



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

**Monthly Operations Report  
For  
*Combined Sewer System*  
Month: January, 2005**

**Prepared By:**  
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Washington, D.C. 20003

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

*Monthly Operations Report for Combined Sewer System*  
*Month: January, 2005*

**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>
				Good	Needs Work		
2	Bolling AFB, 2250 ft. north of the south line of the Base, SW	003	01/28/05	*			
4	Bolling AFB, 2250 ft. north of the south line of the Base, SW	003	01/28/05	*			
5	Poplar Point Pumping Station	004	01/11/05	*			
6	Chicago Street and Railroad Ave, SE	005	01/05/05	*			
7	W Street. and Railroad Ave, SE	005	01/05/05	*			
8	Good Hope Rd, west of Nichols Ave, SE	006	01/05/05	*			
9	13 <sup>th</sup> Street and Ridge Place, SE	007	01/05/05	*			
11	"O" Street Pumping Station	011(a)	01/11/05	*			
12	Storm Pump Discharge at Main Pumping Station	011	01/11/05	*			
13	2 <sup>nd</sup> Street, 300 ft. north of N Place, SE	009	01/03/05	*			
14	2 <sup>nd</sup> Street, 250 ft. north of N Place, SE	011(a)	01/11/05	*			
15	South Capitol and E Streets	010	01/11/05	*			
15a	Half and L Streets, SE	010	01/11/05	*			
15b	South Capitol and I Streets	010	01/07/05	*			
15c	South Capitol and I Streets	010	01/07/05	*			
16	North of Main Sewage Pumping Station	012	01/11/05	*			
17	4 <sup>th</sup> and N Streets, SE, Both Extended	013	01/26/05	*			
17a	K Street between 6 <sup>th</sup> Street and 7 <sup>th</sup> Street, SE	013	01/10/05	*			
18	6 <sup>th</sup> and M Streets, SE	014	01/03/05	*			
19	9 <sup>th</sup> and M Streets, SE	015	01/03/05	*			
19a	9 <sup>th</sup> and M Streets, SE	015	01/03/05	*			

Struct No.	Location	Associated NPDES Outfall	Date Inspected	Condition		Work Needed	Work performed
				Good	Needs Work		
20	12 <sup>th</sup> and M Streets, SE	016	01/03/05	*			
20a	12 <sup>th</sup> and M Streets, SE	016	01/03/05	*			
21	14 <sup>th</sup> and M Streets, SE	017	01/06/05	*			
22a	Barney Circle and Pennsylvania Ave, SE	018	01/04/05	*			
22b	Barney Circle and Pennsylvania Ave, SE	018	01/04/05	*			
22c	Barney Circle and Pennsylvania Ave, SE	018	01/04/05	*			
22d	Kentucky Ave and Potomac Street, SE	018	01/04/05	*			
22e	14 <sup>th</sup> Street and Kentucky Ave, SE	018	01/04/05	*			
23	Independence Ave, 21 <sup>st</sup> Street, SE, Extended	019	01/07/05	*			
24a	East Capitol St, west of RFK stadium	019	01/26/05	*			
28	21 <sup>st</sup> and Constitution Ave, NW	020	01/26/05	*			
29	22 <sup>nd</sup> Street, between Constitution Ave and C St, NW	020	01/26/05	*			
30	17 <sup>th</sup> and D Streets, NW	020	01/07/05	*			
31	15 <sup>th</sup> Street and Pennsylvania Ave, NW	020	01/12/05	*			
33	10 <sup>th</sup> and F Streets, NW	020	01/07/05	*			
34	23 <sup>rd</sup> Street, north of Constitution Ave, NW	020	01/26/05	*			
34a	23 <sup>rd</sup> Street near C Street, NW	020	01/26/05	*			
35	Northeast of Roosevelt Bridge, NW	021	01/13/05	*			
36	27 <sup>th</sup> and I Streets, NW	022	01/10/05	*			
36a	New Hampshire Ave and Eye Street, NW	022	01/10/05	*			
36b	19 <sup>th</sup> and L Streets, NW	022, 034	01/05/05	*			
36d	17 <sup>th</sup> and L Streets, NW	022, 034	01/05/05	*			
36g	18 <sup>th</sup> and M Streets, NW	022, 034	01/05/05	*			

Struct No.	Location	Associated NPDES Outfall	Date Inspected	Condition		Work Needed	Work performed
				Good	Needs Work		
36h	18 <sup>th</sup> and M Streets, NW	022, 034	01/05/05	*			
37	27 <sup>th</sup> and Eye Streets, NW	022	01/26/05	*			
38	29 <sup>th</sup> and K Streets, NW	024	01/03/05	*			
38a	30 <sup>th</sup> Street, south of K Street, NW	024	01/03/05	*			
39a	30 <sup>th</sup> and K Streets, NW	024	01/03/05	*			
39b	30 <sup>th</sup> and K Streets, NW	024	01/03/05	*			
41b	31 <sup>st</sup> and K Streets, NW	025	01/05/05	*			
41c	31 <sup>st</sup> and K Streets, NW	025	01/05/05	*			
42	Wisconsin Ave and K Street, NW	026	01/05/05	*			
43	Potomac and Water Streets, NW	027	01/05/05	*			
43a	Potomac and Water Streets, NW	027	01/05/05	*			
44	Water Street, west of Potomac St, NW	027	01/05/05	*			
45	36 <sup>th</sup> and M Streets, NW	028	01/03/05	*			
46	Canal Rd, 1000ft. east of Foxhall Rd, NW	029	01/04/05	*			
47	38 <sup>th</sup> Street and Reservoir Road, NW	029	01/04/05	*			
47a	37 <sup>th</sup> and T Streets, NW	029	01/04/05	*			
47b	37 <sup>th</sup> and T Streets, NW	029	01/04/05	*			
47c	38 <sup>th</sup> and W Streets, NW	029	01/04/05	*			
49	Pennsylvania Ave, east side of Rock Creek, NW	031	01/10/05	*			
50	26 and M Streets, NW	032	01/10/05	*			
51	N Street Extended, west of 25 <sup>th</sup> Street, NW	033	01/10/05	*			
52	22 <sup>nd</sup> Street between M and N Streets, NW	034	01/13/05	*			
52a	N Street between 22 <sup>nd</sup> and 23 <sup>rd</sup> Streets, NW	034	01/10/05	*			
53	22 <sup>nd</sup> and M Streets, NW	022, 034	01/03/05	*			
53a	22 <sup>nd</sup> and M Streets, NW	022, 034	01/03/05	*			

Struct No.	Location	Associated NPDES Outfall	Date Inspected	Condition		Work Needed	Work performed
				Good	Needs Work		
53b	L Street between 21 <sup>st</sup> Street and New Hampshire Ave, NW	022, 034	01/03/05	*			
53c	L and 22 <sup>nd</sup> Streets, NW	022	01/03/05	*			
54	23 <sup>rd</sup> and O Streets, NW	034	01/10/05	*			
55	22 <sup>nd</sup> Street, south of Q Street, NW	035	01/07/05	*			
55a	22 <sup>nd</sup> Street, south of Q Street, NW	035	01/07/05	*			
56	23 <sup>rd</sup> and Massachusetts Ave, NW	036	01/07/05	*			
57	23 <sup>rd</sup> Street, south of Q Street, NW	036	01/07/05	*			
58	Northwest of Belmont Road and Rock Creek and Potomac Parkway, NW	037	01/28/05	*			
59	North of Belmont Rd, east of Kalorama Cir, NW	038	01/28/05	*			
60	Connecticut Ave, east of Rock Creek, NW	039	01/12/05	*			
61	Biltmore St, Extended, east of Rock Creek, NW	040	01/12/05	*			
62	Ontario Rd, Extended, and Rock Creek Pkwy, NW	041	01/19/05	*			
63	Harvard Street and Rock Creek Parkway, NW	042	01/19/05	*			
64	Adams Mill Road, south of Irving Street, NW	043	01/19/05	*			
65	Kenyon Street and Adams Mill Road, NW	044	01/19/05	*			
65a	Kenyon Street and Adams Mill Road, NW	044	01/19/05	*			
66	Adams Mill Road and Lamont Street, NW	045	01/19/05	*			
67	Park Rd , south of Piney Branch Pkwy, NW	046	01/19/05	*			
68	Ingleside Terrance, Extended and Piney Branch Parkway, NW	047	01/19/05	*			

Struct No.	Location	Associated NPDES Outfall	Date Inspected	Condition		Work Needed	Work performed
				Good	Needs Work		
69	Mt. Pleasant Street, Extended and Piney Branch Parkway, NW	048	01/19/05	*			
70	Piney Branch Parkway, west of 16 <sup>th</sup> Street, NW	049	01/19/05	*			
70i	5 <sup>th</sup> and Quackenbos Streets, NW	049	01/03/05	*			
71	28 <sup>th</sup> Street, west of Rock Creek Parkway, NW	050	01/12/05	*			
72	Olive Street Extended and Rock Creek Pkwy, NW	051	01/25/05	*			
72a	Olive Street Extended and Rock Creek Pkwy, NW	051	01/25/05	*			
73	O Street Extended and Rock Creek Parkway, NW	052	01/25/05	*			
74	Q Street, west of Rock Creek, NW	053	01/28/05	*			
75	West side of Rock Creek, 300 ft. south of Massachusetts Ave, NW	054	01/28/05	*			
77	Normanstone Dr Extended, west of Rock Creek, NW	056	01/07/05	*			
77a	Normanstone Dr and Normanstone Lane, NW	056	01/04/05	*			
78	28th Street Extended, west of Rock Creek, NW	057	01/28/05	*			
79	Connecticut Ave and Rock Creek Parkway, NW	058	01/12/05	*			
84	26 <sup>th</sup> and P Streets, NW	060	01/25/05	*			
84a	26 <sup>th</sup> and P Streets, NW	060	01/25/05	*			

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	01/03/05	*		*		*		*		
005	Across from Navy Yard, aligned with Parsons Ave., SE	01/06/05	*		*		*		*		
006	Good Hope Road and Welsh Memorial Bridge	01/06/05	*		*		*		*		
007	Between 11 <sup>th</sup> St. and Anacostia Bridges, SE	01/06/05	*		*		*		*		
009	O St. Sewage Pumping Station, SE	01/31/05	*		*		*		*		
010	O St. Sewage Pumping Station, SE	01/31/05	*			*			*		
011	Main Sewage Pumping Station, SE	01/31/05	*			*			*		
011(a)	Main Sewage Pumping Station, SE	01/31/05	*		*		*		*		
012	Main Sewage Pumping Station, SE	01/31/05	*		*		*		*		
013	Southeast Federal Center, aligned with 4 <sup>th</sup> St.	01/28/05	*		*		*		*		
014	Navy Yard, aligned with 6 <sup>th</sup> St., SE	01/28/05	*		*		*		*		
015	Navy Yard, aligned with 9th Street, SE	01/28/05	*			*			*		
016	12th and O Streets, SE	01/06/05	*		*		*		*		
017	M and Water Street, SE	01/06/05	*		*		*		*		
018	East of Barney Circle and South of Pennsylvania Avenue Bridge, SE	01/06/05	*		*		*		*		
019	Adjacent to Service Drive behind swirl facility and D.C. General Hospital	01/13/05	*			*			*		
020	Rock Creek Parkway and Independence, NW	01/31/05	*		*		*		*		

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	
021	Rock Creek Parkway and C St., NW	01/31/05	*			*			*		
022	Rock Creek Parkway and G St., NW	01/31/05	*		*		*		*		
024	South of 30 <sup>th</sup> and K Streets, NW	01/31/05	*		*			*	*		WASA has developed a capitol project to design and construct a replacement gate for improved performance.
025	South of 31st and K Streets, NW	01/31/05	*		*		*		*		
026	Wisconsin Avenue and Water Street, NW	01/31/05	*		*		*		*		
027	33 <sup>rd</sup> and Water Sts., NW	01/31/05	*			*			*		
028	Key Bridge and Whitehurst Freeway, NW	01/31/05	*			*			*		
029	Adjacent to C&O Canal, aligned with 38 <sup>th</sup> St. NW	01/31/05	*		*		*		*		
031	Rock Creek Pkwy and Pennsylvania Avenue, NW.	01/05/05	*			*			*		
032	26th and M Street, NW.	01/06/05	*			*			*		
033	Across street from St. Francis Jr. High and aligned with N St., NW.	01/06/05	*		*		*		*		
034	Just west of St. Francis Jr. High and north of N St., NW	01/06/05	*		*		*		*		
035	P St. Bridge and Rock Creek Parkway	01/06/05	*		*		*		*		
036	22nd Street, South of Q Street NW.	01/28/05	*		*		*		*		
037	Waterside Dr. and Rock Creek Parkway	01/28/05	*		*		*		*		
038	Between arch footbridge and Connecticut Ave., north of Kalorama Circle, NW.	01/28/05	*		*		*		*		
039	Connecticut Avenue Bridge and Rock Creek Parkway, NW.	01/12/05	*		*		*		*		
040	Aligned with Biltmore Rd., between Connecticut Ave and Ellington Bridge.	01/12/05	*		*		*		*		
041	Beach Dr. and Ontario Pl., NW	01/06/05	*		*		*		*		
042	Harvard St. and Beach Dr NW.	01/06/05	*		*		*		*		

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	
043	Upstream of Harvard St. and Beach Dr NW.	01/06/05	*		*		*		*		
044	Kenyon Street and Beach Dr., NW.	01/06/05	*		*		*		*		
045	North of Beach Dr. and Walbridge Pl, NW.	01/06/05	*		*		*		*		
046	Piney Branch Parkway and Park Road, NW.	01/19/05	*			*			*		
047	Piney Branch Parkway and Ingleside Terrace	01/19/05	*		*		*		*		
048	South of Piney Branch Parkway and 17 <sup>th</sup> St.	01/19/05	*		*		*		*		
049	North of Piney Branch Parkway and 17 <sup>th</sup> St.	01/19/05	*		*		*		*		
050	Rock Creek Parkway and L St., NW	01/12/05	*		*		*		*		
051	Across Rock Creek Parkway, aligned with Olive St., NW.	01/05/05	*		*		*		*		
052	Between P and Penna. Ave Bridges, aligned with O Street, NW.	01/05/05	*		*		*		*		
053	Q St. Bridge and Rock Creek Parkway, NW.	01/28/05	*		*		*		*		
054	Massachusetts Avenue and Rock Creek Parkway, NW.	01/28/05	*		*		*		*		
056	Normanstone Dr. and Rock Creek Parkway, NW.	01/28/05	*		*		*		*		
057	28th Street and Rock Creek Parkway, NW	01/028/05	*		*		*		*		
058	Connecticut Avenue and Rock Creek Parkway, NW.	01/04/05	*			*			*		

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	
060	North of P Street Bridge and Rock Creek Pkwy, NW	01/28/05	*		*		*		*		

Notes:

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

### 2.3 Pumping Stations

Pumping station operations are summarized in the table below.

**Table 2-3**

**Pumping Stations – Inspections and Equipment in Service**

<i>Pumping Station</i>	<i>No. of Inspections</i>	<i>No. Screens</i>	<i>No. Pumps</i>	<i>Screens or Pumps Out of Service</i>	<i>Dates</i>	<i>Reason</i>	<i>Schedule to Restore to Service</i>
Main	31	4	12	None			
Eastside	31	2	4	None			
Poplar Point	31	2 <sup>1</sup>	3	None			
Potomac	31	4	5	None			

Notes:

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

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

<i>Pumping Station</i>	<i>Date Performed</i>	<i>Type of Preventive Maintenance Performed<sup>1</sup></i>	<i>Comments</i>
Main	31 Days	Group A	Add oil, grease bearings and replace packing if needed.
O St	31 Days	Group A	Add oil, grease bearings and replace packing if needed.
Eastside	31 Days	Group A	Add oil, grease bearings and replace packing if needed.
Poplar Point	31 Days	Group A	Add oil, grease bearings and replace packing if needed.
Potomac	31 Days	Group A	Add oil, grease bearings and replace packing if needed.
Rock Creek	31 Days	Group A	Add oil, grease bearings and replace packing if needed.
Upper Anacostia	31 Days	Group A	Add oil, grease bearings and replace packing if needed.
Earle Place	31 Days	Group A	Add oil, grease bearings and replace packing if needed.

Notes:

1. Group A consists of:

Exercise bar screens

Exercise all sump pumps

Drain condensation from air compressor storage tank

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

Check all safety equipment

Issue work order requests as required

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

<i>Pumping Station</i>	<i>Sanitary Pumpage</i>		<i>Storm Water/CSO Pumped To Anacostia River</i>		
	<i>Total Wastewater (mg)</i>	<i>Daily Average Wastewater (mg)</i>	<i>Date</i>	<i>Volume (mg)</i>	<i>Screenings Collected (units)</i>
Main	2704.20	87.23	N/A	N/A	N/A
O St <sup>1</sup>	206.60	6.66	1/14/2005	45.40	Normal
Eastside	157.80	5.09	N/A	N/A	N/A
Poplar Point	632.20	20.39	N/A	N/A	N/A
Potomac	4,551.90	146.84	N/A	N/A	N/A
Rock Creek	209.60	6.76	N/A	N/A	N/A
Upper Anacostia	55.30	1.78	N/A	N/A	N/A
Earle Place	0.45	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.

## 2-6 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>
1/28/2005	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>
01/24/2005	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>
1/14/2005	8	46.70	6.60	40.10	0.50(40)
1/14/2005	5	1.70	1.70	0	0.35(28)

Notes:

1. Approx. length of time influent flow rate was above the 15 mgd threshold for allowing flow through the facility.
2. Calculated as follows: Total Influent Volume – Total Foul Sewer Volume.
3. One Bin = 80 ft<sup>3</sup>

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>
1/14/2005	Yes	5	2	Mix Chamber	0.5	Mix Chamber	23,000	Mix Chamber	36,000
1/14/2005	Yes	5	2	Anacostia River	0.0	Anacostia River	17,300	Anacostia River	39,000

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><u>Total suspended solids (mg/L)</u></i>	<i><u>Nitrate (NO<sub>3</sub>) mg/L</u></i>	<i><u>Nitrite (NO<sub>2</sub>) mg/L</u></i>	<i><u>Total Kjeldahl Nitrogen (TKN) (mg/L as N)</u></i>	<i><u>Total Nitrogen (mg/L)</u></i>	<i><u>Total Phosphorus (TP) (mg/L)</u></i>	<i><u>Carbonaceous Biological Oxygen Demand (CBOD) (mg/L)</u></i>
1/14/05	62.0	0.06	<0.05	3.10	3.21	1.02	N/A

Notes:

Effluent samples taken every two hours and flow composited for a maximum of 24 hours per storm.

Total Nitrogen = Total Kjeldahl N (TKN) + Nitrate N (NO<sub>3</sub>) + Nitrite N (NO<sub>2</sub>)

Holding time for the sample was exceeded therefore CBOD test was not performed.

## 2.10 Inflatable Dams

WASA operates 12 inflatable dams at 8 locations in the CSS. The dams consist 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 2-11. The inflatable dams consist of multiply 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	01/12/05	No	N/A	N/A	N/A
14 - West	01/12/05	No	N/A	N/A	N/A
15	01/12/05	No	N/A	N/A	N/A
15A	01/12/05	No	N/A	N/A	N/A
16 - East	01/12/05	No	N/A	N/A	N/A
16 - West	01/12/05	No	N/A	N/A	N/A
24 - North	01/12/05	No	N/A	N/A	N/A
24 - Middle	01/12/05	No	N/A	N/A	N/A
24 - South	01/12/05	No	N/A	N/A	N/A
34	01/12/05	No	N/A	N/A	N/A
35	01/12/05	No	N/A	N/A	N/A
52	01/12/05	No	N/A	N/A	N/A

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

<i>Inflatable Dam Structure No.</i>	<i>Overflow Dates</i>	<i>Estimated Duration of Overflow (hrs)</i>
14 (E & W)	<i>None</i>	<i>N/A</i>
15	<i>01/14/2005</i>	<i>50 minutes</i>
15A	<i>01/14/2005</i>	<i>6 hrs 12 minutes</i>
16 (E & W)	<i>01/14/2005</i>	<i>2 hours 39 minutes</i>
24	<i>None</i>	<i>N/A</i>
34	<i>None</i>	<i>N/A</i>
35	<i>None</i>	<i>N/A</i>
52	<i>None</i>	<i>N/A</i>
<i>Structures on Outfall Sewers</i>	<i>Overflow Dates</i>	<i>Estimated Duration of Overflow (hrs)</i>
Outfall Structure 1	None	This structure has been bulk Headed. Overflows are no longer possible.
Outfall Structure 1A	None	This structure has been bulk headed. Overflows are no longer possible.
Outfall Structure 2(E & W)	None	None
<i>Outfall Sewer Control Gates</i>	<i>Operational Status</i>	<i>Position</i>
Outfall Sewer Control Gate No. 1	Operational	Open
Outfall Sewer Control Gate No.2	Operational	Open

3. **DRY WEATHER OVERFLOWS**

Dry weather overflows (DWOs), are summarized below:

**Table 3-1  
Dry Weather Overflows**

<i>Location:</i>	<b>NONE IN JANUARY 2005</b>
<i>Cause</i>	
<i>Date/ Time Discovered</i>	
<i>Action Taken</i>	
<i>Date/Time Discharge Ceased</i>	
<i>Estimated Volume (mg)</i>	
<i>Did Overflow Reach Receiving water?</i>	
<i>Action taken to prevent reoccurrence</i>	

#### 4. SOLIDS AND FLOATABLES CONTROL

##### 4.1 Catch Basin Cleaning

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

**Table 4-1 Catch Basin Summaries**

Ward	Total CBs	CBs in CSS	CBs in Anacostia CSS	Inspections		Cleaning					
				Total CBs Inspected Once this Year	Total CBs Inspected Twice this Year	CBs Cleaned Thru Last Month		CB's Cleaned this Month		Total CBs Cleaned This Year to Date	
						Total	In CSS	Total	In CSS	Total	In CSS
1	1,591	1,568	734	503	0	1753	1244	1074	1058	1074	1058
2	4,714	4,112	2,316	231	0	4393	3778	520	410	520	410
3	3,555	461	-	0	0	4135	796	67	7	67	7
4	2,782	1,985	159	3	0	2923	1753	63	43	63	43
5	2,167	1,035	1,035	28	0	3262	1791	63	28	63	28
6	1,783	1,594	1,594	40	0	2370	1811	40	40	40	40
7	2,313	-	-	0	0	4164	0	82	0	82	0
8	1,278	116	116	36	0	1318	492	387	36	387	36
WASA Subtotal	<b>20,183</b>	<b>10,871</b>	<b>5,954</b>	<b>841</b>	<b>5954</b>	<b>24,318</b>	<b>11,665</b>	<b>2296</b>	<b>1622</b>	<b>2296</b>	<b>1622</b>
DDOT (via VMS) Subtotal					<b>0</b>	<b>145</b>	<b>42</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>6202</b>	<b>5954</b>	<b>24,463</b>	<b>11,707</b>	<b>2296</b>	<b>1622</b>	<b>2296</b>	<b>1622</b>
% Cleaned/Inspected to Date				<b>14%</b>	<b>0%</b>					<b>11%</b>	<b>15%</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	1/17/05 1/28/05	Good	none	Net 3/4 full. No need to change.	none
Bar Rack CSO 040	1/6/05	Good	None	Routine Cleaning	(1)
Bar Rack CSO 041	1/6/05	Good	None	Routine Cleaning	(1)

Notes:

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

#### 4.3 Anacostia River Floating Debris Removal Program

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

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

<i>Program Operation</i>	5-day work week, excluding holidays, weather permitting
<i>Work Days this month:</i>	19
<i>Days not Operating</i>	10
<i>Reason not Operating</i>	High winds and frozen river.
<i># Skimmer in Fleet</i>	2 skimmers
<i># Skimmers Out of Service</i>	None
<i>Dates</i>	--
<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, wood 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: 1/14/05							Inspector's Initials: CD						
CSO	Time of Observation	Overflow Observed		Observed Overflow Rate			Quantity of Floatables			Quantity of Man-Made			REMARKS/OTHER
		Y	N	L	M	H	L	M	H	L	M	H	
009	9:00	X		X			X			X			
	10:00	X		X			X			X			
	11:00	X		X			X			X			
	12:00	X		X			X			X			
010	1:00	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**

Date	Brentwood Reservoir	Bryant St PS	Main PS	Rock Creek PS	National Airport
1/1/2004	0	0	0	0	0
1/2/2004	0	0	0	0	0
1/3/2004	0	0	0	0	0.02
1/4/2004	0	0	0	0	T
1/5/2004	0.21	0.22	0.16	0.16	0.16
1/6/2004	0.03	0.03	0.01	0.01	T
1/7/2004	0	0	0.01	0	T
1/8/2004	0.14	0.15	0.13	0.16	0.15
1/9/2004	0	0	0	0	0
1/10/2004	0	0	0	0	0
1/11/2004	0.1	0.08	0.1	0.08	0.14
1/12/2004	0	0.01	0	0	T
1/13/2004	0.17	0.14	0.22	0.23	0.24
1/14/2004	1.66	1.82	1.57	1.62	1.82
1/15/2004	0	0	0	0	0
1/16/2004	0	0	0	0	T
1/17/2004	0	0	0	0	T
1/18/2004	0	0	0	0	0
1/19/2004	0	0	0	0	0.05
1/20/2004	0.05	0.03	0.06	0.1	T
1/21/2004	0	0	0	0	0
1/22/2004	0	0	0	0	0.34
1/23/2004	0	0.07	0.01	0	T
1/24/2004	0	0	0	0.01	0.01
1/25/2004	0.17	0.14	0.15	0.13	0
1/26/2004	0	0.03	0	0	T
1/27/2004	0	0	0	0	0
1/28/2004	0	0	0	0	0

Date	Brentwood Reservoir	Bryant St PS	Main PS	Rock Creek PS	National Airport
1/29/2004	0	0	0	0	0.07
1/30/2004	0.12	0.02	0.24	0.1	0.31
1/31/2004	0.23	0.29	0.12	0.23	0
Total	2.88	3.03	2.78	2.83	3.31



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

**Monthly Operations Report  
For  
*Combined Sewer System*  
Month: February, 2005**

**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: February, 2005*

**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	02/08/05	*			
4	Bolling AFB, 2250 ft. north of the south line of the Base, SW	003	02/08/05	*			
5	Poplar Point Pumping Station	004	02/15/05	*			
6	Chicago Street and Railroad Ave, SE	005	02/08/05	*			
7	W Street. and Railroad Ave, SE	005	02/08/05	*			
8	Good Hope Rd, west of Nichols Ave, SE	006	02/08/05	*			
9	13 <sup>th</sup> Street and Ridge Place, SE	007	02/01/05	*			
11	"O" Street Pumping Station	011(a)	02/15/05	*			
12	Storm Pump Discharge at Main Pumping Station	011	02/15/05	*			
13	2 <sup>nd</sup> Street, 300 ft. north of N Place, SE	009	02/02/05	*			
14	2 <sup>nd</sup> Street, 250 ft. north of N Place, SE	011(a)	02/15/05	*			
15	South Capitol and E Streets	010	02/15/05	*			
15a	Half and L Streets, SE	010	02/15/05	*			
15b	South Capitol and I Streets	010	02/02/05	*			
15c	South Capitol and I Streets	010	02/02/05	*			
16	North of Main Sewage Pumping Station	012	02/15/05	*			
17	4 <sup>th</sup> and N Streets, SE, Both Extended	013	02/16/05	*			
17a	K Street between 6 <sup>th</sup> Street and 7 <sup>th</sup> Street, SE	013	02/16/05	*			
18	6 <sup>th</sup> and M Streets, SE	014	02/01/05	*			
19	9 <sup>th</sup> and M Streets, SE	015	02/02/05	*			
19a	9 <sup>th</sup> and M Streets, SE	015	02/02/05	*			
20	12 <sup>th</sup> and M Streets, SE	016	02/02/05	*			
20a	12 <sup>th</sup> and M Streets, SE	016	02/02/05	*			
21	14 <sup>th</sup> and M Streets, SE	017	02/03/05	*			

Struct No.	Location	Associated NPDES Outfall	Date Inspected	Condition		Work Needed	Work performed
				Good	Needs Work		
22a	Barney Circle and Pennsylvania Ave, SE	018	02/04/05	*			
22b	Barney Circle and Pennsylvania Ave, SE	018	02/04/05	*			
22c	Barney Circle and Pennsylvania Ave, SE	018	02/04/05	*			
22d	Kentucky Ave and Potomac Street, SE	018	02/07/04	*			
22e	14 <sup>th</sup> Street and Kentucky Ave, SE	018	02/07/05	*			
23	Independence Ave, 21 <sup>st</sup> Street, SE, Extended	019	02/18/05	*			
24a	East Capitol St, west of RFK stadium	019	02/18/05	*			
28	21 <sup>st</sup> and Constitution Ave, NW	020	02/22/05	*			
29	22 <sup>nd</sup> Street, between Constitution Ave and C St, NW	020	02/22/05	*			
30	17 <sup>th</sup> and D Streets, NW	020	02/01/05	*			
31	15 <sup>th</sup> Street and Pennsylvania Ave, NW	020	02/01/05	*			
33	10 <sup>th</sup> and F Streets, NW	020	02/01/05	*			
34	23 <sup>rd</sup> Street, north of Constitution Ave, NW	020	02/17/05	*			
34a	23 <sup>rd</sup> Street near C Street, NW	020	02/17/05	*			
35	Northeast of Roosevelt Bridge, NW	021	02/17/05	*			
36	27 <sup>th</sup> and I Streets, NW	022	02/11/05	*			
36a	New Hampshire Ave and Eye Street, NW	022	02/11/05	*			
36b	19 <sup>th</sup> and L Streets, NW	022, 034	02/02/05	*			
36d	17 <sup>th</sup> and L Streets, NW	022, 034	02/02/05	*			
36g	18 <sup>th</sup> and M Streets, NW	022, 034	02/02/05	*			
36h	18 <sup>th</sup> and M Streets, NW	022, 034	02/02/05	*			
37	27 <sup>th</sup> and Eye Streets, NW	022	02/09/05	*			
38	29 <sup>th</sup> and K Streets, NW	024	02/09/05	*			
38a	30 <sup>th</sup> Street, south of K Street, NW	024	02/22/05	*			
39a	30 <sup>th</sup> and K Streets, NW	024	02/22/05	*			
39b	30 <sup>th</sup> and K Streets, NW	024	02/22/05	*			
41b	31 <sup>st</sup> and K Streets, NW	025	02/22/05	*			

Struct No.	Location	Associated NPDES Outfall	Date Inspected	Condition		Work Needed	Work performed
				Good	Needs Work		
41c	31 <sup>st</sup> and K Streets, NW	025	02/22/05	*			
42	Wisconsin Ave and K Street, NW	026	02/22/05	*			
43	Potomac and Water Streets, NW	027	02/09/05	*			
43a	Potomac and Water Streets, NW	027	02/09/05	*			
44	Water Street, west of Potomac St, NW	027	02/09/05	*			
45	36 <sup>th</sup> and M Streets, NW	028	02/10/05	*			
46	Canal Rd, 1000ft. east of Foxhall Rd, NW	029	02/01/05	*			
47	38 <sup>th</sup> Street and Reservoir Road, NW	029	02/01/05	*			
47a	37 <sup>th</sup> and T Streets, NW	029	02/01/05	*			
47b	37 <sup>th</sup> and T Streets, NW	029	02/01/05	*			
47c	38 <sup>th</sup> and W Streets, NW	029	02/01/05	*			
49	Pennsylvania Ave, east side of Rock Creek, NW	031	02/16/05	*			
50	26 and M Streets, NW	032	02/16/05	*			
51	N Street Extended, west of 25 <sup>th</sup> Street, NW	033	02/16/05	*			
52	22 <sup>nd</sup> Street between M and N Streets, NW	034	02/17/05	*			
52a	N Street between 22 <sup>nd</sup> and 23 <sup>rd</sup> Streets, NW	034	02/17/05	*			
53	22 <sup>nd</sup> and M Streets, NW	022, 034	02/16/05	*			
53a	22 <sup>nd</sup> and M Streets, NW	022, 034	02/16/05	*			
53b	L Street between 21 <sup>st</sup> Street and New Hampshire Ave, NW	022, 034	02/16/05	*			
53c	L and 22 <sup>nd</sup> Streets, NW	022	02/16/05	*			
54	23 <sup>rd</sup> and O Streets, NW	034	02/07/05	*			
55	22 <sup>nd</sup> Street, south of Q Street, NW	035	02/07/05	*			
55a	22 <sup>nd</sup> Street, south of Q Street, NW	035	02/07/05	*			
56	23 <sup>rd</sup> and Massachusetts Ave, NW	036	02/07/05	*			
57	23 <sup>rd</sup> Street, south of Q Street, NW	036	02/07/05	*			
58	Northwest of Belmont Road and Rock Creek and Potomac Parkway, NW	037	02/08/05	*			
59	North of Belmont Rd, east of Kalorama Cir, NW	038	02/08/05	*			
60	Connecticut Ave, east of Rock Creek, NW	039	02/02/05	*			

Struct No.	Location	Associated NPDES Outfall	Date Inspected	Condition		Work Needed	Work performed
				Good	Needs Work		
61	Biltmore St, Extended, east of Rock Creek, NW	040	02/02/05	*			
62	Ontario Rd, Extended, and Rock Creek Pkwy, NW	041	02/04/05	*			
63	Harvard Street and Rock Creek Parkway, NW	042	02/04/05	*			
64	Adams Mill Road, south of Irving Street, NW	043	02/04/05	*			
65	Kenyon Street and Adams Mill Road, NW	044	02/04/05	*			
65a	Kenyon Street and Adams Mill Road, NW	044	02/04/05	*			
66	Adams Mill Road and Lamont Street, NW	045	02/04/05	*			
67	Park Rd , south of Piney Branch Pkwy, NW	046	02/04/05	*			
68	Ingleside Terrance, Extended and Piney Branch Parkway, NW	047	02/04/05	*			
69	Mt. Pleasant Street, Extended and Piney Branch Parkway, NW	048	02/04/05	*			
70	Piney Branch Parkway, west of 16 <sup>th</sup> Street, NW	049	02/04/05	*			
70i	5 <sup>th</sup> and Quackenbos Streets, NW	049	02/02/05	*			
71	28 <sup>th</sup> Street, west of Rock Creek Parkway, NW	050	02/07/05	*			
72	Olive Street Extended and Rock Creek Pkwy, NW	051	02/07/05	*			
72a	Olive Street Extended and Rock Creek Pkwy, NW	051	02/07/05	*			
73	O Street Extended and Rock Creek Parkway, NW	052	02/07/05	*			
74	Q Street, west of Rock Creek, NW	053	02/07/05	*			
75	West side of Rock Creek, 300 ft. south of Massachusetts Ave, NW	054	02/10/05	*			
77	Normanstone Dr Extended, west of Rock Creek, NW	056	02/10/05	*			
77a	Normanstone Dr and Normanstone Lane, NW	056	02/18/05	*			
78	28th Street Extended, west of Rock Creek, NW	057	02/10/05	*			
79	Connecticut Ave and Rock Creek Parkway, NW	058	02/02/05	*			
84	26 <sup>th</sup> and P Streets, NW	060	02/07/05	*			
84a	26 <sup>th</sup> and P Streets, NW	060	02/07/05	*			

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	02/08/05	*		*		*		*		
005	Across from Navy Yard, aligned with Parsons Ave., SE	02/10/05	*		*		*		*		
006	Good Hope Road and Welsh Memorial Bridge	02/10/05	*		*		*		*		
007	Between 11 <sup>th</sup> St. and Anacostia Bridges, SE	02/10/05	*		*		*		*		
009	O St. Sewage Pumping Station, SE	02/24/05	*		*		*		*		
010	O St. Sewage Pumping Station, SE	02/24/05	*			*			*		
011	Main Sewage Pumping Station, SE	02/24/05	*			*			*		
011(a)	Main Sewage Pumping Station, SE	02/24/05	*		*		*		*		
012	Main Sewage Pumping Station, SE	02/24/05	*		*		*		*		
013	Southeast Federal Center, aligned with 4 <sup>th</sup> St.	02/16/05	*		*		*		*		
014	Navy Yard, aligned with 6 <sup>th</sup> St., SE	02/03/05	*		*		*		*		
015	Navy Yard, aligned with 9th Street, SE	02/03/05	*			*			*		
016	12th and O Streets, SE	02//03/05	*		*		*		*		
017	M and Water Street, SE	02/03/05	*		*		*		*		
018	East of Barney Circle and South of Pennsylvania Avenue Bridge, SE	02/03/05	*		*		*		*		
019	Adjacent to Service Drive behind swirl facility and D.C. General Hospital	02/18/05	*			*			*		
020	Rock Creek Parkway and Independence, NW	02/24/05	*		*		*		*		

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	
021	Rock Creek Parkway and C St., NW	02/24/05	*			*			*		
022	Rock Creek Parkway and G St., NW	02/24/05	*		*		*		*		
024	South of 30 <sup>th</sup> and K Streets, NW	02/24/05	*		*			*	*		WASA has developed a capitol project to design and construct a replacement gate for improved performance.
025	South of 31st and K Streets, NW	02/24/05	*		*		*		*		
026	Wisconsin Avenue and Water Street, NW	02/24/05	*		*		*		*		
027	33 <sup>rd</sup> and Water Sts., NW	02/24/05	*			*			*		
028	Key Bridge and Whitehurst Freeway, NW	02/24/05	*			*			*		
029	Adjacent to C&O Canal, aligned with 38 <sup>th</sup> St. NW	02/24/05	*		*		*		*		
031	Rock Creek Pkwy and Pennsylvania Avenue, NW.	02/10/05	*			*			*		
032	26th and M Street, NW.	02/10/05	*			*			*		
033	Across street from St. Francis Jr. High and aligned with N St., NW.	02/10/05	*		*		*		*		
034	Just west of St. Francis Jr. High and north of N St., NW	02/10/05	*		*		*		*		
035	P St. Bridge and Rock Creek Parkway	02/10/05	*		*		*		*		
036	22nd Street, South of Q Street NW.	02/24/05	*		*		*		*		
037	Waterside Dr. and Rock Creek Parkway	02/08/05	*		*		*		*		
038	Between arch footbridge and Connecticut Ave., north of Kalorama Circle, NW.	02/08/05	*		*		*		*		
039	Connecticut Avenue Bridge and Rock Creek Parkway, NW.	02/02/05	*		*		*		*		
040	Aligned with Biltmore Rd., between Connecticut Ave and Ellington Bridge.	02/02/05	*		*		*		*		
041	Beach Dr. and Ontario Pl., NW	02/11/05	*		*		*		*		
042	Harvard St. and Beach Dr NW.	02/11/05	*		*		*		*		

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	
043	Upstream of Harvard St. and Beach Dr NW.	02/11/05	*		*		*		*		
044	Kenyon Street and Beach Dr., NW.	02/11/05	*		*		*		*		
045	North of Beach Dr. and Walbridge Pl, NW.	02/11/05	*		*		*		*		
046	Piney Branch Parkway and Park Road, NW.	02/04/05	*			*			*		
047	Piney Branch Parkway and Ingleside Terrace	02/04/05	*		*		*		*		
048	South of Piney Branch Parkway and 17 <sup>th</sup> St.	02/04/05	*		*		*		*		
049	North of Piney Branch Parkway and 17 <sup>th</sup> St.	02/03/05	*		*		*		*		
050	Rock Creek Parkway and L St., NW	02/03/05	*		*		*		*		
051	Across Rock Creek Parkway, aligned with Olive St., NW.	02/16/05	*		*		*		*		
052	Between P and Penna. Ave Bridges, aligned with O Street, NW.	02/16/05	*		*		*		*		
053	Q St. Bridge and Rock Creek Parkway, NW.	02/24/05	*		*		*		*		
054	Massachusetts Avenue and Rock Creek Parkway, NW.	02/10/05	*		*		*		*		
056	Normanstone Dr. and Rock Creek Parkway, NW.	02/10/05	*		*		*		*		
057	28th Street and Rock Creek Parkway, NW	02/10/05	*		*		*		*		
058	Connecticut Avenue and Rock Creek Parkway, NW.	02/02/05	*			*			*		

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	
060	North of P Street Bridge and Rock Creek Pkwy, NW	02/24/05	*		*		*		*		

Notes:

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

## 2.3 Pumping Stations

Pumping station operations are summarized in the table below.

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

<i>Pumping Station</i>	<i>No. of Inspections</i>	<i>No. Screens</i>	<i>No. Pumps</i>	<i>Screens or Pumps Out of Service</i>	<i>Dates</i>	<i>Reason</i>	<i>Schedule to Restore to Service</i>
Main	31	4	12	None			
Eastside	31	2	4	None			
Poplar Point	31	2 <sup>1</sup>	3	None			
Potomac	31	4	5	None			

Notes:

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

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

<i>Pumping Station</i>	<i>Date Performed</i>	<i>Type of Preventive Maintenance Performed<sup>1</sup></i>	<i>Comments</i>
Main	28 Days	Group A	Add oil, grease bearings and replace packing if needed.
O St	28 Days	Group A	Add oil, grease bearings and replace packing if needed.
Eastside	28 Days	Group A	Add oil, grease bearings and replace packing if needed.
Poplar Point	28 Days	Group A	Add oil, grease bearings and replace packing if needed.
Potomac	28 Days	Group A	Add oil, grease bearings and replace packing if needed.
Rock Creek	28 Days	Group A	Add oil, grease bearings and replace packing if needed.
Upper Anacostia	28 Days	Group A	Add oil, grease bearings and replace packing if needed.
Earle Place	28 Days	Group A	Add oil, grease bearings and replace packing if needed.

Notes:

1. Group A consists of:

Exercise bar screens

Exercise all sump pumps

Drain condensation from air compressor storage tank

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

Check all safety equipment

Issue work order requests as required

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

<i>Pumping Station</i>	<i>Sanitary Pumpage</i>		<i>Storm Water/CSO Pumped To Anacostia River</i>		
	<i>Total Wastewater (mg)</i>	<i>Daily Average Wastewater (mg)</i>	<i>Date</i>	<i>Volume (mg)</i>	<i>Screenings Collected (units)</i>
Main	2,395.20	85.54	N/A	N/A	N/A
O St <sup>1</sup>	156.20	5.58	None	None	Normal
Eastside	130.80	4.67	N/A	N/A	N/A
Poplar Point	489.50	17.48	N/A	N/A	N/A
Potomac	3,857.90	137.78	N/A	N/A	N/A
Rock Creek	222.40	7.94	N/A	N/A	N/A
Upper Anacostia	45.10	1.61	N/A	N/A	N/A
Earle Place	0.39	0.01	N/A	N/A	N/A

Notes:

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

## 2-6 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>
2/23/05	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>
2/23/05	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>
2/14/05	4hrs 30 min	16	8.4	7.6	0.50(40)
2/21/05	3hrs 30min	5	0.4	4.6	0.30(240)

Notes:

1. Approx. length of time influent flow rate was above the 15 mgd threshold for allowing flow through the facility.
2. Calculated as follows: Total Influent Volume – Total Foul Sewer Volume.
3. One Bin = 80 ft<sup>3</sup>
4. The influent meter failed to function between February 1, 2005 to February 28, 2005, because of electronics problems. As a result, the influent readings could not be obtained and the total influent volumes shown in the table during the period were estimated. Influent meter is schedule to be repair and put back to service on March 4, 2005.

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>
2/14/05	Yes	5	2	Mix Chamber	0.3	Mix Chamber	240,000	Mix Chamber	220,000
2/14/05	Yes	5	2	Anacostia River	0.0	Anacostia River	55,000	Anacostia River	56,000
2/21/05	Yes	5	2	Mix Chamber	0.5	Mix Chamber	230,000	Mix Chamber	170,00
2/21/05	Yes	5	2	Anacostia River	0.0	Anacostia River	240,000	Anacostia River	200,000

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>Nitrate (NO<sub>3</sub>) mg/L</i>	<i>Nitrite (NO<sub>2</sub>) mg/L</i>	<i>Total Kjeldahl Nitrogen (TKN) (mg/L as N)</i>	<i>Total Nitrogen (mg/L)</i>	<i>Total Phosphorus (TP) (mg/L)</i>	<i>Carbonaceous Biological Oxygen Demand (CBOD) (mg/L)</i>
2/14/05	87.0	1.14	3.01	4.32	0.69	23.7
2/21/05	116	1.08	5.14	6.32	0.94	51.3

Notes:

Effluent samples taken every two hours and flow composited for a maximum of 24 hours per storm.

Total Nitrogen = Total Kjeldahl N ( TKN) + Nitrate N (NO<sub>3</sub>) + Nitrite N (NO<sub>2</sub>)

## 2.10 Inflatable Dams

WASA operates 12 inflatable dams at 8 locations in the CSS. The dams consist 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 2-11. The inflatable dams consist of multi-ply elastomeric (i.e., “rubber”) fabric dams installed in major overflow conduits within the combined sewer system. The objective of the inflatable dam installation is to increase the effective depth to which the sewage must rise in the combined sewer before overflows occur. The effect of the installation is to retain a greater volume of combined sewage flow resulting from low to moderate intensity storms by maximizing storage within the CSS. During higher intensity storms, when the full carrying capacity of the overflow conduit is required to prevent upstream flooding, the dam is deflated automatically. Inflatable dam operations are summarized below:

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

<i>Inflatable Dam Structure No</i>	<i>Date Inspected</i>	<i>Was Dam Out of Service During the Month?</i>	<i>Dates out of Service</i>	<i>Reason</i>	<i>Schedule to Restore to Service</i>
14 - East	2/22/05	No	N/A	N/A	N/A
14 - West	2/22/05	No	N/A	N/A	N/A
15	2/22/05	No	N/A	N/A	N/A
15A	2/22/05	No	N/A	N/A	N/A
16 - East	2/22/05	No	N/A	N/A	N/A
16 - West	2/22/05	No	N/A	N/A	N/A
24 - North	2/22/05	No	N/A	N/A	N/A
24 - Middle	2/22/05	No	N/A	N/A	N/A
24 - South	2/22/05	No	N/A	N/A	N/A
34	2/22/05	No	N/A	N/A	N/A
35	2/22/05	No	N/A	N/A	N/A
52	2/22/05	No	N/A	N/A	N/A

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

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

3. **DRY WEATHER OVERFLOWS**

Dry weather overflows (DWOs), are summarized below:

**Table 3-1**  
**Dry Weather Overflows**

<i>Location:</i>	<b>NONE IN FEBRUARY 2005</b>
<i>Cause</i>	
<i>Date/ Time Discovered</i>	
<i>Action Taken</i>	
<i>Date/Time Discharge Ceased</i>	
<i>Estimated Volume (mg)</i>	
<i>Did Overflow Reach Receiving water?</i>	
<i>Action taken to prevent reoccurrence</i>	

#### 4. SOLIDS AND FLOATABLES CONTROL

##### 4.1 Catch Basin Cleaning

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

**Table 4-1 Catch Basin Summaries**

Ward	Total CBs	CBs in CSS	CBs in Anacostia CSS	Inspections		Cleaning					
				Total CBs Inspected Once this Year	Total CBs Inspected Twice this Year	CBs Cleaned Thru Last Month		CB's Cleaned this Month		Total CBs Cleaned This Year to Date	
						Total	In CSS	Total	In CSS	Total	In CSS
1	1,591	1,568	734	734	0	1074	1058	933	919	2007	1977
2	4,714	4,112	2,316	294	0	520	410	434	336	954	746
3	3,555	461	-	0	0	67	7	146	78	213	85
4	2,782	1,985	159	14	0	63	43	68	23	131	66
5	2,167	1,035	1,035	49	0	63	28	43	21	106	49
6	1,783	1,594	1,594	93	0	40	40	61	53	101	93
7	2,313	-	-	0	0	82	0	117	0	199	0
8	1,278	116	116	65	0	387	36	29	29	416	65
WASA Subtotal	<b>20,183</b>	<b>10,871</b>	<b>5,954</b>	<b>1249</b>	<b>0</b>	<b>2296</b>	<b>1622</b>	<b>1831</b>	<b>1459</b>	<b>4,127</b>	<b>3,081</b>
DDOT (via VMS) Subtotal				<b>0</b>	<b>0</b>	<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>1249</b>	<b>0</b>	<b>2296</b>	<b>1622</b>	<b>1831</b>	<b>1459</b>	<b>4,127</b>	<b>3,081</b>
% Cleaned/Inspected to Date				<b>21%</b>	<b>0%</b>					<b>20%</b>	<b>28%</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	2/10/05 2/24/05	Good	Tighten Boom	Net 3/4 full. No need to change.	none
Bar Rack CSO 040	2/02/05	Good	None	Routine Cleaning	(1)
Bar Rack CSO 041	2/11/05	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>	16
<i>Days not Operating</i>	5
<i>Reason not Operating</i>	High winds, frozen river, PM service
<i># Skimmer in Fleet</i>	2 skimmers
<i># Skimmers Out of Service</i>	1
<i>Dates</i>	28
<i>Reason</i>	Blown lift switch
<i>Plan to Restore to Service</i>	ASAP – Replacement part is available.
<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:						Inspector's Initials:									
CSO	Time of Observation	Overflow Observed		Observed Overflow Rate			Quantity of Floatables			Quantity of Man-Made			REMARKS/OTHER				
		Y	N	L	M	H	L	M	H	L	M	H					
009																	
010				<b>NONE IN FEBRUARY</b>													
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**

Date	Brentwood Reservoir	Bryant St PS	Main PS	Rock Creek PS	National Airport
2/1/2004	0		0	0	0
2/2/2004	0	0	0	0	0
2/3/2004	0.04	0	0.04	0.05	0.04
2/4/2004	0	0.07	0	0.03	0
2/5/2004	0	0.01	0	0	0
2/6/2004	0	0	0	0	0
2/7/2004	0	0	0	0	0
2/8/2004	0	0	0	0	0
2/9/2004	0	0	0	0	0
2/10/2004	0.07	0.1	0.1	0.08	0.11
2/11/2004	0	0.07	0	0	0
2/12/2004	0	0	0	0	0
2/13/2004	0	0	0	0	T
2/14/2004	0.41	0.48	0.45	0.47	0.49
2/15/2004	0	0	0	0.01	0
2/16/2004	0.02	0.04	0.02	0.03	0.01
2/17/2004	0	0	0	0	0
2/18/2004	0	0	0	0	T
2/19/2004	0	0	0	0	0
2/20/2004	0	0	0	0	T
2/21/2004	0.24	0.24	0.24	0.28	0.39
2/22/2004	0.01	0.01	0.01	0.01	T
2/23/2004	0	0	0	0	T
2/24/2004	0	0	0	0	0.22
2/25/2004	0.18	0.24	0.29	0.2	T
2/26/2004	0	0	0	0	0
2/27/2004	0	0	0	0	0
2/28/2004	0.08	0.03	0.07	0.02	0.37
Total	1.05	1.29	1.22	1.18	1.63



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

**Monthly Operations Report  
For  
*Combined Sewer System*  
Month: March, 2005**

**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: March 2005*

**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>
				Good	Needs Work		
2	Bolling AFB, 2250 ft. north of the south line of the Base, SW	003	3/4/05	*			
4	Bolling AFB, 2250 ft. north of the south line of the Base, SW	003	3/4/05	*			
5	Poplar Point Pumping Station	004	3/10/05	*			
6	Chicago Street and Railroad Ave, SE	005	3/1/05	*			
7	W Street. and Railroad Ave, SE	005	3/1/05	*			
8	Good Hope Rd, west of Nichols Ave, SE	006	3/2/05	*			
9	13 <sup>th</sup> Street and Ridge Place, SE	007	3/1/05	*			
11	"O" Street Pumping Station	011(a)	3/10/05	*			
12	Storm Pump Discharge at Main Pumping Station	011	3/10/05	*			
13	2 <sup>nd</sup> Street, 300 ft. north of N Place, SE	009	3/2/05	*			
14	2 <sup>nd</sup> Street, 250 ft. north of N Place, SE	011(a)	3/2/05	*			
15	South Capitol and E Streets	010	3/10/05	*			
15a	Half and L Streets, SE	010	3/10/05	*			
15b	South Capitol and I Streets	010	3/18/05	*			
15c	South Capitol and I Streets	010	3/18/05	*			
16	North of Main Sewage Pumping Station	012	3/10/05	*			
17	4 <sup>th</sup> and N Streets, SE, Both Extended	013	3/7/05	*			
17a	K Street between 6 <sup>th</sup> Street and 7 <sup>th</sup> Street, SE	013	03/11/05	*			
18	6 <sup>th</sup> and M Streets, SE	014	03/02/05	*			
19	9 <sup>th</sup> and M Streets, SE	015	03/03/05	*			
19a	9 <sup>th</sup> and M Streets, SE	015	03/03/05	*			
20	12 <sup>th</sup> and M Streets, SE	016	03/04/05	*			
20a	12 <sup>th</sup> and M Streets, SE	016	03/04/05	*			

<i>Struct No.</i>	<i>Location</i>	<i>Associated NPDES Outfall</i>	<i>Date Inspected</i>	<i>Condition</i>		<i>Work Needed</i>	<i>Work performed</i>
				Good	Needs Work		
21	14 <sup>th</sup> and M Streets, SE	017	03/02/05	*			
22a	Barney Circle and Pennsylvania Ave, SE	018	03/09/05	*			
22b	Barney Circle and Pennsylvania Ave, SE	018	03/09/05	*			
22c	Barney Circle and Pennsylvania Ave, SE	018	03/09/05	*			
22d	Kentucky Ave and Potomac Street, SE	018	03/04/05	*			
22e	14 <sup>th</sup> Street and Kentucky Ave, SE	018	03/04/05	*			
23	Independence Ave, 21 <sup>st</sup> Street, SE, Extended	019	03/21/05	*			
24a	East Capitol St, west of RFK stadium	019	03/10/05	*			
28	21 <sup>st</sup> and Constitution Ave, NW	020	03/15/05	*			
29	22 <sup>nd</sup> Street, between Constitution Ave and C St, NW	020	03/15/05	*			
30	17 <sup>th</sup> and D Streets, NW	020	03/02/05	*			
31	15 <sup>th</sup> Street and Pennsylvania Ave, NW	020	03/02/05	*			
33	10 <sup>th</sup> and F Streets, NW	020	03/02/05	*			
34	23 <sup>rd</sup> Street, north of Constitution Ave, NW	020	03/15/05	*			
34a	23 <sup>rd</sup> Street near C Street, NW	020	03/15/05	*			
35	Northeast of Roosevelt Bridge, NW	021	03/15/05	*			
36	27 <sup>th</sup> and I Streets, NW	022	03/09/05	*			
36a	New Hampshire Ave and Eye Street, NW	022	03/09/05	*			
36b	19 <sup>th</sup> and L Streets, NW	022, 034	03/04/05	*			
36d	17 <sup>th</sup> and L Streets, NW	022, 034	03/04/05	*			
36g	18 <sup>th</sup> and M Streets, NW	022, 034	03/04/05	*			
36h	18 <sup>th</sup> and M Streets, NW	022, 034	03/04/05	*			
37	27 <sup>th</sup> and Eye Streets, NW	022	03/09/05	*			
38	29 <sup>th</sup> and K Streets, NW	024	03/03/05	*			
38a	30 <sup>th</sup> Street, south of K Street, NW	024	03/03/05	*			
39a	30 <sup>th</sup> and K Streets, NW	024	03/03/05	*			

Struct No.	Location	Associated NPDES Outfall	Date Inspected	Condition		Work Needed	Work performed
				Good	Needs Work		
39b	30 <sup>th</sup> and K Streets, NW	024	03/03/05	*			
41b	31 <sup>st</sup> and K Streets, NW	025	03/09/05	*			
41c	31 <sup>st</sup> and K Streets, NW	025	03/09/05	*			
42	Wisconsin Ave and K Street, NW	026	03/09/05	*			
43	Potomac and Water Streets, NW	027	03/09/05	*			
43a	Potomac and Water Streets, NW	027	03/09/05	*			
44	Water Street, west of Potomac St, NW	027	03/09/05	*			
45	36 <sup>th</sup> and M Streets, NW	028	03/03/05	*			
46	Canal Rd, 1000ft. east of Foxhall Rd, NW	029	03/01/05	*			
47	38 <sup>th</sup> Street and Reservoir Road, NW	029	03/01/05	*			
47a	37 <sup>th</sup> and T Streets, NW	029	03/01/05	*			
47b	37 <sup>th</sup> and T Streets, NW	029	03/01/05	*			
47c	38 <sup>th</sup> and W Streets, NW	029	03/01/05	*			
49	Pennsylvania Ave, east side of Rock Creek, NW	031	03/18/05	*			
50	26 and M Streets, NW	032	03/18/05	*			
51	N Street Extended, west of 25 <sup>th</sup> Street, NW	033	03/18/05	*			
52	22 <sup>nd</sup> Street between M and N Streets, NW	034	03/18/05	*			
52a	N Street between 22 <sup>nd</sup> and 23 <sup>rd</sup> Streets, NW	034	03/24/05	*			
53	22 <sup>nd</sup> and M Streets, NW	022, 034	03/18/05	*			
53a	22 <sup>nd</sup> and M Streets, NW	022, 034	03/18/05	*			
53b	L Street between 21 <sup>st</sup> Street and New Hampshire Ave, NW	022, 034	03/04/05	*			
53c	L and 22 <sup>nd</sup> Streets, NW	022	03/04/05	*			
54	23 <sup>rd</sup> and O Streets, NW	034	03/24/05	*			
55	22 <sup>nd</sup> Street, south of Q Street, NW	035	03/09/05	*			
55a	22 <sup>nd</sup> Street, south of Q Street, NW	035	03/09/05	*			
56	23 <sup>rd</sup> and Massachusetts Ave, NW	036	03/09/05	*			
57	23 <sup>rd</sup> Street, south of Q Street, NW	036	03/09/05	*			

<i>Struct No.</i>	<i>Location</i>	<i>Associated NPDES Outfall</i>	<i>Date Inspected</i>	<i>Condition</i>		<i>Work Needed</i>	<i>Work performed</i>
				Good	Needs Work		
58	Northwest of Belmont Road and Rock Creek and Potomac Parkway, NW	037	03/14/05	*			
59	North of Belmont Rd, east of Kalorama Cir, NW	038	03/14/05	*			
60	Connecticut Ave, east of Rock Creek, NW	039	03/04/05	*			
61	Biltmore St, Extended, east of Rock Creek, NW	040	03/04/05	*			
62	Ontario Rd, Extended, and Rock Creek Pkwy, NW	041	03/14/05	*			
63	Harvard Street and Rock Creek Parkway, NW	042	03/14/05	*			
64	Adams Mill Road, south of Irving Street, NW	043	03/14/05	*			
65	Kenyon Street and Adams Mill Road, NW	044	03/14/05	*			
65a	Kenyon Street and Adams Mill Road, NW	044	03/14/05	*			
66	Adams Mill Road and Lamont Street, NW	045	03/14/05	*			
67	Park Rd , south of Piney Branch Pkwy, NW	046	03/14/05	*			
68	Ingleside Terrance, Extended and Piney Branch Parkway, NW	047	03/14/05	*			
69	Mt. Pleasant Street, Extended and Piney Branch Parkway, NW	048	03/14/05	*			
70	Piney Branch Parkway, west of 16 <sup>th</sup> Street, NW	049	03/14/05	*			
70i	5 <sup>th</sup> and Quackenbos Streets, NW	049	03/01/05	*			
71	28 <sup>th</sup> Street, west of Rock Creek Parkway, NW	050	03/18/05	*			
72	Olive Street Extended and Rock Creek Pkwy, NW	051	03/22/05	*			
72a	Olive Street Extended and Rock Creek Pkwy, NW	051	03/22/05	*			

<i>Struct No.</i>	<i>Location</i>	<i>Associated NPDES Outfall</i>	<i>Date Inspected</i>	<i>Condition</i>		<i>Work Needed</i>	<i>Work performed</i>
				Good	Needs Work		
73	O Street Extended and Rock Creek Parkway, NW	052	03/22/05	*			
74	Q Street, west of Rock Creek, NW	053	03/09/05	*			
75	West side of Rock Creek, 300 ft. south of Massachusetts Ave, NW	054	03/21/05	*			
77	Normanstone Dr Extended, west of Rock Creek, NW	056	03/01/05	*			
77a	Normanstone Dr and Normanstone Lane, NW	056	03/21/05	*			
78	28th Street Extended, west of Rock Creek, NW	057	03/21/05	*			
79	Connecticut Ave and Rock Creek Parkway, NW	058	03/01/05	*			
84	26 <sup>th</sup> and P Streets, NW	060	03/22/05	*			
84a	26 <sup>th</sup> and P Streets, NW	060	03/22/05	*			

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	03/04/05	*		*		*		*		
005	Across from Navy Yard, aligned with Parsons Ave., SE	03/03/05	*		*		*		*		
006	Good Hope Road and Welsh Memorial Bridge	03/03/05	*		*		*		*		
007	Between 11 <sup>th</sup> St. and Anacostia Bridges, SE	03/03/05	*		*		*		*		
009	O St. Sewage Pumping Station, SE	03/10/05	*		*		*		*		
010	O St. Sewage Pumping Station, SE	03/10/05	*			*			*		
011	Main Sewage Pumping Station, SE	03/10/05	*			*			*		
011(a)	Main Sewage Pumping Station, SE	03/10/05	*		*		*		*		
012	Main Sewage Pumping Station, SE	03/10/05	*		*		*		*		
013	Southeast Federal Center, aligned with 4 <sup>th</sup> St.	03/22/05	*		*		*		*		
014	Navy Yard, aligned with 6 <sup>th</sup> St., SE	03/22/05	*		*		*		*		
015	Navy Yard, aligned with 9th Street, SE	03/22/05	*			*			*		
016	12th and O Streets, SE	03/03/05	*		*		*		*		
017	M and Water Street, SE	03/03/05	*		*		*		*		
018	East of Barney Circle and South of Pennsylvania Avenue Bridge, SE	03/03/05	*		*		*		*		
019	Adjacent to Service Drive behind swirl facility and D.C. General Hospital	03/22/05	*			*			*		
020	Rock Creek Parkway and Independence, NW	03/24/05	*		*		*		*		
021	Rock Creek Parkway and C St., NW	03/24/05	*			*			*		
022	Rock Creek Parkway and G St., NW	03/24/05	*		*		*		*		
024	South of 30 <sup>th</sup> and K Streets, NW	03/24/05	*		*			*	*		WASA has developed a capitol project to design and construct a replacement gate for improved performance.

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	
025	South of 31st and K Streets, NW	03/24/05	*		*		*		*		
026	Wisconsin Avenue and Water Street, NW	03/24/05	*		*		*		*		
027	33 <sup>rd</sup> and Water Sts., NW	03/24/05	*			*			*		
028	Key Bridge and Whitehurst Freeway, NW	03/24/05	*			*			*		
029	Adjacent to C&O Canal, aligned with 38 <sup>th</sup> St. NW	03/24/05	*		*		*		*		
031	Rock Creek Pkwy and Pennsylvania Avenue, NW.	03/18/05	*			*			*		
032	26th and M Street, NW.	03/03/05	*			*			*		
033	Across street from St. Francis Jr. High and aligned with N St., NW.	03/03/05	*		*		*		*		
034	Just west of St. Francis Jr. High and north of N St., NW	03/18/05	*		*		*		*		
035	P St. Bridge and Rock Creek Parkway	03/21/05	*		*		*		*		
036	22nd Street, South of Q Street NW.	03/21/05	*		*		*		*		
037	Waterside Dr. and Rock Creek Parkway	03/14/05	*		*		*		*		
038	Between arch footbridge and Connecticut Ave., north of Kalorama Circle, NW.	03/14/05	*		*		*		*		
039	Connecticut Avenue Bridge and Rock Creek Parkway, NW.	03/04/05	*		*		*		*		
040	Aligned with Biltmore Rd., between Connecticut Ave and Ellington Bridge.	03/04/05	*		*		*		*		
041	Beach Dr. and Ontario Pl., NW	03/17/05	*		*		*		*		
042	Harvard St. and Beach Dr NW.	03/17/05	*		*		*		*		
043	Upstream of Harvard St. and Beach Dr NW.	03/17/05	*		*		*		*		
044	Kenyon Street and Beach Dr., NW.	03/17/05	*		*		*		*		
045	North of Beach Dr. and Walbridge Pl, NW.	03/17/05	*		*		*		*		
046	Piney Branch Parkway and Park Road, NW.	03/14/05	*			*			*		
047	Piney Branch Parkway and Ingleside Terrace	03/14/05	*		*		*		*		

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	
048	South of Piney Branch Parkway and 17 <sup>th</sup> St.	03/14/05	*		*		*		*		
049	North of Piney Branch Parkway and 17 <sup>th</sup> St.	03/14/05	*		*		*		*		
050	Rock Creek Parkway and L St., NW	03/18/05	*		*		*		*		
051	Across Rock Creek Parkway, aligned with Olive St., NW.	03/03/05	*		*		*		*		
052	Between P and Penna. Ave Bridges, aligned with O Street, NW.	03/03/05	*		*		*		*		
053	Q St. Bridge and Rock Creek Parkway, NW.	03/21/05	*		*		*		*		
054	Massachusetts Avenue and Rock Creek Parkway, NW.	03/21/05	*		*		*		*		
056	Normanstone Dr. and Rock Creek Parkway, NW.	03/21/05	*		*		*		*		
057	28th Street and Rock Creek Parkway, NW	03/21/05	*		*		*		*		
058	Connecticut Avenue and Rock Creek Parkway, NW.	03/21/05	*			*			*		
060	North of P Street Bridge and Rock Creek Pkwy, NW	03/21/05	*		*		*		*		

Notes:

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

## 2.3 Pumping Stations

Pumping station operations are summarized in the table below.

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

<i>Pumping Station</i>	<i>No. of Inspections</i>	<i>No. Screens</i>	<i>No. Pumps</i>	<i>Screens or Pumps Out of Service</i>	<i>Dates</i>	<i>Reason</i>	<i>Schedule to Restore to Service</i>
Main	31	4	12	None			
Eastside	31	2	4	Pump # 3 Pump # 4	3/26/05 3/26/05	Fuse taken out Starter removed	3/28/05 3/29/05
Poplar Point	31	2 <sup>1</sup>	3	Screen # 1	03/18/05	Rake misaligned	04/30/05
Potomac	31	4	5	None			

Notes:

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

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

<i>Pumping Station</i>	<i>Date Performed</i>	<i>Type of Preventive Maintenance Performed<sup>1</sup></i>	<i>Comments</i>
Main	31 days	Group A	Add oil, grease bearings and replace packing if needed.
O St	31 days	Group A	Add oil, grease bearings and replace packing if needed.
Eastside	31 days	Group A	Add oil, grease bearings and replace packing if needed.
Poplar Point	31 days	Group A	Add oil, grease bearings and replace packing if needed.
Potomac	31 days	Group A	Add oil, grease bearings and replace packing if needed.
Rock Creek	31 days	Group A	Add oil, grease bearings and replace packing if needed.
Upper Anacostia	31 days	Group A	Add oil, grease bearings and replace packing if needed.
Earle Place	31 days	Group A	Add oil, grease bearings and replace packing if needed.

Notes:

1. Group A consists of:

Exercise bar screens

Exercise all sump pumps

Drain condensation from air compressor storage tank

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

Check all safety equipment

Issue work order requests as required

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

<i>Pumping Station</i>	<i>Sanitary Pumpage</i>		<i>Storm Water/CSO Pumped To Anacostia River</i>		
	<i>Total Wastewater (mg)</i>	<i>Daily Average Wastewater (mg)</i>	<i>Date</i>	<i>Volume (mg)</i>	<i>Screenings Collected (units)</i>
Main	2,602.20	83.94	N/A	N/A	N/A
O St <sup>1</sup>	186.40	6.01	03/23/05 03/28/05	7.1 7.6	Normal
Eastside	106.20	3.43	N/A	N/A	N/A
Poplar Point	524.60	16.92	N/A	N/A	N/A
Potomac	4,369.50	140.95	N/A	N/A	N/A
Rock Creek	337.60	10.89	N/A	N/A	N/A
Upper Anacostia	68.10	2.20	N/A	N/A	N/A
Earle Place	0.51	0.02	N/A	N/A	N/A

Notes:

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

## 2-6 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>
3/24/05	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>
3/23/05	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>
3/8/05	8	16.46	4.10	12.36	1.30(104)
3/23/05	10	62.27	6.81	55.46	1.05(84)
3/23/05	8	3.13	1.93	1.2	0.25(20)
3/28/05	6	27.03	3.03	24	0.2(16)
3/28/05	8	10.42	2.53	2.53	0.23(19)
3/29/05	4	2.6	2.6	0	0.10(8)

Notes:

1. Approx. length of time influent flow rate was above the 15 mgd threshold for allowing flow through the facility.
2. Calculated as follows: Total Influent Volume – Total Foul Sewer Volume.
3. One Bin = 80 ft<sup>3</sup>
4. Influent meter repaired and return back to service on March 4, 2005.

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/Dechlor 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>
3/8/05	Yes	5	2	Mix Chamber	0.5	Mix Chamber	55,000	Mix Chamber	170,000
3/8/05	Yes	5	2	Anacostia River	0.0	Anacostia River	43,000	Anacostia River	53,000
3/23/05	Yes	5	2	Mix Chamber	1.0	Mix Chamber	33,000	Mix Chamber	34,000
3/23/05	Yes	5	2	Anacostia River	0.1	Anacostia River	14,500	Anacostia River	32,000
3/23/05	Yes	5	2	Mix Chamber	1.6	Mix Chamber	240	Mix Chamber	230
3/23/05	Yes	5	2	Anacostia River	0.1	Anacostia River	36	Anacostia River	<10
3/28/05	Yes	5	2	Mix Chamber	0.5	Mix Chamber	1,260	Mix Chamber	4,200
3/28/05	Yes	5	2	Anacostia River	0.0	Anacostia River	38,000	Anacostia River	48,000
3/28/05	Yes	5	2	Mix Chamber	0.5	Mix Chamber	3,800	Mix Chamber	2,300
3/28/05	Yes	5	2	Anacostia River	0.0	Anacostia River	4,900	Anacostia River	3,300

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>					
	<u>Nitrate (NO<sub>3</sub>) mg/L</u>	<u>Nitrite (NO<sub>2</sub>) mg/L</u>	<u>Total Kjeldahl Nitrogen (TKN) (mg/L as N)</u>	<u>Total Nitrogen (mg/L)</u>	<u>Total Phosphorus (TP) (mg/L)</u>	<u>Carbonaceous Biological Oxygen Demand (CBOD) (mg/L)</u>
3/8/05	28.0	0.87	10.2	11.14	1.26	48.0
3/23/05	108	0.65	5.47	6.17	1.00	17.4
3/28/05	78.0	0.61	2.74	3.46	0.47	10.5

Notes:

Effluent samples taken every two hours and flow composited for a maximum of 24 hours per storm.

Total Nitrogen = Total Kjeldahl N ( TKN) + Nitrate N (NO<sub>3</sub>) + Nitrite N (NO<sub>2</sub>)

## 2.10 Inflatable Dams

WASA operates 12 inflatable dams at 8 locations in the CSS. The dams consist 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 2-11. The inflatable dams consist of multi-ply elastomeric (i.e., “rubber”) fabric dams installed in major overflow conduits within the combined sewer system. The objective of the inflatable dam installation is to increase the effective depth to which the sewage must rise in the combined sewer before overflows occur. The effect of the installation is to retain a greater volume of combined sewage flow resulting from low to moderate intensity storms by maximizing storage within the CSS. During higher intensity storms, when the full carrying capacity of the overflow conduit is required to prevent upstream flooding, the dam is deflated automatically. Inflatable dam operations are summarized below:

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

<i>Inflatable Dam Structure No</i>	<i>Date Inspected</i>	<i>Was Dam Out of Service During the Month?</i>	<i>Dates out of Service</i>	<i>Reason</i>	<i>Schedule to Restore to Service</i>
14 - East	3/24/05	<b>No</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
14 - West	3/24/05	<b>No</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
15	3/24/05	<b>No</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
15A	3/24/05	<b>No</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
16 - East	3/24/05	<b>No</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
16 - West	3/24/05	<b>No</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
24 - North	3/24/05	<b>No</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
24 - Middle	3/24/05	<b>No</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
24 - South	3/24/05	<b>No</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
34	3/24/05	<b>No</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
35	3/24/05	<b>No</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
52	3/24/05	<b>No</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>

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

<i>Inflatable Dam Structure No.</i>	<i>Overflow Dates</i>	<i>Estimated Duration of Overflow (hrs)</i>
14 (E & W)	<i>None</i>	<i>N/A</i>
15	<i>3/28/05</i>	<i>3hr 39mins</i>
15A	<i>3/23/05</i> <i>3/28/05</i>	<i>4hrs 26mins</i> <i>2hrs 1min</i>
16 (E & W)	<i>3/23/05</i> <i>3/28/05</i>	<i>1hr 2mins</i> <i>1hr 21mins</i>
24	<i>None</i>	<i>N/A</i>
34	<i>None</i>	<i>N/A</i>
35	<i>None</i>	<i>N/A</i>
52	<i>None</i>	<i>N/A</i>
<i>Structures on Outfall Sewers</i>	<i>Overflow Dates</i>	<i>Estimated Duration of Overflow (hrs)</i>
Outfall Structure 1	None	This structure has been bulk Headed. Overflows are no longer possible.
Outfall Structure 1A	None	This structure has been bulk headed. Overflows are no longer possible.
Outfall Structure 2(E & W)	None	None
<i>Outfall Sewer Control Gates</i>	<i>Operational Status</i>	<i>Position</i>
Outfall Sewer Control Gate No. 1	Operational	Open
Outfall Sewer Control Gate No.2	Operational	Open

3. **DRY WEATHER OVERFLOWS**

Dry weather overflows (DWOs), are summarized below:

**Table 3-1  
Dry Weather Overflows**

<i>Location:</i>	<b>NONE IN MARCH 2005</b>
<i>Cause</i>	
<i>Date/ Time Discovered</i>	
<i>Action Taken</i>	
<i>Date/Time Discharge Ceased</i>	
<i>Estimated Volume (mg)</i>	
<i>Did Overflow Reach Receiving water?</i>	
<i>Action taken to prevent reoccurrence</i>	

#### 4. SOLIDS AND FLOATABLES CONTROL

##### 4.1 Catch Basin Cleaning

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

**Table 4-1 Catch Basin Summaries**

Ward	Total CBs	CBs in CSS	CBs in Anacostia CSS	Inspections		Cleaning					
				Total CBs Inspected Once this Year	Total CBs Inspected Twice this Year	CBs Cleaned Thru Last Month		CB's Cleaned this Month		Total CBs Cleaned This Year to Date	
						Total	In CSS	Total	In CSS	Total	In CSS
1	1,591	1,568	734	734	350	2007	1977	370	350	2377	2327
2	4,714	4,112	2,316	624	0	954	746	677	590	1631	1336
3	3,555	461	-	0	0	213	85	1577	666	1790	751
4	2,782	1,985	159	14	0	131	66	0	0	131	66
5	2,167	1,035	1,035	119	0	106	49	98	70	204	119
6	1,783	1,594	1,594	124	0	101	93	92	31	193	124
7	2,313	-	-	0	0	199	0	83	0	282	0
8	1,278	116	116	65	0	416	65	0	0	416	65
WASA Subtotal	<b>20,183</b>	<b>10,871</b>	<b>5,954</b>	<b>1680</b>	<b>350</b>	<b>4,127</b>	<b>3,081</b>	<b>2897</b>	<b>1707</b>	<b>7,024</b>	<b>4,788</b>
DDOT (via VMS) Subtotal				<b>0</b>	<b>0</b>	<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>1680</b>	<b>350</b>	<b>4,127</b>	<b>3,081</b>	<b>2897</b>	<b>1707</b>	<b>7,024</b>	<b>4,788</b>
% Cleaned/Inspected to Date				<b>28%</b>	<b>6%</b>					<b>35%</b>	<b>44%</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	3/4/05 3/24/05	Good	None	Remove debris	128 lb.
Bar Rack CSO 040	3/04/05	Good	None	Routine Cleaning	(1)
Bar Rack CSO 041	3/17/05	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>	High winds
<i># Skimmer in Fleet</i>	2 skimmers
<i># Skimmers Out of Service</i>	1
<i>Dates</i>	3/17/05 thru 3/28/05
<i>Reason</i>	B- 28, repairs to hydraulic pump.
<i>Plan to Restore to Service</i>	N/A.
<i>Volume Material Collected</i>	50 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: 3/23/05

Inspector's Initials: CD

CSO	Time of Observation	Overflow Observed		Observed Overflow Rate			Quantity of Floatables			Quantity of Man-Made			REMARKS/OTHER
		Y	N	L	M	H	L	M	H	L	M	H	
009	12:30	x			x		x			x			
	1:30	x			x		x			x			
010	2:30	x			x		x			x			
	3:30	x			x		x			x			
011													
011a													
012													

Date: 3/28/05

Inspector's Initials: CD

CSO	Time of Observation	Overflow Observed		Observed Overflow Rate			Quantity of Floatables			Quantity of Man-Made			REMARKS/OTHER
		Y	N	L	M	H	L	M	H	L	M	H	
009	3:30	x		x			x			x			
010													
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**

Date	Brentwood Reservoir	Bryant St PS	Main PS	Rock Creek PS	National Airport
3/1/2004	0	0	0	0	T
3/2/2004	0	0	0	0	0
3/3/2004	0	0	0	0	0
3/4/2004	0	0	0	0	0
3/5/2004	0	0	0	0	0
3/6/2004	0	0	0	0	0
3/7/2004	0	0	0	0	0
3/8/2004	0.64	0.68	0.44	0.55	0.66
3/9/2004	0	0.01	0	0	0
3/10/2004	0	0	0	0	T
3/11/2004	0.07	0.06	0.06	0.03	0.02
3/12/2004	0	0	0	0	0
3/13/2004	0	0	0	0	0
3/14/2004	0	0	0	0	0
3/15/2004	0	0	0	0	0
3/16/2004	0	0	0	0	0
3/17/2004	0	0	0	0	T
3/18/2004	0	0	0	0	0
3/19/2004	0	0	0	0	T
3/20/2004	0.09	0.05	0.11	0.12	0.25
3/21/2004	0	0	0	0	0
3/22/2004	0	0.01	0.01	0.01	0.01
3/23/2004	2.05	1.9	1.72	1.55	1.85
3/24/2004	0	0	0	0	0
3/25/2004	0.06	0.05	0.05	0.04	0.06
3/26/2004	0	0	0	0	0
3/27/2004	0.12	0.13	0.11	0.11	0.11
3/28/2004	1.28	1.32	1.13	1.26	1.5

Date	Brentwood Reservoir	Bryant St PS	Main PS	Rock Creek PS	National Airport
3/29/2004	0.01	0	0	0	T
3/30/2004	0	0	0	0	0
3/31/2004	0	0	0	0	
Total	4.32	4.21	3.63	3.67	4.46

District of Columbia Water and Sewer Authority

**Combined Sewer System Model Results**

**Period: January, February, March 2005**

**SCENARIO: Q1\_Y2005, 4-19-05**

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	12	3.4	51.8	4.3	13.5	1.0
006	Good Hope Road, West of Nichols Ave., SE	1	0.0	0.5	0.5	0.5	0.5
007	13 <sup>th</sup> Street and Ridge Place, SE	11	7.5	37.0	3.4	10.5	0.3
009	2nd Street, 300 feet North of N Place, SE	7	3.5	25.0	3.6	9.5	0.3
010	O Street Sewage Pumping Station, SE (pumped Overflow)	5	142.4	15.0	3.0	6.0	0.3
011	South of Main Sewage Pumping Station, SE (pumped overflow)	0	0.0	0.0	0.0	0.0	0.0
011a	South of Main 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)	1	6.6	1.5	1.5	1.5	1.5
013	4th and N Streets, SE	3	3.0	16.0	5.3	6.8	3.8
014	6th and M Streets, SE	8	10.1	31.0	3.9	11.3	0.5
015	9th and M Streets, SE	1	0.1	1.0	1.0	1.0	1.0
016	12th and M Streets, SE	3	2.6	9.8	3.3	3.5	2.8
017	14th and M Streets, SE	3	3.7	11.0	3.7	4.0	3.3
018	Barney Circle and Pennsylvania Ave, SE	3	0.8	10.5	3.5	4.0	3.0
019	Northeast Boundary - Swirl Effluent	4	166.3	26.0	6.5	9.8	3.8
019	Northeast Bound. - Swirl Bypass	3	26.1	4.3	1.4	3.3	0.5
	<b>SUBTOTAL</b>		<b>376</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)	3	19.4	8.8	2.9	3.3	2.5
021	Northeast of Roosevelt Bridge, NW	4	132.3	17.3	4.3	7.0	1.0
022	27th and K Streets, NW	4	12.9	15.0	3.8	5.5	1.0
024	30th and K Streets, NW	3	19.9	18.3	6.1	6.8	5.3
025	31st & K St NW	2	0.0	2.0	1.0	1.3	0.8
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	12	10.3	47.3	3.9	13.3	0.3
028	36th and M Streets, NW	2	0.2	2.3	1.1	1.8	0.5
029	Canal Road 1000 feet east of Rock Creek, NW	7	6.1	27.5	3.9	9.8	0.8
	<b>SUBTOTAL</b>		<b>201</b>				
<b>Rock Creek</b>							
031	Pennsylvania Avenue, East Rock Creek, NW	1	0.1	3.3	3.3	3.3	3.3
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	1.6	1.5	1.5	1.5	1.5
034	23rd and O Streets, SW	0	0.0	0.0	0.0	0.0	0.0
035	22nd Street south of Q Street, NW	0	0.0	0.0	0.0	0.0	0.0
036	22nd Street South of Q Street, NW	4	0.5	11.0	2.8	4.0	0.3
037	Northwest of Belmont and Rock Creek and Potomac Parkway	1	0.0	0.8	0.8	0.8	0.8
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	1	0.0	0.3	0.3	0.3	0.3
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: January, February, March 2005**

**SCENARIO: Q1\_Y2005, 4-19-05**

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	0.3	0.3	0.3	0.3
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	1	0.0	0.5	0.5	0.5	0.5
046	Park Road south of Piney Branch Parkway, NW	1	0.0	0.5	0.5	0.5	0.5
047	Ingleside Terrace extended and Piney Branch Parkway	1	0.1	0.8	0.8	0.8	0.8
048	Mt. Pleasant Street extended and Piney Branch Parkway	1	0.0	0.8	0.8	0.8	0.8
049	Piney Branch and LamontStreet, NW	3	9.5	10.0	3.3	3.8	3.0
050	28th Street west of 16th Street, NW	0	0.0	0.0	0.0	0.0	0.0
051	Olive Street extended and Rock Creek Parkway, NW	0	0.0	0.0	0.0	0.0	0.0
052	O Street extended and Rock Creek Parkway, NW	0	0.0	0.0	0.0	0.0	0.0
053	O Street west of Rock Creek Parkway, NW	0	0.0	0.0	0.0	0.0	0.0
054	West Side of Rock Creek300 ft. south of Mass. Ave, NW	0	0.0	0.0	0.0	0.0	0.0
056	Normanstone Drive extended west of Rock Creek, NW	0	0.0	0.0	0.0	0.0	0.0
057	28th Street extended west of Rock Creek, NW	2	0.7	2.5	1.3	1.8	0.8
058	Connecticut Avenue and Rock Creek Parkway, NW	0	0.0	0.0	0.0	0.0	0.0
060	P St and 26 <sup>th</sup> St, NW	0	0.0	0.0	0.0	0.0	0.0
	<b>SUBTOTAL</b>		<b>13</b>				
	<b>TOTAL</b>		<b>590</b>				

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