

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Board of Directors

*Meeting of the
Environmental Quality and Sewerage Services
Committee*

*5000 Overlook Avenue, SW, Room 407
Thursday, November 17, 2011
9:30 a.m.*

- | | |
|---|----------------------------|
| I. Call to Order | Robert Hoyt
Chairperson |
| 9:30 a.m. II. AWTP Status Updates
1. BPAWTP Performance | Walt Bailey |
| 9:40 a.m. III. Status Updates: Clean Rivers Project Easements
1. LTCP Easements Monthly Report | Carlton Ray |
| 9:50 a.m. IV. Status Updates: Potomac Interceptor Sewer
1. Potomac Pump Station
2. Odor Abatement Project | David McLaughlin |
| 10:00 a.m. V. Action Items – Joint Use
1. Contract No. WAS-10-047-AA-JH, Alpine Trading Company

Non-Joint Use
2. Contract No. 110090, Corinthian Contractors, Inc. | Len Benson |
| 10:10 a.m. VI. Asset Management | Chris Carew |
| 10:40 a.m. VII. Quarterly CIP Report | David McLaughlin |
| 10:50 a.m. VIII. Capital Budget | Len Benson |

11:05 a.m. IX. Other Business/Emerging Issues

Len Benson

1. 2012 Committee meeting dates and times

11:10 a.m. X. Adjournment

Robert Hoyt
Chairperson

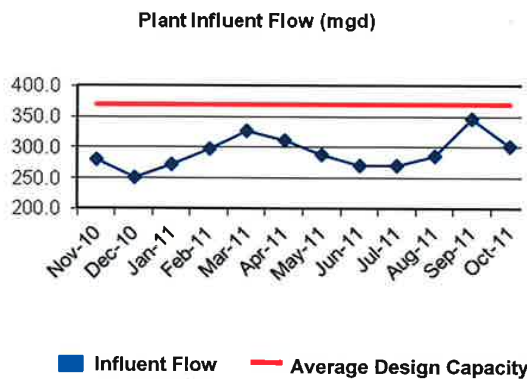
Follow-up Items from Prior Meetings:

1. Add a note to fact sheet for contract DCFA 419, identifying any additional anticipated changes to this contract. **{Completed}**

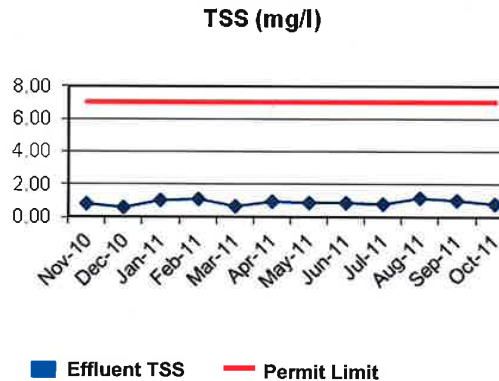
DEPARTMENT OF WASTEWATER TREATMENT MONTHLY REPORT OCTOBER 2011

Average plant performance for the month was excellent with all effluent parameters below the seven-day and monthly NPDES permit requirements. The monthly average influent flow was 301 MGD. There was 9 MG of Excess Flow during this reporting period.

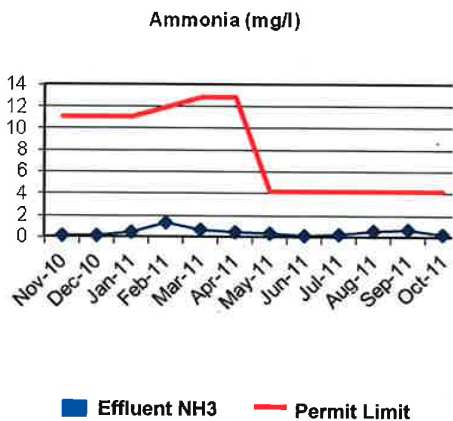
The following Figures compare the plant performance for the month with the corresponding NPDES permit limits.



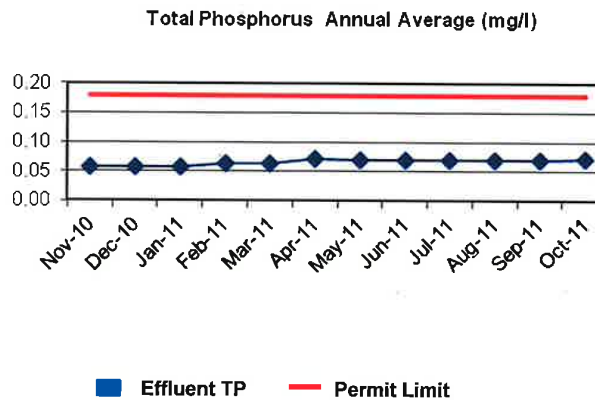
This graph illustrates the monthly average influent flow to the plant. The design average flow is 370 MGD. Blue Plains has a revised 4-hour peak flow capacity of 555 MGD through complete treatment. Flows up to 336 MGD in excess of the 555 MGD peak capacity receive primary treatment, disinfection and dechlorination.



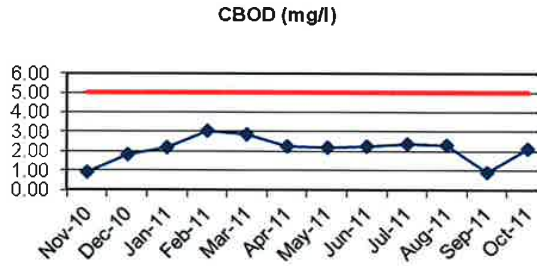
Effluent Total Suspended Solids (TSS) is a measure of the amount of solid material that remains suspended after treatment. The effluent TSS concentration for the month averaged 0.81 mg/L, which is below the 7.0 mg/L permit limit.



The Ammonia Nitrogen (NH₃-N) is a measure of the nitrogen found in ammonia. For the month, effluent NH₃-N concentration averaged 0.24 mg/L and is below the average 4.2 mg/L limit.

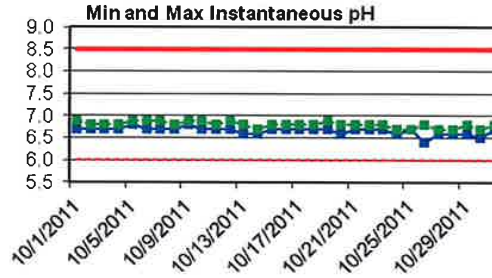


The Total Phosphorus (TP) is a measure of the particulate and dissolved phosphorus in the effluent. The annual average effluent TP concentration for the month was 0.07 mg/L, which is below the 0.18 mg/L annual average limit.



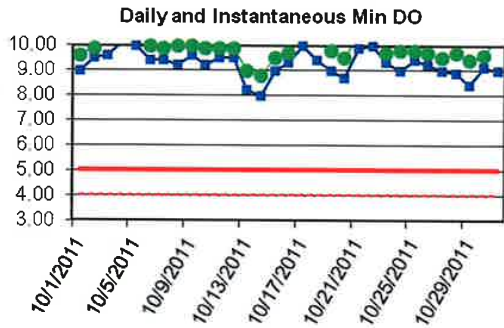
■ Effluent CBOD — Permit Limit

Carbonaceous Biochemical Oxygen Demand (CBOD) is a measure of the amount of dissolved oxygen required for the decomposition of organic materials. The effluent CBOD concentration averaged 2.15 mg/L (partial month reporting), which is below the 5.0 mg/L limit.



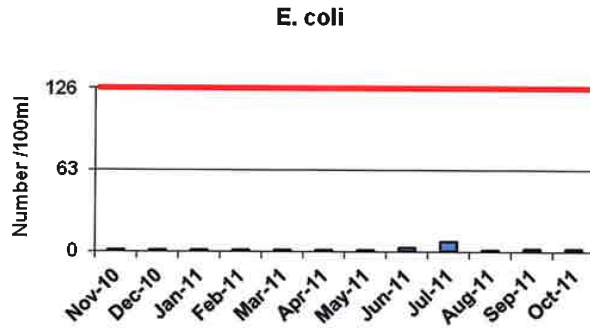
● MAX pH ■ MIN pH — Upper Limit - - Lower Limit

pH is a measure of the intensity of the alkalinity or acidity of the effluent. The minimum and maximum pH observed were 6.4 and 6.9 standard units respectively. The pH was within the permit limits of 6.0 and 8.5 for minimum and maximum respectively.



● MIN Daily Average ■ Instant MIN DO
— MIN Daily Average Limit - - Instant MIN Limit

Dissolved Oxygen (DO) is a measure of the atmospheric oxygen dissolved in wastewater. The DO readings for the month are within the permit limits. The minimum daily average is 9.8 mg/L. The minimum instantaneous DO reading is 8.0 mg/L. The minimum permit limits are 5.0 mg/L and 4.0 mg/L respectively. During a planned air outage, the minimum DO dropped below normal range, but was still maintained above permit limit.



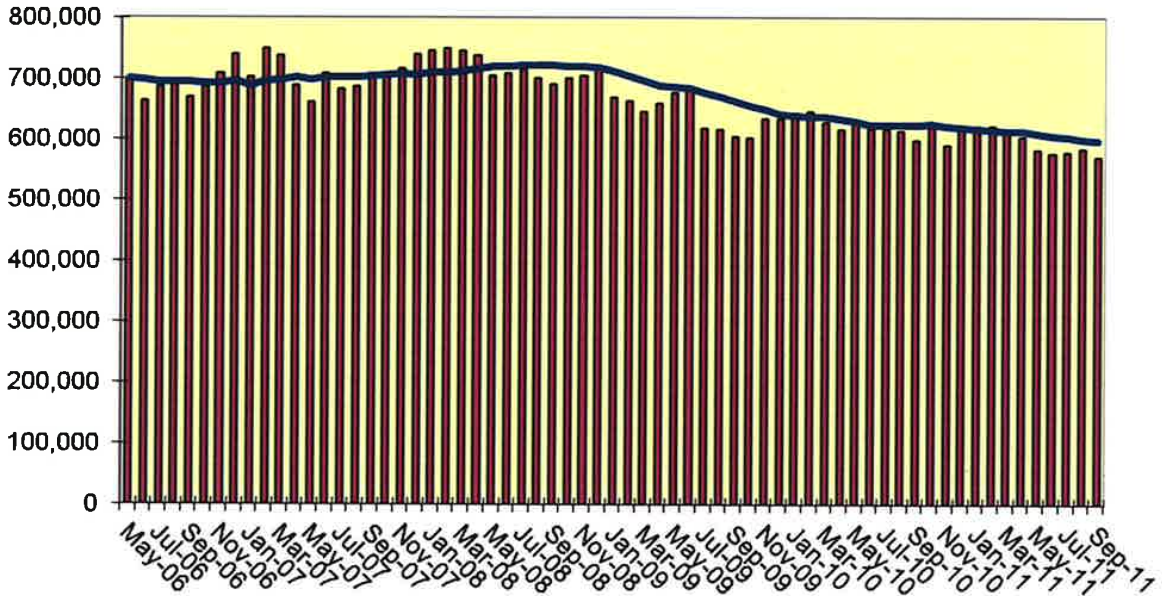
■ Fecal Coliform Geomean — Permit Limit

E. coli is an indicator of disease causing organisms (pathogens). The new Blue Plains permit has changed from monitoring fecal to E. coli. The new E. coli permit limit is 126/100mL. The E. coli geometric mean is 2.32/100mL, and well below the permit limit. Since no E. coli were required to be reported in the prior reporting periods, the data for those months in blank.

BLUE PLAINS ELECTRICITY USAGE

Blue Plains AWWTP is in the process of installing Power Monitors at critical points within the power distribution system to monitor power usage. This is the first step in developing a plant wide power monitoring and optimization program. As the power monitors are installed, the data from these devices is fed into the Process Control System (PCS) for analysis.

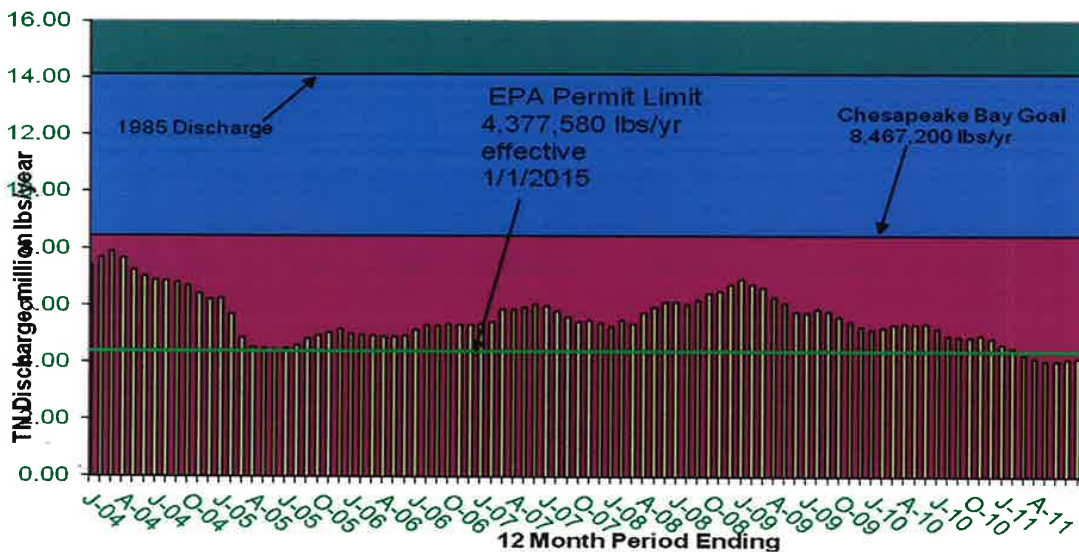
**Blue Plains
Electricity Used, kwh/day**



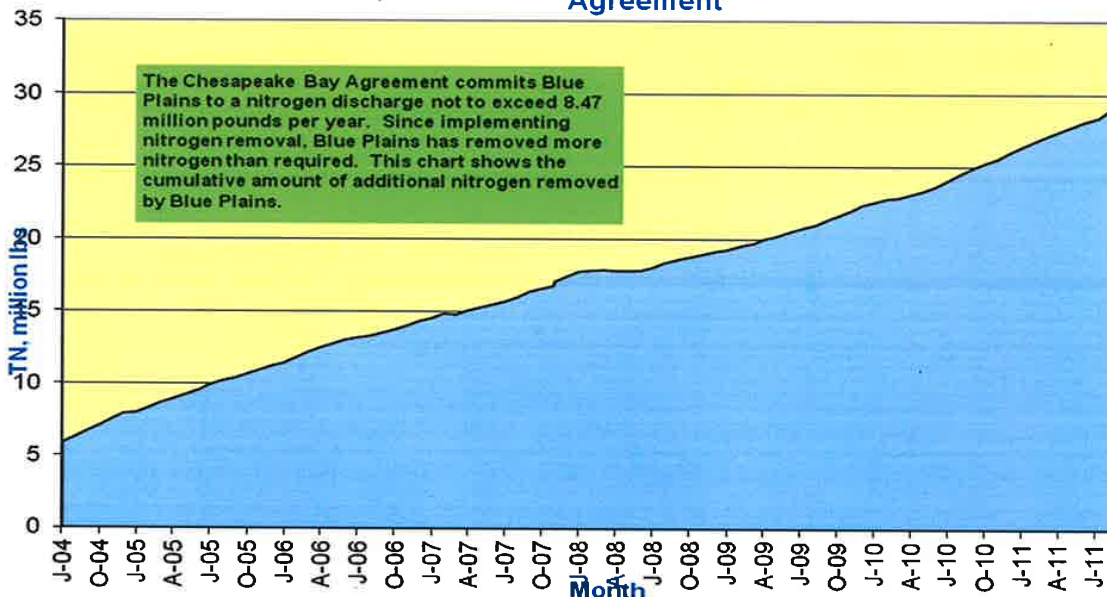
BIOLOGICAL NUTRIENT REMOVAL PERFORMANCE

The full-scale BNR process in October produced an effluent with average total nitrogen concentration of 2.2 mg/l. The figure below shows Blue Plains effluent total nitrogen (TN) since the implementation of full scale BNR.

Annual Total Nitrogen Load, lbs/yr



Blue Plains Cumulative Nitrogen Removed in Excess of Bay Agreement



TOTAL CHLORINE RESIDUAL EXCURSION

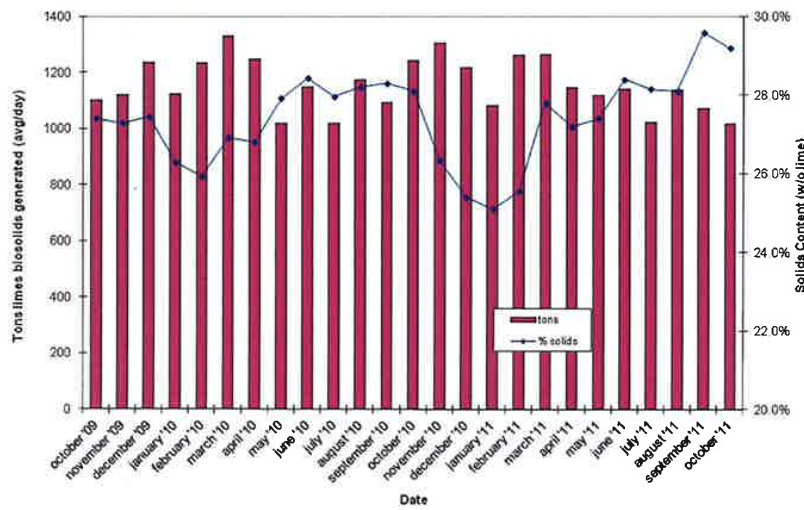
On Friday, October 14th at 8:20 pm, the evening shift measured positive chlorine residual in the final effluent. The permit requires that if chlorine is detected, it must be reduced to non detection concentrations within 2 hours. This excursion was controlled and eliminated by 1 am which was beyond the 2 hours allowed in the NPDES permit. EPA was notified within 24 hours via email, and in writing within 5 days. A detail investigation undertaken uncovered an operator error on a manual valve in the dechlorination chemical feed line. This valve is not monitored at the PCS.

As a result of the investigation, physical changes were recommended to the configuration to eliminate future opportunities for error at the dechlorination and all other chemical feed systems at Blue Plains. Changes are being recommended for design guidelines. Refresher operator training and supervisor communication protocol courses are being conducted. Standard Operating Procedures are being reviewed and modified.

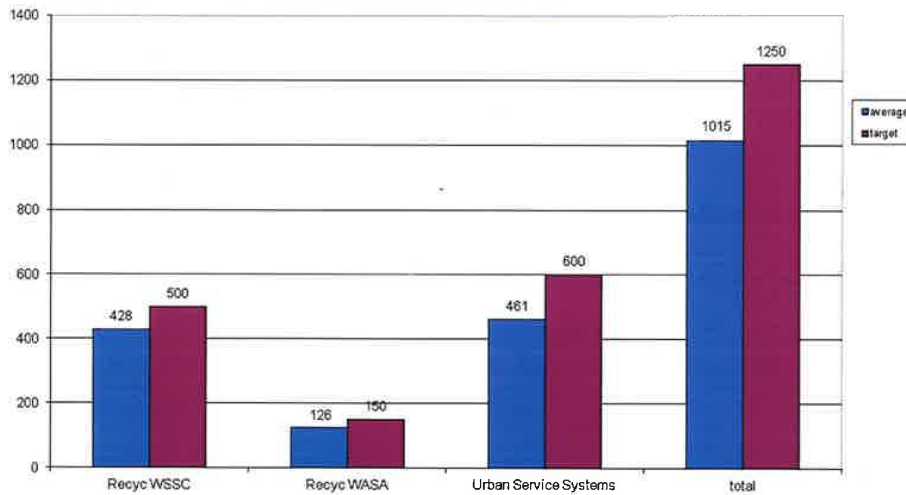
BLUE PLAINS BIOSOLIDS REPORT – OCTOBER 2011

In October, biosolids hauling averaged 1015 wet tons per day. The average solids content was 29.2%. The average lime dose was 18.3%. The graph below shows the hauling by contractor for the month of October. In October, DC Water again shipped biosolids to the McGill Compost Facility in Waverly, VA. This is done through the Urban Service Systems contract. In October a total of 2449 tons went to compost production. At the end of October the Cumberland County storage pad had 480 tons (~25,000 tons capacity) and the Cedarville lagoon (~30,000 tons capacity) was empty.

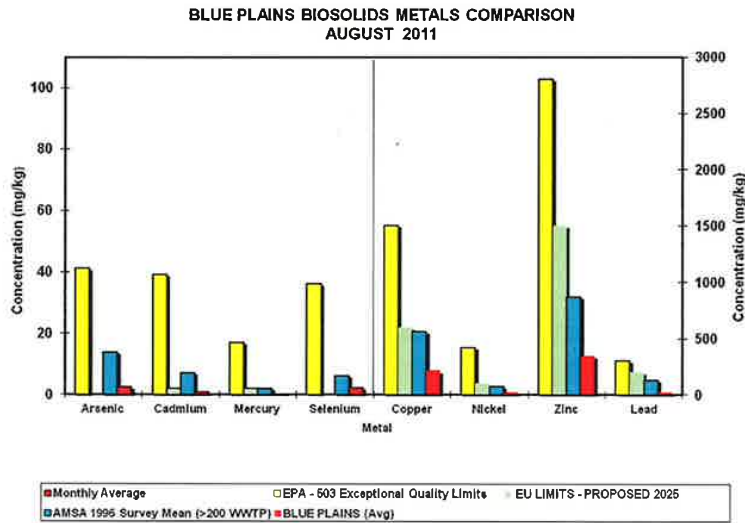
Average Daily Biosolids Production and Solids Content



Average Daily Hauling by Contractor for October 2011

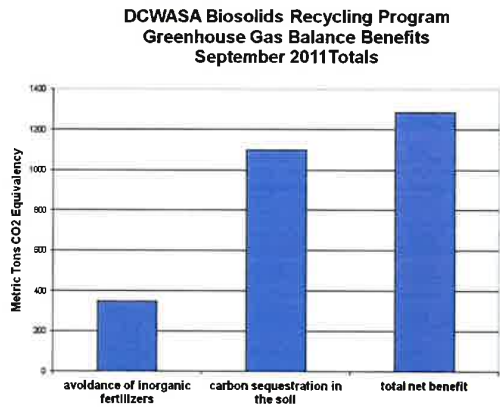


The graphs below show the EPA regulated heavy metals in the Blue Plains biosolids for the month of September 2011. As can be seen in the graphs, the Blue Plains levels are considerably below the regulated exceptional quality limits, the national average levels surveyed in 1996, and the European Union (EU) limits. The EU limits are more conservative than the USEPA limits, and Blue Plains biosolids metals content is lower than the EU standards as well.



Environmental Benefits

The quantity land applied coming directly from the plant and from storage facilities equaled 20,172 tons. In addition, 2401 tons went to composting. Taking into account the fuel required to transport biosolids to the field, the net benefit of the land applied material is 1287 metric tons CO₂ equivalent avoided emissions. This is equivalent to taking 2,947,380 car miles off the road in the month of September (assumes 20 mpg, 19.4 lb CO₂ equivalent emissions/gallon gas – EPA estimate). The cumulative total avoided carbon emission since January, 2007 is 87,614 metric tons CO₂ equivalent.



October Highlights

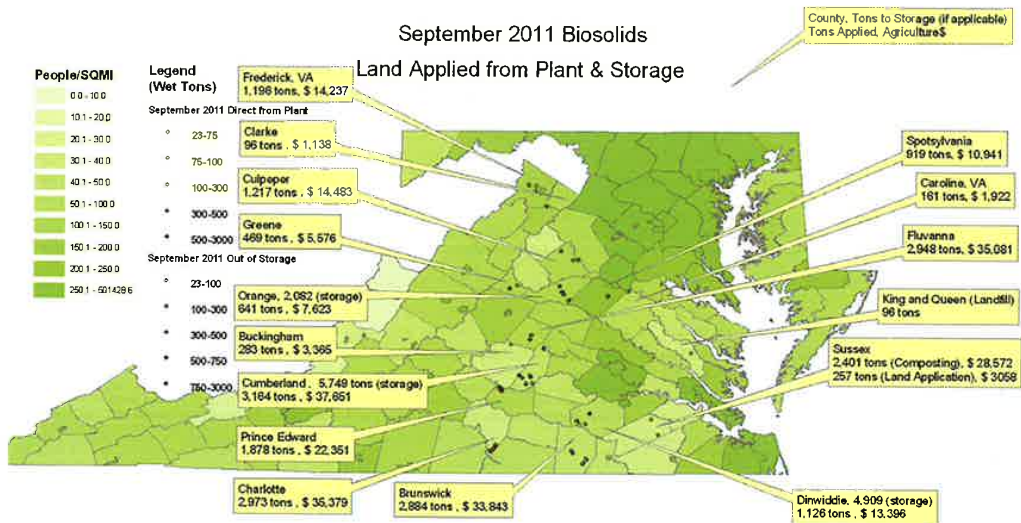
Staff gave a tour to a group of representatives from the National Agronomy, Crop, Soil Science Societies, including the Director of Science Policy. The group was interested in hearing about our plans for digesting solids and producing Class A Biosolids for use in agriculture and blended soils. They have a keen interest in restoration of urban soils to help with water retention, carbon sequestration, runoff, etc. We agreed to continue the dialogue and work together when we have product for demonstration.

Staff participated in the National Biosolids Partnership (NBP) Steering Committee strategic planning meeting in Alexandria. As a member of the Steering Committee, staff is tasked with defining the direction for the organization going forward, beyond merely branding agencies with its EMS certification. The new charge includes outreach, coordination, and proactive communication with lawmakers and the press.

Staff was named this past month to head a WEF Task Force to look at the feasibility of rebranding wastewater treatment plants in the US. The examination will look at changing the perception of what we do from "wastewater treatment" to "resource recovery". The Task Force is charged with producing a report for the WEF Leadership Committee for the mid-year meeting in late January.

The Virginia State Water Control Board passed the Virginia biosolids Regulations, which are now in the public comment period. Proactive interaction with regulators and decision makers helped ensure that the regulations were based on science while remaining protective of the public and the environment. Several changes were included in this regulation, including increased buffers for those with health concerns, storage changes, and a requirement for doctor consultation in cases of health concerns.

Map of Blue Plains Biosolids Applications and Agricultural \$'s for September 2011

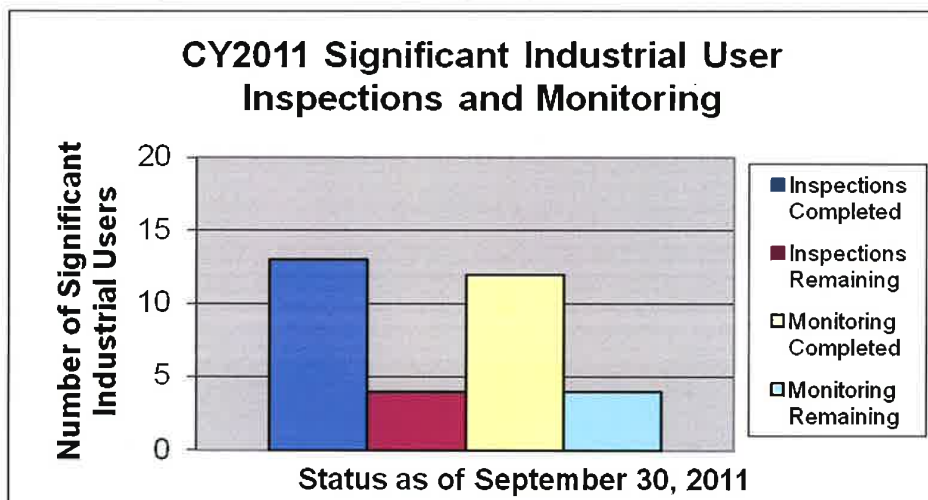


LABORATORY AND PRETREATMENT REPORT

Highlights of laboratory activities for the current month are as follows. Laboratory staff:

- Conducted routine analyses on effluent, biosolids, pretreatment, storm water runoff, and process samples (approximately 5,000 analyses per month) for TSS, VSS, TS, TVS, NH₃, NO₂-N, NO₃-N, TP, TSP, ortho P, TKN, STKN, BOD, Carbonaceous BOD, COD, Alkalinity, Hardness, Fecal Coliform, and E. Coli;
- Assisted Sewer Services in sample analysis including E. Coli bacteria;
- Assisted Biosolids Division with Odor Control and Lime Stabilization studies;
- Continued Biosolids pH monitoring for 40 CFR 503 Pathogen and Vector Attraction Reduction;
- Participated in the WWOA Executive Board; and
- Incurred zero accidents in the lab.

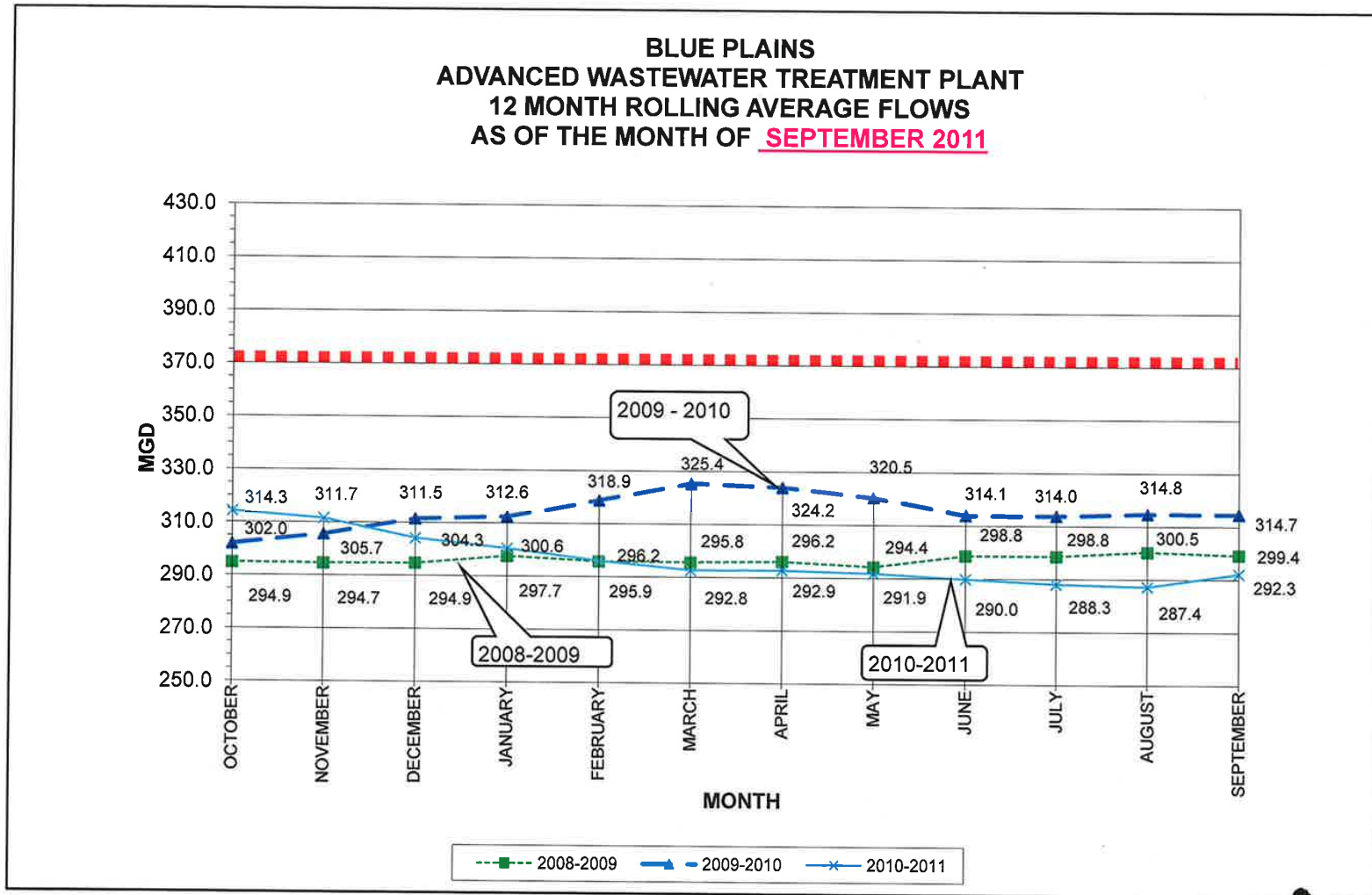
Status of CY2011 annual pretreatment compliance monitoring and inspections for 16 permitted Significant Industrial Users (SIUs):



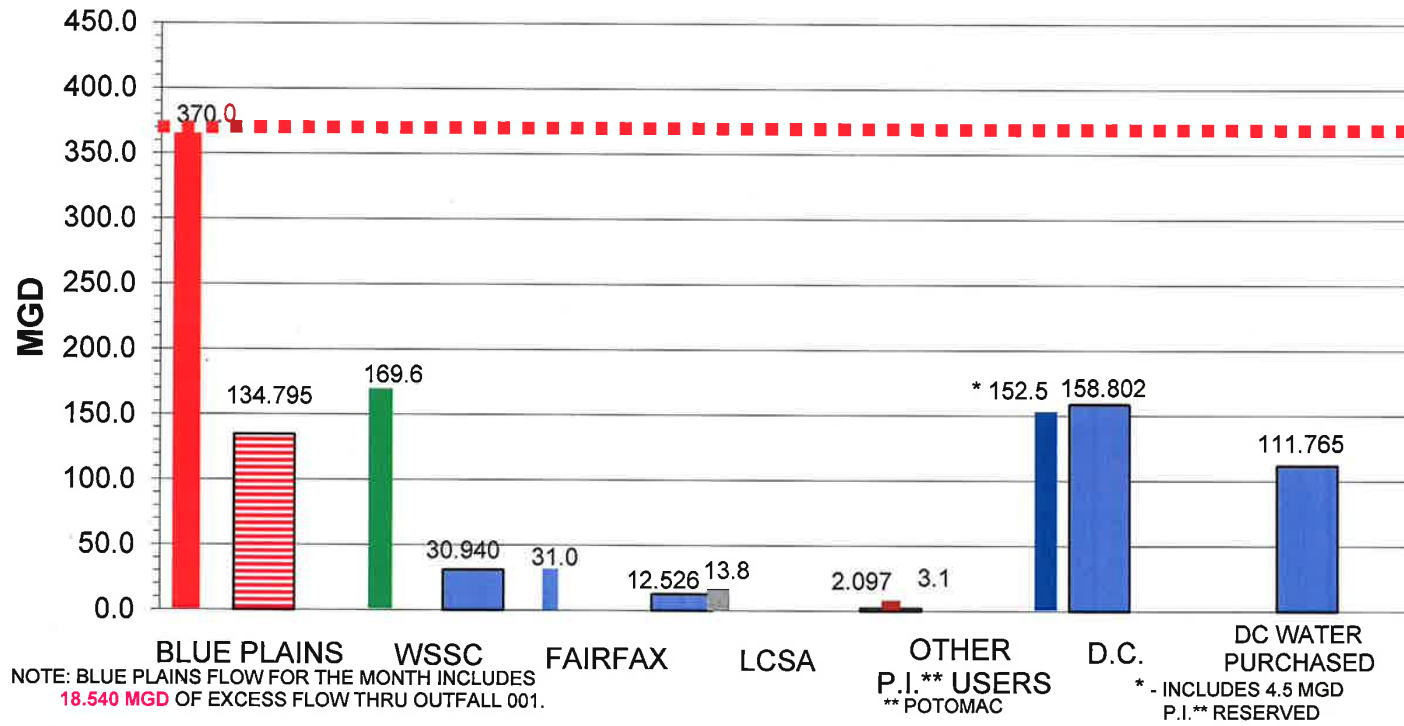
Highlights of pretreatment activities for the current month include the following:

- Conducted a final close-out inspection for Walter Reed Army Medical Center;
- Issued one Notice of Violation to the Capitol Power Plant for a molybdenum violation; resample results showed the facility was in compliance;
- Issued one new Non-Significant Industrial User Wastewater Discharge Permit to Sibley Hospital;
- Issued four Temporary Discharge Authorization Permits;
- Received 387 hauled waste loads (1,322,855 gallons) from permitted haulers and collected one hauled waste sample;
- Collected samples for toxicity testing and low-level PCB analysis from outfalls 001 and 002 and low-level mercury and bimonthly metals from outfall 002;
- Prepared a letter to EPA requesting reduced frequency of toxicity testing due to consistently passing tests; and
- Presented revisions to the Proposed Rulemaking for the Wastewater Discharge Regulations to the EQ&SS Committee.

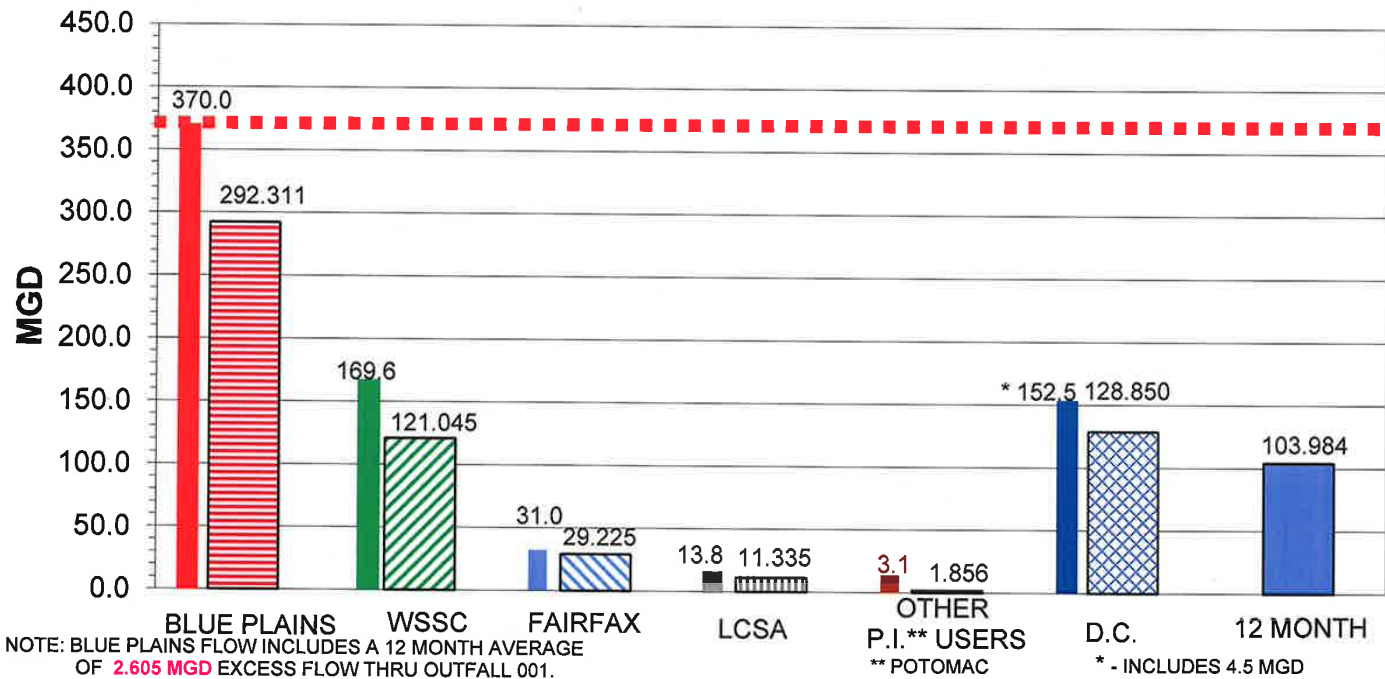
All Significant Industrial Users are currently in compliance with discharge standards.



**JURISDICTIONS - AVERAGE DAILY FLOWS
FOR THE MONTH OF SEPTEMBER 2011
VS
IMA ALLOCATIONS (SHOWN SOLID)**



**JURISDICTIONS - 12 MONTH ROLLING AVERAGE FLOWS
AS OF THE MONTH OF SEPTEMBER 2011 VS
IMA ALLOCATIONS (SHOWN SOLID)**





**Permits/Easements Status Report
for
Environmental Quality and Sewerage Services Committee
Blue Plains Tunnel
Updated: November 10, 2011**

Summary: Permits necessary to authorize construction are on schedule. DC Water and the Navy are finalizing easement documents. Regarding easements from the District, DDOT and DC Water, in conjunction with Federal Highway Administration (FHWA), are continuing to work on this issue.

Agency ⁽¹⁾	Approval Needed	Status	Next Step
U.S. Navy	Construction license and easement for tunnel under Joint Base Anacostia-Bolling (JBAB)	<ul style="list-style-type: none"> Construction license – Received draft copy of license. Draft license is under review by DC WATER. There is an outstanding issue on odor control language and Navy has not completed their review. Navy is committed to issue completed license draft by 11/15/11. Easement – Navy is reviewing odor control language. Apparently, Navy wants odor language in license and easement. Obtaining license this month allows construction to proceed. Expect to finalize Easement this month. Navy has to forward to higher command to complete signing. Easement is not holding up construction. 	<ul style="list-style-type: none"> Complete review of draft license. Resolve remaining license and easement issues.
DDOT & DCRA	Permits for Construction ⁽²⁾	Design-builder is responsible for obtaining permits. Status update for obtaining initial permits is as follows: <ul style="list-style-type: none"> Blue Plains - design builder resubmitted SOE application to CORE on 11/1 addressing their third party review comments. Poplar Point – design builder submitted Erosion & Sediment (E&S) to DDOE on 10/26 and submitted Public Space permit application on 10/31. Main PS - design builder scheduled to submit E&S plan to DDOE in December 2011. JBAB - design builder scheduled to submit E&S Plan in November 2011. 	<ul style="list-style-type: none"> Design-builder is advancing designs in order to submit applications for remaining sites
DDOT	Easements for Tunnel ⁽³⁾	<ul style="list-style-type: none"> DDOT submitted a Categorical Exclusion (Cat Ex, part of NEPA documentation) to FHWA on 6/10/11. The Cat Ex recommended the hybrid approach for easements/permits. On 10/18/11, FHWA provided comments on the Cat Ex. DC Water revised the Cat Ex and provided to DDOT on 10/20/11. 	<ul style="list-style-type: none"> DC Water expecting DDOT and FHWA review of revised Cat Ex in next 60 days.
DMPED	Easements for Tunnel	DMPED has agreed to grant easements for the tunnel	Pending resolution of easements with DDOT

Notes:

- Permits from National Park Service and Army Corps of Engineers have been received and are therefore no longer included in the table.
- Because the project is design-build, multiple permits will be obtained from each agency for each site as the design progresses.
- As of this report's date, we are on schedule to securing all permits required for the project; however, we continue to face challenges securing easements from DDOT.

**Potomac Interceptor Long-Term Odor Abatement
Status Report - October 2011**

Project Description: This project provides for the long-term abatement of odors generated by the Potomac Interceptor by constructing six ventilation buildings along the main sections of the sewer. The six sites are located in the District of Columbia (Site 1995), Montgomery County, MD (Sites 4, 17 and 27), Fairfax County (Site 31) and Loudoun County (Site 46), VA. The constructed system draws gases from the sewer by vacuum, treats the gas stream with activated carbon and discharges the treated air to the atmosphere.

Summary Status:

DC Site

Site 1995 (Fletcher’s Boat House) – Under Construction, 56% complete
Installation of the masonry for the entire building is nearing completion. Stone veneer installation has begun. The elevated slabs over the restrooms and electric room have been poured.

Maryland Sites

Site 4 (Little Falls PS) - Under Construction, 66% complete
The top section of the walls has been poured. Preparation for installation of the roof form system is underway.

Site 17 (Beltway) – Under Construction, 62% complete
The roof steel has been delivered and is ready for installation. The carbon tank slab has been poured. The cap stone installation on the top of the walls is complete.

Site 27 (Old Angler’s Inn) - Under Construction, 56% complete
Installation of the masonry units for the entire building is nearing completion. Stone veneer installation has begun. The carbon tank form has been formed and will be poured in November.

Virginia Sites

Site 31 (Fairfax) - The site plan was finalized and submitted to Fairfax County on May 2nd. Comments have been received from Fairfax County and are currently being addressed. An issue related to the position of the building in relation to the existing easement has been raised by NVRPA and is currently being examined by OGC. A field meeting with NVRPA took place in October and resolution options are currently being evaluated. A title attorney has been engaged to resolve easements, legal description and plats.

Site 46 (Loudoun) – Comments regarding the emergency access license agreement for Loudoun County are being addressed prior to execution by all parties. All other Loudoun County comments have been addressed. A second site plan submittal is pending the final resolution of the license agreement. The building permit submittal is also pending. Additionally, NVRPA has provided a draft license agreement for site 46 which has been reviewed by OGC. Comments will be forwarded to NVRPA shortly.

Design & Construction Activities	Scheduled		Actual		Status
	Start	End	Start	End	
Final Site Plan Submission - Fairfax County (Site 31)	4/8/11	9/8/11			Comments from first submission have been received and are being addressed.
Final Site Plan Submission (Site 46)	3/4/11	4/4/11			Emergency access license agreement is pending. Second submission of Site Plan will be made once a license agreement is reached.
NTP VA Sites	1/2/12	1/2/12			
Building Construction Complete (Site 1995)	1/4/10	12/12/11	4/1/11		In progress
Building Construction Complete (Site 4)	1/4/10	3/1/12	3/13/11		In progress
Building Construction Complete (Site 17)	1/4/10	1/4/12	1/31/11		In progress
Building Construction Complete (Site 27)	1/4/10	5/30/12	5/15/11		In progress

**DC WATER AND SEWER AUTHORITY
BOARD OF DIRECTORS CONTRACTOR FACT SHEET**

ACTION REQUESTED

GOODS AND SERVICES CONTRACT OPTION YEAR:

**Work Uniforms and Miscellaneous Work Clothing
(Joint Use – Indirect Cost)**

Approval to extend the term of the Contract by exercising Option Year No. 1 in the amount of \$454,650.00.

CONTRACTOR/SUB/VENDOR INFORMATION

PRIME: Alpine Trading Company, Inc. 400 Overpeck Avenue Englewood, New Jersey 07631	SUBS: None	PARTICIPATION: N/A
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DESCRIPTION AND PURPOSE

Original Contract Value:	\$575,514.10
Option Years	4
Base Year:	November 12, 2010 – November 11, 2011
Modification #01 Value:	\$37,500.00
Modification #01 Date:	November 12, 2011 – December 11, 2011
Option Year One:	December 12, 2011 – November 11, 2012
Option Year One Value:	\$454,650.00

Purpose of Contract:

- To supply uniforms and other work clothing to DC Water employees as required for their positions and related duties.

Contract Scope:

- The Contract includes the provision of all uniforms and other work clothing required by DC Water employees to carry out their job functions, identify them as such to DC Water customers and the general public, and comply with the terms of the Union agreement(s).

Cumulative Contract Spending:

Contract Value:	November 12, 2010 – November 11, 2011: \$613,014.10
Contract Spending:	November 12, 2010 – November 11, 2011: \$493,756.00

Contractor's Past Performance:

- The incumbent Contractor has been providing satisfactory services.

Note: The overall price of uniforms and related clothing for Option Year No. 1 is in accordance with the prices submitted in response to IFB in 2010. The overall amount for the Option Year represent an average increase of 5.3% over the base period unit pricing. The September 2011 U.S. Department of Labor Producer Price Index for Textile Products and Apparel increase is 9.0% higher in comparison to September 2010. Thus, the unit price increase for option year one is determined fair and reasonable.

PROCUREMENT INFORMATION

Contract Type:	Fixed Unit Price Requirements Contract	Award Based On:	Invitation for Bid: Lowest Bid Received
Commodity:	Goods & Services	Contract Number:	WAS-10-047-AA-JH
Contractor Market:	Open Market		

BUDGET INFORMATION

Funding:	Operating	Department:	Department of Procurement
Project Area:	Authority-Wide	Department Head:	Rosalind R. Inge

USER SHARE INFORMATION

User	Share %	Dollar Amount
District of Columbia	81.45%	\$370,312.43
Washington Suburban Sanitary Commission	13.49%	\$ 61,332.28
Fairfax County	3.26%	\$ 14,821.59
Loudoun County	1.61%	\$ 7,319.87
Other(s)	0.19%	\$ 863.83
Total Estimated Dollar Amount	100%	\$454,650.00

 11/9/11
 Yvette Downs Date
 Director, Finance and Budget

 11/9/11
 Rosalind R. Inge Date
 Director of Procurement

 11/9/2011
 Katrina Wiggins Date
 Assistant General Manager, Support Services

_____/_____
 George S. Hawkins Date
 General Manager

**DC WATER AND SEWER AUTHORITY
BOARD OF DIRECTORS CONTRACTOR FACT SHEET**

ACTION REQUESTED

CONSTRUCTION CONTRACT:

**Sanitary Sewer Lateral Replacements FY2012 – FY2014
(Non-Joint Use)**

Approval to execute a construction contract for \$16,389,600.00

CONTRACTOR/SUB/VENDOR INFORMATION

PRIME: Corinthian Contractors, Inc. LBE 3126 South Abingdon Street Arlington, VA 22206	SUBS:	PARTICIPATION:
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DESCRIPTION AND PURPOSE

Contract Value, Not-To-Exceed:	\$16,389,600.00
Contract Time:	1,096 Days (3 Years)
Anticipated Contract Start Date:	01-04-2012
Anticipated Contract Completion Date:	01-04-2015
Bid Opening Date:	10-26-2011
Bids Received:	6
Other Bids Received	
Fort Myer Construction Corporation	\$18,545,190.00
Anchor Construction Corporation	\$18,653,950.00
Civil Construction LLC	\$22,323,535.00
Capital Paving of D.C.	\$25,456,100.00
Flippo Construction Company Inc.	\$30,824,125.00

Purpose of the Contract:

To replace existing building sewer connections which are deteriorated and where reliability has become problematic.

Contract Scope:

- 16,900 linear feet of 4 through 6-inch diameter PVC pipe building sewer connection replacements;
- 11,300 linear feet of 4-inch diameter PVC cleanout pipe;
- 450 sewer point repairs;
- 2,500 linear feet, of water service line replacement;
- 17,000 square yards of temporary paving.

Federal Grant Status:

- Construction Contract is not eligible for Federal grant funding assistance.

PROCUREMENT INFORMATION

Contract Type:	Fixed Price	Award Based On:	Lowest responsive, responsible bidder.
Commodity:	Construction	Contract Number:	110090
Contractor Market:	Open Market with Preference		

BUDGET INFORMATION


Funding:	Capital	Department:	Sewer Services
Service Area:	Sanitary	Department Head:	Cuthbert Braveboy
Project:	CE, CQ, D6, EU		

ESTIMATED USER SHARE INFORMATION

User	Share %	Dollar Amount
District of Columbia	100.00%	\$16,389,600.00
Washington Suburban Sanitary Commission	0.00%	\$0.00
Fairfax County	0.00%	\$0.00
Loudoun County & Potomac Interceptor	0.00%	\$0.00
Total Estimated Dollar Amount	100.00%	\$16,389,600.00


 Yvette Downs _____ 11/4/11
 Director of Finance & Budget Date


 Rosalind R. Inge _____ 11/7/11
 Director of Procurement Date


 Leonard R. Benson _____ 11/8/11
 Chief Engineer Date

 George S. Hawkins _____
 General Manager Date



Asset Management

A proposed program to reduce DC Water's annual capital, operating and maintenance costs by millions of dollars

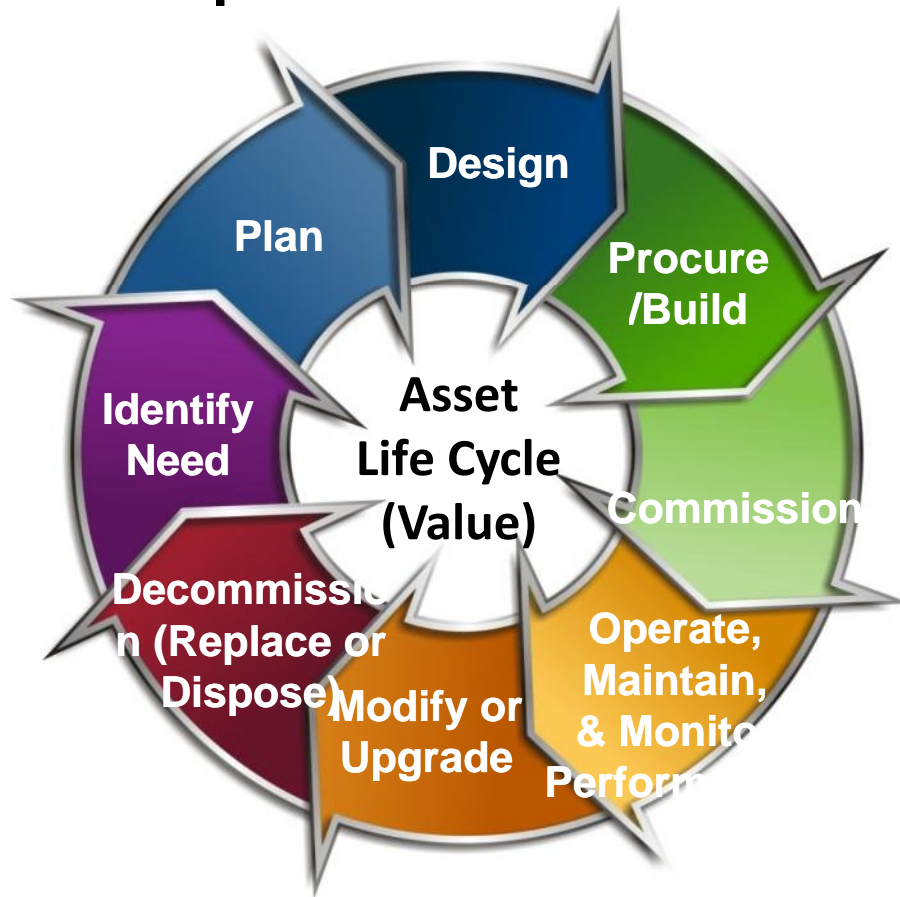


What is Asset Management?

- A comprehensive business program advocated by the US EPA and the water utility industry to optimize infrastructure sustainability
- The practice of managing infrastructure capital assets to minimize the total cost of acquiring, operating and maintaining them, while improving service levels
- Incorporates detailed asset inventories, data management, related business processes and long-range financial planning to drive strategic decision-making



What are the key processes and questions of asset management?



Key Questions:

1. Required level of performance?
2. Critical assets to sustain performance?
3. Current asset state?
4. Minimum life-cycle cost? (CIP + O&M)
5. Best funding strategy?



What are the assets we presently manage?

- 1300 miles of water distribution pipes
- 1800 miles of collection system pipes
- 125,000 water meters (our cash register)
- 9,000+ fire hydrants
- 36,000 valves
- 24 pump stations
- Five reservoirs; four storage tanks
- Thousands of “critical” assets comprise Blue Plains wastewater treatment plant



What are the new assets we will soon be managing?

- At least four major tunnels and their support systems (mandated by consent decree)
- The enhanced nitrogen removal facility (mandated by permit)
- The advanced combined heat and power facility



Why are other water utilities around the world, and the country, doing it?

- Savings of 15-40 percent in operating costs for Australian water utilities attributed to asset management (*2004 US GAO Report on Water Infrastructure*)
- Savings of 20-30 percent in life-cycle costs reported by utilities around the world attributed to asset management
- US EPA advocates asset management for water utilities of all sizes; water program provides technical support and training



Why should DC Water do it?

- We presently manage assets collectively worth billions of dollars
- We will have completed over \$5 billion in capital projects (investments) between 2006 and 2020
- If our asset management program yields just one percent savings in life-cycle costs *on our new assets alone*, we will save \$50 million



How do we implement a best-in-class asset management program?

- Leverage existing efforts
 - Materials management optimization program
 - Maximo expansion and enhancement project
 - Rapid assessment of procurement department
 - Advance “bridge project” within existing budget
- Advance “Team Blue asset management proposal” through future budgeting and planning efforts



- Materials management project will include:
 - A new, properly-sized and -equipped warehouse
 - Updated acquisition strategies and procedures
 - State-of the art, proven, technologies
- Maximo project will support improved planning and scheduling, capturing data to calculate true life-cycle costs
- Procurement “rapid assessment” will address supply availability and other business process issues
- Bridge project will advance design phase to provide:
 - A more precise cost estimate of program
 - A validated funding strategy
 - An accurate time to completion estimate
 - A better understanding of benefits from each initiative

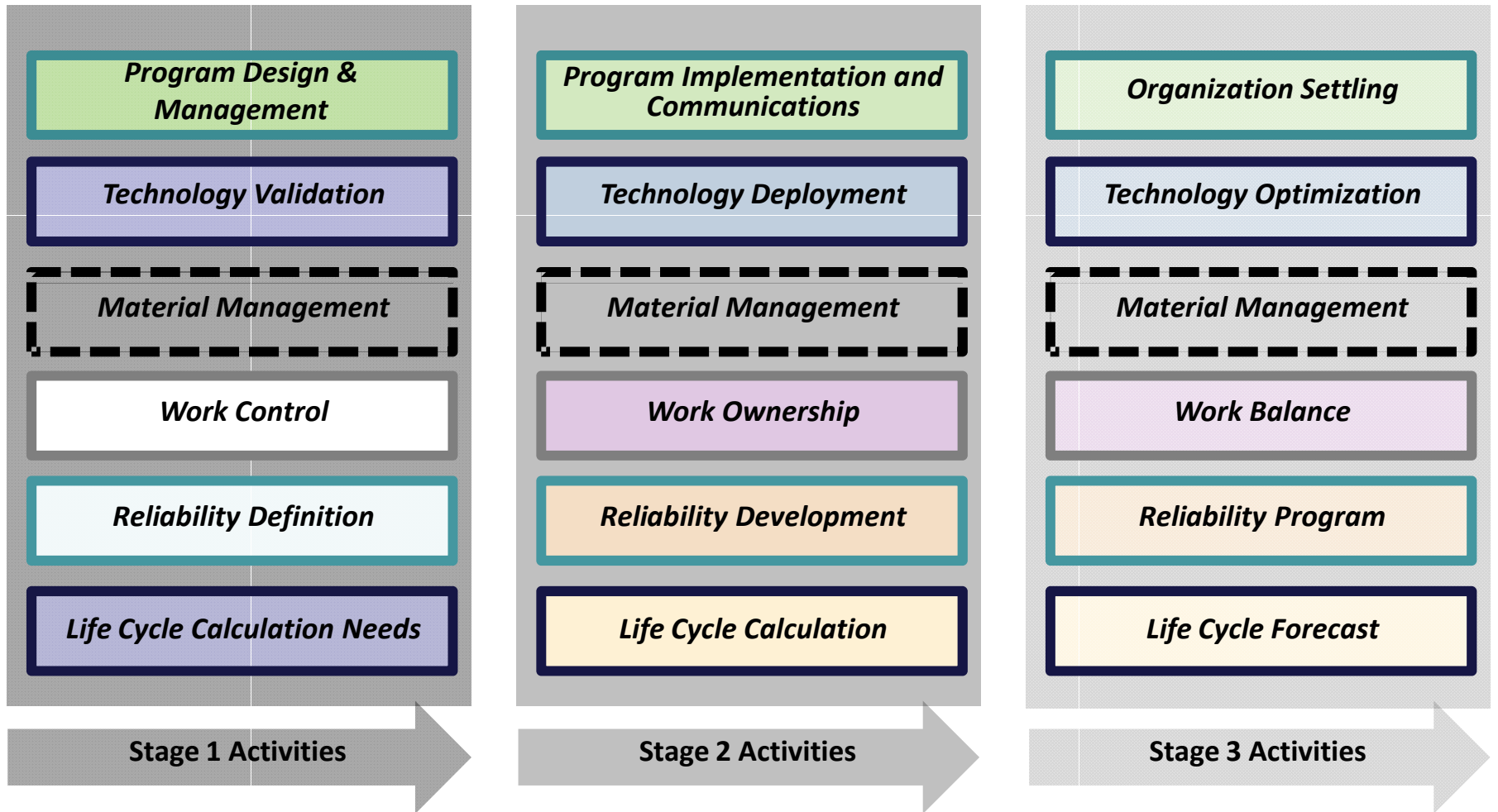


DC Water Team Blue asset management program objectives

- Operate in a manner that meets or exceeds all legal and regulatory environmental requirements
- Optimize the life-cycle of our assets
- Identify and implement best practices in all related business processes
- Establish a culture of continuous improvement
- Educate and prepare our staff to implement
- Maintain reliable and robust systems
- Leverage appropriate technologies
- Access and utilize accurate data to make sound business decisions
- Forecast future investment needs

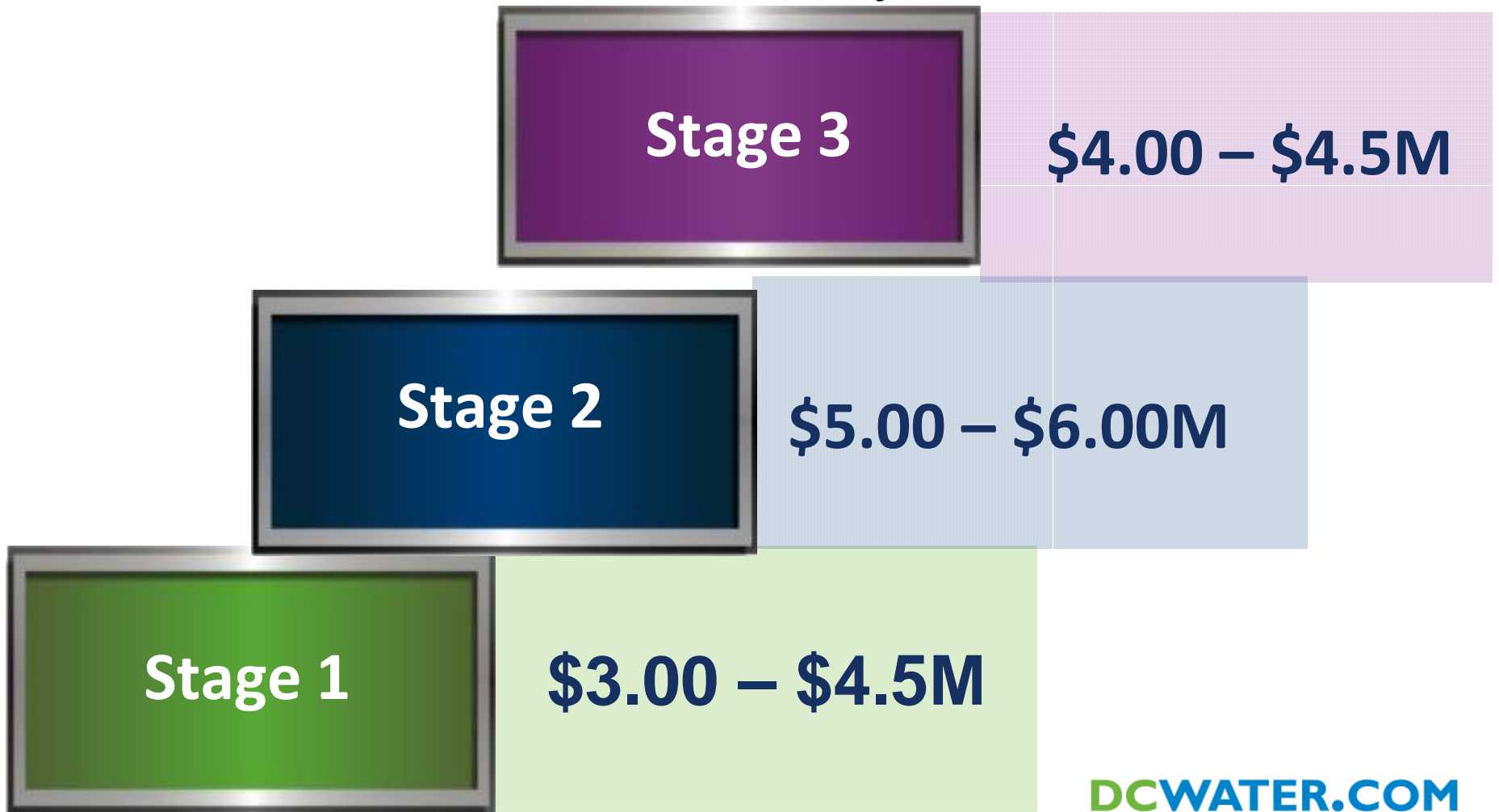


“Best-in-class” in three stages





Program implementation estimated at \$12 - 15M over three years



DCWATER.COM



Thank you!

Questions?

District of Columbia Water and Sewer Authority

Capital Improvement Program Report



**FY-2011 4th Quarter
July 1st through September 30th, 2011**

**Board of Directors
Environmental Quality and Sewerage Services Committee**

**George S. Hawkins, General Manager
Leonard R. Benson, Chief Engineer**

November 2011

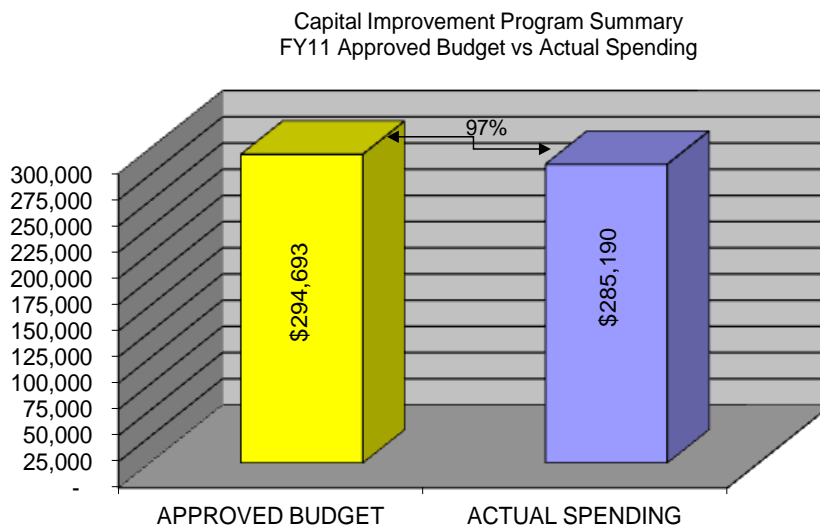


Capital Improvement Program Report 4th Quarter FY2011

Program Performance

Actual program spending through the end of the fiscal year compared with the approved FY11 projection is shown in the chart below:

Disbursement Projections Summary



Overall, progress is consistent with baseline projections.

Priority 1 Projects (Court Ordered, Stipulated Agreements, etc)

On July 11, 2008, DC Water issued notification advising of two issues that had the potential to delay achieving certification of Firm Pumping Capacity at Potomac Pumping Station. One issue, related to a failure of one new electric motor, was resolved, and all new pumping equipment was placed in service prior to the September 1, 2008, Consent Decree compliance date. The second issue, related to performance of the new pumping units under certain conditions, remains under investigation. This issue has prevented the design engineer from certifying Firm Pumping Capacity. A team of experts is working to resolve this issue. Monthly updates are provided to the Environmental Quality and Sewerage Services Committee and to the parties to the Consent Decree.

All other priority 1 projects are on schedule and within budget.



Capital Improvement Program Report 4th Quarter FY2011

Large Contract Actions Anticipated

Project HC – New Warehouse Facility at Blue Plains

Construction Contract (\$8M - \$15M) EQ&SS Feb, BOD Mar

Project EE – Filtrate Treatment Facilities

Design Contract (\$5M - \$10M), EQ&SS Dec, BOD Jan

Project XA – Biosolids Final Dewatering Contract 2C

Construction Contract (\$50M - \$70M) EQ&SS Feb, BOD Mar

Project FH – Discharge Piping Bryant Street Pump Station

Construction Contract (\$5M - \$10M), WQ&WS Apr, BOD May

Project CY – Div E - CSO 015-017 Structures/Diversions

Construction Contract (\$30M - \$40M), EQ&SS Mar, BOD Apr

Project CY – Tingey Street Diversions

Design/Build Contract (\$9M - \$15M), EQ&SS Mar, BOD Apr

Project J3 – National Arboretum Sewer Rehab

Construction Contract (\$4M - \$7M), EQ&SS Apr, BOD May

Project Q3 – Pope's Branch

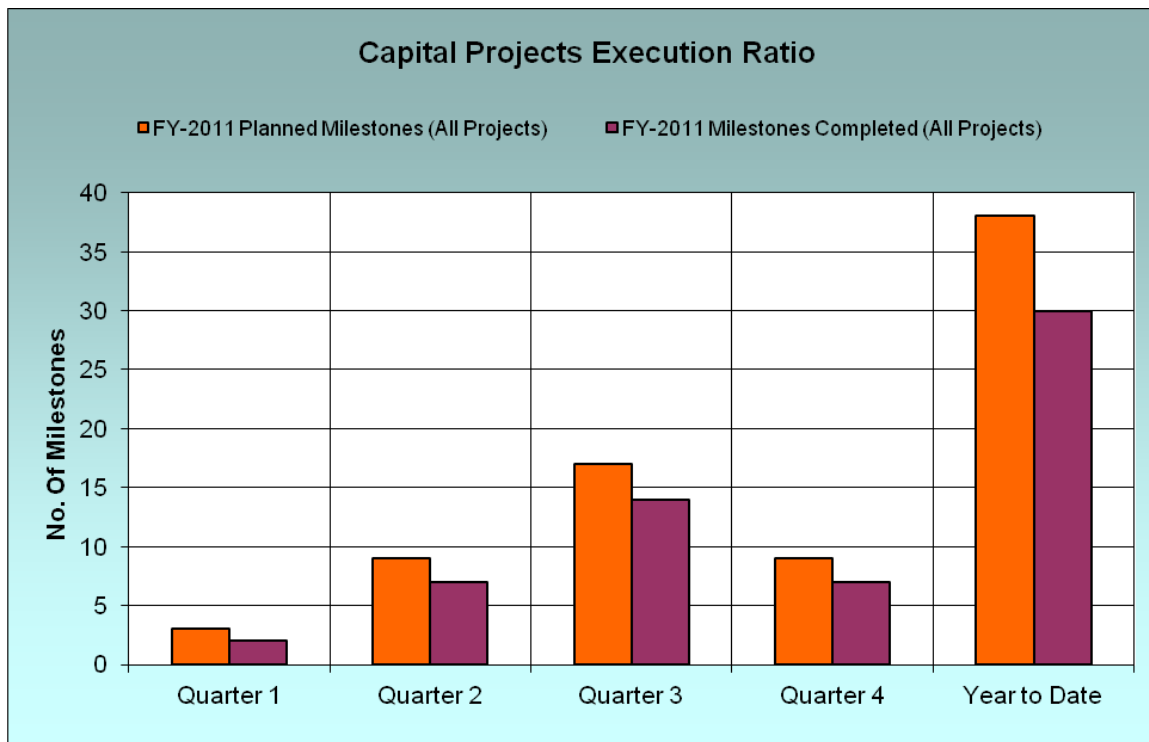
Construction Contract (\$5M - \$9M), EQ&SS Jan, BOD Feb



Capital Improvement Program Report 4th Quarter FY2011

Key Performance Indicators, Capital Program

Key performance indicators related to the Capital Improvement Program are shown below.



Note: Capital Projects Execution Ratio measures the completion of critical project milestones for large capital projects during the fiscal year. Critical project milestones include: Design Starts, Construction Starts and Construction Substantial Completion.

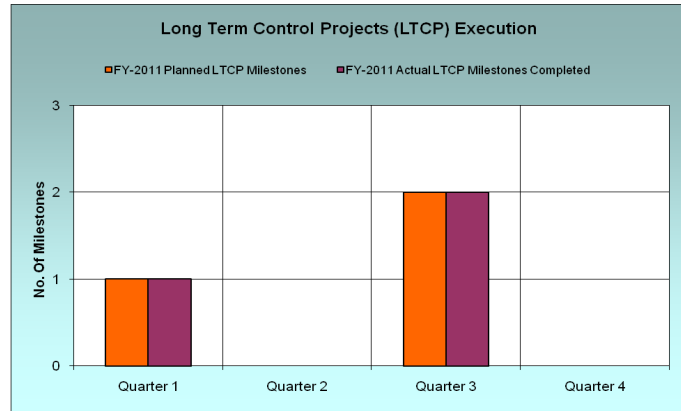
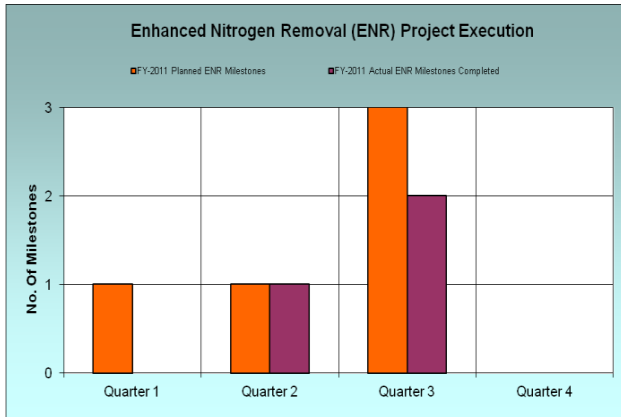
Variance Description: For the 4th Quarter, the following milestones were not achieved:

Project N7, Job N712 – Potomac Sewer - Odor Remedy (VA Sites) construction start is delayed due to issues associate with approvals and permits regarding Fairfax County Zoning and easement resolution with NVRPA at Site 31; the revised start of construction is March 1, 2012.

Project N7, Job N702 – PI Rehab. for Fairfax (MH 31-30) and (MH 44-43) construction start is delayed due to construction coordination as this project cannot proceed at Site 31 until the PI Odor Control project (Job N702) is complete; the revised start of construction is January 13, 2013.

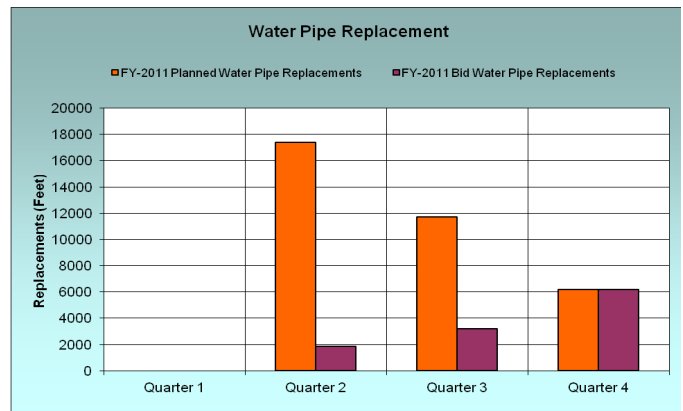
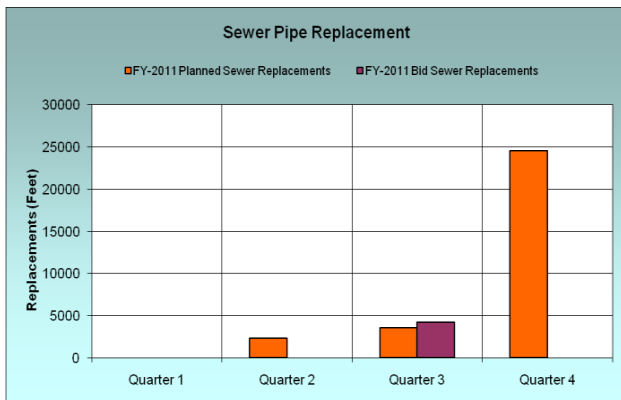


Capital Improvement Program Report 4th Quarter FY2011



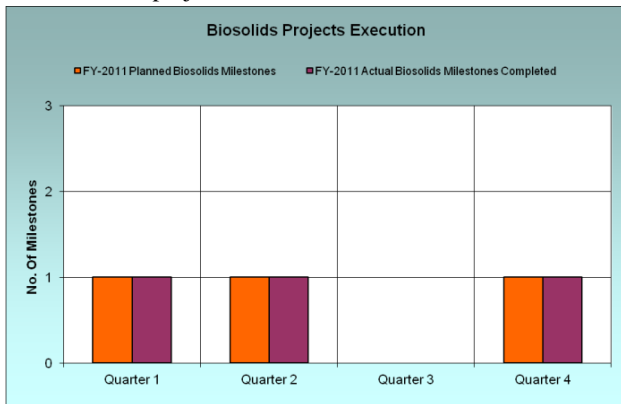
Note: ENR Project Execution measures the completion of critical project milestones for the ENR projects during the fiscal year. Critical project milestones include all those required to meet permit dates.

Note: LTCP Project Execution measures the completion of critical project milestones for the LTCP projects during the fiscal year. Critical project milestones include all those required to meet Consent Decree dates.

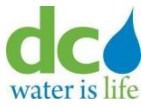


Note: Sewer Pipe Replacement measures feet of pipe replacement under contract during the fiscal year. The variance is due to the issues with N7 described above, delays with B St/New Jersey Ave Trunk Sewer Rehab pending additional sewer inspections, and issues with the NPS which delayed the construction start of Upper Potomac Interceptor Rehabilitation project.

Note: Water Pipe Replacement measures feet of pipe replacement under contract during the fiscal year. In addition to the above variance descriptions, these variances were caused by DDOT projects not progressing as scheduled. DC Water has no control over those projects.



Note: Biosolids Project Execution measures the completion of critical project milestones for the Biosolids projects during the fiscal year.



Capital Improvement Program Report 4th Quarter FY2011

For FY12, the following KPI Milestones will be monitored:

Quarter	Project	Job Name	KPI Name
1st	UC00	Filtration Concrete Repairs	Design Start Milestone
2nd	BZ00	Large Valve Replacement Contract 8	Construction Substantial Completion
2nd	CY00	Div Z - Poplar Point Pumping Sta. Replacement	Design Start Milestone
2nd	N700	Potomac Sewer - Odor Remedy (VA Sites)	Construction Start Milestone
2nd	XA00	Biosolids Combined Heat and Power (CHP)	Construction Start Milestone
2nd	XA00	Biosolids Site Preparation	Construction Substantial Completion Milestone
2nd	XA00	Biosolids Final Dewatering	Construction Start Milestone Contract 1C
2nd	XB00	Centrifuge Thickener Facility	Construction Substantial Completion Milestone
2nd	N900	Small Dia Watermain Rehab 7-1	Construction Start Milestone
2nd	FV00	Lower East Side Interceptor Rehab - Div E	Construction Start Milestone
3rd	CY00	Div E - CSO 015-017 Structures/Diversions	Construction Start Milestone
3rd	F600	Steel Water Mains Contract 2	Design Start Milestone
3rd	F600	Steel Water Mains - Contract 1	Construction Start Milestone
3rd	S500	Large Dia. Watermain Internal Repairs 2	Construction Start Milestone
3rd	O100	Small Dia Watermain Rehab 9	Design Start Milestone
3rd	CY00	Div I - Main Pumping Sta. Diversions	Design Start Milestone
3rd	BZ00	Large Valve Replacement Contract 9	Construction Start Milestone
3rd	Q300	12 inch Sewer Pope's Branch	Construction Start Milestone
3rd	I800	Large Valve Replacements 11	Design Start Milestone
3rd	DN00	Sewer Inspection & Cleaning Contract # 9	Inspection Start Milestone (NTP)
3rd	IN00	Cleaning/Inspection Upper East Side Sewer	Inspection Start Milestone (NTP)
3rd	XA00	Biosolids Final Dewatering	Construction Start Milestone Contract 2C
4th	CY00	Div B - Tingey Street Diversions	Design Start Milestone
4th	EV00	Area Substation No. 6	Construction Substantial Completion Milestone
4th	FH00	Discharge Piping Bryant Street Pump Station	Construction Start Milestone
4th	GU00	Crosstown Water Main Rehab	Construction Substantial Completion
4th	MX00	SDWM Replacement FY2010 -Contract 090250 with N802	Construction Substantial Completion
4th	N800	Small Dia Watermain Rehab Contract 6	Construction Substantial Completion
4th	BR00	Nitrification RAS Piping Rehabilitation	Construction Start Milestone



Capital Improvement Program

Presented to:

***Environmental Quality and
Sewerage Services Committee***

November 17, 2011



Overview of CIP Budget Request

□ 10-Year CIP Disbursements

- Proposed FY 2011 – FY 2020 CIP disbursements at \$3.8 billion are basically the same as the Board-approved FY 2010 – FY 2019 CIP disbursements

□ Lifetime Budget

- Proposed lifetime budget of \$8.0 billion - Increase of \$78.9 million over last year's Board-approved plan primarily for the Sanitary Sewer and Water service areas

□ Capital Authority Request

- Proposed FY 2013 authority request totals \$606.1 million - Decrease of \$146.4 million over the FY 2012 authority request

FY 2011 – FY 2020 CIP (Cash Disbursements)

Summary by Service Area

(\$000's)

	FY 2011 <i>Projected</i>	FY 2012 <i>Revised</i>	FY 2013 <i>Proposed</i>	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	Total FY '10-'19	FY 2020	Total FY '11-'20	FY '11 - '20 vs '10 - '19
Wastewater Treatment	128,186	275,845	378,648	209,313	110,798	104,080	95,922	42,224	16,822	1,402,604	4,350	1,366,187	(36,417)
Sanitary Sewer	26,132	39,922	45,381	56,779	64,335	44,567	41,286	55,928	44,419	436,655	40,110	458,861	22,206
Combined Sewer Overflow / Long Term Control Plan	80,182	132,017	152,020	111,759	163,205	157,542	141,933	57,179	78,546	1,125,047	112,621	1,187,004	61,957
Stormwater	2,479	2,775	4,276	2,545	801	775	737	810	900	21,839	506	16,603	(5,236)
Water	46,750	54,461	59,436	66,820	58,643	58,121	63,572	66,461	56,614	612,873	65,255	596,134	(16,738)
Washington Aqueduct	9,491	11,373	10,598	10,744	11,016	11,280	11,588	10,891	10,323	110,816	9,842	107,145	(3,671)
Capital Equipment	10,230	15,349	15,341	12,384	9,173	7,278	7,348	7,648	6,778	103,906	6,778	98,307	(5,599)
Total FY 2013 DC Water CIP	303,450	531,742	665,700	470,344	417,971	383,643	362,386	241,142	214,402	3,813,740	239,462	3,830,240	16,500
2010-2019	325,222	555,820	589,786	442,122	365,982	421,531	370,976	257,039	223,104	3,813,740	-		
Variance: 2011-2020 vs 2010-2019	(21,772)	(24,078)	75,914	28,222	51,989	(37,888)	(8,590)	(15,897)	(8,702)	0	239,462	16,500	

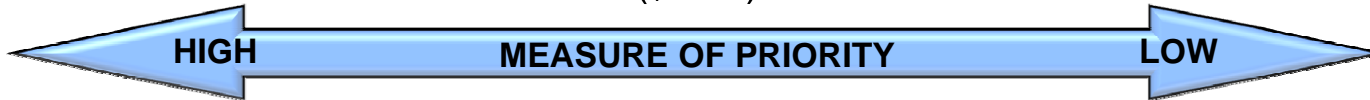
Summary of Disbursements between Retail & Wholesale Customers

	Projected										
	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	Total
EPA/FED	\$ 44,220	\$ 56,787	\$ 64,423	\$ 40,914	\$ 22,500	\$ 16,500	\$ 16,500	\$ 16,500	\$ 16,500	\$ 16,500	\$ 311,344
Retail	177,225	299,713	363,380	288,076	311,373	291,309	280,866	197,451	183,364	214,970	2,607,727
Wholesale	82,005	175,242	237,897	141,354	84,098	75,834	65,020	27,191	14,538	7,992	911,171
Total CIP	\$ 303,450	\$ 531,742	\$ 665,700	\$ 470,344	\$ 417,971	\$ 383,643	\$ 362,386	\$ 241,142	\$ 214,402	\$ 239,462	\$ 3,830,242



Prioritization of Spending

(\$000's)



Category	Mandates	Health & Safety	Board Policy	Potential Failure	High Profile / Good Neighbor	Good Engineering Practices / High Payback	Good Engineering Practices / Low Payback	Total
Description	Agreements, Regulatory standards, Court orders, Issues and Permits requirements, Stipulated Agreements, Etc.	Required to address Public Safety	Undertaken as a result of the Board's commitment to outside agencies	Related to Facilities in danger of failing, or critical to meeting permit requirements	Address Public concerns	Need to fulfill Mission and upgrade Facilities	Lower priority projects	
FY 2011 Projected	\$120,617	\$4,891	\$12,911	\$55,011	\$7,723	\$92,323	\$9,974	\$303,450
FY 2012	230,758	8,499	13,053	52,680	6,582	206,230	13,941	531,742
FY 2013	264,921	10,730	11,722	62,810	7,043	294,875	13,599	665,700
FY 2014	179,609	24,885	13,358	69,860	8,225	165,553	8,853	470,343
FY 2015	214,822	23,496	11,083	54,011	3,897	104,732	5,931	417,971
FY 2016	226,372	9,866	11,348	39,372	0	84,107	12,580	383,643
FY 2017	205,415	6,685	9,361	31,701	0	84,259	24,967	362,386
FY 2018	66,879	8,510	8,367	24,096	0	88,239	45,051	241,141
FY 2019	68,909	9,296	5,818	18,898	0	102,803	8,679	214,403
FY 2020	99,930	5,975	7,857	12,577	0	101,577	11,545	239,461
Total	\$1,678,229	\$112,833	\$104,877	\$421,015	\$33,469	\$1,324,695	\$155,121	\$3,830,240
% of Total	43.82%	2.95%	2.74%	10.99%	0.87%	34.59%	4.05%	100.00%



Prioritization Category Descriptions

1A – Court Ordered, Stipulated Agreements, Regulatory requirement, Etc.

These are projects that are undertaken to comply with court orders, stipulated agreements, regulatory issues and the National Pollutant Discharge Elimination Permit (NPDES)

2A – Health and Safety

These are projects that are required to eliminate or mitigate impacts on public health or safety. These projects are also required to ensure that there is no failure to comply with DC Water's NPDES permit requirements.

2B – Board Policy, DC Water's commitment to outside agencies

These are projects that are undertaken to comply with a policy that the Board may adopt as a result of its commitment to outside Agencies.

2C – Potential Failure/Ability to continue meeting permit requirements

These are projects that are undertaken to construct or rehabilitate facilities or equipment that is in danger of failing and that such failure may potentially endanger WASA's ability to continue meeting permit requirements.

2D – High Profile, Good Neighbor Policy

These are projects that are undertaken to remediate concerns expressed by Citizens or Public Officials.

3A – Good Engineering, High pay back, Mission/Function

This category includes projects that are needed for rehabilitation and upgrading of facilities and infrastructures required for WASA to fulfill its mission and function, as well as, projects needed to resolve operational issues and inefficiencies. This category also recognizes cost savings in operation and maintenance.

3B – Good Engineering, Low pay back, Mission/Function over a long term

This category includes projects that are needed for rehabilitation and upgrading of facilities and infrastructure, but have a lower priority than projects in 3A above, yet help DC Water to fulfill its mission and function over the long term.



Sample Listings of Projects

by Prioritization Category (Disbursements, FY 11 – FY 20)

<i>Mandated Projects</i>			
Priority	Project ID	Project Name	Total
1A	CY00	Anacostia LTCP Projects	914,285
1A	E800	Enhance Clarification Facilities	183,328
1A	E900	Nitrogen Removal Facilities	163,870
1A	BA00	WASA Low Impact Development Projects	1,507
1A	H700	Blue Plains Tunnel Site Preparation	608

<i>Potential Failure Projects</i>			
Priority	Project ID	Project Name	Total
2C	BR00	Nitrification/Denitrification Fac	25,360
2C	BV00	RWWPS No. 2 Upgrades	20,362
2C	EJ00	Potomac Pumping Station-Ph III Rehab	14,887
2C	DR00	Low Area Trunk Sewer Rehabilitation	1,106
2C	K400	Poplar Point Pumping Station	603

<i>Health & Safety Projects</i>			
Priority	Project ID	Project Name	Total
2A	G500	Sewer Rehab Near Creek Beds	20,382
2A	CV00	Laboratory Upgrades	2,046
2A	EN00	WWTP - Central Fire Alarm System	923
2A	DP00	Chemical Building Enhancements	402

<i>High Profile / Good Neighbor Projects</i>			
Priority	Project ID	Project Name	Total
2D	MA00	St. Elizabeth Water Tank	13,015
2D	N700	Potomac Sewer System Rehab.	11,318

<i>Board / DCWater Policy Projects</i>			
Priority	Project ID	Project Name	Total
2B	GQ00	Fire Hydrant Replacement Program - Phase II	20,028
2B	BW00	Lead Service Replacement Program	19,065
2B	CJ00	FY2012 - DDOT WATER PROJECTS	3,087
2B	CM00	FY2013 - DDOT Water Projects	2,722

<i>Good Engineering Practices / High Payback Projects</i>			
Priority	Project ID	Project Name	Total
3A	XA00	New Digestion Facilities	356,923
3A	F100	Small Diameter Water Main Rehab 13	23,524

<i>Good Engineering Practices / Low Payback Projects</i>			
Priority	Project ID	Project Name	Total
3B	MR00	5MG 2nd High Reservoir	10,002
3B	HC00	New Warehouse Facility at Blue Plains	9,969
3B	HJ00	COF Renovations and Additions	6,430
3B	JY00	IT - Data Center	2,217



Significant Project Variances

Wastewater Treatment

Project	Start	Proposed	Current	Variance	Needs Addressed
Project XA – New Digestion Facilities	Exist	\$475.5	\$441.3	\$34.2	\$28.5 Million scope increase for Final Dewatering plus Program Management cost allocation
Project E9 – Nitrogen Removal Facilities	Exist	\$291.6	\$345.4	\$(53.8)	Reduction of funds as a result of lower than anticipated bids. Funds used to offset other program increases

Sewer System – Sanitary and Combined

Project	Start	Proposed	Current	Variance	Needs Addressed
Project Q3 – FY2003 DSS Sanitary Sewer Projects	Exist	\$13.8	\$8.7	\$5.1	Additional funding for revised construction estimate of Pope’s Branch Sewer Rehab.
Project HS – Outfall Sewer Rehabilitation	FY13	\$3.0	\$0	\$3.0	NEW project. Assessment of the East & West Outfall Sewer, and the West Outfall Relief Sewer. Approx. 32,000 LF.
Project EJ – Potomac Sewer Pump Sta. Rehab. – Phase III	Exist	\$20.6	\$16.0	\$4.6	Replace gate valves , additional sluice gates, motor starters and screw conveyor.



Projects not Included in 10-Year CIP

Infrastructure re-investments will continue to grow:

- While all mandates and immediate critical needs are incorporated into this 10-Year Plan, we continue to look to the future and plan accordingly
- In total, approximately \$1 Billion in potential project needs not included in proposed plan
 - This includes items previously identified under the Sewer System Facilities Plan
- In addition to projects not included in 10 –year plan, out year (FY15 – FY20) funding for projects in the CIP, including projects recommended in the Sewer System Facilities Plan, has been reduced to meet financial constraints.
- Funding will be restored to out year projects, and new projects added to the 10-year plan, after peak capital spending years (FY 2015 CIP cycle)

Projects not Included in 10-Year CIP

□ Examples - Wastewater Treatment

Project	Estimate	Start Year
H2 Digestion & Related Facilities – Ph II	\$216M	FY2020
IZ Replace/Upgrade Influent Screens	\$40M	FY2017
IY Effluent Filter Upgrade	\$39M	FY2017
BU Spent Wash Water Treatment	\$43M	FY2021
B6 Primary Sedimentation Tank Covers	\$40M	FY2012

□ Examples - Sewer System

- 26 projects identified in Sewer System Facilities Plan recommended for inclusion in plan not included – estimated cost \$240 million

Project	Estimate	Start Year
HS Rehab Influent Sewers	\$129M	FY2013
FX Rehab Northeast Boundary Sewer	\$46M	FY2012
FX Tiber Creek Sewer Lining – Ph I	\$40M	FY2012
JR Large Sewer Rehab 10	\$16M	FY2020
JS Small Sewer Rehab 10	\$14M	FY2020