QUARTERLY OPERATIONS REPORT

DISTRICT OF COLUMBIA

COMBINED SEWER OVERFLOW FACILITIES

FOURTH QUARTER, 2015

Prepared By:

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

Monthly Operations Report
For
Combined Sewer System
Month: October 2015

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WATER AND SEWER AUTHORITY
Washington, D.C.

Monthly Operations Report for Combined Sewer System
Month: October 2015

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1. INTRODUCTION

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

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

2. OPERATION AND MAINTENACE

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	10/14/2015	*			
4	Bolling AFB, 2250 ft. north of the south line of the Base, SW	003	10/14/2015	*			
5	Poplar Point Pumping Station	004	10/27/2015	*			
6	Chicago Street and Railroad Ave, SE	005	10/8/2015	*			
7	W Street and Railroad Ave, SE	005	10/8/2015	*			
8[1]	Good Hope Rd, west of Nichols Ave, SE	006	N/A				
9	13th Street and Ridge Place, SE	007	10/8/2015	*			
11	"O" Street Pumping Station	011(a)	10/27/2015	*			
12	Storm Pump Discharge at Main Pumping Station	011	10/27/2015	*			
13	2nd Street, 300 ft. north of N Place, SE	009	10/29/2015	*			
14	2nd Street, 250 ft. north of N Place, SE	011(a)	10/29/2015	*			
15	South Capitol and E Streets	010	10/26/2015	*			
15a	Half and L Streets, SE	010	10/26/2015	*			
15b	South Capitol and I Streets	010	10/26/2015	*			
15c	South Capitol and I Streets	010	10/26/2015	*			

Structure Number	*Location*	*Associated NPDES Outfall*	*Date Inspected*	*Condition*		*Work Needed*	*Work performed*
				Good	Needs Work		
16	North of Main Sewage Pumping Station	012	10/29/2015				Under Construction[2]
17	4th and N Streets, SE, Both Extended	013	10/21/2015	*			
17a	K Street between 6th Street and 7th Street, SE	013	10/21/2015	*			
18	6th and M Streets, SE	014	10/21/2015	*			
19	9th and M Streets, SE	015	10/29/2015	*			
19a	9th and M Streets, SE	015	10/29/2015	*			
20	12th and M Streets, SE	016	10/19/2015	*			
20a	12th and M Streets, SE	016	10/19/2015	*			
21	14th and M Streets, SE	017	10/19/2015	*			
22a	Barney Circle and Pennsylvania Ave, SE	018	10/7/2015	*			
22b	Barney Circle and Pennsylvania Ave, SE	018	10/7/2015	*			
22c	Barney Circle and Pennsylvania Ave, SE	018	10/7/2015	*			
22d	Kentucky Ave and Potomac Street, SE	018	10/21/2015	*			
22e	14th Street and Kentucky Ave, SE	018	10/21/2015	*			
23	Independence Ave, 21st Street, SE, Extended	019	10/15/2015	*			
24a	East Capitol St, west of RFK stadium	019	10/15/2015	*			
28	21st and Constitution Ave, NW	020	10/14/2015	*			
29	22nd Street, between Constitution Ave and C St, NW	020	10/14/2015	*			
30	17th and D Streets, NW	020	10/14/2015	*			
31	15th Street and Pennsylvania Ave, NW	020	10/14/2015	*			
33	10th and F Streets, NW	020	10/14/2015	*			
34	23rd Street, north of Constitution Ave, NW	020	10/14/2015	*			
34a	23rd Street near C Street, NW	020	10/14/2015	*			
35	Northeast of Roosevelt Bridge, NW	021	10/19/2015	*			
36	27th and I Streets, NW	022	10/19/2015	*			
36a	New Hampshire Ave and Eye Street, NW	022	10/19/2015	*			
36b	19th and L Streets, NW	022, 034	10/9/2015	*			
36d	17th and L Streets, NW	022, 034	10/9/2015	*			
36g	18th and M Streets, NW	022, 034	10/9/2015	*			
36h	18th and M Streets, NW	022, 034	10/9/2015	*			
37	27th and Eye Streets, NW	022	10/19/2015	*			
38	29th and K Streets, NW	024	10/6/2015	*			
38a	30th Street, south of K Street, NW	024	10/6/2015	*			
39a	30th and K Streets, NW	024	10/6/2015	*			

Structure Number	*Location*	*Associated NPDES Outfall*	*Date Inspected*	*Condition*		*Work Needed*	*Work performed*
				Good	Needs Work		
39b	30th and K Streets, NW	024	10/6/2015	*			
41b	31st and K Streets, NW	025	10/19/2015	*			
41c	31st and K Streets, NW	025	10/19/2015	*			
42	Wisconsin Ave and K Street, NW	026	10/19/2015	*			
43	Potomac and Water Streets, NW	027	10/19/2015	*			
43a	Potomac and Water Streets, NW	027	10/19/2015	*			
44	Water Street, west of Potomac St, NW	027	10/19/2015	*			
45	36th and M Streets, NW	028	10/6/2015	*			
46	Canal Rd, 1000ft. east of Foxhall Rd, NW	029	10/6/2015	*			
47	38th Street and Reservoir Road, NW	029	10/6/2015	*			
47a	37th and T Streets, NW	029	10/6/2015	*			
47b	37th and T Streets, NW	029	10/6/2015	*			
47c	38th and W Streets, NW	029	10/6/2015	*			
49[1]	Pennsylvania Ave, east side of Rock Creek, NW	031	N/A				
50	26 and M Streets, NW	032	10/21/2015	*			
51	N Street Extended, west of 25th Street, NW	033	10/21/2015	*			
52	22nd Street between M and N Streets, NW	034	10/29/2015	*			
52a	N Street between 22nd and 23rd Streets, NW	034	10/29/2015	*			
53	22nd and M Streets, NW	022, 034	10/6/2015	*			
53a	22nd and M Streets, NW	022, 034	10/29/2015	*			
53b	L Street between 21st Street and New Hampshire Ave, NW	022, 034	10/20/2015	*			
53c	L and 22nd Streets, NW	022	10/20/2015	*			
54	23rd and O Streets, NW	034	10/21/2015	*			
55	22nd Street, south of Q Street, NW	035	10/20/2015	*			
55a	22nd Street, south of Q Street, NW	035	10/20/2015	*			
56	23rd and Massachusetts Ave, NW	036	10/20/2015	*			
57	23rd Street, south of Q Street, NW	036	10/20/2015	*			
58[1]	Northwest of Belmont Road and Rock Creek and Potomac Parkway, NW	037	N/A				
59	North of Belmont Rd, east of Kalorama Cir, NW	038	10/7/2015	*			
60	Connecticut Ave, east of Rock Creek, NW	039	10/7/2015	*			
61	Biltmore St, Extended, east of Rock Creek, NW	040	10/7/2015	*			
62	Ontario Rd, Extended, and Rock Creek Pkwy, NW	041	10/16/2015	*			
63	Harvard Street and Rock Creek Parkway, NW	042	10/16/2015	*			
64	Adams Mill Road, south of Irving Street, NW	043	10/16/2015	*			

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	10/16/2015	*			
65a	Kenyon Street and Adams Mill Road, NW	044	10/16/2015	*			
66	Adams Mill Road and Lamont Street, NW	045	10/16/2015	*			
67	Park Rd , south of Piney Branch Pkwy, NW	046	10/16/2015	*			
68	Ingleside Terrance, Extended and Piney Branch Parkway, NW	047	10/16/2015	*			
69	Mt. Pleasant Street, Extended and Piney Branch Parkway, NW	048	10/16/2015	*			
70	Piney Branch Parkway, west of 16th Street, NW	049	10/15/2015	*			
70i	5th and Quackenbos Streets, NW	049	10/7/2015	*			
71	28th Street, west of Rock Creek Parkway, NW	050	10/15/2015	*			
72	Olive Street Extended and Rock Creek Pkwy, NW	051	10/21/2015	*			
72a	Olive Street Extended and Rock Creek Pkwy, NW	051	10/20/2015	*			
73	O Street Extended and Rock Creek Parkway, NW	052	10/21/2015	*			
74[1]	Q Street, west of Rock Creek, NW	053	N/A				
75	West side of Rock Creek, 300 ft. south of Massachusetts Ave, NW	054	10/9/2015	*			
77	Normanstone Dr Extended, west of Rock Creek, NW	056	10/9/2015	*			
77a	Normanstone Dr and Normanstone Lane, NW	056	10/9/2015	*			
78[1]	28th Street Extended, west of Rock Creek, NW	057	N/A				
79[1]	Connecticut Ave and Rock Creek Parkway, NW	058	N/A				
84	26th and P Streets, NW	060	10/20/2015	*			
84a	26th and P Streets, NW	060	10/20/2015	*			

Notes:

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

2.2 Outfalls, Tide Gates and CSO Signs

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

Table 2-2
Outfalls and Tide Gates

NPDES Outfall	*Location*	*Date Inspected*	*Outfall Condition*		*Tide Gate Present?*		*Tide Gate Condition*		*CSO Sign*		*Notes, Work Needed or Performed*
			OK	Needs Work	Yes	No	OK	Needs Work	OK	Needs Work	
003	Bolling Air Force Base, at Giavanolli and Chanute, SW	10/14/2015	*		*		*		*		
005	Across from Navy Yard, aligned with Parsons Ave., SE	10/8/2015	*		*		*		*		
006[1]	Good Hope Road and Welsh Memorial Bridge	N/A									
007	Between 11th St. and Anacostia Bridges, SE	10/8/2015	*		*		*		*		
009	O St. Sewage Pumping Station, SE	10/27/2015	*		*		*		*		
010	O St. Sewage Pumping Station, SE	10/27/2015	*			*			*		
011	Main Sewage Pumping Station, SE	10/27/2015	*			*			*		
011(a)	Main Sewage Pumping Station, SE	10/27/2015	*		*		*		*		
012	Main Sewage Pumping Station, SE	10/27/2015	*		*		*		*		
013	Southeast Federal Center, aligned with 4th St.	10/27/2015	*		*		*		*		
014	Navy Yard, aligned with 6th St., SE	10/27/2015	*		*		*		*		
015	Navy Yard, aligned with 9th Street, SE	10/27/2015	*			*			*		
016	12th and O Streets, SE	10/15/2015	*		*		*		*		
017	M and Water Street, SE	10/15/2015	*		*		*		*		
018	East of Barney Circle & South of Pennsylvania Avenue Bridge, SE	10/15/2015	*		*		*		*		
019	Adjacent to Service Drive behind swirl facility & D.C. General Hospital	10/26/2015	*			*			*		
020	Rock Creek Parkway and Independence, NW	10/26/2015	*		*		*		*		
021	Rock Creek Parkway and C St., NW	10/26/2015	*			*			*		
022	Rock Creek Parkway and G St., NW	10/15/2015	*		*		*		*		
024	South of 30th and K Streets, NW[1]	10/15/2015	*		*		*		*		
025	South of 31st and K Streets, NW	10/15/2015	*		*		*		*		
026	Wisconsin Avenue and Water Street, NW	10/15/2015	*		*		*		*		
027	33rd and Water Sts., NW	10/15/2015	*			*			*		
028	Key Bridge and Whitehurst Freeway, NW	10/15/2015	*			*			*		
029	Adjacent to C&O Canal, aligned with 38th St. NW	10/15/2015	*		*		*		*		
031[1]	Rock Creek Pkwy & Pennsylvania Avenue, NW	N/A									
032	26th and M Street, NW.	10/21/2015	*			*			*		
033	Across street from St. Francis Jr. High and aligned with N St., NW.	10/21/2015	*		*		*		*		

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	10/20/2015	*		*		*		*		
035	P St. Bridge and Rock Creek Parkway	10/20/2015	*			*			*		
036	22nd Street, South of Q Street NW.	10/26/2015	*		*		*		*		
037[1]	Waterside Dr. and Rock Creek Parkway	N/A									
038	Between arch footbridge and Connecticut Ave., north of Kalorama Circle, NW.	10/6/2015	*		*		*		*		
039	Connecticut Avenue Bridge and Rock Creek Parkway, NW.	10/6/2015	*		*		*		*		
040	Aligned with Biltmore Rd., between Connecticut Ave and Ellington Bridge.	10/6/2015	*		*		*		*		
041	Beach Dr. and Ontario Pl., NW	10/26/2015	*		*		*		*		
042	Harvard St. and Beach Dr NW.	10/26/2015	*		*		*		*		
043	Upstream of Harvard St. and Beach Dr NW.	10/26/2015	*		*		*		*		
044	Kenyon Street and Beach Dr., NW.	10/26/2015	*		*		*		*		
045	North of Beach Dr. and Walbridge Pl, NW.	10/26/2015	*		*		*		*		
046	Piney Branch Parkway and Park Road, NW.	10/16/2015	*		*		*		*		
047	Piney Branch Parkway and Ingleside Terrace	10/16/2015	*		*		*		*		
048	South of Piney Branch Parkway and 17th St.	10/16/2015	*		*		*		*		
049	North of Piney Branch Parkway and 17th St.	10/16/2015	*		*		*		*		
050	Rock Creek Parkway and L St., NW	10/15/2015	*		*		*		*		
051	Across Rock Creek Pkwy, aligned with Olive St., NW.	10/15/2015	*		*		*		*		
052	Between P & Penna. Ave Bridges, aligned with O Street, NW.	10/15/2015	*		*		*		*		
053[1]	Q St. Bridge and Rock Creek Parkway, NW.	N/A									
054	Massachusetts Ave & Rock Creek Parkway, NW.	10/9/2015	*		*		*		*		
056	Normanstone Dr. and Rock Creek Parkway, NW.	10/9/2015	*		*		*		*		
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	10/26/2015	*		*		*		*		

Notes:

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

2.3 Pumping Stations

Pumping station operations are summarized in the table below.

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

Pumping Station	*No. of Inspections*	*No. Screens*	*No. Pumps*	*Screens or Pumps Out of Service*	*Dates*	*Reason*	*Work Order Number*	*Schedule to Restore to Service*[1]
Main	31	3	6	Screen #1 Screen #4	10/01/15-10/31/15 10/01/15-10/31/15	Screen repair Screen repair	15-294442 15-322955	12/30/15 11/21/15
Eastside	4	2	4	Screen #1	10/01/15-10/31/15	Screen repair	15-279291	01/27/16
Poplar Point	4	3	3	Screen #2	10/01/15-10/31/15	Screen repair	15-249437	01/15/16
Potomac	31	4	5	Pump #4 Pump #5	10/01/15-10/31/15 10/01/15-10/31/15	Oil pump repair 72” force main closure	15-270256 15-309749	12/04/15 11/17/15

Notes:

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

Table 2-4
Pumping Stations – Preventive Maintenance

Pumping Station	*Date Performed*	*Type of Preventive Maintenance Performed*[1]	*Work Order Number*	*Comments*
Main	10/07/15	Group A	15-344588	Add oil, grease bearings and replace packing if needed.
O St	10/30/15	Group A	15-376507	Add oil, grease bearings and replace packing if needed.
Eastside	10/03/15	Group A	15-355604	Add oil, grease bearings and replace packing if needed.
Poplar Point	10/09/15	Group A	15-330499	Add oil, grease bearings and replace packing if needed.
Potomac	10/29/15	Group A	15-356301	Add oil, grease bearings and replace packing if needed.
Rock Creek	10/03/15	Group A	15-366486	Add oil, grease bearings and replace packing if needed.
Upper Anacostia	10/03/15	Group A	15-344756	Add oil, grease bearings and replace packing if needed.
Earl Place	10/03/15	Group A	15-363757	Add oil, grease bearings and replace packing if needed.

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

Table 2-5
Pumping Stations – Pumpage

	Sanitary Pumpage		*Storm Water/CSO Pumped To Anacostia River*		
Pumping Station	*Total Wastewater (mg)*	*Daily Average Wastewater (mg)*	*Date*	*Volume (mg)*	*Screenings Collected (units)*[1]
Main	2258.97	72.87	N/A	N/A	N/A
O St	123.89	4.00	10/01/15	56.28	Normal
			10/02/15	5.25	Normal
			10/09/15	6.09	Normal
			10/29/15	23.24	Normal
Eastside	173.08	5.58	N/A	N/A	N/A
Poplar Point	513.42	16.56	N/A	N/A	N/A
Potomac	3139.91	101.29	N/A	N/A	N/A
Rock Creek	142.96	4.61	N/A	N/A	N/A
Upper Anacostia	81.63	2.63	N/A	N/A	N/A
Earl Place	0.13	0.004	N/A	N/A	N/A

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

2.4 Northeast Boundary Swirl Facility

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

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

Date Inspected	*No. Screens*	*No. Swirls*	*Screens or Swirls Out of Service*	*Dates*	*Reason*	*Schedule to Restore to Service*
10/19/15	3	3	N/A	N/A		

Table 2-7
Northeast Boundary Swirl Facility – Preventive Maintenance

Date Performed	*Type of Preventive Maintenance Performed*[1]	*Work Order Number*	*Comments*
10/19/15	Group A	15-366746	

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

Date	*Approx. Storm Duration (hrs)*[1]	*Total Influent Volume (mg)*	*Total Foul Sewer Volume (mg)*	*Total Effluent Volume (mg)*[2]	*Approx. Screenings Volume (Cu. ft)*
10/01/15	5.5	13.8	13.8	0	88
10/02/15	9.5	16.9	15.7	1.2	112
10/09/15	3	6.5	6.5	0	32
10/29/15	4.5	6.5	6.5	0	64

Notes:
1. Approx. length of time influent flow rate was above the 15 mgd threshold for allowing flow through the facility.
2. Volume approximated due to a malfunction of the ESIRS meter.

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, enterococcus and fecal coliform testing for samples taken in the Swirl Facility mix chamber and at the facility effluent outfall to the Anacostia River.

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

Table 2-9
Northeast Boundary Swirl Facility – Disinfection Performance

Date	*Chlor/ Dechlor System Used?*	*Dosages*		*Residual Chlorine Test Results*		*E. Coli Test Results*	
		NaOCl (mg/l)	*$NaHSO_3$ (mg/l)*	*Location*	*Conc. (mg/l)*	*Site*	*Count Per 100ml*
N/A				Mix Chamber		Mix Chamber	
				Anacostia River[1]		Anacostia River[1]	

Notes:
1. River: River Outfall

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

Date	*Flow Composited Sample Results*						
	Total suspended solids (mg/L)	*Nitrite (NO2-N) mg/L*	*Nitrate (NO3-N)) mg/L*	*Total Kjeldahl Nitrogen (mg/L as N)*	*Total Nitrogen (mg/L)*	*Total Phosphorus (mg/L)*	*Carbonaceous Biological Oxygen Demand (mg/L)*
N/A							

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

Inflatable Dam Structure No	*Date Inspected*	*Was Dam Out of Service During the Month?*	*Dates out of Service*	*Reason*	*Schedule to Restore to Service*
14 - East	10/22/15	**No**	**N/A**	**N/A**	**N/A**
14 - West	10/22/15	**No**	**N/A**	**N/A**	**N/A**
15	10/22/15	**No**	**N/A**	**N/A**	**N/A**
15A	10/22/15	**No**	**N/A**	**N/A**	**N/A**
16 - East	10/22/15	**No**	**N/A**	**N/A**	**N/A**
16 - West	10/22/15	**No**	**N/A**	**N/A**	**N/A**
24 - North	10/22/15	**No**	**N/A**	**N/A**	**N/A**
24 - Middle	10/22/15	**No**	**N/A**	**N/A**	**N/A**
24 - South	10/22/15	**No**	**N/A**	**N/A**	**N/A**
34	10/22/15	**No**	**N/A**	**N/A**	**N/A**
35	10/22/15	**No**	**N/A**	**N/A**	**N/A**
52	10/22/15	**No**	**N/A**	**N/A**	**N/A**

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

Inflatable Dam Structure No.	*Overflow Dates*	*Estimated Duration of Overflow*
14 (E & W)	*None*	*N/A*
15	*None*	*N/A*
15A	*None*	*N/A*
16 (E & W)	*None*	*N/A*
24	*10/01/15*	*4 mins*
34	*None*	*N/A*
35	*None*	*N/A*
52	*None*	*N/A*
Structures on Outfall Sewers	*Overflow Dates*	*Estimated Duration of Overflow*
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
Outfall Sewer Control Gates	*Operational Status*	*Position*
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 October 2015.

Sanitary Sewer Overflows:

Location	19th Street and Mississippi Avenue, SE
Cause	DC Water received a service call regarding an overflowing sewer manhole at the intersection of 19th Street and Mississippi Ave., SE, and dispatched a maintenance crew from the Department of Sewer Services (DSS) to investigate the report. The crew found two manholes on a10-inch sanitary sewer overflowing into a nearby storm sewer.
Date/ Time Discovered	October 3, 2015 at approximately 10:45 AM
Action Taken	The crew was able to clear the sewer from a buildup of grease and debris in the line.
Date/Time Discharge Ceased	October 3, 2015 at approximately 1:30 PM
Estimated Volume	10,000 gallons.
Did Overflow Reach Receiving water?	Yes, Oxon Run
Action taken to prevent reoccurrence	We plan to inspect the 10-inch sewer by close circuit television camera (CCTV) to determine whether 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:

			Inspections			*Cleaning*					
						CBs Cleaned Thru Last Month		*CB's Cleaned This Month*		*Total CBs Cleaned This Year to Date*	
Ward	*Total CBs*	*CBs in CSS*	*CBs in Anacostia CSS*	*Total Anacostia CBs Inspected Once this Year*	*Total Anacostia CBs Inspected Twice this Year*	Total	In CSS	Total	In CSS	Total	In CSS
1	1338	1338	1338	783	718	843	843	417	417	1260	1260
2	3320	2961	911	641	630	1011	1001	477	468	1488	1469
3	3237	374	0	0	0	2838	0	303	290	3141	290
4	3002	1683	31	31	31	3481	2022	224	56	3705	2078
5	3703	1886	1738	1738	1221	1054	730	1384	1301	2438	2031
6	3686	3106	3068	3068	2549	2493	2084	449	445	2942	2529
7	3144	52	33	33	33	4296	86	308	49	4604	135
8	2512	347	347	347	347	2331	354	18	13	2349	367
Subtotal	**23942**	**11747**	**7466**	**6641**	**5529**	**18347**	**7120**	**3580**	**3039**	**21927**	**10159**
DDOT (via VMS) Subtotal											
Grand Total	**23942**	**11747**	**7466**								
% Cleaned/Inspected to Date				**89%**	**74%**					**92%**	**86%**

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

Facility	*Date Inspected*	*Condition*	*Work Needed*	*Work performed*	*Material Removed (CY)*
Netting System CSO 018	10/21/2015	Good	Replace nets	Nets replaced	800 pounds.
Bar Rack CSO 040	10/6/2015	Good	None	Routine Cleaning	(1)
Bar Rack CSO 041	10/26/2015	Good	None	Routine Cleaning	(1)

Notes:
(1) System is designed such 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

Program Operation	5-day work week, excluding holidays, weather permitting
Work Days this month:	21
Days not Operating	3
Reason not Operating	Environmental (high winds)
# Skimmer in Fleet	3 Skimmers
# Skimmers Out of Service	1 Skimmer
Dates	B28: 10/1 - 10/31
Reason	B28: Front assembly catching on hull
Plan to Restore to Service	B28: Waiting for parts. ETR unknown
Volume Material Collected	40 tons
Nature of Material	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	10/01/15	X			
Bar Racks at Main Storm Pumps (CSO 011)	WR	10/01/15	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
10/1/2015	0.95	0.68	0.98	0.63	0.78
10/2/2015	1.36	1.14	0.70	0.98	0.96
10/3/2015	0.37	0.27	0.37	0.20	0.19
10/4/2015	0.02	0.01	0.19	0	0
10/5/2015	0	0	0.05	0	0
10/6/2015	0	0	0	0	0
10/7/2015	0	0	0	0	0
10/8/2015	0	0	0	0	0
10/9/2015	0.53	0.48	0.32	0.32	0.40
10/10/2015	0	0	0.02	0.01	0
10/11/2015	0	0	0	0	0
10/12/2015	0	0	0	0	0
10/13/2015	0	0.01	0	0.01	0
10/14/2015	0	0	0	0	0
10/15/2015	0	0	0	0	0
10/16/2015	0	0	0	0	0
10/17/2015	0	0	0	0	0
10/18/2015	0	0	0	0	0
10/19/2015	0	0	0	0	0
10/20/2015	0	0	0	0	0
10/21/2015	0	0	0	0	0
10/22/2015	0	0	0	0	0
10/23/2015	0	0	0	0	0
10/24/2015	0	0	0	0	0
10/25/2015	0.04	0.04	0.02	0.04	0.03
10/26/2015	0	0	0	0	0
10/27/2015	0	0	0	0	0
10/28/2015	0.39	0.37	0.21	0.42	0.65
10/29/2015	0.56	0.52	0.50	0.42	0.03
10/30/2015	0	0	0	0	0
10/31/2015	0	0	0	0	0
TOTAL	4.22	3.52	3.36	3.03	3.04

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

Monthly Operations Report
For
Combined Sewer System
Month: November 2015

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: November 2015

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1. INTRODUCTION

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

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

2. OPERATION AND MAINTENACE

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	11/24/15	*			
4	Bolling AFB, 2250 ft. north of the south line of the Base, SW	003	11/24/15	*			
5	Poplar Point Pumping Station	004	11/24/15	*			
6	Chicago Street and Railroad Ave, SE	005	11/3/15	*			
7	W Street and Railroad Ave, SE	005	11/3/15	*			
8[1]	Good Hope Rd, west of Nichols Ave, SE	006	N/A				
9	13th Street and Ridge Place, SE	007	11/3/15	*			
11	"O" Street Pumping Station	011(a)	11/24/15	*			
12	Storm Pump Discharge at Main Pumping Station	011	11/24/15	*			
13	2nd Street, 300 ft. north of N Place, SE	009	11/23/15	*			
14	2nd Street, 250 ft. north of N Place, SE	011(a)	11/23/15	*			
15	South Capitol and E Streets	010	11/23/15	*			
15a	Half and L Streets, SE	010	11/23/15	*			
15b	South Capitol and I Streets	010	11/6/15	*			
15c	South Capitol and I Streets	010	11/6/15	*			

Structure Number	*Location*	*Associated NPDES Outfall*	*Date Inspected*	*Condition*		*Work Needed*	*Work performed*
				Good	Needs Work		
16	North of Main Sewage Pumping Station	012	11/23/15	*			
17	4th and N Streets, SE, Both Extended	013	11/23/15	*			
17a	K Street between 6th Street and 7th Street, SE	013	11/23/15	*			
18	6th and M Streets, SE	014	11/4/15	*			
19	9th and M Streets, SE	015	11/9/15	*			
19a	9th and M Streets, SE	015	11/9/15	*			
20	12th and M Streets, SE	016	11/9/15	*			
20a	12th and M Streets, SE	016	11/9/15	*			
21	14th and M Streets, SE	017	11/9/15	*			
22a	Barney Circle and Pennsylvania Ave, SE	018	11/17/15	*			
22b	Barney Circle and Pennsylvania Ave, SE	018	11/17/15	*			
22c	Barney Circle and Pennsylvania Ave, SE	018	11/17/15	*			
22d	Kentucky Ave and Potomac Street, SE	018	11/9/15	*			
22e	14th Street and Kentucky Ave, SE	018	11/9/15	*			
23	Independence Ave, 21st Street, SE, Extended	019	11/18/15	*			
24a	East Capitol St, west of RFK stadium	019	11/18/15	*			
28	21st and Constitution Ave, NW	020	11/20/15	*			
29	22nd Street, between Constitution Ave and C St, NW	020	11/20/15	*			
30	17th and D Streets, NW	020	11/6/15	*			
31	15th Street and Pennsylvania Ave, NW	020	11/6/15	*			
33	10th and F Streets, NW	020	11/6/15	*			
34	23rd Street, north of Constitution Ave, NW	020	11/20/15	*			
34a	23rd Street near C Street, NW	020	11/20/15	*			
35	Northeast of Roosevelt Bridge, NW	021	11/20/15	*			
36	27th and I Streets, NW	022	11/20/15	*			
36a	New Hampshire Ave and Eye Street, NW	022	11/20/15	*			
36b	19th and L Streets, NW	022, 034	11/4/15	*			
36d	17th and L Streets, NW	022, 034	11/2/15	*			
36g	18th and M Streets, NW	022, 034	11/2/15	*			
36h	18th and M Streets, NW	022, 034	11/2/15	*			
37	27th and Eye Streets, NW	022	11/20/15	*			
38	29th and K Streets, NW	024	11/3/15	*			
38a	30th Street, south of K Street, NW	024	11/3/15	*			
39a	30th and K Streets, NW	024	11/3/15	*			

Structure Number	*Location*	*Associated NPDES Outfall*	*Date Inspected*	*Condition*		*Work Needed*	*Work performed*
				Good	Needs Work		
39b	30th and K Streets, NW	024	11/3/15	*			
41b	31st and K Streets, NW	025	11/3/15	*			
41c	31st and K Streets, NW	025	11/3/15	*			
42	Wisconsin Ave and K Street, NW	026	11/3/15	*			
43	Potomac and Water Streets, NW	027	11/6/15	*			
43a	Potomac and Water Streets, NW	027	11/6/15	*			
44	Water Street, west of Potomac St, NW	027	11/6/15	*			
45	36th and M Streets, NW	028	11/2/15	*			
46	Canal Rd, 1000ft. east of Foxhall Rd, NW	029	11/2/15	*			
47	38th Street and Reservoir Road, NW	029	11/2/15	*			
47a	37th and T Streets, NW	029	11/2/15	*			
47b	37th and T Streets, NW	029	11/2/15	*			
47c	38th and W Streets, NW	029	11/2/15	*			
49[1]	Pennsylvania Ave, east side of Rock Creek, NW	031	N/A				
50	26 and M Streets, NW	032	11/20/15	*			
51	N Street Extended, west of 25th Street, NW	033	11/20/15	*			
52	22nd Street between M and N Streets, NW	034	11/16/15	*			
52a	N Street between 22nd and 23rd Streets, NW	034	11/20/15	*			
53	22nd and M Streets, NW	022, 034	11/20/15	*			
53a	22nd and M Streets, NW	022, 034	11/20/15	*			
53b	L Street between 21st Street and New Hampshire Ave, NW	022, 034	11/20/15	*			
53c	L and 22nd Streets, NW	022	11/20/15	*			
54	23rd and O Streets, NW	034	11/17/15	*			
55	22nd Street, south of Q Street, NW	035	11/17/15	*			
55a	22nd Street, south of Q Street, NW	035	11/17/15	*			
56	23rd and Massachusetts Ave, NW	036	11/17/15	*			
57	23rd Street, south of Q Street, NW	036	11/17/15	*			
58[1]	Northwest of Belmont Road and Rock Creek and Potomac Parkway, NW	037	N/A				
59	North of Belmont Rd, east of Kalorama Cir, NW	038	11/9/15	*			
60	Connecticut Ave, east of Rock Creek, NW	039	11/9/15	*			
61	Biltmore St, Extended, east of Rock Creek, NW	040	11/9/15	*			
62	Ontario Rd, Extended, and Rock Creek Pkwy, NW	041	11/4/15	*			
63	Harvard Street and Rock Creek Parkway, NW	042	11/4/15	*			
64	Adams Mill Road, south of Irving Street, NW	043	11/4/15	*			

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	11/4/15	*			
65a	Kenyon Street and Adams Mill Road, NW	044	11/4/15	*			
66	Adams Mill Road and Lamont Street, NW	045	11/4/15	*			
67	Park Rd , south of Piney Branch Pkwy, NW	046	11/4/15	*			
68	Ingleside Terrance, Extended and Piney Branch Parkway, NW	047	11/4/15	*			
69	Mt. Pleasant Street, Extended and Piney Branch Parkway, NW	048	11/4/15	*			
70	Piney Branch Parkway, west of 16th Street, NW	049	11/4/15	*			
70i	5th and Quackenbos Streets, NW	049	11/9/15	*			
71	28th Street, west of Rock Creek Parkway, NW	050	11/23/15	*			
72	Olive Street Extended and Rock Creek Pkwy, NW	051	11/17/15	*			
72a	Olive Street Extended and Rock Creek Pkwy, NW	051	11/17/15	*			
73	O Street Extended and Rock Creek Parkway, NW	052	11/17/15	*			
74[1]	Q Street, west of Rock Creek, NW	053	N/A				
75	West side of Rock Creek, 300 ft. south of Massachusetts Ave, NW	054	11/23/15	*			
77	Normanstone Dr Extended, west of Rock Creek, NW	056	11/23/15	*			
77a	Normanstone Dr and Normanstone Lane, NW	056	11/23/15	*			
78[1]	28th Street Extended, west of Rock Creek, NW	057	N/A				
79[1]	Connecticut Ave and Rock Creek Parkway, NW	058	N/A				
84	26th and P Streets, NW	060	11/17/15	*			
84a	26th and P Streets, NW	060	11/17/15	*			

Notes:

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

2.2 Outfalls, Tide Gates and CSO Signs

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

Table 2-2
Outfalls and Tide Gates

NPDES Outfall	*Location*	*Date Inspected*	*Outfall Condition*		*Tide Gate Present?*		*Tide Gate Condition*		*CSO Sign*		*Notes, Work Needed or Performed*
			OK	Needs Work	Yes	No	OK	Needs Work	OK	Needs Work	
003	Bolling Air Force Base, at Giavanolli and Chanute, SW	11/24/15	*		*		*		*		
005	Across from Navy Yard, aligned with Parsons Ave., SE	11/5/15	*		*		*		*		
006[1]	Good Hope Road and Welsh Memorial Bridge	N/A									
007	Between 11th St. and Anacostia Bridges, SE	11/5/15	*		*		*		*		
009	O St. Sewage Pumping Station, SE	11/24/15	*		*		*		*		
010	O St. Sewage Pumping Station, SE	11/24/15	*			*			*		
011	Main Sewage Pumping Station, SE	11/24/15	*			*			*		
011(a)	Main Sewage Pumping Station, SE	11/24/15	*		*		*		*		
012	Main Sewage Pumping Station, SE	11/24/15	*		*		*		*		
013	Southeast Federal Center, aligned with 4th St.	11/24/15	*		*		*		*		
014	Navy Yard, aligned with 6th St., SE	11/24/15	*		*		*		*		
015	Navy Yard, aligned with 9th Street, SE	11/24/15	*			*			*		
016	12th and O Streets, SE	11/5/15	*		*		*		*		
017	M and Water Street, SE	11/24/15	*		*		*		*		
018	East of Barney Circle & South of Pennsylvania Avenue Bridge, SE	11/5/15	*		*		*		*		
019	Adjacent to Service Drive behind swirl facility & D.C. General Hospital	11/24/15	*			*			*		
020	Rock Creek Parkway and Independence, NW	11/19/15	*		*		*		*		
021	Rock Creek Parkway and C St., NW	11/19/15	*			*			*		
022	Rock Creek Parkway and G St., NW	11/19/15	*		*		*		*		
024	South of 30th and K Streets, NW[1]	11/19/15	*		*		*		*		
025	South of 31st and K Streets, NW	11/19/15	*		*		*		*		
026	Wisconsin Avenue and Water Street, NW	11/19/15	*		*		*		*		
027	33rd and Water Sts., NW	11/19/15	*			*			*		
028	Key Bridge and Whitehurst Freeway, NW	11/19/15	*			*			*		
029	Adjacent to C&O Canal, aligned with 38th St. NW	11/19/15	*		*		*		*		
031[1]	Rock Creek Pkwy & Pennsylvania Avenue, NW	N/A									
032	26th and M Street, NW.	11/20/15	*			*			*		

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	
033	Across street from St. Francis Jr. High and aligned with N St., NW.	11/20/15	*		*		*		*		
034	Just west of St. Francis Jr. High and north of N St., NW	11/17/15	*		*		*		*		
035	P St. Bridge and Rock Creek Parkway	11/17/15	*			*			*		
036	22nd Street, South of Q Street NW.	11/23/15	*		*		*		*		
037[1]	Waterside Dr. and Rock Creek Parkway	N/A									
038	Between arch footbridge and Connecticut Ave., north of Kalorama Circle, NW.	11/9/15	*		*		*		*		
039	Connecticut Avenue Bridge and Rock Creek Parkway, NW.	11/9/15	*		*		*		*		
040	Aligned with Biltmore Rd., between Connecticut Ave and Ellington Bridge.	11/9/15	*		*		*		*		
041	Beach Dr. and Ontario Pl., NW	11/5/15	*		*		*		*		
042	Harvard St. and Beach Dr NW.	11/5/15	*		*		*		*		
043	Upstream of Harvard St. and Beach Dr NW.	11/5/15	*		*		*		*		
044	Kenyon Street and Beach Dr., NW.	11/5/15	*		*		*		*		
045	North of Beach Dr. and Walbridge Pl, NW.	11/5/15	*		*		*		*		
046	Piney Branch Parkway and Park Road, NW.	11/4/15	*		*		*		*		
047	Piney Branch Parkway and Ingleside Terrace	11/4/15	*		*		*		*		
048	South of Piney Branch Parkway and 17th St.	11/4/15	*		*		*		*		
049	North of Piney Branch Parkway and 17th St.	11/4/15	*		*		*		*		
050	Rock Creek Parkway and L St., NW	11/23/15	*		*		*		*		
051	Across Rock Creek Pkwy, aligned with Olive St., NW.	11/24/15	*		*			*	*		Repair WO #16-136716. Expected completion date 2/30/2016
052	Between P & Penna. Ave Bridges, aligned with O Street, NW.	11/24/15	*		*		*		*		
053[1]	Q St. Bridge and Rock Creek Parkway, NW.	N/A									
054	Massachusetts Ave & Rock Creek Parkway, NW.	11/23/15	*		*		*		*		
056	Normanstone Dr. and Rock Creek Parkway, NW.	11/23/15	*		*		*		*		
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	11/23/15	*		*		*		*		

Notes:

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

2.3 Pumping Stations

Pumping station operations are summarized in the table below.

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

Pumping Station	*No. of Inspections*	*No. Screens*	*No. Pumps*	*Screens or Pumps Out of Service*	*Dates*	*Reason*	*Work Order Number*	*Schedule to Restore to Service*[1]
Main	30	3	6	Screen #1	11/01/15-11/30/15	Screen repair	15-294442	12/30/15
				Screen #4	11/01/15-11/21/15	Screen repair	16-75242	Returned to service on 11/21/15
				Low Area Pump #1	11/13/15-11/16/15	Pump lost power	16-83259	Returned to service on 11/17/15
Eastside	2	2	4	Screen #1	11/01/15-11/30/15	Screen repair	15-279291	01/27/16
				Pump #1	11/12/15-11/30/15	Pump repair	16-82841	02/28/16
Poplar Point	2	3	3	Screen #2	11/01/15-11/30/15	Screen repair	15-249437	01/15/16
Potomac	30	4	5	Pump #4	11/01/15-11/30/15	Oil pump repair	15-270256	12/04/15
				Pump #5	11/01/15-11/17/15	72” force main closure	15-309749	Returned to service on 11/17/15
				Pump #5	11/20/15-11/30/15	72” force main re-closed		

Notes:

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

Table 2-4
Pumping Stations – Preventive Maintenance

Pumping Station	*Date Performed*	*Type of Preventive Maintenance Performed*[1]	*Work Order Number*	*Comments*
Main	11/01/15	Group A	15-382308	Add oil, grease bearings and replace packing if needed.
O St	11/01/15	Group A	16-49533	Add oil, grease bearings and replace packing if needed.
Eastside	11/14/15	Group A	16-26624	Add oil, grease bearings and replace packing if needed.
Poplar Point	11/14/15	Group A	15-379034	Add oil, grease bearings and replace packing if needed.
Potomac	11/01/15	Group A	16-26983	Add oil, grease bearings and replace packing if needed.
Rock Creek	11/14/15	Group A	16-31064	Add oil, grease bearings and replace packing if needed.
Upper Anacostia	11/14/15	Group A	15-382364	Add oil, grease bearings and replace packing if needed.
Earl Place	11/14/15	Group A	16-48158	Add oil, grease bearings and replace packing if needed.

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

Table 2-5
Pumping Stations – Pumpage

	Sanitary Pumpage		*Storm Water/CSO Pumped To Anacostia River*		
Pumping Station	*Total Wastewater (mg)*	*Daily Average Wastewater (mg)*	*Date*	*Volume (mg)*	*Screenings Collected (units)*[1]
Main	2074.13	69.14	N/A	N/A	N/A
O St	109.06	3.64	11/10/2015	13.16	Normal
Eastside	133.28	4.44	N/A	N/A	N/A
Poplar Point	501.11	16.70	N/A	N/A	N/A
Potomac	2973.90	99.13	N/A	N/A	N/A
Rock Creek	123.63	4.12	N/A	N/A	N/A
Upper Anacostia	71.93	2.40	N/A	N/A	N/A
Earl Place	0.16	0.006	N/A	N/A	N/A

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

2.4 Northeast Boundary Swirl Facility

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

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

Date Inspected	*No. Screens*	*No. Swirls*	*Screens or Swirls Out of Service*	*Dates*	*Reason*	*Schedule to Restore to Service*
11/25/15	3	3	N/A	N/A		

Table 2-7
Northeast Boundary Swirl Facility – Preventive Maintenance

Date Performed	*Type of Preventive Maintenance Performed*[1]	*Work Order Number*	*Comments*
11/25/15	Group A	16-31106	

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

Date	*Approx. Storm Duration (hrs)*[1]	*Total Influent Volume (mg)*	*Total Foul Sewer Volume (mg)*	*Total Effluent Volume (mg)*[2]	*Approx. Screenings Volume (Cu. ft)*
11/10/15	9.5	15.3	6.6	8.7	64
11/19/15	7.5	14.4	5.6	8.8	60

Notes:
1. Approx. length of time influent flow rate was above the 15 mgd threshold for allowing flow through the facility.
2. Volume approximated due to a malfunction of the ESIRS meter.

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, enterococcus and fecal coliform testing for samples taken in the Swirl Facility mix chamber and at the facility effluent outfall to the Anacostia River.

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

Table 2-9
Northeast Boundary Swirl Facility – Disinfection Performance

Date	*Chlor/ Dechlor System Used?*	*Dosages*		*Residual Chlorine Test Results*		*E. Coli Test Results*	
		NaOCl (mg/l)	*$NaHSO_3$ (mg/l)*	*Location*	*Conc. (mg/l)*	*Site*	*Count Per 100ml*
11/19/15	Yes	17.0	0	Mix Chamber	0.3	Mix Chamber	280
				Anacostia River[1]	0.1	Anacostia River[1]	144

Notes:
1. River: River Outfall

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

Date	*Flow Composited Sample Results*						
	Total suspended solids (mg/L)	*Nitrite (NO2-N) mg/L*	*Nitrate (NO3-N)) mg/L*	*Total Kjeldahl Nitrogen (mg/L as N)*	*Total Nitrogen (mg/L)*	*Total Phosphorus (mg/L)*	*Carbonaceous Biological Oxygen Demand (mg/L)*
11/19/15	38.0	0.00	0.42	3.41	3.83	0.54	18.8

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

Inflatable Dam Structure No	*Date Inspected*	*Was Dam Out of Service During the Month?*	*Dates out of Service*	*Reason*	*Schedule to Restore to Service*
14 - East	11/25/15	**No**	**N/A**	**N/A**	**N/A**
14 - West	11/25/15	**No**	**N/A**	**N/A**	**N/A**
15	11/25/15	**No**	**N/A**	**N/A**	**N/A**
15A	11/25/15	**No**	**N/A**	**N/A**	**N/A**
16 - East	11/25/15	**No**	**N/A**	**N/A**	**N/A**
16 - West	11/25/15	**No**	**N/A**	**N/A**	**N/A**
24 - North	11/25/15	**No**	**N/A**	**N/A**	**N/A**
24 - Middle	11/25/15	**No**	**N/A**	**N/A**	**N/A**
24 - South	11/25/15	**No**	**N/A**	**N/A**	**N/A**
34	11/25/15	**No**	**N/A**	**N/A**	**N/A**
35	11/25/15	**No**	**N/A**	**N/A**	**N/A**
52	11/25/15	**No**	**N/A**	**N/A**	**N/A**

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

Inflatable Dam Structure No.	*Overflow Dates*	*Estimated Duration of Overflow*
14 (E & W)	*None*	*N/A*
15	*None*	*N/A*
15A	*None*	*N/A*
16 (E & W)	*None*	*N/A*
24	*None*	*N/A*
34	*None*	*N/A*
35	*None*	*N/A*
52	*None*	*N/A*
Structures on Outfall Sewers	*Overflow Dates*	*Estimated Duration of Overflow*
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
Outfall Sewer Control Gates	*Operational Status*	*Position*
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 November 2015.

Sanitary Sewer Overflows:

Location	I-395/14th Street, SW
Cause	A 72–inch force main sewer was recently taken out of service to perform a routine internal inspection as part of our sewer rehabilitation program. A project was completed to address the deficient pipe segments and the main was scheduled to be re-pressurized and placed back in service. The re-charging process was started and DC Water staff reported that they observed what appeared to be sewage bubbling to the surface at I-395 near the 14th Street Bridge. They found an open air release valve on the forced main which allowed sewage to exit the valve vault onto the surface near the 14th Street Bridge.
Date/ Time Discovered	November 18, 2015 at approximately 2:30 PM
Action Taken	The Pump Station was immediately contacted to isolate and discontinue flow into the pipeline.
Date/Time Discharge Ceased	November 18, 2015 at 4:30 PM
Estimated Volume	15,000 to 20,000 gallons.
Did Overflow Reach Receiving water?	Yes, the Potomac River via a nearby catch basin
Action taken to prevent reoccurrence	To prevent a recurrence of this situation when re-pressurizing the 72-inch force main, all of the air release manholes locations will be manned and monitored, while the pipeline is being put into service

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:

			Inspections			*Cleaning*					
						CBs Cleaned Thru Last Month		*CB's Cleaned This Month*		*Total CBs Cleaned This Year to Date*	
Ward	*Total CBs*	*CBs in CSS*	*CBs in Anacostia CSS*	*Total Anacostia CBs Inspected Once this Year*	*Total Anacostia CBs Inspected Twice this Year*	Total	In CSS	Total	In CSS	Total	In CSS
1	1338	1338	1338	1338	1338	1260	1260	96	96	1356	1356
2	3320	2961	911	911	857	1488	1469	1177	1177	2665	2646
3	3237	374	0	0	0	3141	290	414	243	3555	533
4	3002	1683	31	31	31	3705	2078	15	15	3720	2093
5	3703	1886	1738	1738	1738	2438	2031	625	518	3063	2549
6	3686	3106	3068	3068	3068	2942	2529	664	664	3606	3193

7	3144	52	33	33	33	4604	135	6	0	4610	135
8	2512	347	347	347	347	2349	367	9	0	2358	367
Subtotal	**23942**	**11747**	**7466**	**7466**	**7412**	**21927**	**10159**	**3006**	**2713**	**24933**	**12872**
DDOT (via VMS) Subtotal											
Grand Total	**23942**	**11747**	**7466**								
% Cleaned/Inspected to Date				**100%**	**99%**					**104%**	**110%**

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

Facility	*Date Inspected*	*Condition*	*Work Needed*	*Work performed*	*Material Removed (CY)*
Netting System CSO 018	11/25/2015	Good	Routine cleaning	Routine Cleaning	None
Bar Rack CSO 040	11/9/2015	Good	None	Routine Cleaning	(1)
Bar Rack CSO 041	11/5/2015	Good	None	Routine Cleaning	(1)

Notes:
(1) System is designed such 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

Program Operation	5-day work week, excluding holidays, weather permitting
Work Days this month:	19
Days not Operating	8
Reason not Operating	Environmental
# Skimmer in Fleet	3 Skimmers
# Skimmers Out of Service	2 Skimmers
Dates	B28: 11/3 - 11/30 B29: 11/1 - 11/30
Reason	B28: Front assembly catching on hull. B29: Losing power while operating. Hydraulic oil leak in prop.
Plan to Restore to Service	B28: Fleet troubleshooting ETR unknown. B29: Under repair. ETR December 2015.
Volume Material Collected	10 tons.
Nature of Material	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	11/01/15	X			
Bar Racks at Main Storm Pumps (CSO 011)	WR	11/01/15	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
11/1/2015	0.03	0.03	0.02	0.03	0.04
11/2/2015	0	0	0	0	0
11/3/2015	0	0	0	0	0
11/4/2015	0.03	0.01	0.01	0.03	0.02
11/5/2015	0.16	0.15	0.23	0.15	0.15
11/6/2015	0.06	0.10	0.14	0.06	0
11/7/2015	0.12	0.16	0.12	0.14	0.11
11/8/2015	0	0	0	0	0
11/9/2015	0.55	0.58	0.66	0.57	0.53
11/10/2015	0.24	0.25	0.28	0.22	0.24
11/11/2015	0	0	0	0	0
11/12/2015	0.02	0.02	0.01	0.02	0.01
11/13/2015	0	0	0	0	0
11/14/2015	0	0	0	0	0
11/15/2015	0	0	0	0	0
11/16/2015	0	0	0	0	0
11/17/2015	0	0	0	0	0
11/18/2015	0	0	0	0	0
11/19/2015	0.66	0.65	0.60	0.59	0.63
11/20/2015	0.01	0	0	0	0
11/21/2015	0	0	0	0	0
11/22/2015	0	0	0	0	0
11/23/2015	0	0	0	0	0
11/24/2015	0.01	0	0	0	0
11/25/2015	0	0	0	0	0
11/26/2015	0	0	0	0	0
11/27/2015	0	0	0	0	0
11/28/2015	0	0	0	0	0
11/29/2015	0.20	0.20	0.19	0.21	0.17
11/30/2015	0.21	0.19	0.18	0.20	0.20
TOTAL	2.30	2.34	2.44	2.22	2.10

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

Monthly Operations Report
For
Combined Sewer System
Month: December 2015

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: December 2015

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1. INTRODUCTION

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

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

2. OPERATION AND MAINTENACE

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	12/18/15	*			
4	Bolling AFB, 2250 ft. north of the south line of the Base, SW	003	12/18/15	*			
5	Poplar Point Pumping Station	004	12/16/15	*			
6	Chicago Street and Railroad Ave, SE	005	12/02/15	*			
7	W Street and Railroad Ave, SE	005	12/02/15	*			
8[1]	Good Hope Rd, west of Nichols Ave, SE	006	N/A				
9	13th Street and Ridge Place, SE	007	12/01/15	*			
11	"O" Street Pumping Station	011(a)	12/16/15	*			
12	Storm Pump Discharge at Main Pumping Station	011	12/18/15	*			
13	2nd Street, 300 ft. north of N Place, SE	009	12/07/15	*			
14	2nd Street, 250 ft. north of N Place, SE	011(a)	12/07/15	*			
15	South Capitol and E Streets	010	12/02/15	*			
15a	Half and L Streets, SE	010	12/18/15	*			
15b	South Capitol and I Streets	010	12/02/15	*			

Structure Number	*Location*	*Associated NPDES Outfall*	*Date Inspected*	*Condition*		*Work Needed*	*Work performed*
				Good	Needs Work		
15c	South Capitol and I Streets	010	12/02/15	*			
16	North of Main Sewage Pumping Station	012	12/07/15	*			
17	4th and N Streets, SE, Both Extended	013	12/16/15	*			
17a	K Street between 6th Street and 7th Street, SE	013	12/16/15	*			
18	6th and M Streets, SE	014	12/14/15	*			
19	9th and M Streets, SE	015	12/02/15	*			
19a	9th and M Streets, SE	015	12/02/15	*			
20	12th and M Streets, SE	016	12/02/15	*			
20a	12th and M Streets, SE	016	12/02/15	*			
21	14th and M Streets, SE	017	12/02/15	*			
22a	Barney Circle and Pennsylvania Ave, SE	018	12/14/15	*			
22b	Barney Circle and Pennsylvania Ave, SE	018	12/14/15	*			
22c	Barney Circle and Pennsylvania Ave, SE	018	12/14/15	*			
22d	Kentucky Ave and Potomac Street, SE	018	12/14/15	*			
22e	14th Street and Kentucky Ave, SE	018	12/14/15	*			
23	Independence Ave, 21st Street, SE, Extended	019	12/16/15	*			
24a	East Capitol St, west of RFK stadium	019	12/16/15	*			
28	21st and Constitution Ave, NW	020	12/08/15	*			
29	22nd Street, between Constitution Ave and C St, NW	020	12/08/15	*			
30	17th and D Streets, NW	020	12/04/15	*			
31	15th Street and Pennsylvania Ave, NW	020	12/04/15	*			
33	10th and F Streets, NW	020	12/04/15	*			
34	23rd Street, north of Constitution Ave, NW	020	12/08/15	*			
34a	23rd Street near C Street, NW	020	12/08/15	*			
35	Northeast of Roosevelt Bridge, NW	021	12/08/15	*			
36	27th and I Streets, NW	022	12/08/15	*			
36a	New Hampshire Ave and Eye Street, NW	022	12/08/15	*			
36b	19th and L Streets, NW	022, 034	12/04/15	*			
36d	17th and L Streets, NW	022, 034	12/04/15	*			
36g	18th and M Streets, NW	022, 034	12/04/15	*			
36h	18th and M Streets, NW	022, 034	12/04/15	*			

Structure Number	*Location*	*Associated NPDES Outfall*	*Date Inspected*	*Condition*		*Work Needed*	*Work performed*
				Good	Needs Work		
37	27th and Eye Streets, NW	022	12/08/15	*			
38	29th and K Streets, NW	024	12/01/15	*			
38a	30th Street, south of K Street, NW	024	12/01/15	*			
39a	30th and K Streets, NW	024	12/01/15	*			
39b	30th and K Streets, NW	024	12/01/15	*			
41b	31st and K Streets, NW	025	12/01/15	*			
41c	31st and K Streets, NW	025	12/01/15	*			
42	Wisconsin Ave and K Street, NW	026	12/01/15	*			
43	Potomac and Water Streets, NW	027	12/01/15	*			
43a	Potomac and Water Streets, NW	027	12/01/15	*			
44	Water Street, west of Potomac St, NW	027	12/01/15	*			
45	36th and M Streets, NW	028	12/02/15	*			
46	Canal Rd, 1000ft. east of Foxhall Rd, NW	029	12/02/15	*			
47	38th Street and Reservoir Road, NW	029	12/02/15	*			
47a	37th and T Streets, NW	029	12/02/15	*			
47b	37th and T Streets, NW	029	12/02/15	*			
47c	38th and W Streets, NW	029	12/02/15	*			
49[1]	Pennsylvania Ave, east side of Rock Creek, NW	031	N/A				
50	26 and M Streets, NW	032	12/14/15	*			
51	N Street Extended, west of 25th Street, NW	033	12/14/15	*			
52	22nd Street between M and N Streets, NW	034	12/16/15	*			
52a	N Street between 22nd and 23rd Streets, NW	034	12/16/15	*			
53	22nd and M Streets, NW	022, 034	12/16/15	*			
53a	22nd and M Streets, NW	022, 034	12/16/15	*			
53b	L Street between 21st Street and New Hampshire Ave, NW	022, 034	12/14/15	*			
53c	L and 22nd Streets, NW	022	12/14/15	*			
54	23rd and O Streets, NW	034	12/11/15	*			
55	22nd Street, south of Q Street, NW	035	12/11/15	*			
55a	22nd Street, south of Q Street, NW	035	12/11/15	*			
56	23rd and Massachusetts Ave, NW	036	12/11/15	*			
57	23rd Street, south of Q Street, NW	036	12/11/15	*			

Structure Number	*Location*	*Associated NPDES Outfall*	*Date Inspected*	*Condition*		*Work Needed*	*Work performed*
				Good	Needs Work		
58[1]	Northwest of Belmont Road and Rock Creek and Potomac Parkway, NW	037	N/A				
59	North of Belmont Rd, east of Kalorama Cir, NW	038	12/04/15	*			
60	Connecticut Ave, east of Rock Creek, NW	039	12/04/15	*			
61	Biltmore St, Extended, east of Rock Creek, NW	040	12/04/15	*			
62	Ontario Rd, Extended, and Rock Creek Pkwy, NW	041	12/09/15	*			
63	Harvard Street and Rock Creek Parkway, NW	042	12/09/15	*			
64	Adams Mill Road, south of Irving Street, NW	043	12/09/15	*			
65	Kenyon Street and Adams Mill Road, NW	044	12/09/15	*			
65a	Kenyon Street and Adams Mill Road, NW	044	12/09/15	*			
66	Adams Mill Road and Lamont Street, NW	045	12/09/15	*			
67	Park Rd , south of Piney Branch Pkwy, NW	046	12/09/15	*			
68	Ingleside Terrance, Extended and Piney Branch Parkway, NW	047	12/09/15	*			
69	Mt. Pleasant Street, Extended and Piney Branch Parkway, NW	048	12/09/15	*			
70	Piney Branch Parkway, west of 16th Street, NW	049	12/09/15	*			
70i	5th and Quackenbos Streets, NW	049	12/01/15	*			
71	28th Street, west of Rock Creek Parkway, NW	050	12/10/15	*			
72	Olive Street Extended and Rock Creek Pkwy, NW	051	12/11/15	*			
72a	Olive Street Extended and Rock Creek Pkwy, NW	051	12/11/15	*			
73	O Street Extended and Rock Creek Parkway, NW	052	12/11/15	*			
74[1]	Q Street, west of Rock Creek, NW	053	N/A				
75	West side of Rock Creek, 300 ft. south of Massachusetts Ave, NW	054	12/07/15	*			
77	Normanstone Dr Extended, west of Rock Creek, NW	056	12/07/15	*			
77a	Normanstone Dr and Normanstone Lane, NW	056	12/07/15	*			
78[1]	28th Street Extended, west of Rock Creek, NW	057	N/A				
79[1]	Connecticut Ave and Rock Creek Parkway, NW	058	N/A				
84	26th and P Streets, NW	060	12/11/15	*			
84a	26th and P Streets, NW	060	12/11/15	*			

Notes:

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

2.2 Outfalls, Tide Gates and CSO Signs

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

Table 2-2
Outfalls and Tide Gates

NPDES Outfall	*Location*	*Date Inspected*	*Outfall Condition*		*Tide Gate Present?*		*Tide Gate Condition*		*CSO Sign*		*Notes, Work Needed or Performed*
			OK	Needs Work	Yes	No	OK	Needs Work	OK	Needs Work	
003	Bolling Air Force Base, at Giavanolli and Chanute, SW	12/18/15	*		*		*		*		
005	Across from Navy Yard, aligned with Parsons Ave., SE	12/15/15	*		*		*		*		
006[1]	Good Hope Road and Welsh Memorial Bridge	N/A									
007	Between 11th St. and Anacostia Bridges, SE	12/15/15	*		*		*		*		
009	O St. Sewage Pumping Station, SE	12/18/15	*		*		*		*		
010	O St. Sewage Pumping Station, SE	12/18/15	*			*			*		
011	Main Sewage Pumping Station, SE	12/18/15	*			*			*		
011(a)	Main Sewage Pumping Station, SE	12/18/15	*		*		*		*		
012	Main Sewage Pumping Station, SE	12/18/15	*		*		*		*		
013	Southeast Federal Center, aligned with 4th St.	12/18/15	*		*		*		*		
014	Navy Yard, aligned with 6th St., SE	12/18/15	*		*		*		*		
015	Navy Yard, aligned with 9th Street, SE	12/18/15	*			*			*		
016	12th and O Streets, SE	12/18/15	*		*		*		*		
017	M and Water Street, SE	12/04/15	*		*		*		*		
018	East of Barney Circle & South of Pennsylvania Avenue Bridge, SE	12/18/15	*		*		*		*		
019	Adjacent to Service Drive behind swirl facility & D.C. General Hospital	12/15/15	*			*			*		

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	
020	Rock Creek Parkway and Independence, NW	12/03/15	*		*		*		*		
021	Rock Creek Parkway and C St., NW	12/03/15	*			*			*		
022	Rock Creek Parkway and G St., NW	12/03/15	*		*		*		*		
024	South of 30th and K Streets, NW[1]	12/03/15	*		*		*		*		
025	South of 31st and K Streets, NW	12/03/15	*		*		*		*		
026	Wisconsin Avenue and Water Street, NW	12/03/15	*		*		*		*		
027	33rd and Water Sts., NW	12/03/15	*			*			*		
028	Key Bridge and Whitehurst Freeway, NW	12/03/15	*			*			*		
029	Adjacent to C&O Canal, aligned with 38th St. NW	12/03/15	*		*		*		*		
031[1]	Rock Creek Pkwy & Pennsylvania Avenue, NW	N/A									
032	26th and M Street, NW.	12/14/15	*			*			*		
033	Across street from St. Francis Jr. High and aligned with N St., NW.	12/14/15	*		*		*		*		
034	Just west of St. Francis Jr. High and north of N St., NW	12/11/15	*		*		*		*		
035	P St. Bridge and Rock Creek Parkway	12/11/15	*			*			*		
036	22nd Street, South of Q Street NW.	12/10/15	*		*		*		*		
037[1]	Waterside Dr. and Rock Creek Parkway	N/A									
038	Between arch footbridge and Connecticut Ave., north of Kalorama Circle, NW.	12/04/15	*		*		*		*		
039	Connecticut Avenue Bridge and Rock Creek Parkway, NW.	12/04/15	*		*		*		*		
040	Aligned with Biltmore Rd., between Connecticut Ave and Ellington Bridge.	12/04/15	*		*		*		*		
041	Beach Dr. and Ontario Pl., NW	12/03/15	*		*		*		*		
042	Harvard St. and Beach Dr NW.	12/03/15	*		*		*		*		
043	Upstream of Harvard St. and Beach Dr NW.	12/03/15	*		*		*		*		
044	Kenyon Street and Beach Dr., NW.	12/03/15	*		*		*		*		
045	North of Beach Dr. and Walbridge Pl, NW.	12/03/15	*		*		*		*		
046	Piney Branch Parkway and Park Road, NW.	12/09/15	*		*		*		*		
047	Piney Branch Parkway and Ingleside Terrace	12/09/15	*		*		*		*		
048	South of Piney Branch Parkway and 17th St.	12/09/15	*		*		*		*		
049	North of Piney Branch Parkway and 17th St.	12/09/15	*		*		*		*		

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	
050	Rock Creek Parkway and L St., NW	12/10/15	*		*		*		*		
051	Across Rock Creek Pkwy, aligned with Olive St., NW.	12/15/15	*		*			*	*		Repair WO #16-136716. Expected completion date 2/30/2016
052	Between P & Penna. Ave Bridges, aligned with O Street, NW.	12/15/15	*		*		*		*		
053[1]	Q St. Bridge and Rock Creek Parkway, NW.	N/A									
054	Massachusetts Ave & Rock Creek Parkway, NW.	12/07/15	*		*		*		*		
056	Normanstone Dr. and Rock Creek Parkway, NW.	12/07/15	*		*		*		*		
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	12/10/15	*		*		*		*		

Notes:

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

2.3 Pumping Stations

Pumping station operations are summarized in the table below.

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

Pumping Station	No. of Inspections	No. Screens	No. Pumps	Screens or Pumps Out of Service	Dates	Reason	Work Order Number	Schedule to Restore to Service[1]
Main	31	3	6	Screen #1 Screen #4	12/01/15-12/30/15 12/29/15-12/31/15	Screen repair Screen repair	15-296850 16-135111	Returned to service on 12/30/15 02/05/16
Eastside	2	2	4	Screen #1 Pump #1	12/01/15-12/31/15 12/01/15-12/31/15	Screen repair Pump repair	15-279291 16-82841	01/27/16 02/28/16
Poplar Point	2	3	3	Screen #1 Screen #2	12/04/15-12/31/15 12/01/15-12/31/15	Screen repair Screen repair	16-117504 16-158681	01/29/16 01/15/16
Potomac	31	4	5	Pump #4 Pump #5	12/01/15-12/04/15 12/01/15-12/31/15	Oil pump repair Potomac rehab work	15-270256	Returned to service on 12/04/15

Notes:

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

Table 2-4
Pumping Stations – Preventive Maintenance

Pumping Station	*Date Performed*	*Type of Preventive Maintenance Performed*[1]	*Work Order Number*	*Comments*
Main	12/01/15	Group A	16-93669	Add oil, grease bearings and replace packing if needed.
O St	12/01/15	Group A	16-124983	Add oil, grease bearings and replace packing if needed.
Eastside	12/12/15	Group A	16-119092	Add oil, grease bearings and replace packing if needed.
Poplar Point	12/12/15	Group A	16-60693	Add oil, grease bearings and replace packing if needed.
Potomac	12/01/15	Group A	16-119331	Add oil, grease bearings and replace packing if needed.
Rock Creek	12/12/15	Group A	16-112410	Add oil, grease bearings and replace packing if needed.
Upper Anacostia	12/12/15	Group A	16-68726	Add oil, grease bearings and replace packing if needed.
Earl Place	12/12/15	Group A	16-119106	Add oil, grease bearings and replace packing if needed.

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

Table 2-5
Pumping Stations – Pumpage

	Sanitary Pumpage		*Storm Water/CSO Pumped To Anacostia River*		
Pumping Station	*Total Wastewater (mg)*	*Daily Average Wastewater (mg)*	*Date*	*Volume (mg)*	*Screenings Collected (units)*[1]
Main	2311.47	74.56	N/A	N/A	N/A
O St	116.09	3.64	12/01/2015	20.51	Normal
			12/23/2015	107.38	Normal
			12/24/2015	52.01	Normal
Eastside	199.90	6.45	N/A	N/A	N/A
Poplar Point	532.77	17.19	N/A	N/A	N/A
Potomac	3217.06	103.78	N/A	N/A	N/A
Rock Creek	142.14	4.59	N/A	N/A	N/A
Upper Anacostia	80.57	2.60	N/A	N/A	N/A
Earl Place	0.15	0.005	N/A	N/A	N/A

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

2.4 Northeast Boundary Swirl Facility

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

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

Date Inspected	*No. Screens*	*No. Swirls*	*Screens or Swirls Out of Service*	*Dates*	*Reason*	*Schedule to Restore to Service*
12/01/15	3	3	N/A	N/A		

Table 2-7
Northeast Boundary Swirl Facility – Preventive Maintenance

Date Performed	*Type of Preventive Maintenance Performed*[1]	*Work Order Number*	*Comments*
12/01/15	Group A	16-125115	

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

Date	*Approx. Storm Duration (hrs)*[1]	*Total Influent Volume (mg)*	*Total Foul Sewer Volume (mg)*	*Total Effluent Volume (mg)*[2]	*Approx. Screenings Volume (Cu. ft)*[3]
12/01/15	6.5	15.36	7.15	8.21	76
12/17/15	2.5	1.28	1.28	0	44
12/23/15	5.5	22.42	11.30	11.12	196
12/24/15	4.5	5.28	4.36	0.92	50*
12/25/15	4	7.41	7.41	0	60*
12/27/15	2	1.25	1.25	0	44*
12/29/15	10	22.77	5.60	17.17	196*

Notes:

1. Approx. length of time influent flow rate was above the 15 mgd threshold for allowing flow through the facility.
2. Volume approximated due to a malfunction of the ESIRS meter.
3. * - Screenings totals were estimated for these events based on influent flow and storm duration.

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, enterococcus and fecal coliform testing for samples taken in the Swirl Facility mix chamber and at the facility effluent outfall to the Anacostia River.

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

Table 2-9
Northeast Boundary Swirl Facility – Disinfection Performance

Date	*Chlor/ Dechlor System Used?*	*Dosages*		*Residual Chlorine Test Results*		*E. Coli Test Results*	
		NaOCl (mg/l)	*$NaHSO_3$ (mg/l)*	*Location*	*Conc. (mg/l)*	*Site*	*Count Per 100ml*
12/01/15	Yes	23.9	0	Mix Chamber	0.2	Mix Chamber	220
				Anacostia River[1]	0.0	Anacostia River[1]	171

Notes:
1. River: River Outfall

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

Date	*Flow Composited Sample Results*						
	Total suspended solids (mg/L)	*Nitrite (NO2-N) mg/L*	*Nitrate (NO3-N)) mg/L*	*Total Kjeldahl Nitrogen (mg/L as N)*	*Total Nitrogen (mg/L)*	*Total Phosphorus (mg/L)*	*Carbonaceous Biological Oxygen Demand (mg/L)*
12/01/15	37.0	0.00	0.58	4.31	4.89	0.60	36.4

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

Inflatable Dam Structure No	*Date Inspected*	*Was Dam Out of Service During the Month?*	*Dates out of Service*	*Reason*	*Schedule to Restore to Service*
14 - East	12/28/15	**No**	**N/A**	**N/A**	**N/A**
14 - West	12/28/15	**No**	**N/A**	**N/A**	**N/A**
15	12/28/15	**No**	**N/A**	**N/A**	**N/A**
15A	12/28/15	**No**	**N/A**	**N/A**	**N/A**
16 - East	12/28/15	**No**	**N/A**	**N/A**	**N/A**
16 - West	12/28/15	**No**	**N/A**	**N/A**	**N/A**
24 - North	12/28/15	**No**	**N/A**	**N/A**	**N/A**
24 - Middle	12/28/15	**No**	**N/A**	**N/A**	**N/A**
24 - South	12/28/15	**No**	**N/A**	**N/A**	**N/A**
34	12/28/15	**No**	**N/A**	**N/A**	**N/A**
35	12/28/15	**No**	**N/A**	**N/A**	**N/A**
52	12/28/15	**No**	**N/A**	**N/A**	**N/A**

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

Inflatable Dam Structure No.	*Overflow Dates*	*Estimated Duration of Overflow*
14 (E & W)	*12/23/2015*	*1 hr 29 mins*
15	*12/23/2015*	*2 hrs 38 mins*
15A	*12/23/2015*	*2 hrs 56 mins*
16 (E & W)	*None*	*N/A*
24	*12/23/2015* *12/29/2015*	*3 mins* *1 min*
34	*12/23/2015*	*39 mins*
35	*12/23/2015*	*58 mins*
52	*None*	*N/A*
Structures on Outfall Sewers	*Overflow Dates*	*Estimated Duration of Overflow*
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
Outfall Sewer Control Gates	*Operational Status*	*Position*
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

Note:
After the deflation event on December 23rd 2015, Inflatable Dam structure 35 experienced a failure of the level sensor that controls its operations. This caused the dam to deflate and inflate rapidly several times, despite there being no flow conditions that would cause a normal deflation. It is suspected that during the level sensor malfunction there were no flow conditions at this structure capable of overflowing sewage to the outfall. The level sensor was replaced on December 29th 2015 and the dam structure began to operate normally again on December 29th 2015.

On December 14th 2015, Inflatable Dam structure 52 experienced a 21 second deflation that was unable to be replicated by DC Water technicians. The level in sewer at that time was normal and there were no flow conditions at this structure capable of overflowing sewage to the outfall.

3. DRY WEATHER OVERFLOWS

There was no dry weather combined sewer overflow during December 2015.

Sanitary Sewer Overflows:

Location	1930 Quincy Street, NE
Cause	DC Water received a complaint from the homeowner at 1930 Quincy Street, NE regarding a sewer backup in their home. The backup was caused by a buildup of grease and gravel in the 10-inch public sewer.
Date/ Time Discovered	December 22, 2015 at approximately 10:15 AM
Action Taken	The crew was able to clear a blockage in the 10-inch public sewer that serves the property to relieve the resident.
Date/Time Discharge Ceased	December 22, 2015 at 8:30 PM
Estimated Volume	100 gallons.
Did Overflow Reach Receiving water?	No.
Action taken to prevent reoccurrence	DC Water will inspect the pipe by closed circuit television to assess the condition of the 10-inch line more thoroughly to determine whether additional steps may be needed to prevent a recurrence.
Location	800 Block of Taylor Street, NE
Cause	DC Water received a complaint from the homeowner at 800 Block of Taylor Street, NE during heavy rainfall regarding a sewer backup in their home. The backup was caused by roots in the 10-inch public sewer.
Date/ Time Discovered	December 23, 2015 at approximately 5:46 PM
Action Taken	The crew found no surcharge in the 10-inch line at the time and attributed the back-up to a blockage in the rear areaway drain. However, follow-up close circuit television camera (CCTV) inspection on December 30, 2015 identified roots that may have contributed to the back-up.
Date/Time Discharge Ceased	December 23, 2015 at 5:46 PM
Estimated Volume	50 gallons.
Did Overflow Reach Receiving water?	No.
Action taken to prevent reoccurrence	DC Water's contractor performed a point repair on December 31, 2015 on the 10-inch sewer to remove the root intrusion and 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:

			Inspections			*Cleaning*					
						CBs Cleaned Thru Last Month		*CB's Cleaned This Month*		*Total CBs Cleaned This Year to Date*	
Ward	*Total CBs*	*CBs in CSS*	*CBs in Anacostia CSS*	*Total Anacostia CBs Inspected Once this Year*	*Total Anacostia CBs Inspected Twice this Year*	Total	In CSS	Total	In CSS	Total	In CSS
1	1338	1338	1338	1338	1338	1356	1356	165	165	1521	1521
2	3320	2961	911	911	911	2665	2646	752	752	3417	3398
3	3237	374	0	0	0	3555	533	72	6	3627	539
4	3002	1683	31	31	31	3720	2093	413	57	4133	2150
5	3703	1886	1738	1738	1738	3063	2549	1465	132	4528	2681
6	3686	3106	3068	3068	3068	3606	3193	184	172	3790	3365
7	3144	52	33	33	33	4610	135	39		4649	135
8	2512	347	347	347	347	2358	367	206	53	2564	420
Subtotal	**23942**	**11747**	**7466**	**7466**	**7466**	**24933**	**12872**	**3296**	**1331**	**28229**	**14209**
DDOT (via VMS) Subtotal											
Grand Total	**23942**	**11747**	**7466**								
% Cleaned/Inspected to Date				**100%**	**100%**					**118%**	**121%**

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

Facility	*Date Inspected*	*Condition*	*Work Needed*	*Work performed*	*Material Removed (CY)*
Netting System CSO 018	12/15/2015	Good	Replace nets.	Nets replaced.	725 pounds.
Bar Rack CSO 040	12/4/2015	Good	None	Routine Cleaning	(1)
Bar Rack CSO 041	12/3/2015	Good	None	Routine Cleaning	(1)

Notes:
(1) System is designed such 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

Program Operation	5-day work week, excluding holidays, weather permitting
Work Days this month:	22
Days not Operating	14
Reason not Operating	Environmental (13). Boat yard shut down due to gas leak (1).
# Skimmer in Fleet	3 Skimmers
# Skimmers Out of Service	1 Skimmer
Dates	B28: 12/1 - 12/31 B29: 12/1 - 12/10
Reason	B28: Front assembly catching on hull. B29: Hydraulic oil leak port propulsion motor.
Plan to Restore to Service	B28: Fleet troubleshooting. ETR unknown. B29: Returned to service December 11.
Volume Material Collected	20 tons.
Nature of Material	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	12/23/2015	X			
Bar Racks at Main Storm Pumps (CSO 011)	WR	12/01/2015	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
12/1/2015	0.79	0.92	0.78	0.82	0.85
12/2/2015	0.22	0.22	0.21	0.18	0.22
12/3/2015	0	0.01	0	0	0
12/4/2015	0	0	0	0	0
12/5/2015	0	0	0	0	0
12/6/2015	0	0	0	0	0
12/7/2015	0	0	0	0	0
12/8/2015	0	0	0	0	0
12/9/2015	0	0	0	0	0
12/10/2015	0	0	0	0	0
12/11/2015	0	0	0	0	0
12/12/2015	0	0	0	0	0
12/13/2015	0	0	0	0	0
12/14/2015	0.14	0.10	0.08	0.11	0.13
12/15/2015	0	0	0	0.01	0
12/16/2015	0	0	0	0	0
12/17/2015	0.43	0.47	0.41	0.43	0.42
12/18/2015	0	0	0.01	0.01	0
12/19/2015	0	0	0	0	0
12/20/2015	0	0	0	0	0
12/21/2015	0	0	0	0	0
12/22/2015	0.11	0.10	0.11	0.10	0.14
12/23/2015	1.74	1.95	1.42	1.48	1.67
12/24/2015	0.27	0.24	0.20	0.24	0.20
12/25/2015	0.46	0.48	0.29	0.43	0.30
12/26/2015	0.02	0.01	0	0.01	0.01
12/27/2015	0.12	0.12	0.10	0.14	0.02
12/28/2015	0.24	0.23	0.22	0.21	0.23
12/29/2015	0.60	0.68	0.51	0.56	0.50
12/30/2015	0.06	0.05	0.08	0.03	0.15
12/31/2015	0	0	0	0	0
TOTAL	5.20	5.58	4.42	4.76	4.84

District of Columbia Water and Sewer Authority

Combined Sewer System Model Results
Period: October, November, December 2015
SCENARIO: Y2015_Q4, produced January 12, 2015

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	16	3.40	51.25	3.20	9.25	0.25
006	Good Hope Road, West of Nichols Ave.,SE	separated					
007	13th Street and Ridge Place,SE	9	2.97	7.75	0.86	2.50	0.25
009	2nd Street, 300 feet North of N Place, SE	9	1.50	16.25	1.81	3.75	0.25
010	O Street SewagePumping Station, SE (pumped Overflow)	11	23.68	6.25	0.57	3.25	0.25
011	South of Main Sewage Pumping Station, SE (pumped overflow)	2	1.67	0.50	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	10.70	1.75	1.75	1.75	1.75
013	4th and N Streets, SE	11	1.08	15.50	1.41	6.25	0.25
014	6th and M Streets, SE	9	3.18	15.00	1.67	4.25	0.25
015	9th and M Streets, SE	8	0.89	5.75	0.72	1.75	0.25
016	12th and M Streets, SE	7	2.20	6.00	0.86	2.25	0.50
017	14th and M Streets, SE	11	7.72	38.00	3.45	7.25	0.75
018	Barney Circle andPennsylvania Ave, SE	9	4.42	16.25	1.81	4.00	0.75
019	Northeast Boundary - Swirl Effluent	10	128.66	79.25	7.93	32.00	1.50
019	Northeast Bound. - Swirl Bypass	2	64.57	1.75	0.88	1.50	0.25
	SUBTOTAL		**256.66**				
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)	5	7.03	5.25	1.05	3.00	0.25
021	Northeast ofRoosevelt Bridge, NW	9	43.45	10.00	1.11	2.75	0.50
022	27th and K Streets, NW	9	9.32	15.75	1.75	3.50	0.50
024	30th and K Streets, NW	8	3.91	8.50	1.06	4.75	0.25
025	31st & K St NW	4	0.15	1.75	0.44	1.00	0.25
026	Wisconsin Avenue andK St., NW	0	0.00	0.00	0.00	0.00	0.00
027	Water Street West ofStreet, NW	14	8.24	87.75	6.27	25.25	0.50
028	36th and M Streets, NW	12	1.02	18.50	1.54	2.75	0.25
029	Canal Road 1000 feet east of Rock Creek,NW	3	1.63	2.75	0.92	1.75	0.25
	SUBTOTAL		**74.75**				
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	0.128	5.50	0.79	1.75	0.50
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

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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)
042	Harvard Street and RockCreek Parkway, NW	0	0.00	0.00	0.00	0.00	0.00
043	Adams Mill Road South of Irving Street, NW	1	0.31	0.75	0.75	0.75	0.75
044	Kenyon Street and Adams Mill Road, NW	0	0.00	0.00	0.00	0.00	0.00
045	Adams Mill Road and Lamont Street, NW	2	0.04	0.75	0.38	0.50	0.25
046	Park Road south of Piney Branch Parkway, NW	1	0.004	0.25	0.25	0.25	0.25
047	Ingleside Terrace extended and Piney Branch Parkway	1	0.005	0.50	0.50	0.50	0.50
048	Mt. Pleasant Street extended and Piney Branch Parkway	2	0.07	0.75	0.38	0.50	0.25
049	Piney Branch and LamontStreet, NW	9	11.395	12.75	1.42	2.50	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 Creek300 ft. south of Mass. Ave, NW	0	0.00	0.00	0.00	0.00	0.00
056	Normanstone Drive extended west of Rock Creek, NW	0	0.00	0.00	0.00	0.00	0.00
057	28th Street extended west of Rock Creek, NW	separated					
058	Connecticut Avenue and Rock Creek Parkway, NW	separated					
060	P St and 26th St, NW	0	0.00	0.00	0.00	0.00	0.00
	SUBTOTAL		**11.96**				
	TOTAL		**343.36**				

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