Mix Chamber	250
				Anacostia River ¹	0.0	Anacostia River ¹	200
09/28/16	Yes	5.4	4.3	Mix Chamber	0.1	Mix Chamber	2,600
				Anacostia River ¹	0.0	Anacostia River ¹	>800,000
09/28/16	Yes	1.7 ³	4.3 ³	Mix Chamber	0.0	Mix Chamber	690,000
				Anacostia River ¹	0.0	Anacostia River ¹	520,000
09/29/16	Yes	1.7 ³	4.3 ³	Mix Chamber	1.2	Mix Chamber	610,000
				Anacostia River ¹	0.0	Anacostia River ¹	490,000
09/29/16	Yes	1.7 ³	4.3 ³	Mix Chamber	1.6	Mix Chamber	>800,000
				Anacostia River ¹	0.0	Anacostia River ¹	>800,000
09/30/16	Yes	1.7 ³	4.3 ³	Mix Chamber	0.8	Mix Chamber	>800,000
				Anacostia River ¹	0.1	Anacostia River ¹	>800,000
09/30/16	Yes	1.7 ³	4.3 ³	Mix Chamber	1.1	Mix Chamber	540,000
				Anacostia River ¹	0.0	Anacostia River ¹	430,000
09/30/16	Yes	1.7 ³	4.3 ³	Mix Chamber	1.3	Mix Chamber	>800,000
				Anacostia River ¹	0.1	Anacostia River ¹	4900

Notes:

1. River: River Outfall
2. Due to ongoing upgrades for the chemical feed systems at the Swirl Facility, exact chemical use could not be provided for this event. Dosage estimates are given based on updated SOPs and estimated chemical use.
3. Due to the nature and duration of this wet weather event, dosage values were averaged for the entire 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>
9/27/16	72.0	0.03	0.29	10.2	10.5	< 0.04	4.47
9/28/16	64.0	0.04	0.26	10.3	10.6	0.88	42.0
9/29/16	52.0	0.03	0.47	12.6	13.1	1.22	56.6
9/30/16	48.0	0.00	0.24	2.39	2.63	0.28	8.76

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 2-10. 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	09/08/16	No	N/A	N/A	N/A
14 - West	09/08/16	No	N/A	N/A	N/A
15	09/08/16	No	N/A	N/A	N/A
15A	09/08/16	No	N/A	N/A	N/A
16 - East	09/08/16	No	N/A	N/A	N/A
16 - West	09/08/16	No	N/A	N/A	N/A
24 - North	09/15/16	No	N/A	N/A	N/A
24 - Middle	09/15/16	No	N/A	N/A	N/A
24 - South	09/15/16	No	N/A	N/A	N/A
34	09/08/16	No	N/A	N/A	N/A
35	09/08/16	No	N/A	N/A	N/A
52	09/15/16	No	N/A	N/A	N/A

**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	09/29/16	3 hrs 55 mins
16 (E & W)	None	N/A
24	09/29/16 09/30/16	1 hr 25 mins 10 mins
34	None	N/A
35	09/28/16 09/29/16	7 mins 1 hr 59 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

3. DRY WEATHER OVERFLOWS

There was one dry weather combined sewer overflow during September 2016.

Sanitary Sewer Overflows:

Location	CSO 007 Discharge between 11 Street and Anacostia Bridge SE
Cause	During a routine inspection, a DC Water field crew discovered an overflow at CSO 007. Pumping operators were contacted and determined that screens at Poplar Point Sewer Pumping Station had malfunctioned causing a backup.
Date/ Time Discovered	September 1, 2016 approximately 2:00 PM
Action Taken	The pumping operators cleared the screen to allow it to function properly.
Date/Time Discharge Ceased	September 1, 2016 approximately 3:05 PM
Estimated Volume	6500 gallons.
Did Overflow Reach Receiving water?	Yes
Action taken to prevent reoccurrence	A comprehensive assessment will be conducted to determine the cause of the malfunction and to determine what action may be needed to prevent a recurrence.

Location	Foundry Branch near W Street and Foxboro Pl., NW
Cause	DC Water received a call regarding a sanitary sewer manhole overflowing into the Foundry Branch stream, on National Park Service Property, in Glover-Archbold Park near 42 nd Street & Davis Place NW. DSS maintenance crew was dispatched to investigate the report. The crew arrived at location 11:15 AM, searched the park until 12:30 PM but did not find an overflowing manhole. Attempts to contact the caller to verify the location was unsuccessful. At 3:01 PM, the same day, DC Water received another call reporting an overflowing manhole in Glover-Archbold Park near W Street and Foxboro Place NW. The manhole was found overflowing.
Date/ Time Discovered	September 10, 2016 approximately 9:03 AM
Action Taken	Due to remote location, the buildup of grease and debris was removed with a specially designed hook.
Date/Time Discharge Ceased	September 10, 2016 approximately 8:00 PM
Estimated Volume	5000 gallons.
Did Overflow Reach Receiving water?	No
Action taken to prevent reoccurrence	Inspection of the 10 inch sewer by close circuit television camera (CCTV) to determine what additional steps may be needed to prevent a recurrence.

SOLIDS AND FLOATABLES CONTROL

3.1 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	1471	1429	601	601	368	420	419	572	568	992	987
2	2944	2679	539	539	78	944	862	56	56	1000	918
3	3634	168	0	0	0	2490	73	3	0	2493	73
4	3488	1719	0	0	0	2986	1661	173	101	3159	1762
5	3871	1746	1688	1688	903	1969	825	751	496	2720	1321
6	3569	2894	2886	2886	804	2332	1971	617	597	2949	2568
7	3474	27	27	27	2	4061	24	45	2	4106	26
8	2678	206	206	206	116	2034	182	65	5	2099	187
Subtotal	25129	10868	5947	5947	2271	17236	6017	2282	1825	19518	7842
DDOT (via VMS) Subtotal											
Grand Total	25129	10868	5947	5947	2271	17236	6017	2282	1825	19518	7843
% Cleaned/Inspected to Date				100%	39%	69%	53%			78%	72%

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.

3.2 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	9/28/2016	Good	Replace nets.	Nets replaced.	350 pounds.
Bar Rack CSO 040	9/11/2016	Good	None	Routine Cleaning	(1)
Bar Rack CSO 041	9/11/2016	Good	None	Routine Cleaning	(1)

Notes:

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

3.3 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>	21
<i>Days not Operating</i>	15
<i>Reason not Operating</i>	Environmental (1) Fleet troubleshooting and maintenance (14). Offloading conveyor down due to pontoon leak for 13 workdays.
<i># Skimmer in Fleet</i>	3 Skimmers
<i># Skimmers Out of Service</i>	1 Skimmer (on the last day of the month)
<i>Dates</i>	B28: 9/1 - 9/30 B29: 9/9 - 9/13 B32: 9/9 - 9/12
<i>Reason</i>	B28: Front assembly catching on hull. B29: Air-conditioning not working. B32: Hydraulic oil leak.
<i>Plan to Restore to Service</i>	B28: Sent to contractors for repair, ETR unknown. B29: Returned to service 9/14. B32: Returned to service 9/13.
<i>Volume Material Collected</i>	20 tons.
<i>Nature of Material</i>	Bottles, cans, natural debris and plastics.

3.4 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.

4. MONITORING

4.1 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 4-1
Bar Racks at Main & O Street Pumping Stations**

Inspector: Keith Watts and Tom Degnan

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)	TD	09/01/16	X			
Bar Racks at Main Storm Pumps (CSO 011)	KW	09/20/16	X			

4.2 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
9/1/2016	0.17	0.12	0.03	0.06	0.03
9/2/2016	0	0	0	0	0
9/3/2016	0	0	0	0	0
9/4/2016	0	0	0	0	0
9/5/2016	0	0	0	0	0
9/6/2016	0	0	0	0	0
9/7/2016	0.11	0.02	0	0.12	0.02
9/8/2016	0	0.01	0	0	0
9/9/2016	0	0	0	0	0
9/10/2016	0	0	0	0	0
9/11/2016	0	0	0	0	0
9/12/2016	0	0	0	0	0
9/13/2016	0	0	0	0	0
9/14/2016	0	0	0	0	0
9/15/2016	0	0	0	0	0
9/16/2016	0	0.01	0	0	0
9/17/2016	0	0	0	0	0
9/18/2016	0	0	0	0	0
9/19/2016	0.40	0.34	0.41	0.37	0.46
9/20/2016	0	0	0	0.05	0
9/21/2016	0	0.01	0	0	0
9/22/2016	0	0	0	0	0
9/23/2016	0	0	0	0	0
9/24/2016	0	0	0	0	0
9/25/2016	0	0	0	0	0
9/26/2016	0.02	0.02	0.04	0.03	0.12
9/27/2016	0.30	0.27	0.36	0.27	0.31
9/28/2016	0.28	0.26	0.25	0.27	0.31
9/29/2016	1.20	1.13	1.01	1.42	1.02
9/30/2016	0.17	0.30	0.22	0.16	0.11
TOTAL	2.65	2.49	2.32	2.75	2.38

District of Columbia Water and Sewer Authority

Combined Sewer System Model Results
Period: July, August, September 2016

SCENARIO: PCCM_Y2016_Q3, produced October 7, 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	15	3.42	41.50	2.77	7.25	0.50
006	Good Hope Road, West of Nichols Ave.,SE	separated					
007	13 th Street and Ridge Place,SE	9	3.88	10.00	1.11	2.00	0.25
009	2nd Street, 300 feet North of N Place, SE	11	2.12	14.25	1.30	2.25	0.25
010	O Street SewagePumping Station, SE (pumped Overflow)	7	18.89	4.75	0.68	1.50	0.25
011	South of Main Sewage Pumping Station, SE (pumped overflow)	1	0.83	0.25	0.25	0.25	0.25
011a	South of Main SewagePumping Station, SE (gravity overflow)	0	0.00	0.00	0.00	0.00	0.00
012	North of Main SewagePumping Station, SE (Tiber Creek)	1	0.16	0.25	0.25	0.25	0.25
013	4th and N Streets, SE	13	2.19	19.50	1.50	4.50	0.25
014	6th and M Streets, SE	9	4.32	15.25	1.69	3.50	0.25
015	9th and M Streets, SE	12	1.18	8.25	0.69	1.50	0.25
016	12th and M Streets, SE	7	3.16	8.75	1.25	2.00	0.25
017	14th and M Streets, SE	13	8.29	30.25	2.33	6.00	0.25
018	Barney Circle andPennsylvania Ave, SE	12	5.34	16.75	1.40	3.00	0.25
019	Northeast Boundary - Swirl Effluent	8	141.57	37.25	4.66	11.25	0.50
019	Northeast Bound. - Swirl Bypass	6	50.59	4.25	0.71	1.00	0.50
	SUBTOTAL		245.95				
Potomac CSOs							
003	Bolling AFB	0	0.00	0.00	0.00	0.00	0.00
020	23rd Street, North ofConstitution Ave, NW (Easby Point)	6	0.76	11.00	1.83	3.00	1.25
021	Northeast ofRoosevelt Bridge, NW	9	127.21	25.75	2.86	6.75	0.25
022	27th and K Streets, NW	13	13.27	19.50	1.50	3.75	0.25
024	30th and K Streets, NW	10	7.23	17.25	1.73	3.50	0.25
025	31st & K St NW	6	0.37	3.50	0.58	0.75	0.50
026	Wisconsin Avenue andK St., NW	0	0.00	0.00	0.00	0.00	0.00
027	Water Street West ofStreet, NW	7	5.06	8.75	1.25	2.25	0.25
028	36th and M Streets, NW	13	1.45	15.00	1.15	3.00	0.25
029	Canal Road 1000 feet east of Rock Creek,NW	8	5.84	9.50	1.19	2.25	0.25
	SUBTOTAL		161.19				
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 extendedwest 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	0.273	10.00	1.43	2.25	0.25
037	Northwest of Belmontand 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 RockCreek, 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 RockCreek Parkway, NW	2	0.06	0.50	0.25	0.25	0.25

District of Columbia Water and Sewer Authority

Combined Sewer System Model Results
Period: July, August, September 2016

SCENARIO: PCCM_Y2016_Q3, produced October 7, 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)	
043	Adams Mill Road South of Irving Street, NW	2	0.69	1.00	0.50	0.75	0.25	
044	Kenyon Street and Adams Mill Road, NW	2	0.004	0.50	0.25	0.25	0.25	
045	Adams Mill Road and Lamont Street, NW	3	0.07	1.00	0.33	0.50	0.25	
046	Park Road south of Piney Branch Parkway, NW	2	0.01	0.75	0.38	0.50	0.25	
047	Ingleside Terrace extended and Piney Branch Parkway	2	0.001	0.75	0.38	0.50	0.25	
048	Mt. Pleasant Street extended and Piney Branch Parkway	3	0.12	1.00	0.33	0.50	0.25	
049	Piney Branch and Lamont Street, NW	7	12.80	13.50	1.93	3.00	0.75	
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		14.04					
	TOTAL		421.17					

#N/A

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