

# QUARTERLY OPERATIONS REPORT

DISTRICT OF COLUMBIA

COMBINED SEWER OVERFLOW FACILITIES

SECOND QUARTER 2008

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: April 2008**

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*Monthly Operations Report for Combined Sewer System  
Month: April 2008*

**Table of Contents**

- 1. INTRODUCTION**
- 2. OPERATION AND MAINTENANCE**
  - 2.1 Regulators
  - 2.2 Outfalls, Tide Gates and CSO Signs
  - 2.3 Pumping Stations
  - 2.4 Northeast Boundary Swirl Facility
  - 2.5 Inflatable Dams
- 3. DRY WEATHER OVERFLOWS**
- 4. SOLIDS AND FLOATABLES CONTROL**
  - 4.1 Catch Basin Cleaning
  - 4.2 BMP Demonstration Projects
  - 4.3 Skimmer Boat Programs
  - 4.4 CSS Litter Control
- 5. MONITORING**
  - 5.1 Visual Survey of Main & O
  - 5.2 Rainfall Data

## **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	04/16/08	*			
4	Bolling AFB, 2250 ft. north of the south line of the Base, SW	003	04/16/08	*			
5	Poplar Point Pumping Station	004	04/10/08	*			
6	Chicago Street and Railroad Ave, SE	005	04/08/08	*			
7	W Street and Railroad Ave, SE	005	04/08/08	*			
8	Good Hope Rd, west of Nichols Ave, SE	006	04/09/08	*			
9	13 <sup>th</sup> Street and Ridge Place, SE	007	04/07/08	*			
11	"O" Street Pumping Station	011(a)	04/10/08	*			
12	Storm Pump Discharge at Main Pumping Station	011	04/10/08	*			
13	2 <sup>nd</sup> Street, 300 ft. north of N Place, SE	009	04/02/08	*			
14	2 <sup>nd</sup> Street, 250 ft. north of N Place, SE	011(a)	04/10/08	*			
15	South Capitol and E Streets	010	04/10/08	*			
15a	Half and L Streets, SE	010	04/10/08	*			
15b	South Capitol and I Streets	010	04/09/08	*			
15c	South Capitol and I Streets	010	04/09/08	*			
16	North of Main Sewage Pumping Station	012	04/10/08	*			
17	4 <sup>th</sup> and N Streets, SE, Both Extended	013	04/09/08	*			
17a	K Street between 6 <sup>th</sup> Street and 7 <sup>th</sup> Street, SE	013	04/22/08	*			
18	6 <sup>th</sup> and M Streets, SE	014	04/02/08	*			
19	9 <sup>th</sup> and M Streets, SE	015	04/09/08	*			
19a	9 <sup>th</sup> and M Streets, SE	015	04/09/08	*			
20	12 <sup>th</sup> and M Streets, SE	016	04/09/08	*			
20a	12 <sup>th</sup> and M Streets, SE	016	04/09/08	*			
21	14 <sup>th</sup> and M Streets, SE	017	04/03/08	*			
22a	Barney Circle and Pennsylvania Ave, SE	018	04/14/08	*			

Struct No.	Location	Associated NPDES Outfall	Date Inspected	Condition		Work Needed	Work performed
				Good	Needs Work		
22b	Barney Circle and Pennsylvania Ave, SE	018	04/14/08	*			
22c	Barney Circle and Pennsylvania Ave, SE	018	04/14/08	*			
22d	Kentucky Ave and Potomac Street, SE	018	04/14/08	*			
22e	14 <sup>th</sup> Street and Kentucky Ave, SE	018	04/14/08	*			
23	Independence Ave, 21 <sup>st</sup> Street, SE, Extended	019	04/14/08	*			
24a	East Capitol St, west of RFK stadium	019	04/14/08	*			
28	21 <sup>st</sup> and Constitution Ave, NW	020	04/29/08	*			
29	22 <sup>nd</sup> Street, between Constitution Ave and C St, NW	020	04/29/08	*			
30	17 <sup>th</sup> and D Streets, NW	020	04/08/08	*			
31	15 <sup>th</sup> Street and Pennsylvania Ave, NW	020	04/08/08	*			
33	10 <sup>th</sup> and F Streets, NW	020	04/08/08	*			
34	23 <sup>rd</sup> Street, north of Constitution Ave, NW	020	04/14/08	*		construction	
34a	23 <sup>rd</sup> Street near C Street, NW	020	04/29/08	*			
35	Northeast of Roosevelt Bridge, NW	021	04/24/08	*			
36	27 <sup>th</sup> and I Streets, NW	022	04/21/08	*			
36a	New Hampshire Ave and Eye Street, NW	022	04/21/08	*			
36b	19 <sup>th</sup> and L Streets, NW	022, 034	04/07/08	*			
36d	17 <sup>th</sup> and L Streets, NW	022, 034	04/07/08	*			
36g	18 <sup>th</sup> and M Streets, NW	022, 034	04/07/08	*			
36h	18 <sup>th</sup> and M Streets, NW	022, 034	04/07/08	*			
37	27 <sup>th</sup> and Eye Streets, NW	022	04/21/08	*			
38	29 <sup>th</sup> and K Streets, NW	024	04/07/08	*			
38a	30 <sup>th</sup> Street, south of K Street, NW	024	04/07/08	*			
39a	30 <sup>th</sup> and K Streets, NW	024	04/07/08	*			
39b	30 <sup>th</sup> and K Streets, NW	024	04/07/08	*			
41b	31 <sup>st</sup> and K Streets, NW	025	04/01/08	*			
41c	31 <sup>st</sup> and K Streets, NW	025	04/01/08	*			
42	Wisconsin Ave and K Street, NW	026	04/09/08	*			

Struct No.	Location	Associated NPDES Outfall	Date Inspected	Condition		Work Needed	Work performed
				Good	Needs Work		
43	Potomac and Water Streets, NW	027	04/09/08	*			
43a	Potomac and Water Streets, NW	027	04/09/08	*			
44	Water Street, west of Potomac St, NW	027	04/09/08	*			
45	36 <sup>th</sup> and M Streets, NW	028	04/02/08	*			
46	Canal Rd, 1000ft. east of Foxhall Rd, NW	029	04/02/08	*			
47	38 <sup>th</sup> Street and Reservoir Road, NW	029	04/02/08	*			
47a	37 <sup>th</sup> and T Streets, NW	029	04/02/08	*			
47b	37 <sup>th</sup> and T Streets, NW	029	04/02/08	*			
47c	38 <sup>th</sup> and W Streets, NW	029	04/02/08	*			
49	Pennsylvania Ave, east side of Rock Creek, NW	031	04/09/08	*			
50	26 and M Streets, NW	032	04/09/08	*			
51	N Street Extended, west of 25 <sup>th</sup> Street, NW	033	04/14/08	*			
52	22 <sup>nd</sup> Street between M and N Streets, NW	034	04/24/08	*			
52a	N Street between 22 <sup>nd</sup> and 23 <sup>rd</sup> Streets, NW	034	04/24/08	*			
53	22 <sup>nd</sup> and M Streets, NW	022, 034	04/23/08	*			
53a	22 <sup>nd</sup> and M Streets, NW	022, 034	04/23/08	*			
53b	L Street between 21 <sup>st</sup> Street and New Hampshire Ave, NW	022, 034	04/07/08	*			
53c	L and 22 <sup>nd</sup> Streets, NW	022	04/07/08	*			
54	23 <sup>rd</sup> and O Streets, NW	034	04/23/08	*			
55	22 <sup>nd</sup> Street, south of Q Street, NW	035	04/23/08	*			
55a	22 <sup>nd</sup> Street, south of Q Street, NW	035	04/23/08	*			
56	23 <sup>rd</sup> and Massachusetts Ave, NW	036	04/23/08	*			
57	23 <sup>rd</sup> Street, south of Q Street, NW	036	04/23/08	*			
58	Northwest of Belmont Road and Rock Creek and Potomac Parkway, NW	037	04/29/08	*			
59	North of Belmont Rd, east of Kalorama Cir, NW	038	04/29/08	*			
60	Connecticut Ave, east of Rock Creek, NW	039	04/08/08	*			
61	Biltmore St, Extended, east of Rock Creek, NW	040	04/08/08	*			
62	Ontario Rd, Extended, and Rock Creek Pkwy, NW	041	04/11/08	*			

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	04/11/08	*			
64	Adams Mill Road, south of Irving Street, NW	043	04/11/08	*			
65	Kenyon Street and Adams Mill Road, NW	044	04/11/08	*			
65a	Kenyon Street and Adams Mill Road, NW	044	04/11/08	*			
66	Adams Mill Road and Lamont Street, NW	045	04/11/08	*			
67	Park Rd , south of Piney Branch Pkwy, NW	046	04/11/08	*			
68	Ingleside Terrance, Extended and Piney Branch Parkway, NW	047	04/11/08	*			
69	Mt. Pleasant Street, Extended and Piney Branch Parkway, NW	048	04/11/08	*			
70	Piney Branch Parkway, west of 16 <sup>th</sup> Street, NW	049	04/11/08	*			
70i	5 <sup>th</sup> and Quackenbos Streets, NW	049	04/01/08	*			
71	28 <sup>th</sup> Street, west of Rock Creek Parkway, NW	050	04/01/08	*			
72	Olive Street Extended and Rock Creek Pkwy, NW	051	04/14/08	*			
72a	Olive Street Extended and Rock Creek Pkwy, NW	051	04/14/08	*			
73	O Street Extended and Rock Creek Parkway, NW	052	04/14/08	*			
74	Q Street, west of Rock Creek, NW	053	04/23/08	*			
75	West side of Rock Creek, 300 ft. south of Massachusetts Ave, NW	054	04/27/08	*			
77	Normanstone Dr Extended, west of Rock Creek, NW	056	04/27/08	*			
77a	Normanstone Dr and Normanstone Lane, NW	056	04/02/08	*			
78	28th Street Extended, west of Rock Creek, NW	057	04/22/08	*			
79	Connecticut Ave and Rock Creek Parkway, NW	058	04/08/08	*			
84	26 <sup>th</sup> and P Streets, NW	060	04/14/08	*			
84a	26 <sup>th</sup> and P Streets, NW	060	04/14/08	*			

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	04/16/08	*		*		*		*		
005	Across from Navy Yard, aligned with Parsons Ave., SE	04/03/08	*		*		*		*		
006	Good Hope Road and Welsh Memorial Bridge	04/03/08	*		*		*		*		
007	Between 11 <sup>th</sup> St. and Anacostia Bridges, SE	04/03/08	*		*		*		*		
009	O St. Sewage Pumping Station, SE/	04/07/08	*		*		*		*		
010	O St. Sewage Pumping Station, SE/	04/15/08	*			*			*		
011	Main Sewage Pumping Station, SE	04/15/08	*			*			*		
011(a)	Main Sewage Pumping Station, SE	04/15/08	*		*		*		*		
012	Main Sewage Pumping Station, SE	04/15/08	*		*		*		*		
013	Southeast Federal Center, aligned with 4 <sup>th</sup> St.	04/09/08	*		*		*		*		
014	Navy Yard, aligned with 6 <sup>th</sup> St., SE	04/15/08	*		*		*		*		
015	Navy Yard, aligned with 9th Street, SE	04/15/08	*			*			*		
016	12th and O Streets, SE	04/03/08	*		*		*		*		
017	M and Water Street, SE	04/03/08	*		*		*		*		
018	East of Barney Circle and South of Pennsylvania Avenue Bridge, SE	04/03/08	*		*		*		*		
019	Adjacent to Service Drive behind swirl facility and D.C. General Hospital	04/29/08	*			*			*		
020	Rock Creek Parkway and Independence, NW	04/29/08	*		*		*		*		
021	Rock Creek Parkway and C St., NW	04/29/08	*			*			*		
022	Rock Creek Parkway and G St., NW	04/29/08	*		*		*		*		

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	04/29/08	*		*			*	*		WASA has developed a capitol project to design and construct a replacement gate for improved performance.
025	South of 31st and K Streets, NW	04/29/08	*		*		*		*		
026	Wisconsin Avenue and Water Street, NW	04/29/08	*		*		*		*		
027	33 <sup>rd</sup> and Water Sts., NW	04/29/08	*			*			*		
028	Key Bridge and Whitehurst Freeway, NW	04/29/08	*			*			*		
029	Adjacent to C&O Canal, aligned with 38 <sup>th</sup> St. NW	04/29/08	*		*		*		*		
031	Rock Creek Pkwy and Pennsylvania Avenue, NW.	04/09/08	*			*			*		
032	26th and M Street, NW.	04/09/08	*			*			*		
033	Across street from St. Francis Jr. High and aligned with N St., NW.	04/14/08	*		*		*		*		
034	Just west of St. Francis Jr. High and north of N St., NW	04/23/08	*		*		*		*		
035	P St. Bridge and Rock Creek Parkway	04/23/08	*		*		*		*		
036	22nd Street, South of Q Street NW.	04/15/08	*		*		*		*		
037	Waterside Dr. and Rock Creek Parkway	04/29/08	*		*		*		*		
038	Between arch footbridge and Connecticut Ave., north of Kalorama Circle, NW.	04/29/08	*		*		*		*		
039	Connecticut Avenue Bridge and Rock Creek Parkway, NW.	04/08/08	*		*		*		*		
040	Aligned with Biltmore Rd., between Connecticut Ave and Ellington Bridge.	04/08/08	*		*		*		*		
041	Beach Dr. and Ontario Pl., NW	04/17/08	*		*		*		*		
042	Harvard St. and Beach Dr NW.	04/17/08	*		*		*		*		
043	Upstream of Harvard St. and Beach Dr NW.	04/17/08	*		*		*		*		
044	Kenyon Street and Beach Dr., NW.	04/17/08	*		*		*		*		
045	North of Beach Dr. and Walbridge Pl, NW.	04/17/08	*		*		*		*		

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	
046	Piney Branch Parkway and Park Road, NW.	04/11/08	*			*			*		
047	Piney Branch Parkway and Ingleside Terrace	04/11/08	*		*		*		*		
048	South of Piney Branch Parkway and 17 <sup>th</sup> St.	04/11/08	*		*		*		*		
049	North of Piney Branch Parkway and 17 <sup>th</sup> St.	04/11/08	*		*		*		*		
050	Rock Creek Parkway and L St., NW	04/01/08	*		*		*		*		
051	Across Rock Creek Parkway, aligned with Olive St., NW.	04/03/08	*		*		*		*		
052	Between P and Penna. Ave Bridges, aligned with O Street, NW.	04/03/08	*		*		*		*		
053	Q St. Bridge and Rock Creek Parkway, NW.	04/15/08	*		*		*		*		
054	Massachusetts Avenue and Rock Creek Parkway, NW.	04/22/08	*		*		*		*		
056	Normanstone Dr. and Rock Creek Parkway, NW.	04/22/08	*		*		*		*		
057	28th Street and Rock Creek Parkway, NW	04/22/08	*		*		*		*		
058	Connecticut Avenue and Rock Creek Parkway, NW.	04/08/08	*			*			*		
060	North of P Street Bridge and Rock Creek Pkwy, NW	04/15/08	*		*		*		*		

Notes:

### 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	Pump #1	4/2/08-4/30/08	Pump vibration –Damaged Impeller and shaft	8/31/08
Eastside	30	2	4	None			
Poplar Point	30	2	3	Screen #2	4/1/08-4/30/08	Motor burnt up	8/31/08
				Pump #2	4/1/08-4/30/08	Bad bearing	8/31/08
Potomac	30	4	5	Pump #2	4/1/08-4/22/08	Construction	4/22/08

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	04/24/08	Group A	Add oil, grease bearings and replace packing if needed.
O St	04/24/08	Group A	Add oil, grease bearings and replace packing if needed.
Eastside	04/24/08	Group A	Add oil, grease bearings and replace packing if needed.
Poplar Point	04/24/08	Group A	Add oil, grease bearings and replace packing if needed.
Potomac	04/24/08	Group A	Add oil, grease bearings and replace packing if needed.
Rock Creek	04/24/08	Group A	Add oil, grease bearings and replace packing if needed.
Upper Anacostia	04/24/08	Group A	Add oil, grease bearings and replace packing if needed.
Earle Place	04/24/08	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 Vector truck as required

Check all safety equipment

Issue work order requests as required

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

<i>Pumping Station</i>	<i>Sanitary Pumpage</i>		<i>Storm Water/CSO Pumped To Anacostia River</i>		
	<i>Total Wastewater (mg)</i>	<i>Daily Average Wastewater (mg)</i>	<i>Date</i>	<i>Volume (mg)</i>	<i>Screenings Collected (units)</i>
Main	1,827.80	60.93	N/A	N/A	N/A
O St <sup>1</sup>	173.70	5.79	4/20/08 4/28/08	11.8 19.3	Normal Normal
Eastside	521.90	17.40	N/A	N/A	N/A
Poplar Point	666.00	22.20	N/A	N/A	N/A
Potomac	4,287.50	142.92	N/A	N/A	N/A
Rock Creek	177.50	5.92	N/A	N/A	N/A
Upper Anacostia	47.80	1.59	N/A	N/A	N/A
Earle Place	0.15	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>
04/26/08	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>
04/26/08	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>
04/03/08	4	7.14	2.10	5.04	0.55(44)
04/04/08	7	3.17	2.33	0.84	0.20(16)
04/20/08	5	22.23	13.01	9.22	2.10(168)
4/20/08	8	13.37	2.75	10.62	0.45(36)
04/21/08	7.5	10.84	5.41	5.43	0.43(34.4)
04/21/08	8.5	14.07	5.43	8.64	0.45(36)
04/21/08	8	3.41	1.89	1.52	0.40(32)
04/27/08	3	5.33	5.33	0	0.80(64)
04/28/08	4.5	15.37	2.58	12.79	0.70(56)
04/28/08	8	5.95	2.36	3.59	0.30(24)

**Note**

Refrigerator used to preserve samples broke down in the middle of events on April 4, 2008. Shift operator stored the samples in the freezer to avoid contamination and spoilage. Laboratory was unable to analyze samples collected for the following dates because sample was frozen.

First shift on April 4, 2004

Second shift on April 20, 2004

Third shift on April 21, 2004

First shift on April 28, 2004

Refrigerator was replaced on April 29, 2008.

**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>
04/03/08	Yes	5	2	Mix Chamber	0.2	Mix Chamber	36	Mix Chamber	<10
04/03/08	Yes	5	2	Anacostia River	0.0	Anacostia River	27,000	Anacostia River	7,091
04/20/08	Yes	5	2	Mix Chamber	0.2	Mix Chamber	58,000	Mix Chamber	390,000
04/20/08	Yes	5	2	Anacostia River	0.0	Anacostia River	100,000	Anacostia River	350,000
04/21/08	Yes	5	2	Mix Chamber	0.2	Mix Chamber	4,400	Mix Chamber	700
04/21/08	Yes	5	2	Anacostia River	0.2	Anacostia River	3,200	Anacostia River	3,600
04/21/08	Yes	5	2	Mix Chamber	0.1	Mix Chamber	<10	Mix Chamber	260
04/21/08	Yes	5	2	Anacostia River	0.1	Anacostia River	20,000	Anacostia River	1,802
04/28/08	Yes	5	2	Mix Chamber	0.1	Mix Chamber	58,000	Mix Chamber	210,000
04/28/08	Yes	5	2	Anacostia River	0	Anacostia River	250,000	Anacostia River	660,000

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 Composited 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>
4/03/08	87.5	0.04	0.54	3.24	3.82	0.81	39.0
4/20/08	262	0.08	0.61	6.56	7.25	1.12	36.2
4/21/08	86.0	0.05	0.76	2.80	3.61	0.61	25.1
4/28/08	102	0.03	0.29	2.98	3.30	0.52	24.1

## 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	04/17/08	<b>No</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
14 - West	04/17/08	<b>No</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
15	04/17/08	<b>No</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
15A	04/17/08	<b>No</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
16 - East	04/24/08	<b>No</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
16 - West	04/24/08	<b>No</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
24 - North	04/24/08	<b>No</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
24 - Middle	04/24/08	<b>No</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
24 - South	04/24/08	<b>No</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
34	04/17/08	<b>No</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
35	04/17/08	<b>No</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
52	04/17/08	<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)	None	N/A
15	04/20/08	30 mins
15A	04/03/08	7 hrs 15 mins
	04/20/08	3 hrs
	04/21/08	1 hr
	04/28/08	15 mins
16 (E & W)	04/03/08	36 mins
	04/20/08	9 hrs
24	None	N/A
34	04/20/08	1 hr 36 mins
	04/28/08	12 mins
35	04/20/08	15 hrs
	04/21/08	8 mins
	04/28/08	1 hr 3 mins
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

**3. DRY WEATHER OVERFLOWS**

**There was no dry weather overflow during April 2008.**

**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	Inspections			Cleaning					
			CBs in Anacostia CSS	Total Anacostia CBs Inspected Once this Year	Total Anacostia CBs Inspected Twice this Year	CBs Cleaned Thru Last Month		CB's Cleaned this Month		Total CBs Cleaned This Year to Date	
						Total	In CSS	Total	In CSS	Total	In CSS
1	1,591	1,568	734	524	291	700	690	105	95	805	785
2	4,714	4,112	2,316	1,833	594	3182	2778	537	476	3719	3254
3	3,555	461	-	0	0	1627	157	100	12	1727	169
4	2,782	1,985	159	135	0	156	122	194	156	350	278
5	2,167	1,035	1,035	724	475	921	446	499	278	1420	724
6	1,783	1,594	1,594	1,594	110	813	724	1103	986	1916	1710
7	2,313	-	-	0	0	554	0	760	0	1314	0
8	1,278	116	116	11	0	89	8	43	3	132	11
WASA Subtotal	<b>20,183</b>	<b>10,871</b>	<b>5,954</b>	<b>4,821</b>	<b>1,470</b>	<b>8,042</b>	<b>4,925</b>	<b>3,341</b>	<b>2,006</b>	<b>11,383</b>	<b>6,931</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>4,821</b>	<b>1,470</b>			<b>3,341</b>	<b>2,006</b>	<b>11,383</b>	<b>6,931</b>
% Cleaned/Inspected to Date				<b>81%</b>	<b>25%</b>					<b>56%</b>	<b>64%</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	4/1/08 and 4/23/08.	Good	Minor Maintenance	Nets emptied.	320 lbs.
Bar Rack CSO 040	4/8/08	Good	None	Routine Cleaning	(1)
Bar Rack CSO 041	4/17/08	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>	22
<i>Days not Operating</i>	4
<i>Reason not Operating</i>	Strong winds and low tide.
<i># Skimmer in Fleet</i>	2 skimmers
<i># Skimmers Out of Service</i>	None.
<i>Dates</i>	N/A.
<i>Reason</i>	N/A.
<i>Plan to Restore to Service</i>	N/A.
<i>Volume Material Collected</i>	30 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: 04/20/08

Inspector's Initials: TC

CSO	Time of Observation	Overflow		Observed			Quantity of			Quantity of			REMARKS/OTHER
		Y	N	L	M	H	L	M	H	L	M	H	
009	12:00 pm												
	2:00 pm												
	4:00 pm												
010	12:00 pm												
	2:00 pm												
	4:00 pm												
011	7.30 pm	X		x			x			x			Very little floatables turned storm pumps on at 5.30 pm
011a	12:00 pm												
	2:00 pm												
	4:00 pm												
012	12:00 pm												
	2:00 pm												
	4:00 pm												

Date: 04/28/08

Inspector's Initials: DJW

CSO	Time of Observation	Overflow		Observed			Quantity of			Quantity of			REMARKS/OTHER
		Y	N	L	M	H	L	M	H	L	M	H	
009	12:00 pm												
	2:00 pm												
	4:00 pm												
010	12:00 pm												
	2:00 pm												
	4:00 pm												
011													
	7.30 pm												
011a	12:00 pm												
	2:00 pm												
	4:00 pm												
012	3.30 pm	X		x			x			x			
	5.30 pm	x		x			x			x			Off @ 6.00 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)**

Date	Brentwood Reservoir	Bryant St PS	Main PS	Rock Creek PS
4/1/2008	0.08	0.05	0.00	0.00
4/2/2008	0.00	0.00	0.00	0.00
4/3/2008	0.64	0.68	0.67	0.67
4/4/2008	0.08	0.07	0.10	0.10
4/5/2008	0.01	0.01	0.00	0.00
4/6/2008	0.36	0.34	0.38	0.39
4/7/2008	0.02	0.04	0.00	0.01
4/8/2008	0.00	0.00	0.00	0.00
4/9/2008	0.00	0.00	0.00	0.00
4/10/2008	0.00	0.00	0.00	0.00
4/11/2008	0.11	0.11	0.11	0.09
4/12/2008	0.03	0.02	0.07	0.02
4/13/2008	0.00	0.00	0.00	0.00
4/14/2008	0.02	0.02	0.01	0.02
4/15/2008	0.00	0.00	0.01	0.00
4/16/2008	0.00	0.00	0.03	0.00
4/17/2008	0.00	0.00	0.02	0.00
4/18/2008	0.00	0.00	0.00	0.00
4/19/2008	0.00	0.00	0.00	0.00
4/20/2008	2.01	2.03	0.00	1.45
4/21/2008	0.97	1.09	0.27	1.13
4/22/2008	0.00	0.00	0.00	0.03
4/23/2008	0.01	0.00	0.00	0.00
4/24/2008	0.00	0.00	0.02	0.00
4/25/2008	0.00	0.00	0.00	0.00
4/26/2008	0.21	0.24	0.18	0.19
4/27/2008	0.05	0.05	0.08	0.17
4/28/2008	0.98	0.94	0.96	0.91
4/29/2008	0.00	0.00	0.00	0.01
4/30/2008	0.00	0.00	0.00	0.00
<b>TOTALS</b>	<b>5.58</b>	<b>5.69</b>	<b>2.91</b>	<b>5.19</b>



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

**Monthly Operations Report  
For  
*Combined Sewer System*  
Month: May 2008**

**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: May 2008*

**Table of Contents**

- 1. INTRODUCTION**
- 2. OPERATION AND MAINTENANCE**
  - 2.1 Regulators
  - 2.2 Outfalls, Tide Gates and CSO Signs
  - 2.3 Pumping Stations
  - 2.4 Northeast Boundary Swirl Facility
  - 2.5 Inflatable Dams
- 3. DRY WEATHER OVERFLOWS**
- 4. SOLIDS AND FLOATABLES CONTROL**
  - 4.1 Catch Basin Cleaning
  - 4.2 BMP Demonstration Projects
  - 4.3 Skimmer Boat Programs
  - 4.4 CSS Litter Control
- 5. MONITORING**
  - 5.1 Visual Survey of Main & O
  - 5.2 Rainfall Data

## **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	05/23/08	*			
4	Bolling AFB, 2250 ft. north of the south line of the Base, SW	003	05/23/08	*			
5	Poplar Point Pumping Station	004	05/06/08	*			
6	Chicago Street and Railroad Ave, SE	005	05/05/08	*			
7	W Street and Railroad Ave, SE	005	05/05/08	*			
8	Good Hope Rd, west of Nichols Ave, SE	006	05/05/08	*			
9	13 <sup>th</sup> Street and Ridge Place, SE	007	05/05/08	*			
11	"O" Street Pumping Station	011(a)	05/22/08	*			
12	Storm Pump Discharge at Main Pumping Station	011	05/22/08	*			
13	2 <sup>nd</sup> Street, 300 ft. north of N Place, SE	009	05/06/08	*			
14	2 <sup>nd</sup> Street, 250 ft. north of N Place, SE	011(a)	05/22/08	*			
15	South Capitol and E Streets	010	05/22/08	*			
15a	Half and L Streets, SE	010	05/22/08	*			
15b	South Capitol and I Streets	010	05/02/08	*			
15c	South Capitol and I Streets	010	05/02/08	*			
16	North of Main Sewage Pumping Station	012	05/22/08	*			
17	4 <sup>th</sup> and N Streets, SE, Both Extended	013	05/08/08	*			
17a	K Street between 6 <sup>th</sup> Street and 7 <sup>th</sup> Street, SE	013	05/02/08	*			
18	6 <sup>th</sup> and M Streets, SE	014	05/05/08	*			
19	9 <sup>th</sup> and M Streets, SE	015	05/05/08	*			
19a	9 <sup>th</sup> and M Streets, SE	015	05/05/08	*			
20	12 <sup>th</sup> and M Streets, SE	016	05/07/08	*			
20a	12 <sup>th</sup> and M Streets, SE	016	05/07/08	*			
21	14 <sup>th</sup> and M Streets, SE	017	05/07/08	*			
22a	Barney Circle and Pennsylvania Ave, SE	018	05/07/08	*			



Struct No.	Location	Associated NPDES Outfall	Date Inspected	Condition		Work Needed	Work performed
				Good	Needs Work		
22b	Barney Circle and Pennsylvania Ave, SE	018	05/16/08	*			
22c	Barney Circle and Pennsylvania Ave, SE	018	05/16/08	*			
22d	Kentucky Ave and Potomac Street, SE	018	05/06/08	*			
22e	14 <sup>th</sup> Street and Kentucky Ave, SE	018	05/06/08	*			
23	Independence Ave, 21 <sup>st</sup> Street, SE, Extended	019	05/01/08	*			
24a	East Capitol St, west of RFK stadium	019	05/01/08	*			
28	21 <sup>st</sup> and Constitution Ave, NW	020	05/29/08	*			
29	22 <sup>nd</sup> Street, between Constitution Ave and C St, NW	020	05/29/08	*			
30	17 <sup>th</sup> and D Streets, NW	020	05/06/08	*			
31	15 <sup>th</sup> Street and Pennsylvania Ave, NW	020	05/06/08	*			
33	10 <sup>th</sup> and F Streets, NW	020	05/06/08	*			
34	23 <sup>rd</sup> Street, north of Constitution Ave, NW	020	05/30/08	*		construction	
34a	23 <sup>rd</sup> Street near C Street, NW	020	05/29/08	*			
35	Northeast of Roosevelt Bridge, NW	021	05/29/08	*			
36	27 <sup>th</sup> and I Streets, NW	022	05/23/08	*			
36a	New Hampshire Ave and Eye Street, NW	022	05/23/08	*			
36b	19 <sup>th</sup> and L Streets, NW	022, 034	05/07/08	*			
36d	17 <sup>th</sup> and L Streets, NW	022, 034	05/07/08	*			
36g	18 <sup>th</sup> and M Streets, NW	022, 034	05/07/08	*			
36h	18 <sup>th</sup> and M Streets, NW	022, 034	05/07/08	*			
37	27 <sup>th</sup> and Eye Streets, NW	022	05/23/08	*			
38	29 <sup>th</sup> and K Streets, NW	024	05/05/08	*			
38a	30 <sup>th</sup> Street, south of K Street, NW	024	05/07/08	*			
39a	30 <sup>th</sup> and K Streets, NW	024	05/07/08	*			
39b	30 <sup>th</sup> and K Streets, NW	024	05/07/08	*			
41b	31 <sup>st</sup> and K Streets, NW	025	05/07/08	*			
41c	31 <sup>st</sup> and K Streets, NW	025	05/07/08	*			
42	Wisconsin Ave and K Street, NW	026	05/05/08	*			

Struct No.	Location	Associated NPDES Outfall	Date Inspected	Condition		Work Needed	Work performed
				Good	Needs Work		
43	Potomac and Water Streets, NW	027	05/16/08	*			
43a	Potomac and Water Streets, NW	027	05/16/08	*			
44	Water Street, west of Potomac St, NW	027	05/16/08	*			
45	36 <sup>th</sup> and M Streets, NW	028	05/13/08	*			
46	Canal Rd, 1000ft. east of Foxhall Rd, NW	029	05/16/08	*			
47	38 <sup>th</sup> Street and Reservoir Road, NW	029	05/16/08	*			
47a	37 <sup>th</sup> and T Streets, NW	029	05/16/08	*			
47b	37 <sup>th</sup> and T Streets, NW	029	05/16/08	*			
47c	38 <sup>th</sup> and W Streets, NW	029	05/16/08	*			
49	Pennsylvania Ave, east side of Rock Creek, NW	031	05/21/08	*			
50	26 and M Streets, NW	032	05/21/08	*			
51	N Street Extended, west of 25 <sup>th</sup> Street, NW	033	05/21/08	*			
52	22 <sup>nd</sup> Street between M and N Streets, NW	034	05/29/08	*			
52a	N Street between 22 <sup>nd</sup> and 23 <sup>rd</sup> Streets, NW	034	05/29/08	*			
53	22 <sup>nd</sup> and M Streets, NW	022, 034	05/29/08	*			
53a	22 <sup>nd</sup> and M Streets, NW	022, 034	05/29/08	*			
53b	L Street between 21 <sup>st</sup> Street and New Hampshire Ave, NW	022, 034	05/21/08	*			
53c	L and 22 <sup>nd</sup> Streets, NW	022	05/21/08	*			
54	23 <sup>rd</sup> and O Streets, NW	034	05/28/08	*			
55	22 <sup>nd</sup> Street, south of Q Street, NW	035	05/28/08	*			
55a	22 <sup>nd</sup> Street, south of Q Street, NW	035	05/28/08	*			
56	23 <sup>rd</sup> and Massachusetts Ave, NW	036	05/28/08	*			
57	23 <sup>rd</sup> Street, south of Q Street, NW	036	05/28/08	*			
58	Northwest of Belmont Road and Rock Creek and Potomac Parkway, NW	037	05/23/08	*			
59	North of Belmont Rd, east of Kalorama Cir, NW	038	05/23/08	*			
60	Connecticut Ave, east of Rock Creek, NW	039	05/21/08	*			
61	Biltmore St, Extended, east of Rock Creek, NW	040	05/19/08	*			
62	Ontario Rd, Extended, and Rock Creek Pkwy, NW	041	05/19/08	*			

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	05/19/08	*			
64	Adams Mill Road, south of Irving Street, NW	043	05/19/08	*			
65	Kenyon Street and Adams Mill Road, NW	044	05/19/08	*			
65a	Kenyon Street and Adams Mill Road, NW	044	05/19/08	*			
66	Adams Mill Road and Lamont Street, NW	045	05/19/08	*			
67	Park Rd , south of Piney Branch Pkwy, NW	046	05/19/08	*			
68	Ingleside Terrance, Extended and Piney Branch Parkway, NW	047	05/19/08	*			
69	Mt. Pleasant Street, Extended and Piney Branch Parkway, NW	048	05/19/08	*			
70	Piney Branch Parkway, west of 16 <sup>th</sup> Street, NW	049	05/19/08	*			
70i	5 <sup>th</sup> and Quackenbos Streets, NW	049	05/06/08	*			
71	28 <sup>th</sup> Street, west of Rock Creek Parkway, NW	050	05/07/08	*			
72	Olive Street Extended and Rock Creek Pkwy, NW	051	05/21/08	*			
72a	Olive Street Extended and Rock Creek Pkwy, NW	051	05/21/08	*			
73	O Street Extended and Rock Creek Parkway, NW	052	05/21/08	*			
74	Q Street, west of Rock Creek, NW	053	05/28/08	*			
75	West side of Rock Creek, 300 ft. south of Massachusetts Ave, NW	054	05/01/08	*			
77	Normanstone Dr Extended, west of Rock Creek, NW	056	05/01/08	*			
77a	Normanstone Dr and Normanstone Lane, NW	056	05/13/08	*			
78	28th Street Extended, west of Rock Creek, NW	057	05/01/08	*			
79	Connecticut Ave and Rock Creek Parkway, NW	058	05/06/08	*			
84	26 <sup>th</sup> and P Streets, NW	060	05/21/08	*			
84a	26 <sup>th</sup> and P Streets, NW	060	05/21/08	*			

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	05/23/08	*		*		*		*		
005	Across from Navy Yard, aligned with Parsons Ave., SE	05/08/08	*		*		*		*		
006	Good Hope Road and Welsh Memorial Bridge	05/08/08	*		*		*		*		
007	Between 11 <sup>th</sup> St. and Anacostia Bridges, SE	05/08/08	*		*		*		*		
009	O St. Sewage Pumping Station, SE/	05/30/08	*		*		*		*		
010	O St. Sewage Pumping Station, SE/	05/30/08	*			*			*		
011	Main Sewage Pumping Station, SE	05/30/08	*			*			*		
011(a)	Main Sewage Pumping Station, SE	05/30/08	*		*		*		*		
012	Main Sewage Pumping Station, SE	05/30/08	*		*		*		*		
013	Southeast Federal Center, aligned with 4 <sup>th</sup> St.	05/01/08	*		*		*		*		
014	Navy Yard, aligned with 6 <sup>th</sup> St., SE	05/01/08	*		*		*		*		
015	Navy Yard, aligned with 9th Street, SE	05/01/08	*			*			*		
016	12th and O Streets, SE	05/08/08	*		*		*		*		
017	M and Water Street, SE	05/08/08	*		*		*		*		
018	East of Barney Circle and South of Pennsylvania Avenue Bridge, SE	05/08/08	*		*		*		*		
019	Adjacent to Service Drive behind swirl facility and D.C. General Hospital	05/01/08	*			*			*		
020	Rock Creek Parkway and Independence, NW	05/27/08	*		*		*		*		
021	Rock Creek Parkway and C St., NW	05/27/08	*			*			*		
022	Rock Creek Parkway and G St., NW	05/27/08	*		*		*		*		

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	05/27/08	*		*			*	*		WASA has developed a capitol project to design and construct a replacement gate for improved performance.
025	South of 31st and K Streets, NW	05/27/08	*		*		*	*			
026	Wisconsin Avenue and Water Street, NW	05/27/08	*		*		*	*			
027	33 <sup>rd</sup> and Water Sts., NW	05/27/08	*			*			*		
028	Key Bridge and Whitehurst Freeway, NW	05/27/08	*			*			*		
029	Adjacent to C&O Canal, aligned with 38 <sup>th</sup> St. NW	05/27/08	*		*		*		*		
031	Rock Creek Pkwy and Pennsylvania Avenue, NW.	05/21/08	*			*			*		
032	26th and M Street, NW.	05/21/08	*			*			*		
033	Across street from St. Francis Jr. High and aligned with N St., NW.	05/21/08	*		*		*		*		
034	Just west of St. Francis Jr. High and north of N St., NW	05/26/08	*		*		*		*		
035	P St. Bridge and Rock Creek Parkway	05/26/08	*		*		*		*		
036	22nd Street, South of Q Street NW.	05/08/08	*		*		*		*		
037	Waterside Dr. and Rock Creek Parkway	05/23/08	*		*		*		*		
038	Between arch footbridge and Connecticut Ave., north of Kalorama Circle, NW.	05/23/08	*		*		*		*		
039	Connecticut Avenue Bridge and Rock Creek Parkway, NW.	05/21/08	*		*		*		*		
040	Aligned with Biltmore Rd., between Connecticut Ave and Ellington Bridge.	05/22/08	*		*		*		*		
041	Beach Dr. and Ontario Pl., NW	05/22/08	*		*		*		*		
042	Harvard St. and Beach Dr NW.	05/22/08	*		*		*		*		
043	Upstream of Harvard St. and Beach Dr NW.	05/22/08	*		*		*		*		
044	Kenyon Street and Beach Dr., NW.	05/22/08	*		*		*		*		

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.	05/22/08	*		*		*		*		
046	Piney Branch Parkway and Park Road, NW.	05/19/08	*			*			*		
047	Piney Branch Parkway and Ingleside Terrace	05/19/08	*		*		*		*		
048	South of Piney Branch Parkway and 17 <sup>th</sup> St.	05/19/08	*		*		*		*		
049	North of Piney Branch Parkway and 17 <sup>th</sup> St.	05/19/08	*		*		*		*		
050	Rock Creek Parkway and L St., NW	05/08/08	*		*		*		*		
051	Across Rock Creek Parkway, aligned with Olive St., NW.	05/30/08	*		*		*		*		
052	Between P and Penna. Ave Bridges, aligned with O Street, NW.	05/30/08	*		*		*		*		
053	Q St. Bridge and Rock Creek Parkway, NW.	05/08/08	*		*		*		*		
054	Massachusetts Avenue and Rock Creek Parkway, NW.	05/01/08	*		*		*		*		
056	Normanstone Dr. and Rock Creek Parkway, NW.	05/01/08	*		*		*		*		
057	28th Street and Rock Creek Parkway, NW	05/01/08	*		*		*		*		
058	Connecticut Avenue and Rock Creek Parkway, NW.	05/06/08	*			*			*		
060	North of P Street Bridge and Rock Creek Pkwy, NW	05/08/08	*		*		*		*		

Notes:

### 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	Pump #1	5/1/08-5/31/08	Pump Vibration – Damaged Impeller and shaft	8/31/08
				Screen #4	5/1/08-5/31/08	Bearing failure	8/30/08
Eastside	31	2	4	None			
Poplar Point	31	2	3	Screen #2	5/1/08-5/31/08	Motor burnt up	8/31/08
				Pump #1	5/1/08-5/31/08	Damaged shaft	8/31/08
				Pump #2	5/1/08-5/31/08	Damaged bearing	8/31/08
Potomac	31	4	5	Pump #3	5/1/08-5/31/08	Construction	8/31/08

Notes:

1. The schedule to restore to service is impacted by the type and age of equipment. In some cases, the condition of equipment and the lack of availability of replacement parts necessitate complete replacement of the unit or element or custom fabrication of needed parts to return the units to service. For these and other reasons, projects are underway for the rehabilitation of the pumping stations.
2. 3 Temporary pumps were added to provide the 45 mgd firm pumping capacity at Poplar point during the month

**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	05/22/2008	Group A	Add oil, grease bearings and replace packing if needed.
O St	05/22/2008	Group A	Add oil, grease bearings and replace packing if needed.
Eastside	05/22/2008	Group A	Add oil, grease bearings and replace packing if needed.
Poplar Point	05/22/2008	Group A	Add oil, grease bearings and replace packing if needed.
Potomac	05/22/2008	Group A	Add oil, grease bearings and replace packing if needed.
Rock Creek	05/22/2008	Group A	Add oil, grease bearings and replace packing if needed.
Upper Anacostia	05/22/2008	Group A	Add oil, grease bearings and replace packing if needed.
Earle Place	05/22/2008	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 Vector truck as required

Check all safety equipment

Issue work order requests as required



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

<i>Pumping Station</i>	<i>Sanitary Pumpage</i>		<i>Storm Water/CSO Pumped To Anacostia River</i>		
	<i>Total Wastewater (mg)</i>	<i>Daily Average Wastewater (mg)</i>	<i>Date</i>	<i>Volume (mg)</i>	<i>Screenings Collected (units)</i>
Main	1,998.60	64.47	N/A	N/A	N/A
O St <sup>1</sup>	152.90	4.93	05/08/08 05/09/08 05/11/08 05/12/08 05/13/08 05/15/08 05/31/08	5.0 53.0 41.20 178.90 25.20 8.40 13.00	Normal Normal Normal Normal Normal Normal Normal
Eastside	573.10	18.49	N/A	N/A	N/A
Poplar Point	505.80	16.32	N/A	N/A	N/A
Potomac	4,853.60	156.57	N/A	N/A	N/A
Rock Creek	203.40	6.56	N/A	N/A	N/A
Upper Anacostia	88.70	2.86	N/A	N/A	N/A
Earle Place	0.27	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>
05/23/08	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>
05/23/08	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>
5/9/2008	8	41.16	5.376	35.784	1.20(96)
5/9/2008	8	23.88	4.637	19.243	0.42(33.6)
5/9/2008	4.5	2.29	2.29	0	0.15(12)
5/10/2008	8	3.91	2.335	1.575	0.20(16)
5/11/2008	6.5	33.21	6.023	27.187	0.55(44)
5/12/2008	8	2.58	2.58	0	0.30(24)
5/12/2008	8	4.77	4.77	0	0.15(12)
5/12/2008	8	3.88	3.88	0	0.18(14.4)
5/16/2008	5.5	33.55	19.947	13.603	0.07(5.6)
5/16/2008	8.5	1.92	1.92	0	0.54(43.2)
5/20/2008	2	3.47	3.47	0	0.16(12.8)
5/20/2008	5	1.95	1.95	0	0.40(32)
5/21/2008	2	1.54	1.54	0	0.30(24)
5/31/2008	9	13.37	4.265	9.105	0.20(16)

Note

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>
05/09/08	Yes	5	2	Mix Chamber	0.1	Mix Chamber	32,000	Mix Chamber	28,000
05/09/08	Yes	5	2	Anacostia River	0.0	Anacostia River	54,000	Anacostia River	53,000
05/09/08	Yes	5	2	Mix Chamber	0.2	Mix Chamber	<10	Mix Chamber	<10
05/09/08	Yes	5	2	Anacostia River	0.0	Anacostia River	39,000	Anacostia River	42,000
05/10/08	Yes	5	2	Mix Chamber	0.2	Mix Chamber	53,000	Mix Chamber	210,000
05/10/08	Yes	5	2	Anacostia River	0.0	Anacostia River	47,000	Anacostia River	330,000
05/11/08	Yes	5	2	Mix Chamber	0.2	Mix Chamber	2,500	Mix Chamber	3,300
05/11/08	Yes	5	2	Anacostia River	0.1	Anacostia River	29,000	Anacostia River	31,000
05/16/08	Yes	5	2	Mix Chamber	0.1	Mix Chamber	28,000	Mix Chamber	16,400
05/16/08	Yes	5	2	Anacostia River	0.0	Anacostia River	42,000	Anacostia River	34,000
05/31/08	Yes	5	2	Mix Chamber	0.2	Mix Chamber	3,900	Mix Chamber	490
05/31/08	Yes	5	2	Anacostia River	0.0	Anacostia River	5,800	Anacostia River	4,400

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 Composited 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>
5/09/08	74.0	0.03	0.59	2.93	3.55	0.49	12.4
5/10/08	60.0	0.03	0.74	3.79	4.56	0.62	LE
5/11/08	74.0	0.00	0.33	4.05	4.38	0.27	15.9
5/16/08	60.5	0.00	0.52	2.80	3.32	0.45	24.9

## 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	05/21/08	<b>No</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
14 - West	05/21/08	<b>No</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
15	05/21/08	<b>No</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
15A	05/21/08	<b>No</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
16 - East	05/21/08	<b>No</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
16 - West	05/21/08	<b>No</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
24 - North	05/21/08	<b>No</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
24 - Middle	05/21/08	<b>No</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
24 - South	05/21/08	<b>No</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
34	05/21/08	<b>No</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
35	05/21/08	<b>No</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
52	05/21/08	<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)	None	N/A
15	05/09/08 05/12/08	2hrs 30mins 8hrs 10mins
15A	05/09/08 05/12/08	5hrs 10mins 14hrs 30mins
16 (E & W)	05/09/08 05/11/08 05/12/08	4hrs 0mins 4hrs 40mins 7hrs 0mins
24	None	N/A
34	05/09/08	2hrs 10mins
35	05/09/08 05/11/08 05/12/08 5/16/08	5hrs 50mins 5hrs 30mins 8hrs 20mins 1hr 10mins
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



**3. DRY WEATHER OVERFLOWS**

There was no dry weather overflow in May 2008.

#### 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	Inspections			Cleaning					
			CBs in Anacostia CSS	Total Anacostia CBs Inspected Once this Year	Total Anacostia CBs Inspected Twice this Year	CBs Cleaned Thru Last Month		CB's Cleaned this Month		Total CBs Cleaned This Year to Date	
						Total	In CSS	Total	In CSS	Total	In CSS
1	1,591	1,568	734	734	397	805	785	63	62	868	847
2	4,714	4,112	2,316	1996	729	3719	3254	322	281	4041	3535
3	3,555	461	-	0	0	1727	169	129	17	1856	186
4	2,782	1,985	159	159	65	350	278	52	37	402	315
5	2,167	1,035	1,035	804	628	1420	724	126	80	1546	804
6	1,783	1,594	1,594	1594	230	1916	1710	129	114	2045	1824
7	2,313	-	-	0	0	1314	0	1786	0	3100	0
8	1,278	116	116	63	30	132	11	54	52	186	63
<b>WASA Subtotal</b>	<b>20,183</b>	<b>10,871</b>	<b>5,954</b>	<b>5,350</b>	<b>2,079</b>	<b>11,383</b>	<b>6,931</b>	<b>2,661</b>	<b>643</b>	<b>14,044</b>	<b>7,574</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>5,350</b>	<b>2,079</b>			<b>2,661</b>	<b>643</b>	<b>14,044</b>	<b>7,574</b>
% Cleaned/Inspected to Date				<b>90%</b>	<b>35%</b>					<b>69%</b>	<b>70%</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	5/2/08 and 5/25/08.	Good	Minor Maintenance	Nets emptied.	480 lbs.
Bar Rack CSO 040	5/22/08	Good	None	Routine Cleaning	(1)
Bar Rack CSO 041	5/22/08	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>	3
<i>Reason not Operating</i>	Strong winds and low tide.
<i># Skimmer in Fleet</i>	2 skimmers
<i># Skimmers Out of Service</i>	None
<i>Dates</i>	N/A
<i>Reason</i>	N/A
<i>Plan to Restore to Service</i>	N/A.
<i>Volume Material Collected</i>	80 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: 5/12/08					Inspector's Initials: TC						
CSO	Time of Observation	Overflow		Observed			Quantity of			Quantity of			REMARKS/OTHER
		Y	N	L	M	H	L	M	H	L	M	H	
009	9 am	x		x			x			x			
	11 am	x		x			x			x			
	1 pm	x		x			x			x			
	3 pm	x		x			x			x			
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)**

Date	Brentwood Reservoir	Bryant St PS	Main PS	Rock Creek PS
5/1/2008	0.03	0.03	0.03	0.03
5/2/2008	0.00	0.00	0.00	0.00
5/3/2008	0.00	0.00	0.00	0.00
5/4/2008	0.02	0.00	0.00	0.00
5/5/2008	0.02	0.00	0.00	0.00
5/6/2008	0.00	0.00	0.00	0.00
5/7/2008	0.02	0.00	0.00	0.00
5/8/2008	0.46	0.52	0.37	0.60
5/9/2008	2.20	2.02	2.98	2.11
5/10/2008	0.25	0.29	0.25	0.26
5/11/2008	2.13	1.97	2.26	2.23
5/12/2008	1.52	1.29	1.32	1.31
5/13/2008	0.03	0.01	0.00	0.02
5/14/2008	0.00	0.00	0.00	0.00
5/15/2008	0.05	0.03	0.05	0.05
5/16/2008	0.61	0.74	0.71	0.83
5/17/2008	0.00	0.00	0.00	0.00
5/18/2008	0.06	0.05	0.06	0.05
5/19/2008	0.00	0.00	0.00	0.00
5/20/2008	0.57	0.62	0.55	0.63
5/21/2008	0.01	0.00	0.00	0.00
5/22/2008	0.00	0.00	0.00	0.00
5/23/2008	0.01	0.00	0.00	0.00
5/24/2008	0.00	0.00	0.00	0.00
5/25/2008	0.00	0.00	0.00	0.00
5/26/2008	0.00	0.00	0.00	0.00
5/27/2008	0.00	0.00	0.00	0.00
5/28/2008	0.00	0.00	0.00	0.00
5/29/2008	0.00	0.00	0.00	0.00
5/30/2008	0.00	0.00	0.00	0.00
5/31/2008	0.57	0.95	1.24	1.02
<b>TOTALS</b>	<b>8.56</b>	<b>8.52</b>	<b>9.82</b>	<b>9.14</b>



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

**Monthly Operations Report  
For  
*Combined Sewer System*  
Month: June 2008**

**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: June 2008*

**Table of Contents**

- 1. INTRODUCTION**
- 2. OPERATION AND MAINTENANCE**
  - 2.1 Regulators
  - 2.2 Outfalls, Tide Gates and CSO Signs
  - 2.3 Pumping Stations
  - 2.4 Northeast Boundary Swirl Facility
  - 2.5 Inflatable Dams
- 3. DRY WEATHER OVERFLOWS**
- 4. SOLIDS AND FLOATABLES CONTROL**
  - 4.1 Catch Basin Cleaning
  - 4.2 BMP Demonstration Projects
  - 4.3 Skimmer Boat Programs
  - 4.4 CSS Litter Control
- 5. MONITORING**
  - 5.1 Visual Survey of Main & O
  - 5.2 Rainfall Data



## **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	06/27/08	*			
4	Bolling AFB, 2250 ft. north of the south line of the Base, SW	003	06/27/08	*			
5	Poplar Point Pumping Station	004	06/12/08	*			
6	Chicago Street and Railroad Ave, SE	005	06/25/08	*			
7	W Street and Railroad Ave, SE	005	06/25/08	*			
8	Good Hope Rd, west of Nichols Ave, SE	006	06/25/08	*			
9	13 <sup>th</sup> Street and Ridge Place, SE	007	06/01/08	*			
11	"O" Street Pumping Station	011(a)	06/12/08	*			
12	Storm Pump Discharge at Main Pumping Station	011	06/12/08	*			
13	2 <sup>nd</sup> Street, 300 ft. north of N Place, SE	009	06/16/08	*			
14	2 <sup>nd</sup> Street, 250 ft. north of N Place, SE	011(a)	06/12/08	*			
15	South Capitol and E Streets	010	06/12/08	*			
15a	Half and L Streets, SE	010	06/12/08	*			
15b	South Capitol and I Streets	010	06/04/08	*			
15c	South Capitol and I Streets	010	06/04/08	*			
16	North of Main Sewage Pumping Station	012	06/12/08	*			
17	4 <sup>th</sup> and N Streets, SE, Both Extended	013	06/24/08	*			
17a	K Street between 6 <sup>th</sup> Street and 7 <sup>th</sup> Street, SE	013	06/04/08	*			
18	6 <sup>th</sup> and M Streets, SE	014	06/05/08	*			
19	9 <sup>th</sup> and M Streets, SE	015	06/20/08	*			
19a	9 <sup>th</sup> and M Streets, SE	015	06/20/08	*			
20	12 <sup>th</sup> and M Streets, SE	016	06/20/08	*			
20a	12 <sup>th</sup> and M Streets, SE	016	06/20/08	*			
21	14 <sup>th</sup> and M Streets, SE	017	06/06/08	*			
22a	Barney Circle and Pennsylvania Ave, SE	018	06/23/08	*			

Struct No.	Location	Associated NPDES Outfall	Date Inspected	Condition		Work Needed	Work performed
				Good	Needs Work		
22b	Barney Circle and Pennsylvania Ave, SE	018	06/23/08	*			
22c	Barney Circle and Pennsylvania Ave, SE	018	06/23/08	*			
22d	Kentucky Ave and Potomac Street, SE	018	06/27/08	*			
22e	14 <sup>th</sup> Street and Kentucky Ave, SE	018	06/27/08	*			
23	Independence Ave, 21 <sup>st</sup> Street, SE, Extended	019	06/06/08	*			
24a	East Capitol St, west of RFK stadium	019	06/06/08	*			
28	21 <sup>st</sup> and Constitution Ave, NW	020	06/26/08	*			
29	22 <sup>nd</sup> Street, between Constitution Ave and C St, NW	020	06/26/08	*			
30	17 <sup>th</sup> and D Streets, NW	020	06/13/08	*			
31	15 <sup>th</sup> Street and Pennsylvania Ave, NW	020	06/13/08	*			
33	10 <sup>th</sup> and F Streets, NW	020	06/13/08	*			
34	23 <sup>rd</sup> Street, north of Constitution Ave, NW	020	06/26/08	*		construction	
34a	23 <sup>rd</sup> Street near C Street, NW	020	06/26/08	*			
35	Northeast of Roosevelt Bridge, NW	021	06/18/08	*			
36	27 <sup>th</sup> and I Streets, NW	022	06/11/08	*			
36a	New Hampshire Ave and Eye Street, NW	022	06/11/08	*			
36b	19 <sup>th</sup> and L Streets, NW	022, 034	06/05/08	*			
36d	17 <sup>th</sup> and L Streets, NW	022, 034	06/05/08	*			
36g	18 <sup>th</sup> and M Streets, NW	022, 034	06/05/08	*			
36h	18 <sup>th</sup> and M Streets, NW	022, 034	06/05/08	*			
37	27 <sup>th</sup> and Eye Streets, NW	022	06/11/08	*			
38	29 <sup>th</sup> and K Streets, NW	024	06/09/08	*			
38a	30 <sup>th</sup> Street, south of K Street, NW	024	06/09/08	*			
39a	30 <sup>th</sup> and K Streets, NW	024	06/09/08	*			
39b	30 <sup>th</sup> and K Streets, NW	024	06/09/08	*			
41b	31 <sup>st</sup> and K Streets, NW	025	06/20/08	*			
41c	31 <sup>st</sup> and K Streets, NW	025	06/20/08	*			
42	Wisconsin Ave and K Street, NW	026	06/13/08	*			

Struct No.	Location	Associated NPDES Outfall	Date Inspected	Condition		Work Needed	Work performed
				Good	Needs Work		
43	Potomac and Water Streets, NW	027	06/13/08	*			
43a	Potomac and Water Streets, NW	027	06/13/08	*			
44	Water Street, west of Potomac St, NW	027	06/13/08	*			
45	36 <sup>th</sup> and M Streets, NW	028	06/13/08	*			
46	Canal Rd, 1000ft. east of Foxhall Rd, NW	029	06/09/08	*			
47	38 <sup>th</sup> Street and Reservoir Road, NW	029	06/09/08	*			
47a	37 <sup>th</sup> and T Streets, NW	029	06/09/08	*			
47b	37 <sup>th</sup> and T Streets, NW	029	06/09/08	*			
47c	38 <sup>th</sup> and W Streets, NW	029	06/09/08	*			
49	Pennsylvania Ave, east side of Rock Creek, NW	031	06/16/08	*			
50	26 and M Streets, NW	032	06/16/08	*			
51	N Street Extended, west of 25 <sup>th</sup> Street, NW	033	06/16/08	*			
52	22 <sup>nd</sup> Street between M and N Streets, NW	034	06/26/08	*			
52a	N Street between 22 <sup>nd</sup> and 23 <sup>rd</sup> Streets, NW	034	06/26/08	*			
53	22 <sup>nd</sup> and M Streets, NW	022, 034	06/27/08	*			
53a	22 <sup>nd</sup> and M Streets, NW	022, 034	06/27/08	*			
53b	L Street between 21 <sup>st</sup> Street and New Hampshire Ave, NW	022, 034	06/16/08	*			
53c	L and 22 <sup>nd</sup> Streets, NW	022	06/16/08	*			
54	23 <sup>rd</sup> and O Streets, NW	034	06/25/08	*			
55	22 <sup>nd</sup> Street, south of Q Street, NW	035	06/25/08	*			
55a	22 <sup>nd</sup> Street, south of Q Street, NW	035	06/25/08	*			
56	23 <sup>rd</sup> and Massachusetts Ave, NW	036	06/25/08	*			
57	23 <sup>rd</sup> Street, south of Q Street, NW	036	06/25/08	*			
58	Northwest of Belmont Road and Rock Creek and Potomac Parkway, NW	037	06/09/08	*			
59	North of Belmont Rd, east of Kalorama Cir, NW	038	06/09/08	*			
60	Connecticut Ave, east of Rock Creek, NW	039	06/16/08	*			
61	Biltmore St, Extended, east of Rock Creek, NW	040	06/16/08	*			
62	Ontario Rd, Extended, and Rock Creek Pkwy, NW	041	06/11/08	*			

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	06/11/08	*			
64	Adams Mill Road, south of Irving Street, NW	043	06/11/08	*			
65	Kenyon Street and Adams Mill Road, NW	044	06/11/08	*			
65a	Kenyon Street and Adams Mill Road, NW	044	06/11/08	*			
66	Adams Mill Road and Lamont Street, NW	045	06/11/08	*			
67	Park Rd , south of Piney Branch Pkwy, NW	046	06/11/08	*			
68	Ingleside Terrance, Extended and Piney Branch Parkway, NW	047	06/11/08	*			
69	Mt. Pleasant Street, Extended and Piney Branch Parkway, NW	048	06/11/08	*			
70	Piney Branch Parkway, west of 16 <sup>th</sup> Street, NW	049	06/11/08	*			
70i	5 <sup>th</sup> and Quackenbos Streets, NW	049	06/06/08	*			
71	28 <sup>th</sup> Street, west of Rock Creek Parkway, NW	050	06/23/08	*			
72	Olive Street Extended and Rock Creek Pkwy, NW	051	06/23/08	*			
72a	Olive Street Extended and Rock Creek Pkwy, NW	051	06/23/08	*			
73	O Street Extended and Rock Creek Parkway, NW	052	06/23/08	*			
74	Q Street, west of Rock Creek, NW	053	06/25/08	*			
75	West side of Rock Creek, 300 ft. south of Massachusetts Ave, NW	054	06/27/08	*			
77	Normanstone Dr Extended, west of Rock Creek, NW	056	06/27/08	*			
77a	Normanstone Dr and Normanstone Lane, NW	056	06/25/08	*			
78	28th Street Extended, west of Rock Creek, NW	057	06/27/08	*			
79	Connecticut Ave and Rock Creek Parkway, NW	058	06/20/08	*			
84	26 <sup>th</sup> and P Streets, NW	060	06/23/08	*			
84a	26 <sup>th</sup> and P Streets, NW	060	06/23/08	*			

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	06/27/08	*		*		*		*		
005	Across from Navy Yard, aligned with Parsons Ave., SE	06/05/08	*		*		*		*		
006	Good Hope Road and Welsh Memorial Bridge	06/05/08	*		*		*		*		
007	Between 11 <sup>th</sup> St. and Anacostia Bridges, SE	06/05/08	*		*		*		*		
009	O St. Sewage Pumping Station, SE/	06/30/08	*		*		*		*		
010	O St. Sewage Pumping Station, SE/	06/30/08	*			*			*		
011	Main Sewage Pumping Station, SE	06/30/08	*			*			*		
011(a)	Main Sewage Pumping Station, SE	06/30/08	*		*		*		*		
012	Main Sewage Pumping Station, SE	06/30/08	*		*		*		*		
013	Southeast Federal Center, aligned with 4 <sup>th</sup> St.	06/24/08	*		*		*		*		
014	Navy Yard, aligned with 6 <sup>th</sup> St., SE	06/30/08	*		*		*		*		
015	Navy Yard, aligned with 9th Street, SE	06/30/08	*			*			*		
016	12th and O Streets, SE	06/24/08	*		*		*		*		
017	M and Water Street, SE	06/24/08	*		*		*		*		
018	East of Barney Circle and South of Pennsylvania Avenue Bridge, SE	06/24/08	*		*		*		*		
019	Adjacent to Service Drive behind swirl facility and D.C. General Hospital	06/05/08	*			*			*		
020	Rock Creek Parkway and Independence, NW	06/24/08	*		*		*		*		
021	Rock Creek Parkway and C St., NW	06/24/08	*			*			*		
022	Rock Creek Parkway and G St., NW	06/24/08	*		*		*		*		

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	06/24/08	*		*			*	*		WASA has developed a capitol project to design and construct a replacement gate for improved performance.
025	South of 31st and K Streets, NW	06/24/08	*		*		*		*		
026	Wisconsin Avenue and Water Street, NW	06/20/08	*		*		*		*		
027	33 <sup>rd</sup> and Water Sts., NW	06/24/08	*			*			*		
028	Key Bridge and Whitehurst Freeway, NW	06/24/08	*			*			*		
029	Adjacent to C&O Canal, aligned with 38 <sup>th</sup> St. NW	06/24/08	*		*		*		*		
031	Rock Creek Pkwy and Pennsylvania Avenue, NW.	06/16/08	*			*			*		
032	26th and M Street, NW.	06/16/08	*			*			*		
033	Across street from St. Francis Jr. High and aligned with N St., NW.	06/16/08	*		*		*		*		
034	Just west of St. Francis Jr. High and north of N St., NW	06/25/08	*		*		*		*		
035	P St. Bridge and Rock Creek Parkway	06/25/08	*		*		*		*		
036	22nd Street, South of Q Street NW.	06/05/08	*		*		*		*		
037	Waterside Dr. and Rock Creek Parkway	06/09/08	*		*		*		*		
038	Between arch footbridge and Connecticut Ave., north of Kalorama Circle, NW.	06/09/08	*		*		*		*		
039	Connecticut Avenue Bridge and Rock Creek Parkway, NW.	06/16/08	*		*		*		*		
040	Aligned with Biltmore Rd., between Connecticut Ave and Ellington Bridge.	06/18/08	*		*		*		*		
041	Beach Dr. and Ontario Pl., NW	06/25/08	*		*		*		*		
042	Harvard St. and Beach Dr NW.	06/25/08	*		*		*		*		
043	Upstream of Harvard St. and Beach Dr NW.	06/25/08	*		*		*		*		
044	Kenyon Street and Beach Dr., NW.	06/25/08	*		*		*		*		

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.	06/25/08	*		*		*		*		
046	Piney Branch Parkway and Park Road, NW.	06/11/08	*			*			*		
047	Piney Branch Parkway and Ingleside Terrace	06/11/08	*		*		*		*		
048	South of Piney Branch Parkway and 17 <sup>th</sup> St.	06/11/08	*		*		*		*		
049	North of Piney Branch Parkway and 17 <sup>th</sup> St.	06/11/08	*		*		*		*		
050	Rock Creek Parkway and L St., NW	06/11/08	*		*		*		*		
051	Across Rock Creek Parkway, aligned with Olive St., NW.	06/30/08	*		*		*		*		
052	Between P and Penna. Ave Bridges, aligned with O Street, NW.	06/30/08	*		*		*		*		
053	Q St. Bridge and Rock Creek Parkway, NW.	06/05/08	*		*		*		*		
054	Massachusetts Avenue and Rock Creek Parkway, NW.	06/27/08	*		*		*		*		
056	Normanstone Dr. and Rock Creek Parkway, NW.	06/27/08	*		*		*		*		
057	28th Street and Rock Creek Parkway, NW	06/27/08	*		*		*		*		
058	Connecticut Avenue and Rock Creek Parkway, NW.	06/20/08	*			*			*		
060	North of P Street Bridge and Rock Creek Pkwy, NW	06/05/08	*		*		*		*		

Notes:



### 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	Pump#1	06/01/08-6/30/08	Pump Vibration –Damaged Impeller and shaft	08/31/08
				Screen #4	06/01/08-6/30/08	Bearing Failure	08/30/08
Eastside	30	2	4	None			
Poplar Point	30	2	3	Screen #2	06/01/08-6/30/08	Motor burnt up	08/31/08
				Pump #1	06/01/08-6/30/08	Bad shaft	08/31/08
				Pump #2	06/01/08-6/7/08	Bad bearing	06/08/08
Potomac	30	4	5	Pump #1	6/24/08-6/30/08	Motor burnt up	07/30/08

Notes:

1. The schedule to restore to service is impacted by the type and age of equipment. In some cases, the condition of equipment and the lack of availability of replacement parts necessitate complete replacement of the unit or element or custom fabrication of needed parts to return the units to service. For these and other reasons, projects are underway for the rehabilitation of the pumping stations.
2. 3 Temporary pumps were added to provide the 45 mgd firm pumping capacity at Poplar point during the month

**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	6/20/2008	Group A	Add oil, grease bearings and replace packing if needed.
O St	6/20/2008	Group A	Add oil, grease bearings and replace packing if needed.
Eastside	6/20/2008	Group A	Add oil, grease bearings and replace packing if needed.
Poplar Point	6/20/2008	Group A	Add oil, grease bearings and replace packing if needed.
Potomac	6/20/2008	Group A	Add oil, grease bearings and replace packing if needed.
Rock Creek	6/20/2008	Group A	Add oil, grease bearings and replace packing if needed.
Upper Anacostia	6/20/2008	Group A	Add oil, grease bearings and replace packing if needed.
Earle Place	6/20/2008	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 Vector truck as required

Check all safety equipment

Issue work order requests as required

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

<i>Pumping Station</i>	<i>Sanitary Pumpage</i>		<i>Storm Water/CSO Pumped To Anacostia River</i>		
	<i>Total Wastewater (mg)</i>	<i>Daily Average Wastewater (mg)</i>	<i>Date</i>	<i>Volume (mg)</i>	<i>Screenings Collected (units)</i>
Main	1,887.60	62.92	N/A	N/A	N/A
O St <sup>1</sup>	162.90	5.43	6/4/2008	44.9	Normal
Eastside	591.40	19.71	N/A	N/A	N/A
Poplar Point	594.90	19.83	N/A	N/A	N/A
Potomac	4,401.80	146.73	N/A	N/A	N/A
Rock Creek	156.10	5.20	N/A	N/A	N/A
Upper Anacostia	72.80	2.43	N/A	N/A	N/A
Earle Place	0.24	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. Main Station had higher pumpage reading on 6/26/2008 through 7/3/2008 due to Potomac Station #1 sanitary motor problems. Overflow came to Main station.

#### 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>
6/23/2008	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>
6/23/2008	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>
6/3/2008	3.5	9.39	2.06	7.33	0.2(16)
6/4/2008	8	10.091	3.869	6.222	0.9(72)
6/4/2008	8	40.19	4.989	35.201	0.3(24)
6/5/2008	7.5	2.13	2.13	0	0.5(40)
6/10/2008	2.75	1.6	0.607	0.993	0.5(40)
6/16/2008	7.5	14.89	3.493	11.397	208(2.6)
6/17/2008	2	0.27	0.27	0	0.0(0)
6/28/2008	4.5	2.97	2.97	0	0.5(12)
6/28/2008	2.75	2.79	1.534	1.256	0.15(12)
6/29/2008	3	2.29	0.804	1.486	0.15(12)

Note

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>
06/03/08	Yes	5	2	Mix Chamber	0.6	Mix Chamber	27	Mix Chamber	27
06/03/08	Yes	5	2	Anacostia River	0	Anacostia River	153	Anacostia River	3,700
06/04/08	Yes	5	2	Mix Chamber	0.3	Mix Chamber	510	Mix Chamber	440
06/04/08	Yes	5	2	Anacostia River	0	Anacostia River	2,700	Anacostia River	2,900
06/04/08	Yes	5	2	Mix Chamber	0.2	Mix Chamber	4,700	Mix Chamber	5,100
06/04/08	Yes	5	2	Anacostia River	0	Anacostia River	480	Anacostia River	490
06/10/08	Yes	5	2	Mix Chamber	0.2	Mix Chamber	49,000	Mix Chamber	660,000
06/10/08	Yes	5	2	Anacostia River	0.2	Anacostia River	76,400	Anacostia River	160,000
06/16/08	Yes	5	2	Mix Chamber	1.3	Mix Chamber	99	Mix Chamber	63
06/16/08	Yes	5	2	Anacostia River	0	Anacostia River	14,500	Anacostia River	23,000
06/28/08	Yes	5	2	Mix Chamber	0.3	Mix Chamber	380,000	Mix Chamber	310,000
06/28/08	Yes	5	2	Anacostia River	0	Anacostia River	57,000	Anacostia River	280,000

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 Composited 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>
6/03/08	238	0.08	0.33	2.34	2.75	0.48	19.9
6/04/08	106	0.00	0.29	1.66	1.95	0.52	11.7
6/10/08	256	0.04	0.50	3.49	4.03	0.72	35.8
6/16/08	60.0	0.33	0.27	2.19	2.79	0.42	19.7
6/28/08	179	0.00	0.49	4.74	5.23	0.64	33.8



## 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	6/24/2008	<b>No</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
14 - West	6/24/2008	<b>No</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
15	6/24/2008	<b>No</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
15A	6/24/2008	<b>No</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
16 - East	6/24/2008	<b>No</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
16 - West	6/24/2008	<b>No</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
24 - North	6/24/2008	<b>No</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
24 - Middle	6/24/2008	<b>No</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
24 - South	6/24/2008	<b>No</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
34	6/24/2008	<b>No</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
35	6/24/2008	<b>No</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
52	6/24/2008	<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)	None	N/A
15	None	N/A
15A	6/28/08	15 mins
16 (E & W)	6/1/08 6/10/08 6/16/08 6/28/08	4hours 7mins 1hr 29mins 6mins
24	None	N/A
34	6/16/08	24mins
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

**Notes:**

### 3. DRY WEATHER OVERFLOWS

Dry weather overflows (DWOs), are summarized below:

**Table 3-1  
DRY WEATHER DISCHARGES**

Location	CSO Outfall 006 at Good Hope Road, SE
Cause	One station pump at the Poplar Point station experienced total mechanical failure and was being rebuilt. Several weeks later, a second station pump experienced total mechanical failure before the first station pump was returned to service. To ensure continuity of operations, a back-up pump system was installed as a precautionary measure in the event the third station pump failed. On June 10, the team inspected the station at noon and the station was operating normally. The inspection team returned at 3:30 p.m. to find a high influent channel. The team discovered the screen partially clogged with debris, which they removed in about ten (10) minutes. The water level in the channel dropped to normal conditions and the station was operating properly. The team also discovered that the back-up pump turned on as an extra precaution to prevent a back up failed. As a part of their routine, the team checked the overflow site. While the team did not witness an overflow act, they did find evidence that an overflow occurred so it was reported on June 11.
Date/Time Discovered	6/10/08 we found high influent at 3:30 p.m.
Action Taken	The partially clogged screen was cleaned and flow was restored to normal station levels.
Date/Time Discharged Ceased	6/10/08 at 3:40 p.m.
Estimated Volume (mg)	300,000 gallons
Did Overflow Reach Receiving water?	Found evidence of discharge at CSO #006 on the Anacostia River.
Action taken to prevent reoccurrence	Repairs were completed on one of the failed station pumps on June 13 and the station has resumed normal operations.

#### 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	Inspections			Cleaning					
			CBs in Anacostia CSS	Total Anacostia CBs Inspected Once this Year	Total Anacostia CBs Inspected Twice this Year	CBs Cleaned Thru Last Month		CB's Cleaned this Month		Total CBs Cleaned This Year to Date	
						Total	In CSS	Total	In CSS	Total	In CSS
1	1,591	1,568	734	734	422	868	847	55	53	923	900
2	4,714	4,112	2,316	2316	1195	4041	3535	930	804	4971	4339
3	3,555	461	-	0	0	1856	186	119	3	1975	189
4	2,782	1,985	159	159	159	402	315	51	46	453	361
5	2,167	1,035	1,035	877	731	1546	804	106	73	1652	877
6	1,783	1,594	1,594	1594	456	2045	1824	261	169	2306	1993
7	2,313	-	-	0	0	3100	0	34	0	3134	0
8	1,278	116	116	108	88	186	63	881	45	1067	108
WASA Subtotal	<b>20,183</b>	<b>10,871</b>	<b>5,954</b>	<b>5,788</b>	<b>3,051</b>	<b>14,044</b>	<b>7,574</b>	<b>2,437</b>	<b>1,193</b>	<b>16,481</b>	<b>8,767</b>
DDOT (via VMS) Subtotal				<b>0</b>	<b>0</b>			<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>5,788</b>	<b>3,051</b>			<b>2,437</b>	<b>1,193</b>	<b>16,481</b>	<b>8,767</b>
% Cleaned/Inspected to Date				<b>97%</b>	<b>51%</b>					<b>82%</b>	<b>81%</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	6/2/08 and 6/23/08.	Good	Minor Maintenance	Nets emptied.	540 lbs.
Bar Rack CSO 040	6/18/08	Good	None	Routine Cleaning	(1)
Bar Rack CSO 041	6/25/08	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>	2
<i>Reason not Operating</i>	Strong winds and low tide.
<i># Skimmer in Fleet</i>	2 skimmers
<i># Skimmers Out of Service</i>	1
<i>Dates</i>	6/19/08 to present.
<i>Reason</i>	New wing and screens being installed on
<i>Plan to Restore to Service</i>	As soon as possible.
<i>Volume Material Collected</i>	70 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**

CSO	Time of Observation	Date:		Observed			Quantity of			Quantity of			REMARKS/OTHER	
		Y	N	L	M	H	L	M	H	L	M	H		
009														
011				<b>NONE</b>										
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)**

Date	Brentwood Reservoir	Bryant St PS	Main PS	Rock Creek PS
6/1/2008	0.00	0.00	0.00	0.00
6/2/2008	0.00	0.00	0.00	0.00
6/3/2008	0.00	0.00	0.00	0.00
6/4/2008	0.44	1.75	1.33	1.69
6/5/2008	0.01	0.00	0.00	0.00
6/6/2008	0.01	0.00	0.00	0.00
6/7/2008	0.04	0.03	0.17	0.00
6/8/2008	0.01	0.00	0.00	0.00
6/9/2008	0.00	0.00	0.00	0.00
6/10/2008	0.84	0.85	0.32	0.40
6/11/2008	0.01	0.00	0.00	0.00
6/12/2008	0.01	0.00	0.00	0.00
6/13/2008	0.00	0.00	0.00	0.00
6/14/2008	0.13	0.14	0.14	0.14
6/15/2008	0.00	0.00	0.00	0.00
6/16/2008	0.85	1.02	0.84	0.97
6/17/2008	0.01	0.03	0.00	0.00
6/18/2008	0.01	0.05	0.00	0.00
6/19/2008	0.00	0.00	0.00	0.00
6/20/2008	0.00	0.00	0.00	0.00
6/21/2008	0.04	0.01	0.11	0.07
6/22/2008	0.02	0.00	0.14	0.02
6/23/2008	0.02	0.04	0.09	0.04
6/24/2008	0.00	0.00	0.00	0.00
6/25/2008	0.00	0.00	0.00	0.00
6/26/2008	0.00	0.00	0.00	0.00
6/27/2008	0.05	0.05	0.06	0.10
6/28/2008	0.55	0.18	0.70	0.14
6/29/2008	0.00	0.00	0.00	0.00
6/30/2008	0.04	0.04	0.10	0.06
<b>TOTALS</b>	<b>3.09</b>	<b>4.19</b>	<b>4.00</b>	<b>3.63</b>



District of Columbia Water and Sewer Authority

**Combined Sewer System Model Results**

Period: April, May, June 2008

SCENARIO: Q2Y2008, 7-23-08

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	20	7.8	146.5	7.3	33.5	0.3
006	Good Hope Road, West of Nichols Ave., SE	7	0.3	8.8	1.3	3.3	0.3
007	13 <sup>th</sup> Street and Ridge Place, SE	11	10.5	36.3	3.3	10.8	0.8
009	2nd Street, 300 feet North of N Place, SE	15	6.4	96.3	6.4	21.8	0.5
010	O Street Sewage Pumping Station, SE (pumped Overflow)	14	208.0	43.8	3.1	15.0	0.3
011	South of Main Sewage Pumping Station, SE (pumped overflow)	2	1.7	0.5	0.3	0.3	0.3
011a	South of Main Sewage Pumping Station, SE (gravity overflow)	0	0.0	0.0	0.0	0.0	0.0
012	North of Main Sewage Pumping Station, SE (Tiber Creek)	7	32.6	15.8	2.3	6.8	0.3
013	4th and N Streets, SE	15	6.5	54.0	3.6	10.8	0.5
014	6th and M Streets, SE	17	33.9	103.0	6.1	19.3	0.8
015	9th and M Streets, SE	10	2.1	20.8	2.1	7.8	0.5
016	12th and M Streets, SE	9	9.8	26.3	2.9	9.5	0.3
017	14th and M Streets, SE	15	26.6	94.8	6.3	22.3	0.5
018	Barney Circle and Pennsylvania Ave, SE	26	18.9	334.5	12.9	139.8	0.3
019	Northeast Boundary - Swirl Effluent	14	462.0	154.3	11.0	24.5	1.0
019	Northeast Bound. - Swirl Bypass	8	106.4	11.3	1.4	4.3	0.5
	<b>SUBTOTAL</b>		<b>933.5</b>				
<b>Potomac CSOs</b>							
003	Bolling AFB	0	0.0	0.0	0.0	0.0	0.0
020	23rd Street, North of Constitution Ave, NW (Easby Point)	8	30.3	34.3	4.3	10.8	1.0
021	Northeast of Roosevelt Bridge, NW	11	231.2	49.8	4.5	14.0	1.5
022	27th and K Streets, NW	18	13.0	152.5	8.5	37.0	0.5
024	30th and K Streets, NW	25	14.8	187.5	7.5	36.3	0.3
025	31st & K St NW	31	0.4	185.0	6.0	55.8	0.3
026	Wisconsin Avenue and K St., NW	0	0.0	0.0	0.0	0.0	0.0
027	Water Street West of Street, NW	16	30.6	184.3	11.5	42.0	2.3
028	36th and M Streets, NW	14	2.9	72.3	5.2	16.8	0.8
029	Canal Road 1000 feet east of Rock Creek, NW	6	5.1	14.0	2.3	5.0	1.3
	<b>SUBTOTAL</b>		<b>328.3</b>				
<b>Rock Creek</b>							
031	Pennsylvania Avenue, East Rock Creek, NW	6	0.0	10.5	1.8	3.5	0.3
032	26th and M Streets, NW	0	0.0	0.0	0.0	0.0	0.0
033	N Street extended west of 25th Street, NW	1	0.0	1.0	1.0	1.0	1.0
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	11	0.6	25.3	2.3	7.8	0.3
037	Northwest of Belmont and 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 Rock Creek, 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: April, May, June 2008**

**SCENARIO: Q2Y2008, 7-23-08**

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	1	0.0	0.5	0.5	0.5	0.5
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	12	25.7	43.0	3.6	11.8	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	8	3.4	26.0	3.3	8.3	0.5
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>29.8</b>				
	<b>TOTAL</b>		<b>1,292</b>				

H:\1163\NPDES\Model Predictions\[2008 Quarter 2 Model Results.xls]Q2Y2008

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