

QUARTERLY OPERATIONS REPORT

DISTRICT OF COLUMBIA

COMBINED SEWER OVERFLOW FACILITIES

FOURTH QUARTER 2006

Prepared By:

D.C. Water and Sewer Authority  
Department of Sewer Services  
Sewer Pumping Division  
2<sup>nd</sup> & 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: OCTOBER 2006**

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*Monthly Operations Report for Combined Sewer System*  
*Month: October, 2006*

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## **1. INTRODUCTION**

The District of Columbia Water and Sewer Authority (WASA or Authority) 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 Authority'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 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**

Struct No.	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	10/30/06	*			
4	Bolling AFB, 2250 ft. north of the south line of the Base, SW	003	10/30/06	*			
5	Poplar Point Pumping Station	004	10/19/06	*			
6	Chicago Street and Railroad Ave, SE	005	10/04/06	*			
7	W Street and Railroad Ave, SE	005	10/04/06	*			
8	Good Hope Rd, west of Nichols Ave, SE	006	10/02/06	*			
9	13 <sup>th</sup> Street and Ridge Place, SE	007	10/02/06	*			
11	"O" Street Pumping Station	011(a)	10/19/06	*			
12	Storm Pump Discharge at Main Pumping Station	011	10/19/06	*			
13	2 <sup>nd</sup> Street, 300 ft. north of N Place, SE	009	10/02/06	*			
14	2 <sup>nd</sup> Street, 250 ft. north of N Place, SE	011(a)	10/19/06	*			
15	South Capitol and E Streets	010	10/19/06	*			
15a	Half and L Streets, SE	010	10/19/06	*			
15b	South Capitol and I Streets	010	10/25/06	*			
15c	South Capitol and I Streets	010	10/25/06	*			
16	North of Main Sewage Pumping Station	012	10/19/06	*			
17	4 <sup>th</sup> and N Streets, SE, Both Extended	013	10/03/06	*			
17a	K Street between 6 <sup>th</sup> Street and 7 <sup>th</sup> Street, SE	013	10/30/06	*			
18	6 <sup>th</sup> and M Streets, SE	014	10/02/06	*			
19	9 <sup>th</sup> and M Streets, SE	015	10/03/06	*			
19a	9 <sup>th</sup> and M Streets, SE	015	10/03/06	*			
20	12 <sup>th</sup> and M Streets, SE	016	10/03/06	*			
20a	12 <sup>th</sup> and M Streets, SE	016	10/03/06	*			
21	14 <sup>th</sup> and M Streets, SE	017	10/12/06	*			
22a	Barney Circle and Pennsylvania Ave, SE	018	10/13/06	*			
22b	Barney Circle and Pennsylvania Ave, SE	018	10/13/06	*			
22c	Barney Circle and Pennsylvania Ave, SE	018	10/13/06	*			
22d	Kentucky Ave and Potomac Street, SE	018	10/02/06	*			

Struct No.	Location	Associated NPDES Outfall	Date Inspected	Condition		Work Needed	Work performed
				Good	Needs Work		
22e	14 <sup>th</sup> Street and Kentucky Ave, SE	018	10/02/06	*			
23	Independence Ave, 21 <sup>st</sup> Street, SE, Extended	019	10/03/06	*			
24a	East Capitol St, west of RFK stadium	019	10/12/06	*			
28	21 <sup>st</sup> and Constitution Ave, NW	020	10/16/06	*			
29	22 <sup>nd</sup> Street, between Constitution Ave and C St, NW	020	10/16/06	*			
30	17 <sup>th</sup> and D Streets, NW	020	10/13/06	*			
31	15 <sup>th</sup> Street and Pennsylvania Ave, NW	020	10/13/06	*			
33	10 <sup>th</sup> and F Streets, NW	020	10/13/06	*			
34	23 <sup>rd</sup> Street, north of Constitution Ave, NW	020	10/24/06	*			
34a	23 <sup>rd</sup> Street near C Street, NW	020	10/16/06	*			
35	Northeast of Roosevelt Bridge, NW (1)	021	10/24/06	*			
36	27 <sup>th</sup> and I Streets, NW	022	10/04/06	*			
36a	New Hampshire Ave and Eye Street, NW	022	10/04/06	*			
36b	19 <sup>th</sup> and L Streets, NW	022, 034	10/16/06	*			
36d	17 <sup>th</sup> and L Streets, NW	022, 034	10/16/06	*			
36g	18 <sup>th</sup> and M Streets, NW	022, 034	10/16/06	*			
36h	18 <sup>th</sup> and M Streets, NW	022, 034	10/16/06	*			
37	27 <sup>th</sup> and Eye Streets, NW	022	10/04/06	*			
38	29 <sup>th</sup> and K Streets, NW	024	10/04/06	*			
38a	30 <sup>th</sup> Street, south of K Street, NW	024	10/04/06	*			
39a	30 <sup>th</sup> and K Streets, NW	024	10/04/06	*			
39b	30 <sup>th</sup> and K Streets, NW	024	10/04/06	*			
41b	31 <sup>st</sup> and K Streets, NW	025	10/13/06	*			
41c	31 <sup>st</sup> and K Streets, NW	025	10/13/06	*			
42	Wisconsin Ave and K Street, NW	026	10/13/06	*			
43	Potomac and Water Streets, NW	027	10/13/06	*			
43a	Potomac and Water Streets, NW	027	10/13/06	*			
44	Water Street, west of Potomac St, NW	027	10/13/06	*			
45	36 <sup>th</sup> and M Streets, NW (1)	028	10/13/06	*			
46	Canal Rd, 1000ft. east of Foxhall Rd, NW	029	10/02/06	*			
47	38 <sup>th</sup> Street and Reservoir Road, NW	029	10/02/06	*			
47a	37 <sup>th</sup> and T Streets, NW	029	10/02/06	*			

Struct No.	Location	Associated NPDES Outfall	Date Inspected	Condition		Work Needed	Work performed
				Good	Needs Work		
47b	37 <sup>th</sup> and T Streets, NW	029	10/02/06	*			
47c	38 <sup>th</sup> and W Streets, NW	029	10/02/06	*			
49	Pennsylvania Ave, east side of Rock Creek, NW	031	10/16/06	*			
50	26 and M Streets, NW	032	10/16/06	*			
51	N Street Extended, west of 25 <sup>th</sup> Street, NW	033	10/16/06	*			
52	22 <sup>nd</sup> Street between M and N Streets, NW	034	10/24/06	*			
52a	N Street between 22 <sup>nd</sup> and 23 <sup>rd</sup> Streets, NW	034	10/24/06	*			
53	22 <sup>nd</sup> and M Streets, NW	022, 034	10/16/06	*			
53a	22 <sup>nd</sup> and M Streets, NW	022, 034	10/16/06	*			
53b	L Street between 21 <sup>st</sup> Street and New Hampshire Ave, NW	022, 034	10/20/06	*			
53c	L and 22 <sup>nd</sup> Streets, NW	022	10/20/06	*			
54	23 <sup>rd</sup> and O Streets, NW	034	10/18/06	*			
55	22 <sup>nd</sup> Street, south of Q Street, NW	035	10/18/06	*			
55a	22 <sup>nd</sup> Street, south of Q Street, NW	035	10/18/06	*			
56	23 <sup>rd</sup> and Massachusetts Ave, NW	036	10/18/06	*			
57	23 <sup>rd</sup> Street, south of Q Street, NW	036	10/18/06	*			
58	Northwest of Belmont Road and Rock Creek and Potomac Parkway, NW	037	10/04/06	*			
59	North of Belmont Rd, east of Kalorama Cir, NW	038	10/04/06	*			
60	Connecticut Ave, east of Rock Creek, NW	039	10/11/06	*			
61	Biltmore St, Extended, east of Rock Creek, NW	040	10/11/06	*			
62	Ontario Rd, Extended, and Rock Creek Pkwy, NW	041	10/11/06	*			
63	Harvard Street and Rock Creek Parkway, NW	042	10/11/06	*			
64	Adams Mill Road, south of Irving Street, NW	043	10/11/06	*			
65	Kenyon Street and Adams Mill Road, NW	044	10/11/06	*			
0665a	Kenyon Street and Adams Mill Road, NW	044	10/11/06	*			
66	Adams Mill Road and Lamont Street, NW	045	10/11/06	*			
67	Park Rd , south of Piney Branch Pkwy, NW	046	10/11/06	*			
68	Ingleside Terrance, Extended and Piney Branch Parkway, NW	047	10/11/06	*			
69	Mt. Pleasant Street, Extended and Piney Branch Parkway, NW	048	10/11/06	*			
70	Piney Branch Parkway, west of 16 <sup>th</sup> Street, NW	049	10/11/06	*			
70i	5 <sup>th</sup> and Quackenbos Streets, NW	049	10/02/06	*			

Struct No.	Location	Associated NPDES Outfall	Date Inspected	Condition		Work Needed	Work performed
				Good	Needs Work		
71	28 <sup>th</sup> Street, west of Rock Creek Parkway, NW	050	10/13/06	*			
72	Olive Street Extended and Rock Creek Pkwy, NW	051	10/18/06	*			
72a	Olive Street Extended and Rock Creek Pkwy, NW	051	10/18/06	*			
73	O Street Extended and Rock Creek Parkway, NW	052	10/18/06	*			
74	Q Street, west of Rock Creek, NW	053	10/18/06	*			
75	West side of Rock Creek, 300 ft. south of Massachusetts Ave, NW	054	10/23/06	*			
77	Normanstone Dr Extended, west of Rock Creek, NW	056	10/23/06	*			
77a	Normanstone Dr and Normanstone Lane, NW	056	1/026/06	*			
78	28th Street Extended, west of Rock Creek, NW	057	10/23/06	*			
79	Connecticut Ave and Rock Creek Parkway, NW	058	10/25/06	*			
84	26 <sup>th</sup> and P Streets, NW	060	10/18/06	*			
84a	26 <sup>th</sup> and P Streets, NW	060	10/18/06	*			

Notes:

1. For regulators noted as “visually checked outfall”, the outfall was visually observed to confirm no DWO was occurring.

## 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 - 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	10/30/06	*		*		*		*		
005	Across from Navy Yard, aligned with Parsons Ave., SE	10/05/06	*		*		*		*		
006	Good Hope Road and Welsh Memorial Bridge	10/05/06	*		*		*		*		
007	Between 11 <sup>th</sup> St. and Anacostia Bridges, SE	10/05/06	*		*		*		*		



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	
009	O St. Sewage Pumping Station, SE	10/20/06	*		*		*		*		
010	O St. Sewage Pumping Station, SE	10/19/06	*			*			*		
011	Main Sewage Pumping Station, SE	10/19/06	*			*			*		
011(a)	Main Sewage Pumping Station, SE	10/19/06	*		*		*		*		
012	Main Sewage Pumping Station, SE	10/19/06	*		*		*		*		
013	Southeast Federal Center, aligned with 4 <sup>th</sup> St.	10/03/06	*		*		*		*		
014	Navy Yard, aligned with 6 <sup>th</sup> St., SE	10/05/06	*		*		*		*		
015	Navy Yard, aligned with 9th Street, SE	10/05/06	*			*			*		
016	12th and O Streets, SE	10/05/06	*		*		*		*		
017	M and Water Street, SE	10/05/06	*		*		*		*		
018	East of Barney Circle and South of Pennsylvania Avenue Bridge, SE	10/05/06	*		*		*		*		
019	Adjacent to Service Drive behind swirl facility and D.C. General Hospital	10/1250/6	*			*			*		
020	Rock Creek Parkway and Independence, NW	10/26/06	*		*		*		*		
021	Rock Creek Parkway and C St., NW	10/26/06	*			*			*		
022	Rock Creek Parkway and G St., NW	10/26/06	*		*		*		*		
024	South of 30 <sup>th</sup> and K Streets, NW	10/26/06	*		*			*	*		WASA has developed a capitol project to design and construct a replacement gate for improved performance.
025	South of 31st and K Streets, NW	10/26/06	*		*		*		*		
026	Wisconsin Avenue and Water Street, NW	10/26/06	*		*		*		*		
027	33 <sup>rd</sup> and Water Sts., NW	10/26/06	*			*			*		
028	Key Bridge and Whitehurst Freeway, NW	10/26/06	*			*			*		
029	Adjacent to C&O Canal, aligned with 38 <sup>th</sup> St. NW	10/26/06	*		*		*		*		
031	Rock Creek Pkwy and Pennsylvania Avenue, NW.	1016/06	*			*			*		

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	
032	26th and M Street, NW.	10/16/06	*			*			*		
033	Across street from St. Francis Jr. High and aligned with N St., NW.	10/16/06	*		*		*		*		
034	Just west of St. Francis Jr. High and north of N St., NW	10/18/06	*		*		*		*		
035	P St. Bridge and Rock Creek Parkway	10/18/06	*		*		*		*		
036	22nd Street, South of Q Street NW.	10/23/06	*		*		*		*		
037	Waterside Dr. and Rock Creek Parkway	10/04/06	*		*		*		*		
038	Between arch footbridge and Connecticut Ave., north of Kalorama Circle, NW.	10/04/06	*		*		*		*		
039	Connecticut Avenue Bridge and Rock Creek Parkway, NW.	10/11/06	*		*		*		*		
040	Aligned with Biltmore Rd., between Connecticut Ave and Ellington Bridge.	10/11/06	*		*		*		*		
041	Beach Dr. and Ontario Pl., NW	10/12/06	*		*		*		*		
042	Harvard St. and Beach Dr NW.	10/12/06	*		*		*		*		
043	Upstream of Harvard St. and Beach Dr NW.	10/12/06	*		*		*		*		
044	Kenyon Street and Beach Dr., NW.	10/12/06	*		*		*		*		
045	North of Beach Dr. and Walbridge Pl, NW.	10/12/06	*		*		*		*		
046	Piney Branch Parkway and Park Road, NW.	10/11/06	*			*			*		
047	Piney Branch Parkway and Ingleside Terrace	10/11/06	*		*		*		*		
048	South of Piney Branch Parkway and 17 <sup>th</sup> St.	10/11/06	*		*		*		*		
049	North of Piney Branch Parkway and 17 <sup>th</sup> St.	10/11/06	*		*		*		*		
050	Rock Creek Parkway and L St., NW	10/13/06	*		*		*		*		

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	
051	Across Rock Creek Parkway, aligned with Olive St., NW.	10/05/06	*		*		*		*		
052	Between P and Penna. Ave Bridges, aligned with O Street, NW.	10/05/06	*		*		*		*		
053	Q St. Bridge and Rock Creek Parkway, NW.	10/23/06	*		*		*		*		
054	Massachusetts Avenue and Rock Creek Parkway, NW.	10/23/06	*		*		*		*		
056	Normanstone Dr. and Rock Creek Parkway, NW.	10/23/06	*		*		*		*		
057	28th Street and Rock Creek Parkway, NW	10/23/06	*		*		*		*		
058	Connecticut Avenue and Rock Creek Parkway, NW.	10/05/06	*			*			*		
060	North of P Street Bridge and Rock Creek Pkwy, NW	10/23/06	*		*		*		*		

### 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>Schedule to Restore to Service</i>
Main	31	4	12	Sanitary Pump #2	12/01/05	Needs packing Sleeve and Impeller	
Eastside	31	2	4	None			
Poplar Point	31	2 <sup>1</sup>	3	Sanitary Pump #1 Screen #1	02/25/06 01/05/06	Seal Water line needs to be connected Screen off track	
Potomac	31	4	5	None			

Notes:

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

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

<i>Pumping Station</i>	<i>Date Performed</i>	<i>Type of Preventive Maintenance Performed<sup>1</sup></i>	<i>Comments</i>
Main	10/19/2006	Group A	Add oil, grease bearings and replace packing if needed.
O St	10/19/2006	Group A	Add oil, grease bearings and replace packing if needed.
Eastside	10/19/2006	Group A	Add oil, grease bearings and replace packing if needed.
Poplar Point	10/19/2006	Group A	Add oil, grease bearings and replace packing if needed.
Potomac	10/19/2006	Group A	Add oil, grease bearings and replace packing if needed.
Rock Creek	10/19/2006	Group A	Add oil, grease bearings and replace packing if needed.
Upper Anacostia	10/19/2006	Group A	Add oil, grease bearings and replace packing if needed.
Earle Place	10/19/2006	Group A	Add oil, grease bearings and replace packing if needed.

Notes:

1. Group A consists of:

Exercise bar screens

Exercise all sump pumps

Drain condensation from air compressor storage tank

Check depth of screening in the screen room and schedule Vactor truck as required

Check all safety equipment

Issue work order requests as required

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

<i>Pumping Station</i>	<i>Sanitary Pumpage</i>		<i>Storm Water/CSO Pumped To Anacostia River</i>		
	<i>Total Wastewater (mg)</i>	<i>Daily Average Wastewater (mg)</i>	<i>Date</i>	<i>Volume (mg)</i>	<i>Screenings Collected (units)</i>
Main	2,031.40	65.53	N/A	N/A	N/A
O St <sup>1</sup>	248.70	8.02			Normal
			10/6/2006	84.40	Normal
			10/18/2006	16.00	Normal
			10/28/2006	31.50	Normal
Eastside	269.50	8.69	N/A	N/A	N/A
Poplar Point	675.00	21.77	N/A	N/A	N/A
Potomac	4,177.40	134.75	N/A	N/A	N/A
Rock Creek	142.80	4.61	N/A	N/A	N/A
Upper Anacostia	50.70	1.64	N/A	N/A	N/A
Earle Place	0.31	0.01	N/A	N/A	N/A

Notes:

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

#### 2-4 Northeast Boundary Swirl Facility

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

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

<i>Date Inspected</i>	<i># Screens</i>	<i># Swirls</i>	<i>Screens or Swirls Out of Service</i>	<i>Dates</i>	<i>Reason</i>	<i>Schedule to Restore to Service</i>
10/30/2006	1,2 & 3	1,2 & 3	None	N/a	N/a	N/a

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

<i>Date Performed</i>	<i>Type of Preventive Maintenance Performed<sup>1</sup></i>	<i>Comments</i>
10/30/2006	Group A	

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<sup>1</sup> (Hours)</i>	<i>Total Influent Volume (mg)</i>	<i>Total Foul Sewer Volume (mg)</i>	<i>Total Effluent Volume<sup>2</sup> (mg)</i>	<i>Approx. Screenings Volume<sup>3</sup> # of bins (cu ft)</i>
10/1/2006	2	27.04	27.04	0	0.20(16)
10/6/2006	8	25.17	1.01	24.160	0.90(72)
10/6/2006	8	19.93	1.21	18.722	0.15(12)
10/6/2006	4	2.37	0.35	2.02	0.15(12)
10/17/2006	8	10.93	0.78	10.15	1.80(144)
10/20/2006	2.3	5.45	5.45	0	1.00(80)
10/27/2006	2	4.41	4.41	0	0.40(32)
10/28/2006	9	36.06	1.45	34.61	1.20(96)
10/28/2006	4	1.53	1.53	0	.250(20)

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**

<i>Date</i>	<i>Chlor/Dechl or System Used?</i>	<i>Dosages</i>		<i>Residual Chlorine Test Results</i>		<i>Enterococcus Test Results</i>		<i>Fecal Coliform Test Results</i>	
		<i>NaOCl (mg/l)</i>	<i>NaHSO<sub>3</sub> (mg/l)</i>	<i>Location</i>	<i>Conc. (mg/l)</i>	<i>Site</i>	<i>Count Per 100ml</i>	<i>Site</i>	<i>Count Per 100ml</i>
10/06/06	Yes	5	2	Mix Chamber	0.4	Mix Chamber	4,400	Mix Chamber	30,000
10/06/06	Yes	5	2	Anacostia River	0.0	Anacostia River	18,200	Anacostia River	26,000
10/06/06	Yes	5	2	Mix Chamber	0.6	Mix Chamber	29,000	Mix Chamber	22,000
10/06/06	Yes	5	2	Anacostia River	0.0	Anacostia River	19,090	Anacostia River	49,000
10/17/00	Yes	5	2	Mix Chamber	0.6	Mix Chamber	41,000	Mix Chamber	49,000
10/17/00	Yes	5	2	Anacostia River	0.0	Anacostia River	25,000	Anacostia River	32,000
10/28/06	Yes	5	2	Mix Chamber	0.2	Mix Chamber	1,260	Mix Chamber	410
10/28/06	Yes	5	2	Anacostia River	0.0	Anacostia River	19,090	Anacostia River	44,000

Notes:

1. Mix Chr.: Mixing Chamber
2. River: River Outfall

**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 (NO<sub>2</sub>-N) mg/L</i>	<i>Nitrate (NO<sub>3</sub>-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>
10/06/09	38.0	< 0.05	0.51	2.96	3.47	0.50	13.0
10/17/06	62.0	0.07	0.30	3.82	4.19	0.76	39.5
10/28/06	73.0	< 0.05	0.26	2.11	2.37	0.37	14.5

**NOTE**

\*The controls for the inflatable dams at Structure 24 in the Northeast Boundary Sewer were damaged by extremely high flows in the Northeast Boundary Sewer. The dams were out of service from approximately 9 pm, June 25, 2006 to 4 pm June 29, 2006. Since the dams were not functional, the Northeast Boundary Swirl Facility was also out of service for that period of time. During the storm, the flows were so severe that the Northeast Boundary Swirl Facility also was flooded during the event. Repairs were made using temporary controls such that both the inflatable dams and Northeast Boundary Swirl Facility were placed back in operation by about 4:00 pm June 29, 2006.

## 2.5 Inflatable Dams

WASA 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	10/24/06	<b>No</b>	N/A	N/A	N/A
14 - West	10/24/06	<b>No</b>	N/A	N/A	N/A
15	10/24/06	<b>Yes</b>	<b>10/19/06</b>	<b>Hole in Fabri Dam. Fabri Dam partially functioning.</b>	<b>11/30/2006</b>
15A	10/24/06	<b>No</b>	N/A	N/A	N/A
16 - East	10/24/06	<b>No</b>	N/A	N/A	N/A
16 - West	10/24/06	<b>No</b>	N/A	N/A	N/A
*24 – North	10/24/06	<b>No</b>	N/A	N/A	N/A
*24 - Middle	10/24/06	<b>No</b>	N/A	N/A	N/A
*24 - South	10/24/06	<b>No</b>	N/A	N/A	N/A
34	10/24/06	<b>No</b>	N/A	N/A	N/A
35	10/24/06	<b>No</b>	N/A	N/A	N/A
52	10/24/06	<b>No</b>	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 (hrs)</i>
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
<i>Structures on Outfall Sewers</i>	<i>Overflow Dates</i>	<i>Estimated Duration of Overflow (hrs)</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(E & W)	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	Open

\*\*The inflatable dam at Structure 15 (South Capital & E Streets, SE) was out of service from 10/19/06 to 10/31/06. A leak was discovered in the dam on 10/19/06 and the manufacture was contacted. A representative was onsite 10/23/06 for preliminary evaluation and repair recommendations. Material for the repair was expected the following week and the dam should be back in service early next month.

**3. DRY WEATHER OVERFLOWS**

Dry weather overflows (DWOs), are summarized below:

**Table 3-1  
Dry Weather Overflows**

Location:	NO DRY WEATHER OVERFLOW IN JUNE.
Cause	
Date/ Time Discovered	
Action Taken	
Date/Time Discharge Ceased	
Estimated Volume (mg)	
Did Overflow Reach Receiving water?	
Action taken to prevent reoccurrence	

#### 4. SOLIDS AND FLOATABLES CONTROL

##### 4.1 Catch Basin Cleaning

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

**Table 4-1 Catch Basin Summaries**

Ward	Total CBs	CBs in CSS	CBs in Anacostia CSS	Anacostia CSS Inspections		Cleaning					
				Total CBs Inspected Once this Year	Total 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	1,591	1,568	734	734	734	2328	2060	0	0	2328	2060
2	4,714	4,112	2,316	2316	2067	5241	3808	247	215	5488	4023
3	3,555	461	-	0	0	4880	1671	14	0	4894	1671
4	2,782	1,985	159	159	159	3730	2199	189	180	3919	2379
5	2,167	1,035	1,035	1,035	1035	1206	597	1818	963	3024	1560
6	1,783	1,594	1,594	1,594	685	735	447	282	238	1017	685
7	2,313	-	-	0	0	2125	0	0	0	2125	0
8	1,278	116	116	116	116	1700	355	0	0	1700	355
<b>WASA Subtotal</b>	<b>20,183</b>	<b>10,871</b>	<b>5,954</b>	<b>5,954</b>	<b>4,796</b>	<b>21,945</b>	<b>11,137</b>	<b>2,550</b>	<b>1,596</b>	<b>24,495</b>	<b>12,733</b>
DDOT (via VMS) Subtotal				0	0			0	0		0
<b>Grand Total</b>	<b>20,183</b>	<b>10,871</b>	<b>5,954</b>	<b>5,954</b>	<b>4,796</b>			<b>2,550</b>	<b>1,596</b>	<b>24,495</b>	<b>12,733</b>
% Cleaned/Inspected to Date				<b>100%</b>	<b>81%</b>					<b>&gt;100%</b>	<b>&gt;100%</b>

#### 4.2 BMP Demonstration Projects

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

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

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

<i>Facility</i>	<i>Date Inspected</i>	<i>Condition</i>	<i>Work Needed</i>	<i>Work performed</i>	<i>Material Removed (CY)</i>
Netting System CSO 018	10/3/06 10/31/06	Good	Minor Maintenance	None	280 lbs.
Bar Rack CSO 040	10/11/06	Good	None	Routine Cleaning	(1)
Bar Rack CSO 041	10/12/06	Good	None	Routine Cleaning	(1)

Notes:

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



#### 4.3 Anacostia River Floating Debris Removal Program

This program was initiated in September 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 WASA, Department of Sewer Services. The floating debris removal program utilizes a skimmer boat and support boats to remove floatable debris from the Rivers as well as trash, which accumulates on the riverbanks and in the mud flats at low tides. Work for the most part is directed toward the Anacostia River. The boats pick up debris five days a week. Operations are summarized as follows:

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

<i>Program Operation</i>	5-day work week, excluding holidays, weather permitting
<i>Work Days this month:</i>	21
<i>Days not Operating</i>	5
<i>Reason not Operating</i>	Strong winds
<i># Skimmer in Fleet</i>	2 skimmers
<i># Skimmers Out of Service</i>	One
<i>Dates</i>	10/27/06 to present
<i>Reason</i>	Skimmer B-28 needs to replace the throttle cable.
<i>Plan to Restore to Service</i>	As soon as possible.
<i>Volume Material Collected</i>	20 tons.
<i>Nature of Material</i>	Bottles, cans, natural debris and plastics.

#### 4.4 CSS Litter Control

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

Status: no activities this month.

**5. MONITORING**

**5.1 Visual Wet Weather Surveys at Main & O**

WASA performs visual surveys of the CSO overflows at Main and O Street Pumping Station to characterize the quantity and nature of floatable discharged. Results are as follows:

**Table 5-1  
CSO 010, 011, 011, 012 Visual Wet Weather Survey Summaries  
SOLIDS AND FLOATABLES VISUAL SURVEY FORM**

Date:10/18/06

Inspector's Initials: CW

CSO	Time of Observation	Overflo		Observed			Quantity of			Quantity of			REMARKS/OTHER
		Y	N	L	M	H	L	M	H	L	M	H	
009	8.00 am	X		X			X			X			
	10.00 am	X		X			X			X			
	12.00 noon	X		X			X			X			
	2.00 pm	X		X			X			X			
010	8.00 am	X		X			X			X			
	10.00 am	X		X			X			X			
	12.00 noon	X		X			X			X			
	2.00 pm	X		X			X			X			
011	8.00 am												
	10.00 am												
	12.00 noon												
	2.00 pm												
011a	8.00 am												
	10.00 am												
	12.00 noon												
	2.00 pm												
012	8.00 am												
	10.00 am												
	12.00 noon												
	2.00 pm												

Note: L= Low, M= Moderate, H= High

Date:10/28/06

Inspector's Initials: VB

CSO	Time of Observation	Overflo		Observed			Quantity of			Quantity of			REMARKS/OTHER
		Y	N	L	M	H	L	M	H	L	M	H	
009	8.00 am		X										
	10.00 am		X										
	12.00 noon		X										
	2.00 pm		X										
010	8.00 am		X										
	10.00 am		X										
	12.00 noon		X										
	2.00 pm		X										
011	8.00 am												
	10.00 am												
	12.00 noon												
	2.00 pm												
011a	8.00 am												
	10.00 am												
	12.00 noon												
	2.00 pm												
012	8.00 am												
	10.00 am												
	12.00 noon												
	2.00 pm												

Note: L= Low, M= Moderate, H= High

## 5.2 Rain Data

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

**Table 5-2 Rainfall Data (inches)**

Monthly Rain Totals Date	Brentwood Reservoir	Bryant St PS	Main PS	Rock Creek PS
10/1/2006		0.12	0.2	0.17
10/2/2006		0	0	0
10/3/2006	0.02	0.01	0	0
10/4/2006	0	0	0	0
10/5/2006	0.41	0.39	0	0.36
10/6/2006	1.35	1.27	1.28	1.37
10/7/2006	0.06	0.06	0.02	0.03
10/8/2006	0	0	0	0
10/9/2006	0	0	0	0
10/10/2006	0	0	0	0
10/11/2006	0	0	0	0
10/12/2006	0.12	0.08	0.19	0.06
10/13/2006	0	0	0	0
10/14/2006	0	0	0	0
10/15/2006	0	0	0	0
10/16/2006	0	0	0	0
10/17/2006	0.53	0.56	0.04	0.58
10/18/2006	0	0	0	0
10/19/2006	0.02	0.04	0.02	0.07
10/20/2006	0.28	0.32	0.23	0.32
10/21/2006	0	0	0	0
10/22/2006	0	0	0	0
10/23/2006	0	0	0	0
10/24/2006	0	0	0	0
10/25/2006	0	0	0	0
10/26/2006	0	0	0	0
10/27/2006	0.59	0.61	0	0.64
10/28/2006	1.06	0.98	0	1.01
10/29/2006	0	0	0	0
10/30/2006	0	0	0	0
10/31/2006	0	0	0	0
<b>Total</b>	<b>4.44</b>	<b>4.44</b>	<b>1.98</b>	<b>4.61</b>



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

**Monthly Operations Report  
For  
*Combined Sewer System*  
Month: November, 2006**

**Prepared By:**  
D.C. 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, 2006*

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## **1. INTRODUCTION**

The District of Columbia Water and Sewer Authority (WASA or Authority) 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 Authority'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 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**

<i>Struct No.</i>	<i>Location</i>	<i>Associated NPDES Outfall</i>	<i>Date Inspected</i>	<i>Condition</i>		<i>Work Needed</i>	<i>Work performed</i>
				<i>Good</i>	<i>Needs Work</i>		
2	Bolling AFB, 2250 ft. north of the south line of the Base, SW	003	11/13/06	*			
4	Bolling AFB, 2250 ft. north of the south line of the Base, SW	003	11/13/06	*			
5	Poplar Point Pumping Station	004	11/06/06	*			
6	Chicago Street and Railroad Ave, SE	005	11/03/06	*			
7	W Street and Railroad Ave, SE	005	11/03/06	*			
8	Good Hope Rd, west of Nichols Ave, SE	006	11/03/06	*			
9	13 <sup>th</sup> Street and Ridge Place, SE	007	11/03/06	*			
11	"O" Street Pumping Station	011(a)	11/09/06	*			
12	Storm Pump Discharge at Main Pumping Station	011	11/09/06	*			
13	2 <sup>nd</sup> Street, 300 ft. north of N Place, SE	009	11/01/06	*			
14	2 <sup>nd</sup> Street, 250 ft. north of N Place, SE	011(a)	11/09/06	*			
15	South Capitol and E Streets	010	11/03/06	*			
15a	Half and L Streets, SE	010	11/09/06	*			
15b	South Capitol and I Streets	010	11/06/06	*			
15c	South Capitol and I Streets	010	11/06/06	*			
16	North of Main Sewage Pumping Station	012	11/09/06	*			
17	4 <sup>th</sup> and N Streets, SE, Both Extended	013	11/07/06	*			
17a	K Street between 6 <sup>th</sup> Street and 7 <sup>th</sup> Street, SE	013	11/24/06	*			
18	6 <sup>th</sup> and M Streets, SE	014	11/01/06	*			
19	9 <sup>th</sup> and M Streets, SE	015	11/06/06	*			
19a	9 <sup>th</sup> and M Streets, SE	015	11/06/06	*			
20	12 <sup>th</sup> and M Streets, SE	016	11/14/06	*			
20a	12 <sup>th</sup> and M Streets, SE	016	11/14/06	*			
21	14 <sup>th</sup> and M Streets, SE	017	11/24/06	*			
22a	Barney Circle and Pennsylvania Ave, SE	018	11/13/06	*			



Struct No.	Location	Associated NPDES Outfall	Date Inspected	Condition		Work Needed	Work performed
				Good	Needs Work		
22b	Barney Circle and Pennsylvania Ave, SE	018	11/13/06	*			
22c	Barney Circle and Pennsylvania Ave, SE	018	11/13/06	*			
22d	Kentucky Ave and Potomac Street, SE	018	11/13/06	*			
22e	14 <sup>th</sup> Street and Kentucky Ave, SE	018	11/13/06	*			
23	Independence Ave, 21 <sup>st</sup> Street, SE, Extended	019	11/14/06	*			
24a	East Capitol St, west of RFK stadium	019	11/14/06	*			
28	21 <sup>st</sup> and Constitution Ave, NW	020	11/17/06	*			
29	22 <sup>nd</sup> Street, between Constitution Ave and C St, NW	020	11/17/06	*			
30	17 <sup>th</sup> and D Streets, NW	020	11/13/06	*			
31	15 <sup>th</sup> Street and Pennsylvania Ave, NW	020	11/13/06	*			
33	10 <sup>th</sup> and F Streets, NW	020	11/13/06	*			
34	23 <sup>rd</sup> Street, north of Constitution Ave, NW	020	11/09/06	*			
34a	23 <sup>rd</sup> Street near C Street, NW	020	11/17/06	*			
35	Northeast of Roosevelt Bridge, NW	021	11/09/06	*			
36	27 <sup>th</sup> and I Streets, NW	022	11/17/06	*			
36a	New Hampshire Ave and Eye Street, NW	022	11/17/06	*			
36b	19 <sup>th</sup> and L Streets, NW	022, 034	11/01/06	*			
36d	17 <sup>th</sup> and L Streets, NW	022, 034	11/01/06	*			
36g	18 <sup>th</sup> and M Streets, NW	022, 034	11/01/06	*			
36h	18 <sup>th</sup> and M Streets, NW	022, 034	11/01/06	*			
37	27 <sup>th</sup> and Eye Streets, NW	022	11/17/06	*			
38	29 <sup>th</sup> and K Streets, NW	024	11/01/06	*			
38a	30 <sup>th</sup> Street, south of K Street, NW	024	11/01/06	*			
39a	30 <sup>th</sup> and K Streets, NW	024	11/17/06	*			
39b	30 <sup>th</sup> and K Streets, NW	024	11/17/06	*			
41b	31 <sup>st</sup> and K Streets, NW	025	11/14/06	*			
41c	31 <sup>st</sup> and K Streets, NW	025	11/14/06	*			
42	Wisconsin Ave and K Street, NW	026	11/14/06	*			

Struct No.	Location	Associated NPDES Outfall	Date Inspected	Condition		Work Needed	Work performed
				Good	Needs Work		
43	Potomac and Water Streets, NW	027	11/06/06	*			
43a	Potomac and Water Streets, NW	027	11/06/06	*			
44	Water Street, west of Potomac St, NW	027	11/06/06	*			
45	36 <sup>th</sup> and M Streets, NW	028	11/20/06	*			
46	Canal Rd, 1000ft. east of Foxhall Rd, NW	029	11/03/06	*			
47	38 <sup>th</sup> Street and Reservoir Road, NW	029	11/03/06	*			
47a	37 <sup>th</sup> and T Streets, NW	029	11/03/06	*			
47b	37 <sup>th</sup> and T Streets, NW	029	11/03/06	*			
47c	38 <sup>th</sup> and W Streets, NW	029	11/03/06	*			
49	Pennsylvania Ave, east side of Rock Creek, NW	031	11/24/06	*			
50	26 and M Streets, NW	032	11/24/06	*			
51	N Street Extended, west of 25 <sup>th</sup> Street, NW	033	11/24/06	*			
52	22 <sup>nd</sup> Street between M and N Streets, NW	034	11/09/06	*			
52a	N Street between 22 <sup>nd</sup> and 23 <sup>rd</sup> Streets, NW	034	11/17/06	*			
53	22 <sup>nd</sup> and M Streets, NW	022, 034	11/17/06	*			
53a	22 <sup>nd</sup> and M Streets, NW	022, 034	11/17/06	*			
53b	L Street between 21 <sup>st</sup> Street and New Hampshire Ave, NW	022, 034	11/17/06	*			
53c	L and 22 <sup>nd</sup> Streets, NW	022	11/27/06	*			
54	23 <sup>rd</sup> and O Streets, NW	034	11/27/06	*			
55	22 <sup>nd</sup> Street, south of Q Street, NW	035	11/24/06	*			
55a	22 <sup>nd</sup> Street, south of Q Street, NW	035	11/24/06	*			
56	23 <sup>rd</sup> and Massachusetts Ave, NW	036	11/24/06	*			
57	23 <sup>rd</sup> Street, south of Q Street, NW	036	11/24/06	*			
58	Northwest of Belmont Road and Rock Creek and Potomac Parkway, NW	037	11/14/06	*			
59	North of Belmont Rd, east of Kalorama Cir, NW	038	11/14/06	*			
60	Connecticut Ave, east of Rock Creek, NW	039	11/07/06	*			
61	Biltmore St, Extended, east of Rock Creek, NW	040	11/07/06	*			
62	Ontario Rd, Extended, and Rock Creek Pkwy, NW	041	11/20/06	*			

Struct No.	Location	Associated NPDES Outfall	Date Inspected	Condition		Work Needed	Work performed
				Good	Needs Work		
63	Harvard Street and Rock Creek Parkway, NW	042	11/20/06	*			
64	Adams Mill Road, south of Irving Street, NW	043	11/21/06	*			
65	Kenyon Street and Adams Mill Road, NW	044	11/20/06	*			
65a	Kenyon Street and Adams Mill Road, NW	044	11/20/06	*			
66	Adams Mill Road and Lamont Street, NW	045	11/20/06	*			
67	Park Rd , south of Piney Branch Pkwy, NW	046	11/20/06	*			
68	Ingleside Terrance, Extended and Piney Branch Parkway, NW	047	11/20/06	*			
69	Mt. Pleasant Street, Extended and Piney Branch Parkway, NW	048	11/20/06	*			
70	Piney Branch Parkway, west of 16 <sup>th</sup> Street, NW	049	11/20/06	*			
70i	5 <sup>th</sup> and Quackenbos Streets, NW	049	11/06/06	*			
71	28 <sup>th</sup> Street, west of Rock Creek Parkway, NW	050	11/07/06	*			
72	Olive Street Extended and Rock Creek Pkwy, NW	051	11/24/06	*			
72a	Olive Street Extended and Rock Creek Pkwy, NW	051	11/24/06	*			
73	O Street Extended and Rock Creek Parkway, NW	052	11/24/06	*			
74	Q Street, west of Rock Creek, NW	053	11/24/06	*			
75	West side of Rock Creek, 300 ft. south of Massachusetts Ave, NW	054	11/29/06	*			
77	Normanstone Dr Extended, west of Rock Creek, NW	056	11/29/06	*			
77a	Normanstone Dr and Normanstone Lane, NW	056	11/27/06	*			
78	28th Street Extended, west of Rock Creek, NW	057	11/29/06	*			
79	Connecticut Ave and Rock Creek Parkway, NW	058	11/07/06	*			
84	26 <sup>th</sup> and P Streets, NW	060	11/24/06	*			
84a	26 <sup>th</sup> and P Streets, NW	060	11/24/06	*			

Notes:

1. For regulators noted as “visually checked outfall”, the outfall was visually observed to confirm no DWO was occurring.
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 - 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	11/13/06	*		*		*		*		
005	Across from Navy Yard, aligned with Parsons Ave., SE	11/21/06	*		*		*		*		
006	Good Hope Road and Welsh Memorial Bridge	11/21/06	*		*		*		*		
007	Between 11 <sup>th</sup> St. and Anacostia Bridges, SE	11/21/06	*		*		*		*		
009	O St. Sewage Pumping Station, SE	11/21/06	*		*		*		*		
010	O St. Sewage Pumping Station, SE	11/21/06	*			*			*		
011	Main Sewage Pumping Station, SE	11/12/06	*			*			*		
011(a)	Main Sewage Pumping Station, SE	11/21/06	*		*		*		*		
012	Main Sewage Pumping Station, SE	11/21/06	*		*		*		*		
013	Southeast Federal Center, aligned with 4 <sup>th</sup> St.	11/07/06	*		*		*		*		
014	Navy Yard, aligned with 6 <sup>th</sup> St., SE	11/07/06	*		*		*		*		
015	Navy Yard, aligned with 9th Street, SE	11/07/06	*			*			*		
016	12th and O Streets, SE	11/16/06	*		*		*		*		
017	M and Water Street, SE	11/16/06	*		*		*		*		
018	East of Barney Circle and South of Pennsylvania Avenue Bridge, SE	11/16/06	*		*		*		*		
019	Adjacent to Service Drive behind swirl facility and D.C. General Hospital	11/09/06	*			*			*		
020	Rock Creek Parkway and Independence, NW	11/29/06	*		*		*		*		
021	Rock Creek Parkway and C St., NW	11/29/06	*			*			*		
022	Rock Creek Parkway and G St., NW	11/29/06	*		*		*		*		

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	
024	South of 30 <sup>th</sup> and K Streets, NW	11/28/06	*		*				*	*	WASA has developed a capitol project to design and construct a replacement gate for improved performance.
025	South of 31st and K Streets, NW	11/28/06	*		*		*		*		
026	Wisconsin Avenue and Water Street, NW	11/28/06	*		*		*		*		
027	33 <sup>rd</sup> and Water Sts., NW	11/28/06	*			*			*		
028	Key Bridge and Whitehurst Freeway, NW	11/28/06	*			*			*		
029	Adjacent to C&O Canal, aligned with 38 <sup>th</sup> St. NW	11/28/06	*		*		*		*		
031	Rock Creek Pkwy and Pennsylvania Avenue, NW.	11/24/06	*			*			*		
032	26th and M Street, NW.	11/24/06	*			*			*		
033	Across street from St. Francis Jr. High and aligned with N St., NW.	11/24/06	*		*		*		*		
034	Just west of St. Francis Jr. High and north of N St., NW	11/27/06	*		*		*		*		
035	P St. Bridge and Rock Creek Parkway	11/27/06	*		*		*		*		
036	22nd Street, South of Q Street NW.	11/21/06	*		*		*		*		
037	Waterside Dr. and Rock Creek Parkway	11/14/06	*		*		*		*		
038	Between arch footbridge and Connecticut Ave., north of Kalorama Circle, NW.	11/14/06	*		*		*		*		
039	Connecticut Avenue Bridge and Rock Creek Parkway, NW.	11/07/06	*		*		*		*		
040	Aligned with Biltmore Rd., between Connecticut Ave and Ellington Bridge.	11/07/06	*		*		*		*		
041	Beach Dr. and Ontario Pl., NW	11/07/06	*		*		*		*		
042	Harvard St. and Beach Dr NW.	11/07/06	*		*		*		*		
043	Upstream of Harvard St. and Beach Dr NW.	11/07/06	*		*		*		*		
044	Kenyon Street and Beach Dr., NW.	11/07/06	*		*		*		*		

NPDES Outfall	Location	Date Inspected	Outfall Condition		Tide Gate Present?		Tide Gate Condition		CSO Sign		Notes, Work Needed or Performed
			OK	Needs Work	Yes	No	OK	Needs Work	OK	Needs Work	
045	North of Beach Dr. and Walbridge Pl, NW.	11/07/06	*		*		*		*		
046	Piney Branch Parkway and Park Road, NW.	11/20/06	*			*			*		
047	Piney Branch Parkway and Ingleside Terrace	11/20/06	*		*		*		*		
048	South of Piney Branch Parkway and 17 <sup>th</sup> St.	11/20/06	*		*		*		*		
049	North of Piney Branch Parkway and 17 <sup>th</sup> St.	11/20/06	*		*		*		*		
050	Rock Creek Parkway and L St., NW	11/07/06	*		*		*		*		
051	Across Rock Creek Parkway, aligned with Olive St., NW.	11/28/06	*		*		*		*		
052	Between P and Penna. Ave Bridges, aligned with O Street, NW.	11/28/06	*		*		*		*		
053	Q St. Bridge and Rock Creek Parkway, NW.	11/21/06	*		*		*		*		
054	Massachusetts Avenue and Rock Creek Parkway, NW.	11/29/06	*		*		*		*		
056	Normanstone Dr. and Rock Creek Parkway, NW.	11/29/06	*		*		*		*		
057	28th Street and Rock Creek Parkway, NW	11/29/06	*		*		*		*		
058	Connecticut Avenue and Rock Creek Parkway, NW.	11/07/06	*			*			*		
060	North of P Street Bridge and Rock Creek Pkwy, NW	11/21/06	*		*		*		*		

Notes:

1. Outfall is submerged and not visible. CSO is performing acceptably as evidenced by lack of capacity/flooding issues associated with pipe.

### 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>Schedule to Restore to Service</i>
Main	30	4	12	None			
Eastside	30	2	4	None			
Poplar Point	30	2 <sup>1</sup>	3	None			
Potomac	30	4	5	None			

Notes:

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

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

<i>Pumping Station</i>	<i>Date Performed</i>	<i>Type of Preventive Maintenance Performed<sup>1</sup></i>	<i>Comments</i>
Main	11/27/06	Group A	Add oil, grease bearings and replace packing if needed.
O St	11/27/06	Group A	Add oil, grease bearings and replace packing if needed.
Eastside	11/27/06	Group A	Add oil, grease bearings and replace packing if needed.
Poplar Point	11/27/06	Group A	Add oil, grease bearings and replace packing if needed.
Potomac	11/27/06	Group A	Add oil, grease bearings and replace packing if needed.
Rock Creek	11/27/06	Group A	Add oil, grease bearings and replace packing if needed.
Upper Anacostia	11/27/06	Group A	Add oil, grease bearings and replace packing if needed.
Earle Place	11/27/06	Group A	Add oil, grease bearings and replace packing if needed.

Notes:

1. Group A consists of:

Exercise bar screens

Exercise all sump pumps

Drain condensation from air compressor storage tank

Check depth of screening in the screen room and schedule Vactor truck as required

Check all safety equipment

Issue work order requests as required



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

<i>Pumping Station</i>	<i>Sanitary Pumpage</i>		<i>Storm Water/CSO Pumped To Anacostia River</i>		
	<i>Total Wastewater (mg)</i>	<i>Daily Average Wastewater (mg)</i>	<i>Date</i>	<i>Volume (mg)</i>	<i>Screenings Collected (units)</i>
Main	2,100.30	70.01	N/A	N/A	N/A
O St <sup>1</sup>	180.00	6.00	N/A 11/12/06 11/16/06 11/22/06	None 29.00 60.10 10.90	Normal
Eastside	33.13	1.07	N/A	N/A	N/A
Poplar Point	58.50	1.89	N/A	N/A	N/A
Potomac	4,110.00	137.00	N/A	N/A	N/A
Rock Creek	19.17	0.62	N/A	N/A	N/A
Upper Anacostia	38.33	1.20	N/A	N/A	N/A
Earle Place	0.03	0.001	N/A	N/A	N/A

Notes:

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

#### 2-4 Northeast Boundary Swirl Facility

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

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

<i>Date Inspected</i>	<i># Screens</i>	<i># Swirls</i>	<i>Screens or Swirls Out of Service</i>	<i>Dates</i>	<i>Reason</i>	<i>Schedule to Restore to Service</i>
11/22/06	1,2 & 3	1,2 & 3	None	N/a	N/a	N/a

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

<i>Date Performed</i>	<i>Type of Preventive Maintenance Performed<sup>1</sup></i>	<i>Comments</i>
11/22/06	Group A	

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<sup>1</sup> (Hours)</i>	<i>Total Influent Volume (mg)</i>	<i>Total Foul Sewer Volume (mg)</i>	<i>Total Effluent Volume<sup>2</sup> (mg)</i>	<i>Approx. Screenings Volume<sup>3</sup> # of bins (cu ft)</i>
11/2/06	7	6.67	6.67	0	3(252)
11/8/06	6	48.56	1.17	47.39	3(252)
11/8/06	9	10.57	0.760	9.81	0.80(67.2)
11/12/06	9	31.46	1.51	29.95	3(252)
11/16/06	7	17.45	0.944	16.51	2.55(214.2)
11/22/06	3	5.39	5.39	0	1.10(92.4)
11/22/06	8	21.91	4.00	17.91	0.20(16.8)

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**

<i>Date</i>	<i>Chlor/Dechl or System Used?</i>	<i>Dosages</i>		<i>Residual Chlorine Test Results</i>		<i>Enterococcus Test Results</i>		<i>Fecal Coliform Test Results</i>	
		<i>NaOCl (mg/l)</i>	<i>NaHSO<sub>3</sub> (mg/l)</i>	<i>Location</i>	<i>Conc. (mg/l)</i>	<i>Site</i>	<i>Count Per 100ml</i>	<i>Site</i>	<i>Count Per 100ml</i>
11/08/06	Yes	5	2	Mix Chamber	0,1	Mix Chamber	58,000	Mix Chamber	57,000
11/08/06	Yes	5	2	Anacostia River	0.0	Anacostia River	48,000	Anacostia River	49,000
11/08/06	Yes	5	2	Mix Chamber	0,1	Mix Chamber	34,000	Mix Chamber	240,000
11/08/06	Yes	5	2	Anacostia River	0.0	Anacostia River	56,000	Anacostia River	210,000
11/12/06	Yes	5	2	Mix Chamber	0,1	Mix Chamber	43,000	Mix Chamber	49,000
11/12/06	Yes	5	2	Anacostia River	0.0	Anacostia River	41,000	Anacostia River	26,000
11/16/06	Yes	5	2	Mix Chamber	0.2	Mix Chamber	58,000	Mix Chamber	52,000
11/16/06	Yes	5	2	Anacostia River	0.2	Anacostia River	34,000	Anacostia River	39,000
11/22/06	Yes	5	2	Mix Chamber	0.2	Mix Chamber	18,200	Mix Chamber	5,400
11/22/06	Yes	5	2	Anacostia River	0.2	Anacostia River	12,700	Anacostia River	5,600

Notes:

1. Mix Chr.: Mixing Chamber
2. River: River Outfall

**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>
11/08/06	63.0	0.08	0.49	2.50	3.07	0.49	15.2
11/12/06	50.0	< 0.05	0.78	2.76	3.54	0.58	16.4
11/16/06	84.0	< 0.05	0.36	2.92	3.28	0.59	11.3
11/22/06	35.0	< 0.05	0.26	1.43	1.69	0.30	10.3

## 2.5 Inflatable Dams

WASA 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	11/24/06	<b>No</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
14 - West	11/24/06	<b>No</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
15**	11/24/06	<b>No</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
15A	11/24/06	<b>No</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
16 - East	11/24/06	<b>No</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
16 - West	11/24/06	<b>No</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
24 - North	11/24/06	<b>No</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
24 - Middle	11/24/06	<b>No</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
24 - South	11/24/06	<b>No</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
34	11/24/06	<b>No</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
35	11/24/06	<b>No</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
52	11/24/06	<b>No</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>

\*\*The inflatable dam at Structure 15 (South Capital & E Streets, SE) was out of service from 10/19/06 to 10/31/06.

A leak was discovered in the dam on 10/19/06 and the manufacture was contacted. A representative was onsite 10/23/06 for preliminary evaluation and repair recommendations. The inflatable dam was repaired and restored back to service on November 15,2006.

**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 (hrs)</i>
14 (E & W)	None	N/A
15**	11/16/06	7hours 25mins
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
<i>Structures on Outfall Sewers</i>	<i>Overflow Dates</i>	<i>Estimated Duration of Overflow (hrs)</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(E & W)	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	Open

\*\*The inflatable dam at Structure 15 (South Capital & E Streets, SE) was repaired and placed back in service 11/15/06.



**3. DRY WEATHER OVERFLOWS**

Dry weather overflows (DWOs), are summarized below:

**Table 3-1  
Dry Weather Overflows**

Location:	<b>NO DRY WEATHER OVERFLOW IN November</b>
Cause	
Date/ Time Discovered	
Action Taken	
Date/Time Discharge Ceased	
Estimated Volume (mg)	
Did Overflow Reach Receiving water?	
Action taken to prevent reoccurrence	

**4. SOLIDS AND FLOATABLES CONTROL**

**4.1 Catch Basin Cleaning**

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

**Table 4-1 Catch Basin Summaries**

Ward	Total CBs	CBs in CSS	CBs in Anacostia CSS	Inspections		Cleaning					
				Total CBs Inspected Once this Year	Total 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	1,591	1,568	734	734	734	2328	2060	0	0	2328	2060
2	4,714	4,112	2,316	2316	2316	5488	4023	553	460	6041	4483
3	3,555	461	-	0	0	4894	1671	164	0	5058	1671
4	2,782	1,985	159	159	159	3919	2379	69	69	3988	2448
5	2,167	1,035	1,035	1035	1035	3024	1560	721	428	3745	1988
6	1,783	1,594	1,594	1594	1482	1017	685	625	559	1642	1244
7	2,313	-	-	0	0	2125	0	761	0	2886	0
8	1,278	116	116	116	116	1700	355	21	21	1721	376
WASA Subtotal	<b>20,183</b>	<b>10,871</b>	<b>5,954</b>	<b>5,954</b>	<b>5,842</b>	<b>24,495</b>	<b>12,733</b>	<b>2,914</b>	<b>1,537</b>	<b>27,409</b>	<b>14,270</b>
DDOT (via VMS) Subtotal				<b>0</b>	<b>0</b>			<b>0</b>	<b>0</b>		
Grand Total	<b>20,183</b>	<b>10,871</b>	<b>5,954</b>	<b>5,954</b>	<b>5,842</b>			<b>2,914</b>	<b>1,537</b>		
% Cleaned/Inspected to Date				<b>100%</b>	<b>98%</b>					<b>&gt;100%</b>	<b>&gt;100%</b>

#### 4.2 BMP Demonstration Projects

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

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

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

<i>Facility</i>	<i>Date Inspected</i>	<i>Condition</i>	<i>Work Needed</i>	<i>Work performed</i>	<i>Material Removed (CY)</i>
Netting System CSO 018	11/10/06 11/29/06	Good	Removal of weeds near boom	Cleared weeds Removed debris .	385 lbs.
Bar Rack CSO 040	11/07/06	Good	None	Routine Cleaning	(1)
Bar Rack CSO 041	11/07/06	Good	None	Routine Cleaning	(1)

Notes:

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

#### 4.3 Anacostia River Floating Debris Removal Program

This program was initiated in September 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 WASA, Department of Sewer Services. The floating debris removal program utilizes a skimmer boat and support boats to remove floatable debris from the Rivers as well as trash, which accumulates on the riverbanks and in the mud flats at low tides. Work for the most part is directed toward the Anacostia River. The boats pick up debris five days a week. Operations are summarized as follows:

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

<i>Program Operation</i>	5-day work week, excluding holidays, weather permitting
<i>Work Days this month:</i>	20
<i>Days not Operating</i>	7
<i>Reason not Operating</i>	Strong winds
<i># Skimmer in Fleet</i>	2 skimmers
<i># Skimmers Out of Service</i>	One
<i>Dates</i>	10/27/06 to present
<i>Reason</i>	Skimmer B-28 needs to replace throttle cable.
<i>Plan to Restore to Service</i>	As soon as possible.
<i>Volume Material Collected</i>	10 ton.
<i>Nature of Material</i>	Bottles, cans, natural debris and plastics.

#### 4.4 CSS Litter Control

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

Status: no activities this month.

**5. MONITORING**

**5.1 Visual Wet Weather Surveys at Main & O**

WASA performs visual surveys of the CSO overflows at Main and O Street Pumping Station to characterize the quantity and nature of floatable discharged. Results are as follows:

**Table 5-1  
CSO 010, 011, 011, 012 Visual Wet Weather Survey Summaries  
SOLIDS AND FLOATABLES VISUAL SURVEY FORM**

Date:11/16/06

Inspector's Initials: VB

CSO	Time of Observation	Overflo		Observed			Quantity of			Quantity of			REMARKS/OTHER
		Y	N	L	M	H	L	M	H	L	M	H	
009	8.00 am												
	10.00 am												
	12.00 noon												
	2.00 pm	X		X			X			X			
010	8.00 am												
	10.00 am												
	12.00 noon												
	2.00 pm	X		X			X			X			
011	8.00 am												
	10.00 am												
	12.00 noon												
	2.00 pm	X		X			X			X			
011a	8.00 am												
	10.00 am												
	12.00 noon												
	2.00 pm												
012	8.00 am												
	10.00 am												
	12.00 noon												
	2.00 pm												

Note: L= Low, M= Moderate, H= High

## 5.2 Rain Data

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

**Table 5-2 Rainfall Data (inches)**

Monthly Rain Totals Date	Brentwood Reservoir	Bryant St PS	Main PS	Rock Creek PS
11/1/2006	0	0	0	0
11/2/2006	0.39	0.37	0	0.27
11/3/2006	0	0	0	0
11/4/2006	0	0	0	0
11/5/2006	0	0	0	0
11/6/2006	0	0	0	0
11/7/2006	0.24	0.23	0	0.23
11/8/2006	1.46	1.48	0.11	1.51
11/9/2006	0	0	0	0
11/10/2006	0	0	0	0
11/11/2006	0	0	0	0
11/12/2006	1.11	1.11	0	0.76
11/13/2006	0.02	0.02	0	0
11/14/2006	0	0	0	0
11/15/2006	0	0	0	0
11/16/2006	0.94	0.84	0.96	1.28
11/17/2006	0	0	0	0
11/18/2006	0	0	0	0
11/19/2006	0.05	0	0	0
11/20/2006	1.84	0	0	0
11/21/2006	0	0	0	0
11/22/2006	0.85	0.87	0.88	0.8
11/23/2006	0.05	0.03	0.09	0.02
11/24/2006	0	0	0	0
11/25/2006	0	0	0	0
11/26/2006	0	0	0	0
11/27/2006	0	0	0	0
11/28/2006	0	0	0	0
11/29/2006	0	0	0	0
11/30/2006	0	0	0	0
Total	6.95	4.95	2.04	4.87



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

**Monthly Operations Report  
For  
*Combined Sewer System*  
Month: December 2006**

**Prepared By:**  
D.C. 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, 2006*

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## **1. INTRODUCTION**

The District of Columbia Water and Sewer Authority (WASA or Authority) 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 Authority'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 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**

<i>Struct No.</i>	<i>Location</i>	<i>Associated NPDES Outfall</i>	<i>Date Inspected</i>	<i>Condition</i>		<i>Work Needed</i>	<i>Work performed</i>
				Good	Needs Work		
2	Bolling AFB, 2250 ft. north of the south line of the Base, SW	003	12-27-06	*			
4	Bolling AFB, 2250 ft. north of the south line of the Base, SW	003	12-27-06	*			
5	Poplar Point Pumping Station	004		*			
6	Chicago Street and Railroad Ave, SE	005	12-6-06	*			
7	W Street and Railroad Ave, SE	005	12-6-06	*			
8	Good Hope Rd, west of Nichols Ave, SE	006	12-6-06	*			
9	13 <sup>th</sup> Street and Ridge Place, SE	007	12-6-06	*			
11	"O" Street Pumping Station	011(a)	12-14-06	*			
12	Storm Pump Discharge at Main Pumping Station	011	12-14-06	*			
13	2 <sup>nd</sup> Street, 300 ft. north of N Place, SE	009	12-1-06	*			
14	2 <sup>nd</sup> Street, 250 ft. north of N Place, SE	011(a)	12-14-06	*			
15	South Capitol and E Streets	010	12-20-06	*			
15a	Half and L Streets, SE	010	12-20-06	*			
15b	South Capitol and I Streets	010	12-13-06	*			
15c	South Capitol and I Streets	010	12-13-06	*			
16	North of Main Sewage Pumping Station	012	12-14-06	*			
17	4 <sup>th</sup> and N Streets, SE, Both Extended	013	12-20-06	*			
17a	K Street between 6 <sup>th</sup> Street and 7 <sup>th</sup> Street, SE	013	12-27-06	*			
18	6 <sup>th</sup> and M Streets, SE	014	12-5-06	*			
19	9 <sup>th</sup> and M Streets, SE	015	12-4-06	*			
19a	9 <sup>th</sup> and M Streets, SE	015	12-4-06	*			
20	12 <sup>th</sup> and M Streets, SE	016	12-4-06	*			
20a	12 <sup>th</sup> and M Streets, SE	016	12-4-06	*			
21	14 <sup>th</sup> and M Streets, SE	017	12-12-06	*			
22a	Barney Circle and Pennsylvania Ave, SE	018	12-8-06	*			

Struct No.	Location	Associated NPDES Outfall	Date Inspected	Condition		Work Needed	Work performed
				Good	Needs Work		
22b	Barney Circle and Pennsylvania Ave, SE	018	12-8-06	*			
22c	Barney Circle and Pennsylvania Ave, SE	018	12-5-06	*			
22d	Kentucky Ave and Potomac Street, SE	018	12-5-06	*			
22e	14 <sup>th</sup> Street and Kentucky Ave, SE	018	12-5-06	*			
23	Independence Ave, 21 <sup>st</sup> Street, SE, Extended	019	12-21-06	*			
24a	East Capitol St, west of RFK stadium	019	12-12-06	*			
28	21 <sup>st</sup> and Constitution Ave, NW	020	12-27-06	*			
29	22 <sup>nd</sup> Street, between Constitution Ave and C St, NW	020	12-27-06	*			
30	17 <sup>th</sup> and D Streets, NW	020	12-13-06	*			
31	15 <sup>th</sup> Street and Pennsylvania Ave, NW	020	12-13-06	*			
33	10 <sup>th</sup> and F Streets, NW	020	12-13-06	*			
34	23 <sup>rd</sup> Street, north of Constitution Ave, NW	020	12-14-06	*			
34a	23 <sup>rd</sup> Street near C Street, NW	020	12-27-06	*			
35	Northeast of Roosevelt Bridge, NW	021	12-14-06	*			
36	27 <sup>th</sup> and I Streets, NW	022	12-11-06	*			
36a	New Hampshire Ave and Eye Street, NW	022	12-11-06	*			
36b	19 <sup>th</sup> and L Streets, NW	022, 034	12-8-06	*			
36d	17 <sup>th</sup> and L Streets, NW	022, 034	12-8-06	*			
36g	18 <sup>th</sup> and M Streets, NW	022, 034	12-8-06	*			
36h	18 <sup>th</sup> and M Streets, NW	022, 034	12-8-06	*			
37	27 <sup>th</sup> and Eye Streets, NW	022	12-11-06	*			
38	29 <sup>th</sup> and K Streets, NW	024	12-1-06	*			
38a	30 <sup>th</sup> Street, south of K Street, NW	024	12-1-06	*			
39a	30 <sup>th</sup> and K Streets, NW	024	12-1-06	*			
39b	30 <sup>th</sup> and K Streets, NW	024	12-1-06	*			
41b	31 <sup>st</sup> and K Streets, NW	025	12-1-06	*			
41c	31 <sup>st</sup> and K Streets, NW	025	12-1-06	*			
42	Wisconsin Ave and K Street, NW	026	12-5-06	*			

Struct No.	Location	Associated NPDES Outfall	Date Inspected	Condition		Work Needed	Work performed
				Good	Needs Work		
43	Potomac and Water Streets, NW	027	12-8-06	*			
43a	Potomac and Water Streets, NW	027	12-8-06	*			
44	Water Street, west of Potomac St, NW	027	12-8-06	*			
45	36 <sup>th</sup> and M Streets, NW	028	12-20-06	*			
46	Canal Rd, 1000ft. east of Foxhall Rd, NW	029	12-5-06	*			
47	38 <sup>th</sup> Street and Reservoir Road, NW	029	12-5-06	*			
47a	37 <sup>th</sup> and T Streets, NW	029	12-5-06	*			
47b	37 <sup>th</sup> and T Streets, NW	029	12-5-06	*			
47c	38 <sup>th</sup> and W Streets, NW	029	12-5-06	*			
49	Pennsylvania Ave, east side of Rock Creek, NW	031	12-4-06	*			
50	26 and M Streets, NW	032	12-4-06	*			
51	N Street Extended, west of 25 <sup>th</sup> Street, NW	033	12-4-06	*			
52	22 <sup>nd</sup> Street between M and N Streets, NW	034	12-14-06	*			
52a	N Street between 22 <sup>nd</sup> and 23 <sup>rd</sup> Streets, NW	034	12-29-06	*			
53	22 <sup>nd</sup> and M Streets, NW	022, 034	12-29-06	*			
53a	22 <sup>nd</sup> and M Streets, NW	022, 034	12-29-06	*			
53b	L Street between 21 <sup>st</sup> Street and New Hampshire Ave, NW	022, 034	12-29-06	*			
53c	L and 22 <sup>nd</sup> Streets, NW	022	12-29-06	*			
54	23 <sup>rd</sup> and O Streets, NW	034	12-29-06	*			
55	22 <sup>nd</sup> Street, south of Q Street, NW	035	12-29-06	*			
55a	22 <sup>nd</sup> Street, south of Q Street, NW	035	12-29-06	*			
56	23 <sup>rd</sup> and Massachusetts Ave, NW	036	12-29-06	*			
57	23 <sup>rd</sup> Street, south of Q Street, NW	036	12-29-06	*			
58	Northwest of Belmont Road and Rock Creek and Potomac Parkway, NW	037	12-20-06	*			
59	North of Belmont Rd, east of Kalorama Cir, NW	038	12-20-06	*			
60	Connecticut Ave, east of Rock Creek, NW	039	12-11-06	*			
61	Biltmore St, Extended, east of Rock Creek, NW	040	12-11-06	*			
62	Ontario Rd, Extended, and Rock Creek Pkwy, NW	041	12-11-06	*			

Struct No.	Location	Associated NPDES Outfall	Date Inspected	Condition		Work Needed	Work performed
				Good	Needs Work		
63	Harvard Street and Rock Creek Parkway, NW	042	12-13-06	*			
64	Adams Mill Road, south of Irving Street, NW	043	12-11-06	*			
65	Kenyon Street and Adams Mill Road, NW	044	12-13-06	*			
65a	Kenyon Street and Adams Mill Road, NW	044	12-13-06	*			
66	Adams Mill Road and Lamont Street, NW	045	12-13-06	*			
67	Park Rd , south of Piney Branch Pkwy, NW	046	12-13-06	*			
68	Ingleside Terrance, Extended and Piney Branch Parkway, NW	047	12-13-06	*			
69	Mt. Pleasant Street, Extended and Piney Branch Parkway, NW	048	12-13-06	*			
70	Piney Branch Parkway, west of 16 <sup>th</sup> Street, NW	049	12-13-06	*			
70i	5 <sup>th</sup> and Quackenbos Streets, NW	049	12-4-06	*			
71	28 <sup>th</sup> Street, west of Rock Creek Parkway, NW	050	12-5-06	*			
72	Olive Street Extended and Rock Creek Pkwy, NW	051	12-29-06	*			
72a	Olive Street Extended and Rock Creek Pkwy, NW	051	12-29-06	*			
73	O Street Extended and Rock Creek Parkway, NW	052	12-29-06	*			
74	Q Street, west of Rock Creek, NW	053	12-29-06	*			
75	West side of Rock Creek, 300 ft. south of Massachusetts Ave, NW	054	12-20-06	*			
77	Normanstone Dr Extended, west of Rock Creek, NW	056	12-20-06	*			
77a	Normanstone Dr and Normanstone Lane, NW	056	12-5-06	*			
78	28th Street Extended, west of Rock Creek, NW	057	12-20-06	*			
79	Connecticut Ave and Rock Creek Parkway, NW	058	12-5-06	*			
84	26 <sup>th</sup> and P Streets, NW	060	12-29-06	*			
84a	26 <sup>th</sup> and P Streets, NW	060	12-29-06	*			

Notes:

1. For regulators noted as “visually checked outfall”, the outfall was visually observed to confirm no DWO was occurring.
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 - 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	12-27-06	*		*		*		*		
005	Across from Navy Yard, aligned with Parsons Ave., SE	12-7-06	*		*		*		*		
006	Good Hope Road and Welsh Memorial Bridge	12-7-06	*		*		*		*		
007	Between 11 <sup>th</sup> St. and Anacostia Bridges, SE	12-7-06	*		*		*		*		
009	O St. Sewage Pumping Station, SE	12-28-06	*		*		*		*		
010	O St. Sewage Pumping Station, SE	12-28-06	*			*			*		
011	Main Sewage Pumping Station, SE	12-28-06	*			*			*		
011(a)	Main Sewage Pumping Station, SE	12-28-06	*		*		*		*		
012	Main Sewage Pumping Station, SE	12-28-06	*		*		*		*		
013	Southeast Federal Center, aligned with 4 <sup>th</sup> St.	12-7-06	*		*		*		*		
014	Navy Yard, aligned with 6 <sup>th</sup> St., SE	12-7-06	*		*		*		*		
015	Navy Yard, aligned with 9th Street, SE	12-7-06	*			*			*		
016	12th and O Streets, SE	12-7-06	*		*		*		*		
017	M and Water Street, SE	12-7-06	*		*		*		*		
018	East of Barney Circle and South of Pennsylvania Avenue Bridge, SE	12-7-06	*		*		*		*		
019	Adjacent to Service Drive behind swirl facility and D.C. General Hospital	12-21-06	*			*			*		
020	Rock Creek Parkway and Independence, NW	12-21-06	*		*		*		*		
021	Rock Creek Parkway and C St., NW	12-21-06	*			*			*		
022	Rock Creek Parkway and G St., NW	12-21-06	*		*		*		*		

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	
024	South of 30 <sup>th</sup> and K Streets, NW	12-21-06	*		*				*	*	WASA has developed a capitol project to design and construct a replacement gate for improved performance.
025	South of 31st and K Streets, NW	12-21-06	*		*			*		*	
026	Wisconsin Avenue and Water Street, NW	12-21-06	*		*			*		*	
027	33 <sup>rd</sup> and Water Sts., NW	12-21-06	*			*				*	
028	Key Bridge and Whitehurst Freeway, NW	12-21-06	*			*				*	
029	Adjacent to C&O Canal, aligned with 38 <sup>th</sup> St. NW	12-21-06	*		*			*		*	
031	Rock Creek Pkwy and Pennsylvania Avenue, NW.	12-4-06	*			*				*	
032	26th and M Street, NW.	12-4-06	*			*				*	
033	Across street from St. Francis Jr. High and aligned with N St., NW.	12-4-06	*		*			*		*	
034	Just west of St. Francis Jr. High and north of N St., NW	12-29-06	*		*			*		*	
035	P St. Bridge and Rock Creek Parkway	12-29-06	*		*			*		*	
036	22nd Street, South of Q Street NW.	12-29-06	*		*			*		*	
037	Waterside Dr. and Rock Creek Parkway	12-20-06	*		*			*		*	
038	Between arch footbridge and Connecticut Ave., north of Kalorama Circle, NW.	12-20-06	*		*			*		*	
039	Connecticut Avenue Bridge and Rock Creek Parkway, NW.	12-11-06	*		*			*		*	
040	Aligned with Biltmore Rd., between Connecticut Ave and Ellington Bridge.	12-11-06	*		*			*		*	
041	Beach Dr. and Ontario Pl., NW	12-7-06	*		*			*		*	
042	Harvard St. and Beach Dr NW.	12-7-06	*		*			*		*	
043	Upstream of Harvard St. and Beach Dr NW.	12-7-06	*		*			*		*	
044	Kenyon Street and Beach Dr., NW.	12-7-06	*		*			*		*	

NPDES Outfall	Location	Date Inspected	Outfall Condition		Tide Gate Present?		Tide Gate Condition		CSO Sign		Notes, Work Needed or Performed
			OK	Needs Work	Yes	No	OK	Needs Work	OK	Needs Work	
045	North of Beach Dr. and Walbridge Pl, NW.	12-7-06	*		*		*		*		
046	Piney Branch Parkway and Park Road, NW.	12-13-06	*			*			*		
047	Piney Branch Parkway and Ingleside Terrace	12-13-06	*		*		*		*		
048	South of Piney Branch Parkway and 17 <sup>th</sup> St.	12-13-06	*		*		*		*		
049	North of Piney Branch Parkway and 17 <sup>th</sup> St.	12-13-06	*		*		*		*		
050	Rock Creek Parkway and L St., NW	12-5-06	*		*		*		*		
051	Across Rock Creek Parkway, aligned with Olive St., NW.	12-29-06	*		*		*		*		
052	Between P and Penna. Ave Bridges, aligned with O Street, NW.	12-29-06	*		*		*		*		
053	Q St. Bridge and Rock Creek Parkway, NW.	12-29-06	*		*		*		*		
054	Massachusetts Avenue and Rock Creek Parkway, NW.	12-20-06	*		*		*		*		
056	Normanstone Dr. and Rock Creek Parkway, NW.	12-20-06	*		*		*		*		
057	28th Street and Rock Creek Parkway, NW	12-20-06	*		*		*		*		
058	Connecticut Avenue and Rock Creek Parkway, NW.	12-5-06	*			*			*		
060	North of P Street Bridge and Rock Creek Pkwy, NW	12-29-06	*		*		*		*		

Notes:

1. Outfall is submerged and not visible. CSO is performing acceptably as evidenced by lack of capacity/flooding issues associated with pipe.



### 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>Schedule to Restore to Service</i>
Main	31	4	12	None			
Eastside	31	2	4	None			
Poplar Point	31	2 <sup>1</sup>	3	None			
Potomac	31	4	5	None			

Notes:

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

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

<i>Pumping Station</i>	<i>Date Performed</i>	<i>Type of Preventive Maintenance Performed<sup>1</sup></i>	<i>Comments</i>
Main	12/14/06	Group A	Add oil, grease bearings and replace packing if needed.
O St	12/14/06	Group A	Add oil, grease bearings and replace packing if needed.
Eastside	12/14/06	Group A	Add oil, grease bearings and replace packing if needed.
Poplar Point	12/14/06	Group A	Add oil, grease bearings and replace packing if needed.
Potomac	12/14/06	Group A	Add oil, grease bearings and replace packing if needed.
Rock Creek	12/14/06	Group A	Add oil, grease bearings and replace packing if needed.
Upper Anacostia	12/14/06	Group A	Add oil, grease bearings and replace packing if needed.
Earle Place	12/14/06	Group A	Add oil, grease bearings and replace packing if needed.

Notes:

1. Group A consists of:

Exercise bar screens

Exercise all sump pumps

Drain condensation from air compressor storage tank

Check depth of screening in the screen room and schedule Vactor truck as required

Check all safety equipment

Issue work order requests as required

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

<i>Pumping Station</i>	<i>Sanitary Pumpage</i>		<i>Storm Water/CSO Pumped To Anacostia River</i>		
	<i>Total Wastewater (mg)</i>	<i>Daily Average Wastewater (mg)</i>	<i>Date</i>	<i>Volume (mg)</i>	<i>Screenings Collected (units)</i>
Main	1874.40	60.46	N/A	N/A	N/A
O St <sup>1</sup>	125.40	4.05	N/A	None	Normal
Eastside	216.50	6.98	N/A	N/A	N/A
Poplar Point	576.00	18.58	N/A	N/A	N/A
Potomac	3959.40	127.72	N/A	N/A	N/A
Rock Creek	100.40	3.24	N/A	N/A	N/A
Upper Anacostia	55.90	1.80	N/A	N/A	N/A
Earle Place	0.68	0.02	N/A	N/A	N/A

Notes:

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

#### 2-4 Northeast Boundary Swirl Facility

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

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

<i>Date Inspected</i>	<i># Screens</i>	<i># Swirls</i>	<i>Screens or Swirls Out of Service</i>	<i>Dates</i>	<i>Reason</i>	<i>Schedule to Restore to Service</i>
12/06	1,2 & 3	1,2 & 3	None	N/a	N/a	N/a

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

<i>Date Performed</i>	<i>Type of Preventive Maintenance Performed<sup>1</sup></i>	<i>Comments</i>
12/06	Group A	

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<sup>1</sup> (Hours)</i>	<i>Total Influent Volume (mg)</i>	<i>Total Foul Sewer Volume (mg)</i>	<i>Total Effluent Volume<sup>2</sup> (mg)</i>	<i>Approx. Screenings Volume<sup>3</sup> # of bins (cu ft)</i>
12/22	6	15.87	15.87	0	3(252)
12/23	3	3.19	3.19	0	1.2(93.7)
12/25	8	6.02	6.02	0	3(252)

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**

<i>Date</i>	<i>Chlor/Dechl or System Used?</i>	<i>Dosages</i>		<i>Residual Chlorine Test Results</i>		<i>Enterococcus Test Results</i>		<i>Fecal Coliform Test Results</i>	
		<i>NaOCl (mg/l)</i>	<i>NaHSO<sub>3</sub> (mg/l)</i>	<i>Location</i>	<i>Conc. (mg/l)</i>	<i>Site</i>	<i>Count Per 100ml</i>	<i>Site</i>	<i>Count Per 100ml</i>
12/22									
12/23									
12/25									

Notes:

1. Mix Chr.: Mixing Chamber
2. River: River Outfall

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

Date	Flow Composited Sample Results						
	Total suspended solids (mg/L)	Nitrite (NO <sub>2</sub> -N) mg/L	Nitrate (NO <sub>3</sub> -N) mg/L	Total Kjeldahl Nitrogen (mg/L as N)	Total Nitrogen (mg/L)	Total Phosphorus (mg/L)	Carbonaceous Biological Oxygen Demand (mg/L)
12/22	NONE						
12/23							
12/25							



## 2.5 Inflatable Dams

WASA 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	12/14	<b>No</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
14 - West	12/14	<b>No</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
15	12/14	<b>No</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
15A	12/14	<b>No</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
16 - East	12/14	<b>No</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
16 - West	12/14	<b>No</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
24 - North	12/14	<b>No</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
24 - Middle	12/14	<b>No</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
24 - South	12/14	<b>No</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
34	12/14	<b>No</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
35	12/14	<b>No</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
52	12/14	<b>No</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>

**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 (hrs)</i>
14 (E & W)	<i>None</i>	<i>N/A</i>
15	<i>None</i>	<i>N/A</i>
15A	<i>None</i>	<i>N/A</i>
16 (E & W)	<i>None</i>	<i>N/A</i>
24	<i>None</i>	<i>N/A</i>
34	<i>None</i>	<i>N/A</i>
35	<i>None</i>	<i>N/A</i>
52	<i>None</i>	<i>N/A</i>
<i>Structures on Outfall Sewers</i>	<i>Overflow Dates</i>	<i>Estimated Duration of Overflow (hrs)</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(E & W)	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	Open

**3. DRY WEATHER OVERFLOWS**

Dry weather overflows (DWOs), are summarized below:

**Table 3-1  
Dry Weather Overflows**

Location:	<b>NO DRY WEATHER OVERFLOW IN DECEMBER 2006</b>
Cause	
Date/ Time Discovered	
Action Taken	
Date/Time Discharge Ceased	
Estimated Volume (mg)	
Did Overflow Reach Receiving water?	
Action taken to prevent reoccurrence	

#### 4. SOLIDS AND FLOATABLES CONTROL

##### 4.1 Catch Basin Cleaning

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

**Table 4-1 Catch Basin Summaries**

Ward	Total CBs	CBs in CSS	CBs in Anacostia CSS	Inspections		Cleaning					
				Total CBs Inspected Once this Year	Total 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	1,591	1,568	734	734	734	2328	2060	0	0	2328	2060
2	4,714	4,112	2,316	2316	2316	6041	4483	205	185	6246	4668
3	3,555	461	-	0	0	5058	1671	0	0	5058	1671
4	2,782	1,985	159	159	159	3988	2448	105	33	4093	2481
5	2,167	1,035	1,035	1035	1035	3745	1988	132	49	3877	2037
6	1,783	1,594	1,594	1594	1594	1642	1244	384	361	2026	1605
7	2,313	-	-	0	0	2886	0	1351	0	4237	0
8	1,278	116	116	116	116	1721	376	0	0	1721	376
<b>WASA Subtotal</b>	<b>20,183</b>	<b>10,871</b>	<b>5,954</b>	<b>5,954</b>	<b>5,954</b>	<b>27,409</b>	<b>14,270</b>	<b>2,177</b>	<b>628</b>	<b>29,586</b>	<b>14,898</b>
DDOT (via VMS) Subtotal				0	0			0	0	0	0
<b>Grand Total</b>	<b>20,183</b>	<b>10,871</b>	<b>5,954</b>	<b>5,954</b>	<b>5,954</b>			<b>2,177</b>	<b>628</b>	<b>29,586</b>	<b>14,898</b>
% Cleaned/Inspected to Date				<b>100%</b>	<b>100%</b>					<b>&gt;100%</b>	<b>&gt;100%</b>

#### 4.2 BMP Demonstration Projects

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

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

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

<i>Facility</i>	<i>Date Inspected</i>	<i>Condition</i>	<i>Work Needed</i>	<i>Work performed</i>	<i>Material Removed (CY)</i>
Netting System CSO 018	12/4/06 and 12/29/06	Good	Minor Maintenance	Nets emptied.	550 lbs.
Bar Rack CSO 040	12/7/06	Good	None	Routine Cleaning	(1)
Bar Rack CSO 041	12/7/06	Good	None	Routine Cleaning	(1)

Notes:

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

#### 4.3 Anacostia River Floating Debris Removal Program

This program was initiated in September 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 WASA, Department of Sewer Services. The floating debris removal program utilizes a skimmer boat and support boats to remove floatable debris from the Rivers as well as trash, which accumulates on the riverbanks and in the mud flats at low tides. Work for the most part is directed toward the Anacostia River. The boats pick up debris five days a week. Operations are summarized as follows:

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

<i>Program Operation</i>	5-day work week, excluding holidays, weather permitting
<i>Work Days this month:</i>	19
<i>Days not Operating</i>	3
<i>Reason not Operating</i>	Strong winds
<i># Skimmer in Fleet</i>	2 skimmers
<i># Skimmers Out of Service</i>	One
<i>Dates</i>	12/1/06 to present
<i>Reason</i>	Skimmer B-29 waiting for part – switch control handle.
<i>Plan to Restore to Service</i>	As soon as possible.
<i>Volume Material Collected</i>	20 ton.
<i>Nature of Material</i>	Bottles, cans, natural debris and plastics.

#### 4.4 CSS Litter Control

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

Status: no activities this month.

**5. MONITORING**

**5.1 Visual Wet Weather Surveys at Main & O**

WASA performs visual surveys of the CSO overflows at Main and O Street Pumping Station to characterize the quantity and nature of floatable discharged. Results are as follows:

**Table 5-1  
CSO 010, 011, 011, 012 Visual Wet Weather Survey Summaries  
SOLIDS AND FLOATABLES VISUAL SURVEY FORM**

CSO	Time of Observation	Date:		Observed			Quantity of			Quantity of			REMARKS/OTHER
		Y	N	L	M	H	L	M	H	L	M	H	
009													
010				None Reported									
				None Reported									
				None Reported									
011													
011a													
012													

Note: L= Low, M= Moderate, H= High

## 5.2 Rain Data

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

**Table 5-2 Rainfall Data (inches)**

Monthly Rain Totals Date	Brentwood Reservoir	Bryant St PS	Main PS	Rock Creek PS
12/1/2006	0.01	0.01	0.03	0.01
12/2/2006	0	0	0	0
12/3/2006	0	0	0	0
12/4/2006	0	0	0	0
12/5/2006	0	0	0	0
12/6/2006	0	0	0	0
12/7/2006	0	0	0	0
12/8/2006	0	0	0	0
12/9/2006	0	0	0	0
12/10/2006	0	0	0	0
12/11/2006	0	0	0	0
12/12/2006	0	0	0	0
12/13/2006	0.09	0.07	0.09	0.07
12/14/2006	0	0.01	0	0.01
12/15/2006	0	0	0	0
12/16/2006	0	0	0	0
12/17/2006	0	0	0	0
12/18/2006	0	0	0	0
12/19/2006	0	0	0	0
12/20/2006	0	0	0	0
12/21/2006	0	0	0	0
12/22/2006	0.69	0.75	0.71	0.73
12/23/2006	0.08	0.07	0.06	0.09
12/24/2006	0	0	0	0
12/25/2006	0.46	0.45	0.48	0.45
12/26/2006	0.03	0.03	0.06	0.03
12/27/2006	0	0	0	0
12/28/2006	0	0	0	0
12/29/2006	0	0	0	0
12/30/2006	0	0	0	0
12/31/2006	0.04	0.04	0.05	0.03
<b>TOTALS</b>	1.4	1.43	1.48	1.42



District of Columbia Water and Sewer Authority

**Combined Sewer System Model Results**  
**Period: October, November, December 2006**  
**SCENARIO: Q4\_Y2006, 1-22-07**

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)
<b>Anacostia CSOs</b>							
005	Chicago St and Railroad Station SE	15	4.1	95.3	6.4	14.5	0.5
006	Good Hope Road, West of Nichols Ave.,SE	0	0.0	0.0	0.0	0.0	0.0
007	13 <sup>th</sup> Street and Ridge Place,SE	14	6.2	49.8	3.6	8.8	0.5
009	2nd Street, 300 feet North of N Place, SE	11	4.1	39.0	3.5	7.0	0.8
010	O Street SewagePumping Station, SE (pumped Overflow)	7	147.2	18.0	2.6	5.3	0.5
011	South of Main Sewage Pumping Station, SE (pumped overflow)	0	0.0	0.0	0.0	0.0	0.0
011a	South of Main SewagePumping Station, SE (gravity overflow)	0	0.0	0.0	0.0	0.0	0.0
012	North of Main SewagePumping Station, SE (Tiber Creek)	1	0.4	0.5	0.5	0.5	0.5
013	4th and N Streets, SE	7	1.8	15.0	2.1	5.8	0.3
014	6th and M Streets, SE	13	10.1	50.0	3.8	10.0	0.5
015	9th and M Streets, SE	2	0.0	0.8	0.4	0.5	0.3
016	12th and M Streets, SE	4	1.7	8.8	2.2	3.0	0.3
017	14th and M Streets, SE	6	2.6	12.0	2.0	3.5	0.8
018	Barney Circle andPennsylvania Ave, SE	6	0.3	12.3	2.0	3.3	0.8
019	Northeast Boundary - Swirl Effluent	8	176.0	35.3	4.4	8.3	1.0
019	Northeast Bound. - Swirl Bypass	4	5.3	3.0	0.8	1.3	0.3
	<b>SUBTOTAL</b>		<b>360</b>				
<b>Potomac CSOs</b>							
003	Bolling AFB	0	0.0	0.0	0.0	0.0	0.0
020	23rd Street, North ofConstitution Ave, NW (Easby Point)	3	10.9	7.5	2.5	2.8	2.3
021	Northeast ofRoosevelt Bridge, NW	6	114.4	15.8	2.6	6.0	0.8
022	27th and K Streets, NW	6	2.0	17.8	3.0	6.3	0.8
024	30th and K Streets, NW	3	9.7	12.3	4.1	5.8	3.0
025	31st & K St NW	3	0.0	2.0	0.7	1.0	0.3
026	Wisconsin Avenue andK St., NW	0	0.0	0.0	0.0	0.0	0.0
027	Water Street West ofStreet, NW	16	13.4	100.8	6.3	16.3	0.3
028	36th and M Streets, NW	2	0.1	1.8	0.9	1.0	0.8
029	Canal Road 1000 feet east of Rock Creek,NW	12	5.0	50.5	4.2	10.0	1.0
	<b>SUBTOTAL</b>		<b>156</b>				
<b>Rock Creek</b>							
031	Pennsylvania Avenue, East Rock Creek, NW	2	0.0	2.8	1.4	1.5	1.3
032	26th and M Streets, NW	0	0.0	0.0	0.0	0.0	0.0
033	N Street extendedwest of 25th Street,NW	0	0.0	0.0	0.0	0.0	0.0
034	23rd and O Streets, SW	0	0.0	0.0	0.0	0.0	0.0
035	22nd Street south of Q Street, NW	0	0.0	0.0	0.0	0.0	0.0
036	22nd Street South of Q Street, NW	4	0.1	11.5	2.9	4.3	1.0
037	Northwest of Belmontand Rock Creek and Potomac Parkway	0	0.0	0.0	0.0	0.0	0.0
038	North of Belmont Road,east of Kalorama Circle, NW	0	0.0	0.0	0.0	0.0	0.0
039	Connecticut Avenue east of Rock Creek, NW	0	0.0	0.0	0.0	0.0	0.0
040	Biltmore Street extended east of RockCreek, NW	0	0.0	0.0	0.0	0.0	0.0
041	Ontario extended and Rock Creek Parkway	0	0.0	0.0	0.0	0.0	0.0

District of Columbia Water and Sewer Authority

**Combined Sewer System Model Results**  
**Period: October, November, December 2006**  
**SCENARIO: Q4\_Y2006, 1-22-07**

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	0.0	0.0	0.0	0.0	0.0
043	Adams Mill Road South of Irving Street, NW	0	0.0	0.0	0.0	0.0	0.0
044	Kenyon Street and Adams Mill Road, NW	0	0.0	0.0	0.0	0.0	0.0
045	Adams Mill Road and Lamont Street, NW	0	0.0	0.0	0.0	0.0	0.0
046	Park Road south of Piney Branch Parkway, NW	0	0.0	0.0	0.0	0.0	0.0
047	Ingleside Terrace extended and Piney Branch Parkway	0	0.0	0.0	0.0	0.0	0.0
048	Mt. Pleasant Street extended and Piney Branch Parkway	0	0.0	0.0	0.0	0.0	0.0
049	Piney Branch and LamontStreet, NW	5	2.9	9.3	1.9	2.8	0.5
050	28th Street west of 16th Street, NW	0	0.0	0.0	0.0	0.0	0.0
051	Olive Street extended and Rock Creek Parkway, NW	0	0.0	0.0	0.0	0.0	0.0
052	O Street extended and Rock Creek Parkway, NW	0	0.0	0.0	0.0	0.0	0.0
053	O Street west of Rock Creek Parkway, NW	0	0.0	0.0	0.0	0.0	0.0
054	West Side of Rock Creek300 ft. south of Mass. Ave, NW	0	0.0	0.0	0.0	0.0	0.0
056	Normanstone Drive extended west of Rock Creek, NW	0	0.0	0.0	0.0	0.0	0.0
057	28th Street extended west of Rock Creek, NW	2	0.2	1.8	0.9	1.0	0.8
058	Connecticut Avenue and Rock Creek Parkway, NW	0	0.0	0.0	0.0	0.0	0.0
060	P St and 26 <sup>th</sup> St, NW	0	0.0	0.0	0.0	0.0	0.0
	<b>SUBTOTAL</b>		<b>3</b>				
	<b>TOTAL</b>		<b>519</b>				

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