DISTRICT OF COLUMBIA
WATER AND SEWER AUTHORITY

Board of Directors

Meeting of the
Environmental Quality and Operations Committee

5000 Overlook Avenue, SW, Room 407
Thursday, March 16, 2017
9:30 a.m.

	I.	**Call to Order**	James Patteson Chairperson
9:30 a.m.	**II.**	**AWTP Status Updates** **1.** BPAWTP Performance	Aklile Tesfaye
9:45 a.m.	**III.**	**OEM, Emergency and Planning Overview**	Jonathan Reeves
10:05 a.m.	**IV.**	**Action Items**	John Bosley/Len Benson

Joint Use

1. Contract No.15-PR-DFS-05 – Document Management Services, Canon Solutions America, Inc.
2. DCFA #482-WSA – Capital Improvement Program Permit Support Services, RK&K
3. DCFA #425-WSA – Gravity Thickener Upgrades – Phase II (SA 4), HDR Engineering, Inc.

Non-Joint Use

1. Contract No.170010 - Anacostia 2nd High Residential Pressure Reducing Valve Installation, United Plumbing and Mechanical, LLC
2. Contract No. 150050 – Small Diameter Water Main Replacement 12a, Capital Paving, Inc.
3. Contract No. 140170 – Bryant Street Pumping Station HVAC Improvements, W.M. Schlosser Company, Inc.

10:20 a.m.	**V.**	**Water Quality Monitoring**	Charles Kiely

1. Coliform Testing
2. LCR Compliance Testing

10:30 a.m.	**VI.**	**Fire Hydrant Upgrade Program**	David Wall
		1. Status Report of Public Fire Hydrants	
		2. Out of Service Fire Hydrant Map	
10:40 a.m.	**VII.**	**Water Quality Programs & Operations**	Jessica Edwards Brandt
10:55 a.m.	**VIII.**	**Other Business/Emerging Issues**	
11:00 a.m.	**IX.**	**Adjournment**	James Patteson Chairperson

* The DC Water Board of Directors may go into executive session at this meeting pursuant to the District of Columbia Open Meetings Act of 2010, if such action is approved by a majority vote of the Board members who constitute a quorum to discuss: matters prohibited from public disclosure pursuant to a court order or law under D.C. Official Code § 2-575(b)(1); contract negotiations under D.C. Official Code § 2-575(b)(1); legal, confidential or privileged matters under D.C. Official Code § 2-575(b)(4); collective bargaining negotiations under D.C. Official Code § 2-575(b)(5); facility security under D.C. Official Code § 2-575(b)(8); disciplinary matters under D.C. Official Code § 2-575(b)(9); personnel matters under D.C. Official Code § 2-575(b)(10);proprietary matters under D.C. Official Code § 2-575(b)(11); decision in an adjudication action under D.C. Official Code § 2-575(b)(13); civil or criminal matters where disclosure to the public may harm the investigation under D.C. Official Code § 2-575(b)(14), and other matters provided in the Act.

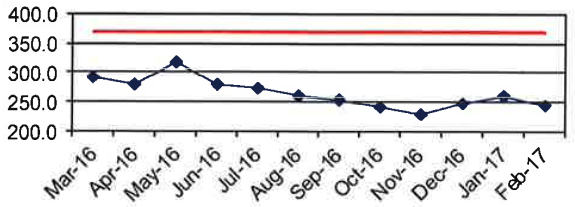
Follow-up Items from Prior Meetings:

1. Director, DETS: Provide location of SDWMR 11b project. **[Completed]**
2. Assistant General Manager, Customer Care and Operations: Set up a field/on-site briefing for Committee members regarding DC Water's operational activities, including a more detailed discussion of what specific water quality parameters are monitored on a recurring basis and why. **[Will be addressed in Item VI.]**
3. General Manager: Provide an update regarding DC Water's emergency response procedures as well as overall, Authority-wide security measures. **[Will be addressed in Item III.]**

BLUE PLAINS ADVANCED WASTEWATER TRATMETN PLANT
PERFORMANCE REPORT – FEBRUARY 2017

Average plant performance for the month was excellent with all effluent parameters well below the seven-day and monthly NPDES permit requirements. The monthly average influent flow was 243 MGD. There was no Excess Flow during this reporting period. The following Figures compare the plant performance with the corresponding NPDES permit limits.

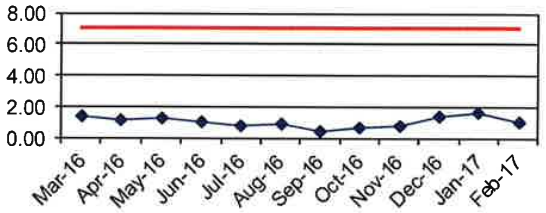
Plant Influent Flow (mgd)



Influent Flow **Average Design Capacity**

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 511 MGD through complete treatment. Flows up to 336 MGD in excess of the 511 MGD peak capacity receive primary treatment, disinfection and dechlorination.

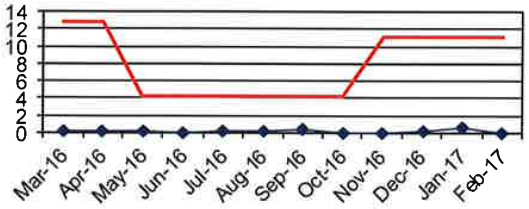
TSS (mg/l)



Effluent TSS **Permit Limit**

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 0.96 mg/L, which is below the 7.0 mg/L permit limit.

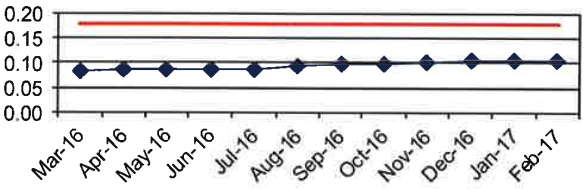
Ammonia (mg/l)



Effluent NH3 **Permit Limit**

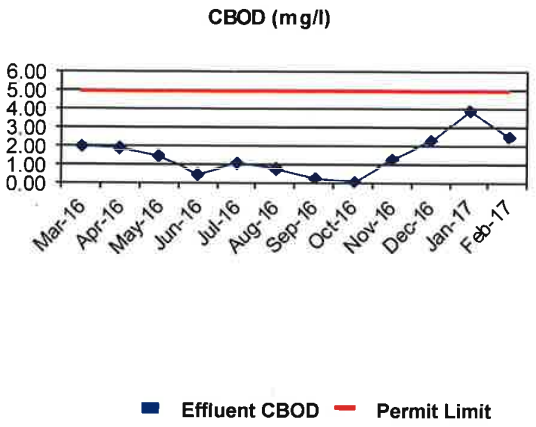
The Ammonia Nitrogen (NH3-N) is a measure of the nitrogen found in ammonia. For the month, effluent NH3-N concentration averaged 0.02 mg/L and is below the average 11.1 mg/L limit.

Total Phosphorus Annual Average (mg/l)

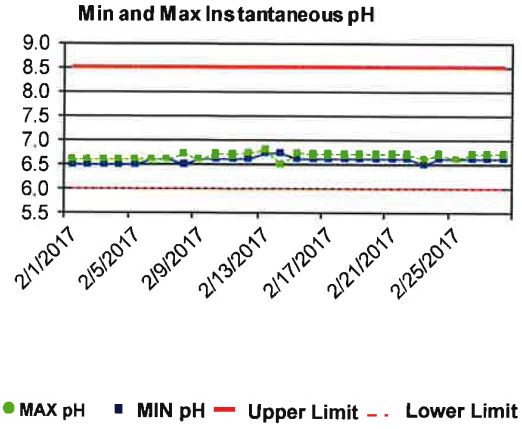


Effluent TP **Permit Limit**

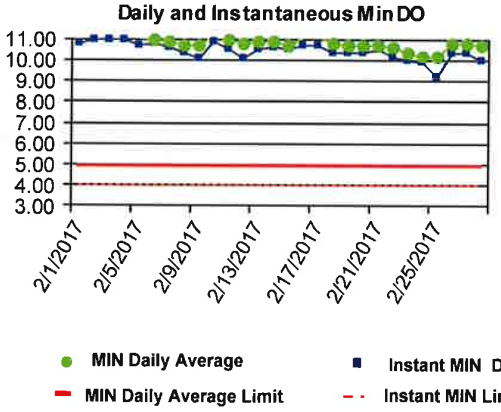
The Total Phosphorus (TP) is a measure of the particulate and dissolved phosphorus in the effluent. The annual average effluent TP concentration is 0.10 mg/L, which is below the 0.18 mg/L annual average limit.



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 2.55 mg/L (partial month), which is below the 5.0 mg/L limit.

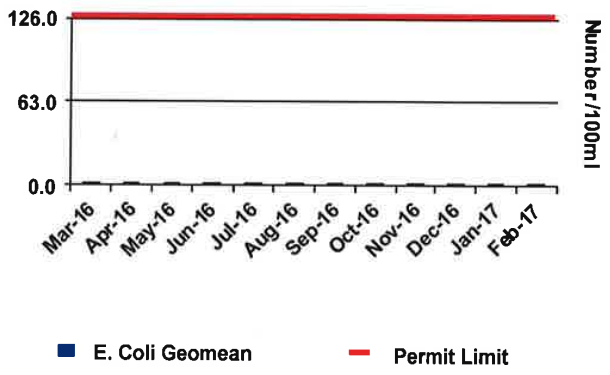


pH is a measure of the intensity of the alkalinity or acidity of the effluent. The minimum and maximum pH observed were 6.6 and 6.8 standard units, respectively. The pH was within the permit limits of 6.0 and 8.5 for minimum and maximum respectively.



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 10.2 mg/L. The minimum instantaneous DO reading is 9.2 mg/L. The minimum permit limits are 5.0 mg/L and 4.0 mg/L respectively.

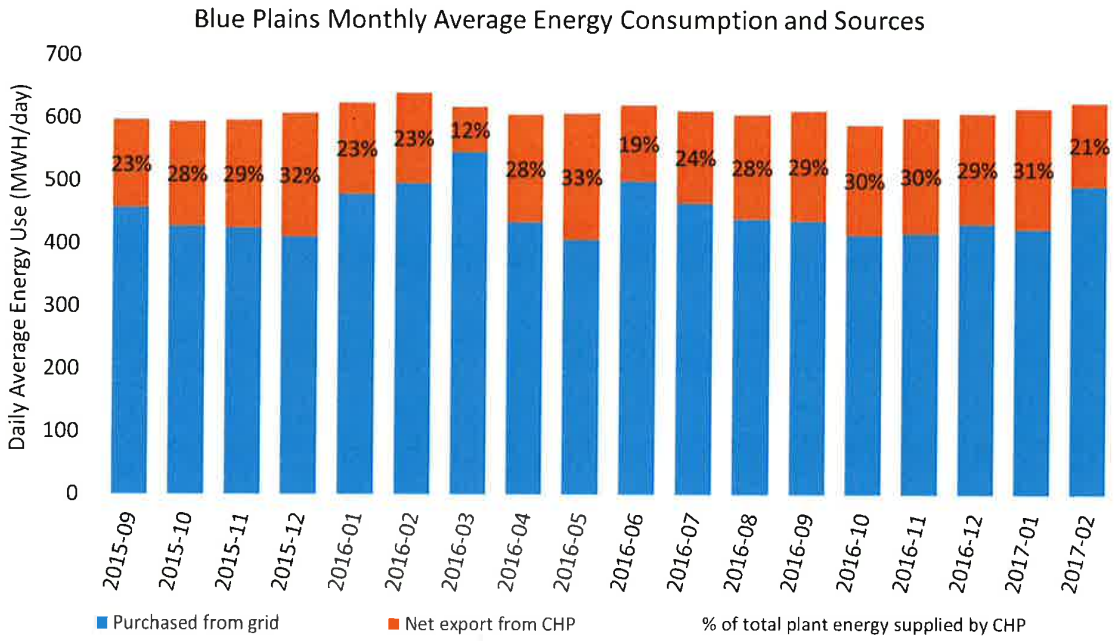
E. coli



E.coli is an indicator of disease causing organisms (pathogens). The E.coli permit limit is 126/100mL. The E coli geometric mean is 1.0 /100mL, and well below the permit limit.

Blue Plains Electricity Generation and Usage

The average energy consumed at Blue Plains was 625 megawatt hours per day (MWH/day) for the month of February, while the average energy purchased from PEPCO was 493 MWH/day. Approximately 2.57 MWH of electricity was used per million gallon of wastewater that was fully treated. The Combined Heat and Power (CHP) facility exported an average of 132 MWH/day, making up for 21% of total energy consumed at Blue Plains.



The graph above is based on power monitors installed at the Main Substation and CHP, and reflects average energy consumed at Blue Plains in MWH/day. Of the total use, the energy purchased from PEPCO and net energy supplied (exported) by CHP are indicated by the blue and orange highlights, respectively.

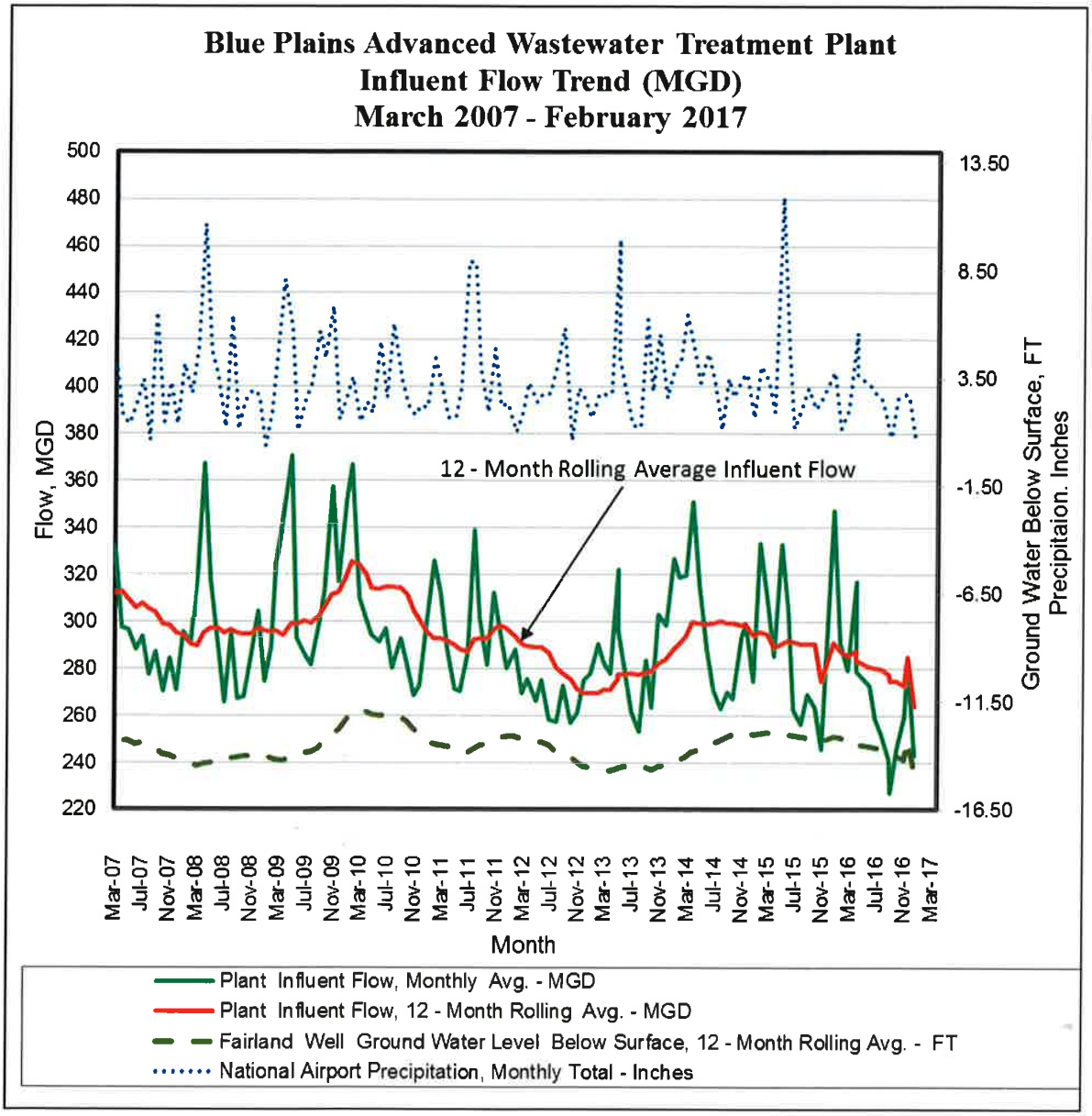
Combined Hear and Power (CHP) Performance

The CHP energy production was lower this month because of two activities that required full outages of the facility. The auxiliary boiler performance test that took place from February 13 to 17 required a full shutdown of the turbines, resulting in an estimated 825 MWH reduction of CHP electric output. This reduction equates to 29.5 MWH/day or 4.7% of the daily total energy consumed at Blue Plains. Completion of the test is a requirement of the contract and was performed to demonstrate that the auxiliary boiler can meet the steam demand required to sustain the desired temperature and pressure in the thermal hydrolysis (THP) reactors. Preventive maintenance on the electrical grid system, related to CHP, required several outages resulting in an additional estimated 530 MWH reduction of electric output. This reduction is equivalent to 18.9 MWH/day or

3% of the daily total energy consumed at Blue Plains. Biennial PM tasks on high voltage switchgears are required to sustain reliability of the electrical grid system.

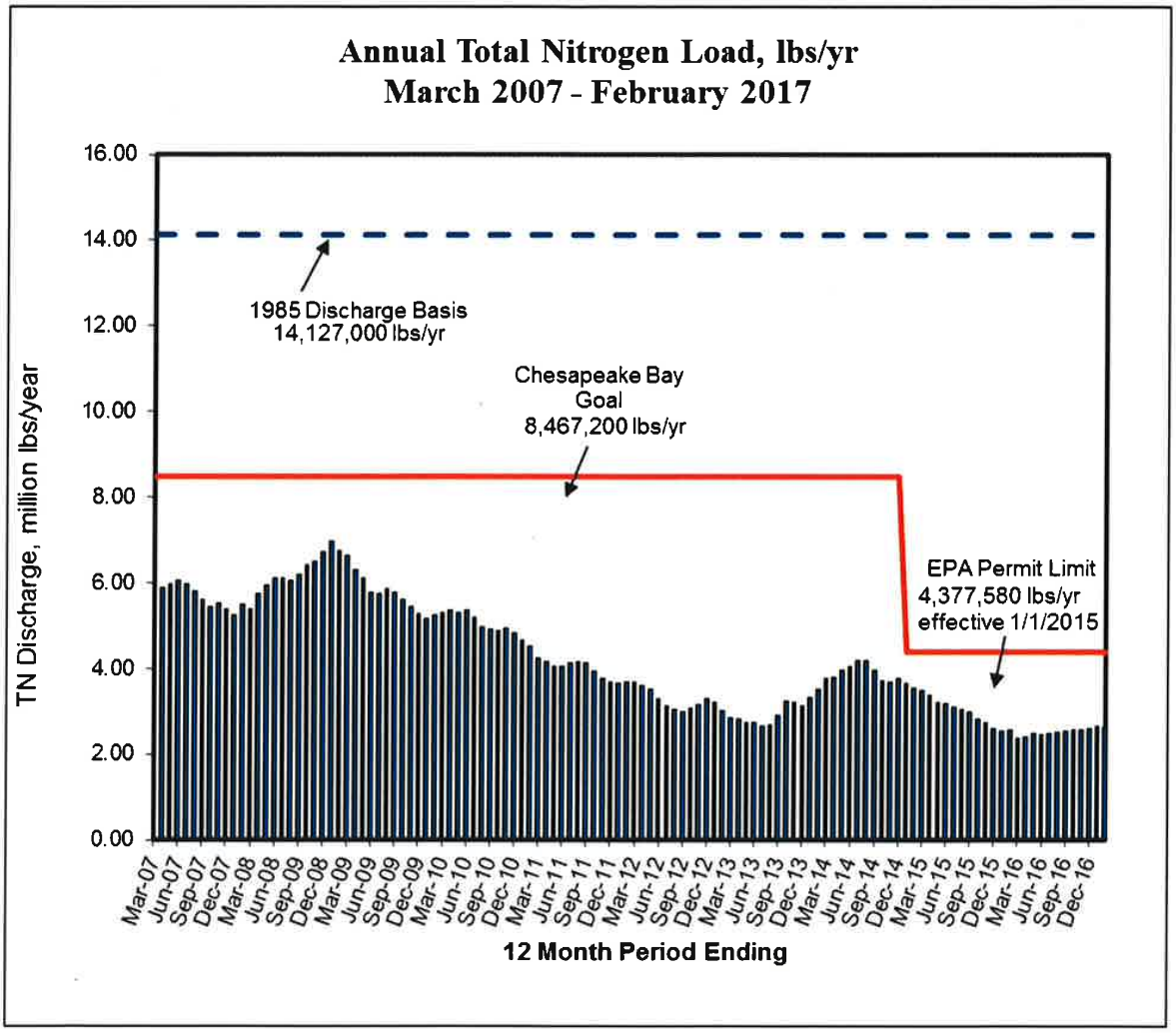
Plant Influent Flow Trend

The graph below shows influent flow trend to the plant over a 10-year period ending February 2017. While for any given month the flow is weather dependent, the 12-month rolling average influent flow has remained at or below 300 since February 2011.



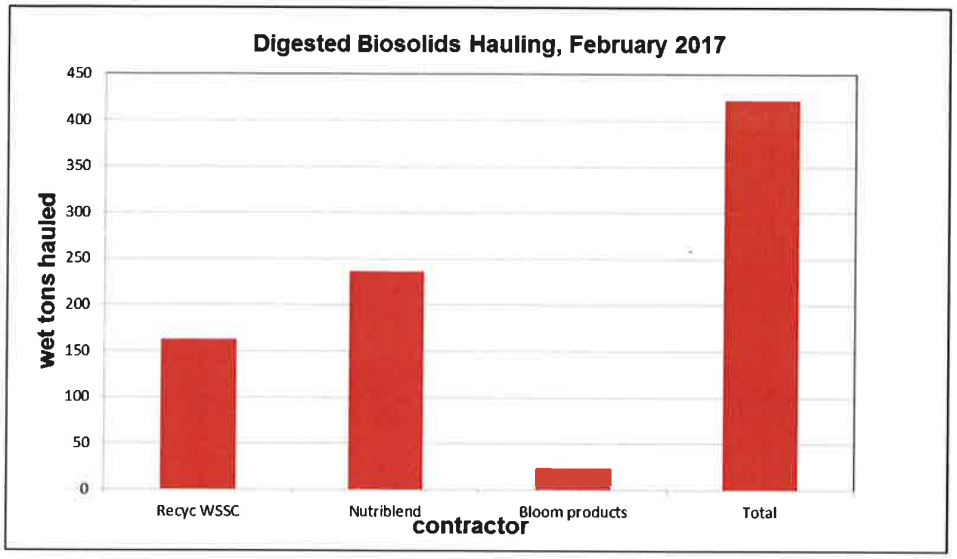
Blue Plains Total Nitrogen (TN) Removal Performance

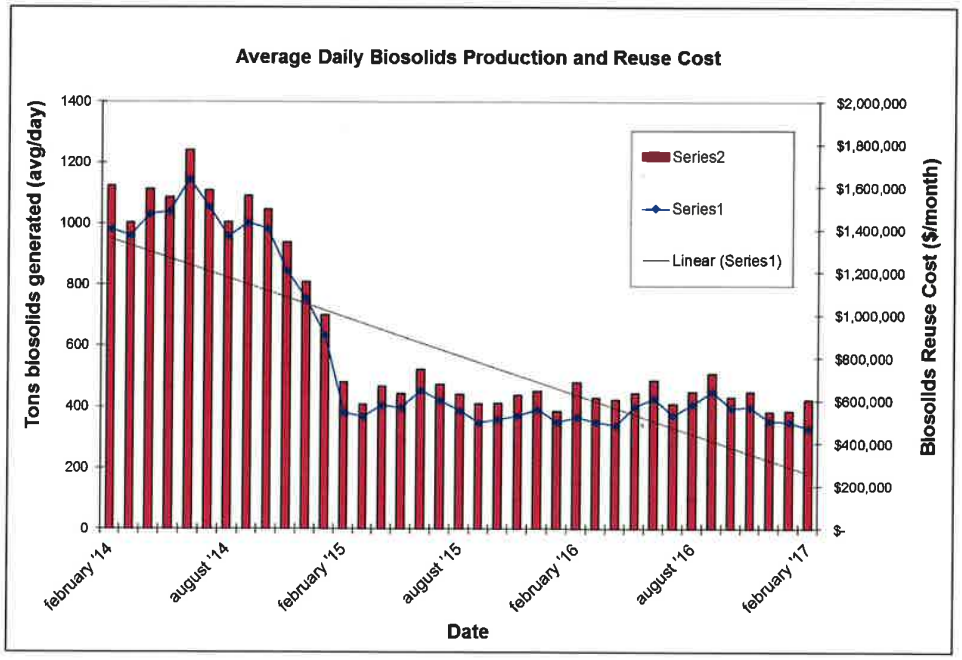
The graph below shows the rolling 12-month total effluent TN over a 10-year period ending February 2017. During the month, the TN average concentration and total load in the effluent were 3.66 mg/L and 208,000 lbs. respectively. The effluent quality is on track to remain below the NPDES permit annual load limit of 4,377,580 lbs.

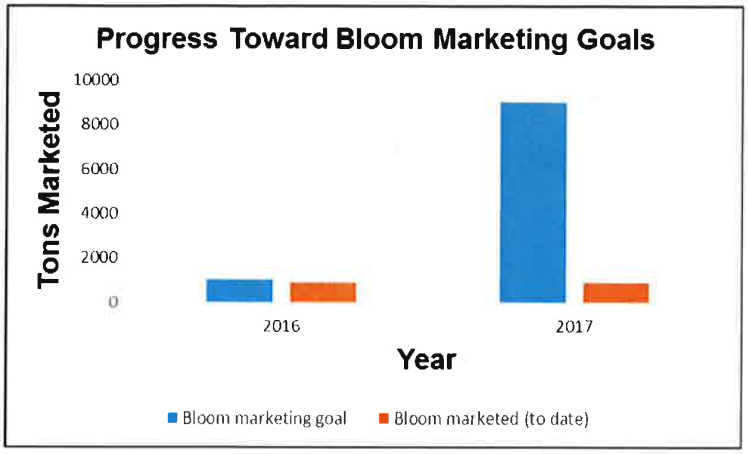


RESOURCE RECOVERY

In February, biosolids hauling averaged 422 wet tons per day (wtpd). The graph below shows the total hauling by contractor for the month of February. The average percent solids for the digested material was 29.3%.



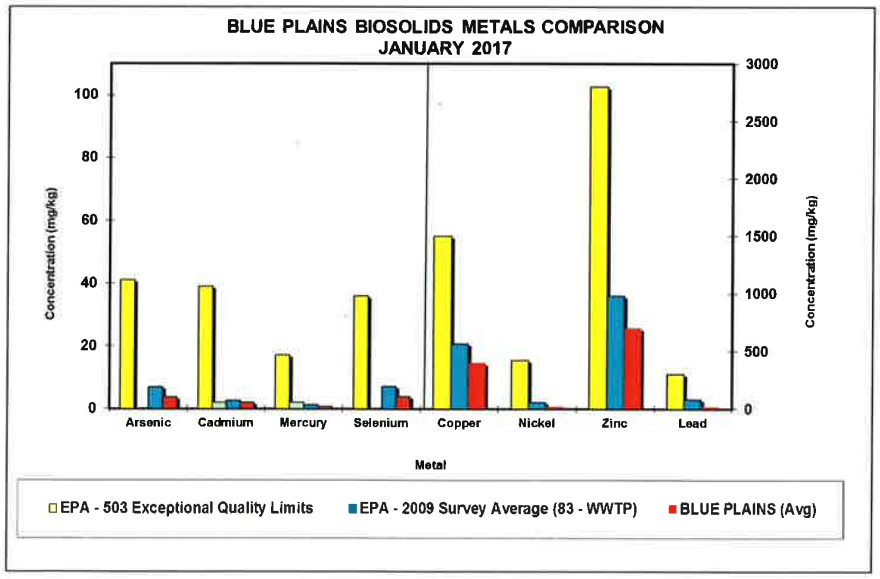


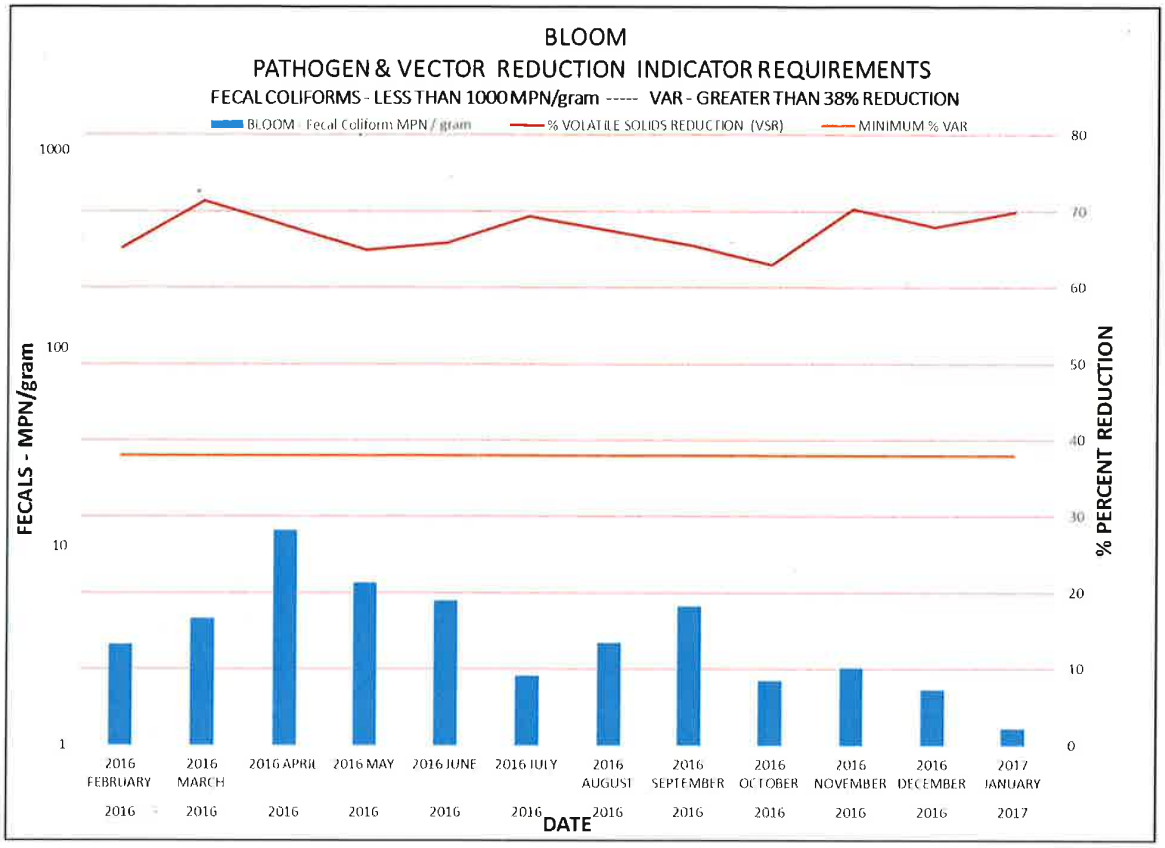


In February, diesel prices averaged $2.77/gallon and with the contractual fuel surcharge the weighted average biosolids reuse cost (taking into account the marketed material) was $40.54 wet ton.

Product Quality

The graph below show the EPA regulated heavy metals in the Blue Plains biosolids for the month of January 2017. As can be seen in the graphs, the Blue Plains levels are considerably below the regulated exceptional quality limits and the national average.

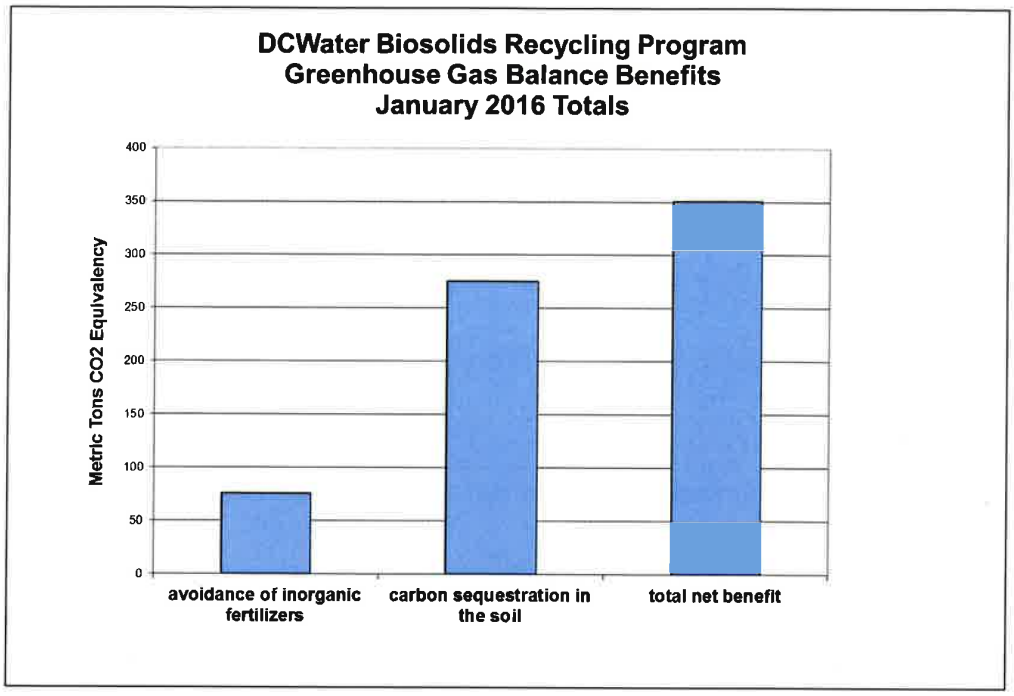




The graph above shows both Vector Attraction Reduction (VAR) and Fecal Coliform results in the final Bloom product, both of which are required to maintain the Class A Exceptional Quality (EQ) status of the Bloom product. Volatile solids are organic compounds that may be odorous and attract nuisance vectors (i.e. flies or rodents). DC Water digesters reduce VS by 65-70%, well above the required 38% minimum. In addition, this graph shows fecal coliforms (FC) levels in DC Water's final Bloom product. Fecal coliforms are indicators of disease causing organisim (pathogens), and must be below 1000 MPN/g to meet Class A standards. Bloom FC levels are 2 or 3 orders of magnitude less than the maximum allowable level.

Environmental Benefits

The quantity land applied in January coming directly from the plant and from storage facilities equaled 5333 tons. Taking into account the fuel required to transport biosolids to the field, the net benefit of the land applied material is 351 metric tons CO_2 equivalent avoided emissions. This is equivalent to taking 714,650 car miles off the road in the month of December (assumes 20 mpg, 19.4 lb CO_2 equivalent emissions/gallon gas – EPA estimate). The cumulative total avoided carbon emission since, January 2006 is 152,328 metric tons CO_2 equivalent.



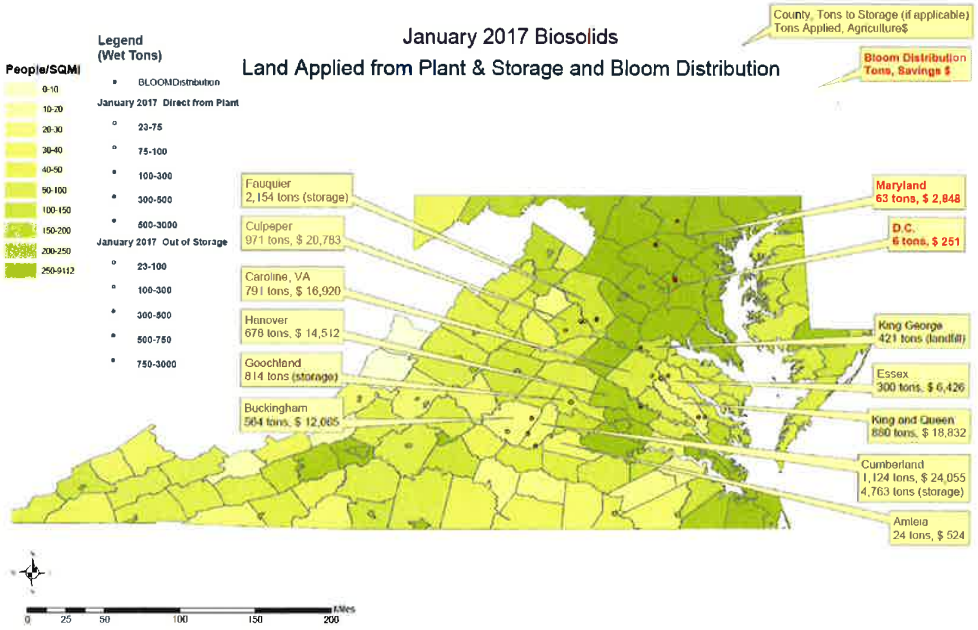
Highlights

Staff tabled and presented for the fourth consecutive year at the Rooting DC annual one-day forum for urban gardeners. It was the 10th anniversary of the event, and turnout was estimated at well over 1,000 people. Most of the District's food-growing organizations—school and community gardens, garden clubs, urban agriculture non-profits, tree advocates, for-profit gardening consulting firms, journalists, District government agencies—were represented. Staff gave away 80 bags of cured Bloom and marketing materials. Over 30 people signed up for tours that staff will be giving especially for Rooting DC participants later in March. A full-page ad for Bloom was again featured in the program pamphlet that went out to all attendees. Staff made valuable contacts with journalists, government agencies and potential partners.

VA DEQ Distribution and Marketing Permit Update

Staff worked closely with VA DEQ on the draft Bloom distribution and Marketing permit, and it is nearly ready for re-submission. Since this will be the first such permit for a product of this kind in VA, staff worked closely with VAMWA and legal counsel to ensure that what we were asking for in the permit was both supported by the regulations and beneficial to other generators in VA. Through a series of meetings and review processes, staff feels everyone's interests are represented in the revised application, which will go to VA DEQ personnel for review this week.

Biosolids Applications and Agricultural $'s for January 2016



CLEAN WATER QUALITY AND TECHNOLOGY

The Department of Clean Water Quality and Technology includes the research and development, pretreatment and laboratory programs. A summary of activities for each group is provided below.

Research and Development

The research and development team continues to work on research topics associated with the planning and operation of Blue Plains. The current focus of research is to optimize treatment process capacity and to work toward achieving energy neutral operations.

In-situ odor control in the secondary activated sludge system at Blue Plains

Odor control strategies at DC Water have generally focused on capture and treatment of foul air for volatile sulfur compounds (VSC) from key locations in the collection system, plant headworks and the biosolids facilities. However, the secondary treatment system also can be a significant source of odors which are mainly caused by volatile organic sulfur compounds (VOSC) emission as methyl mercaptan (MM) rather than by hydrogen sulfide. Due to the large surface area of the aeration basins, capture and treatment of foul air from these basins would require significant capital investment. This study focuses on gaining a better understanding of the microbial kinetics involved in the in-situ production of volatile sulfur compounds and volatile organic sulfur compounds. This information will be used to develop operational controls to minimize production of odors.

This project has two major objectives:

- To develop fundamental understanding of the mechanisms and conditions leading to production, consumption and emission of VOSC, and to measure kinetic parameters needed to predict odor emission potential in wastewater treatment processes.
- To develop an odor prediction tool that is directly coupled to existing full-plant process models to link process optimization with development of odor management strategies.

Research highlights:

Batch studies were performed to understand the mechanism of VSC production and to estimate kinetic parameters on activated sludge from the secondary system, underflow from chemical enhanced primary treatment (CEPT) and biological nitrogen removal at Blue Plains Advanced AWTP. The mechanisms tested are sulfate reduction to H_2S, cysteine degradation with subsequent H_2S release, H_2S methylation to methyl mercaptan, and methionine degradation with subsequent methyl mercaptan release.

Key findings:

Initial results from the batch experiments on secondary sludge samples showed that methylation of hydrogen sulfide might not be significant in secondary systems, and that methionine degradation, under anaerobic conditions, to methyl mercaptan is the more important biological pathway. The study also confirmed that the methyl mercaptan production was coming from degradation of methionine in the activated sludge and not coming from the wastewater itself.

The second step in the research was to determine the rates at which methyl mercaptan is produced in the secondary system and identify the process inhibition strategies. Preliminary results from batch tests showed a maximum methyl mercaptan production of 50 ugS/gVSS/day and the methionine concentration at which this maximum rate is reduced by half was 0.5 mg methionine/L.

To inhibit the methyl mercaptan production in the activated sludge system, one should eliminate or reduce the occurrence of anaerobic conditions. This can be achieved by introducing oxygen or nitrate into the sludge. To further examine this strategy, kinetic experiments were performed with secondary sludge to identify kinetic inhibition constants related to dissolved oxygen (DO) and nitrate levels. In both cases methyl mercaptan production was minimized in the presence of dissolved oxygen (DO) (**Exhibit A**) and when nitrate concentrations were above 1 mg N/L. These parameters will form the basis for the development of an odor prediction tool that can be coupled with full scale process models to allow for odor optimization. Future work will incorporate parameters and mechanisms of primary treatment systems, biological nutrient removal systems and anaerobic digestion. Data collected from additional full scale monitoring and kinetic experiments will be used to calibrate the models.

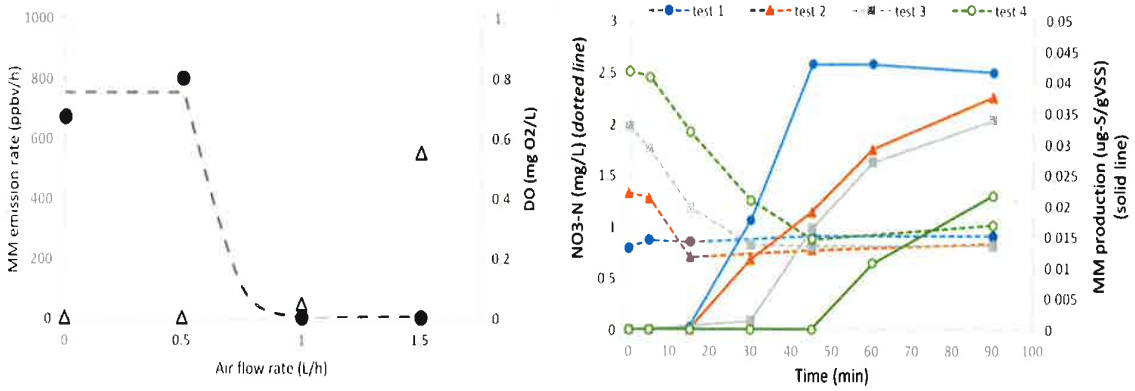


Exhibit A: left: MM production response (round points, dotted line) to elevated DO levels (triangles); right; MM production response (solid lines) to nitrate levels (dotted line)

Blue Plains Main Laboratory

The Main Laboratory staff conducts analyses on Blue Plains AWTP effluent for NPDES Permit requirements, as well as on biosolids, pretreatment samples, storm water runoff, and process samples, on a daily basis, 365 days a year. The laboratory currently analyzes approximately 2,800 samples each month and conducts approximately 8,000 analyses, including Total Suspended Solids; Volatile Suspended Solids; Total and Volatile Solids; Ammonia Nitrogen; Nitrite and Nitrate Nitrogen; Total, Soluble, and Ortho Phosphorus; Total and Soluble Kjeldahl Nitrogen; Carbonaceous Biochemical Oxygen Demand; Chemical Oxygen Demand; Total Alkalinity and Hardness; and Fecal Coliform and E. Coli microbiological testing.

This month, the laboratory continued the analysis of Belt Filter Press cake samples for fecal coliform bacteria for DC Water's Class A Biosolids reporting, as well as digester samples from the new Cambi Thermal Hydrolysis and Anaerobic Digestion facility, including Total and Volatile Solids, Total and Volatile Suspended Solids, Ammonia Nitrogen, alkalinity and pH. Fecal coliforms in the BFP dewatered cake and TS and VS upstream and downstream of the digestion process are monitored to show compliance with 40 CFR 503 Pathogen and Vector Attraction Reduction requirements.

The laboratory also assisted the Department of Sewer Services conducting microbiological analysis of water samples for E. Coli bacteria, as well as monitoring the Northeast Boundary Swirl Facility Effluent for NPDES compliance. Laboratory staff also participated in the WWOA Executive Board.

Blue Plains Pretreatment Program

The Blue Plains Pretreatment Program manages the Industrial Pretreatment Program, including temporary dewatering dischargers from construction and other activities, as well as the Hauled Waste Program. Additional responsibilities include providing specialized sampling and program management support for the Blue Plains NPDES permit and facilitating the quarterly Blue Plains Storm Water Committee meetings.

Industrial Pretreatment Program

DC Water currently manages fourteen (14) Significant Industrial User (SIU) permits and sixteen (16) Non-Significant Industrial User (NSIU) wastewater discharge permits. DC Water received monthly self-compliance monitoring reports for six (6) SIUs and one NSIU. Semi-annual compliance monitoring reports for the remaining SIUs and annual Pollution Minimization reports for some NSIUs were also received this month. All SIUs and NSIUs are in compliance with discharge standards for the current month.

The District portion of the 2016 annual pretreatment program report to EPA was completed this month. Information from the jurisdictions is being compiled and will be added to the report for submittal to EPA in March.

DC Water currently manages 81 Temporary Discharge Authorization (TDA) permits, primarily for construction site discharges of groundwater and/or surface runoff in the combined sewer area. Nine new TDA permits were issued this month. All TDA discharges are currently in compliance with pretreatment standards.

Hauled Waste Program

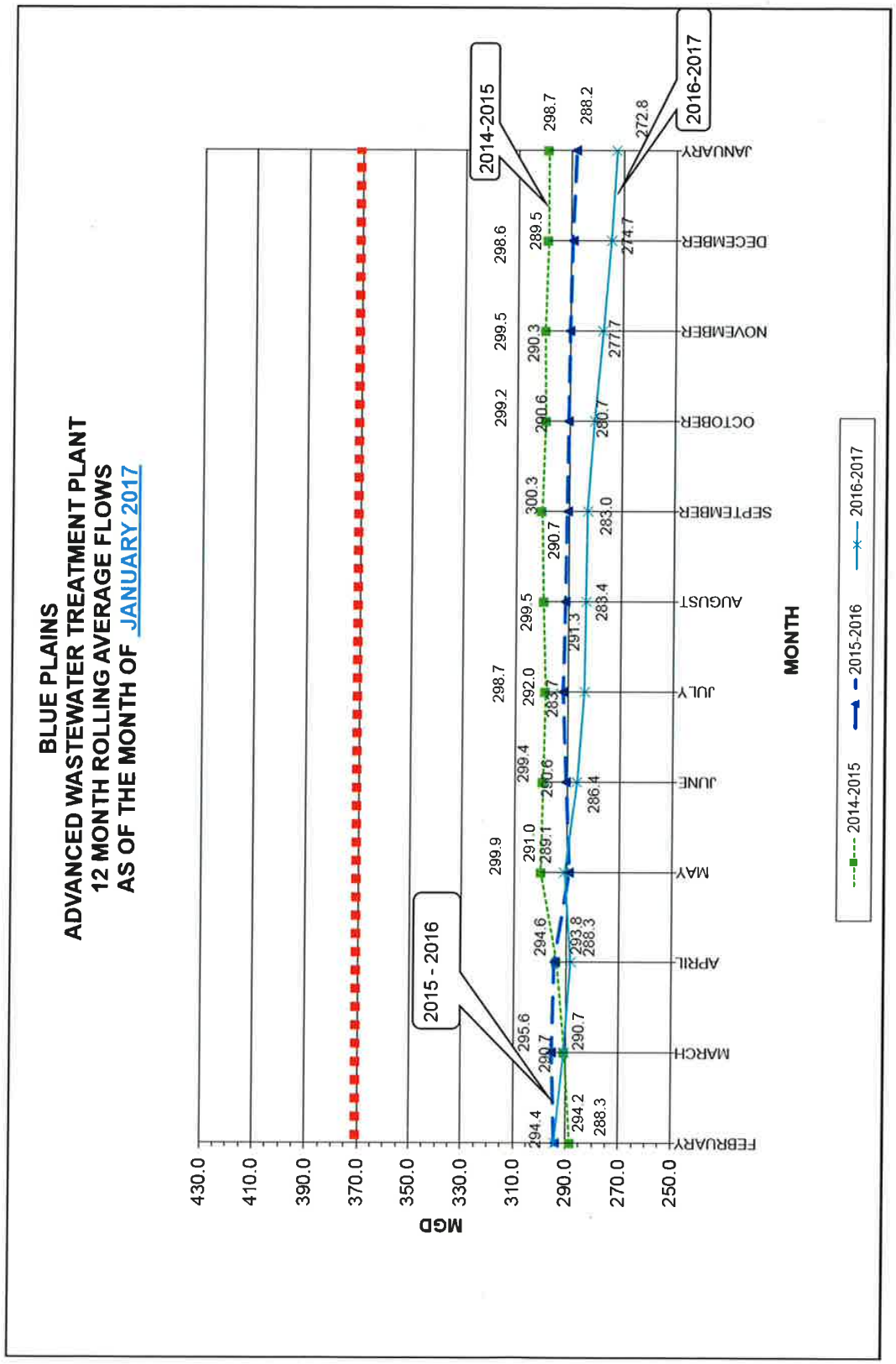
As of the end of the current month, the hauled waste program had 33 permitted haulers authorized to discharge domestic septage, portable toilet waste, grease trap waste, groundwater or surface runoff, and other types of waste, if approved in advance and have been characterized and meet pretreatment standards. DC Water collected fees from ten waste haulers this month, including those on a monthly payment plan option.

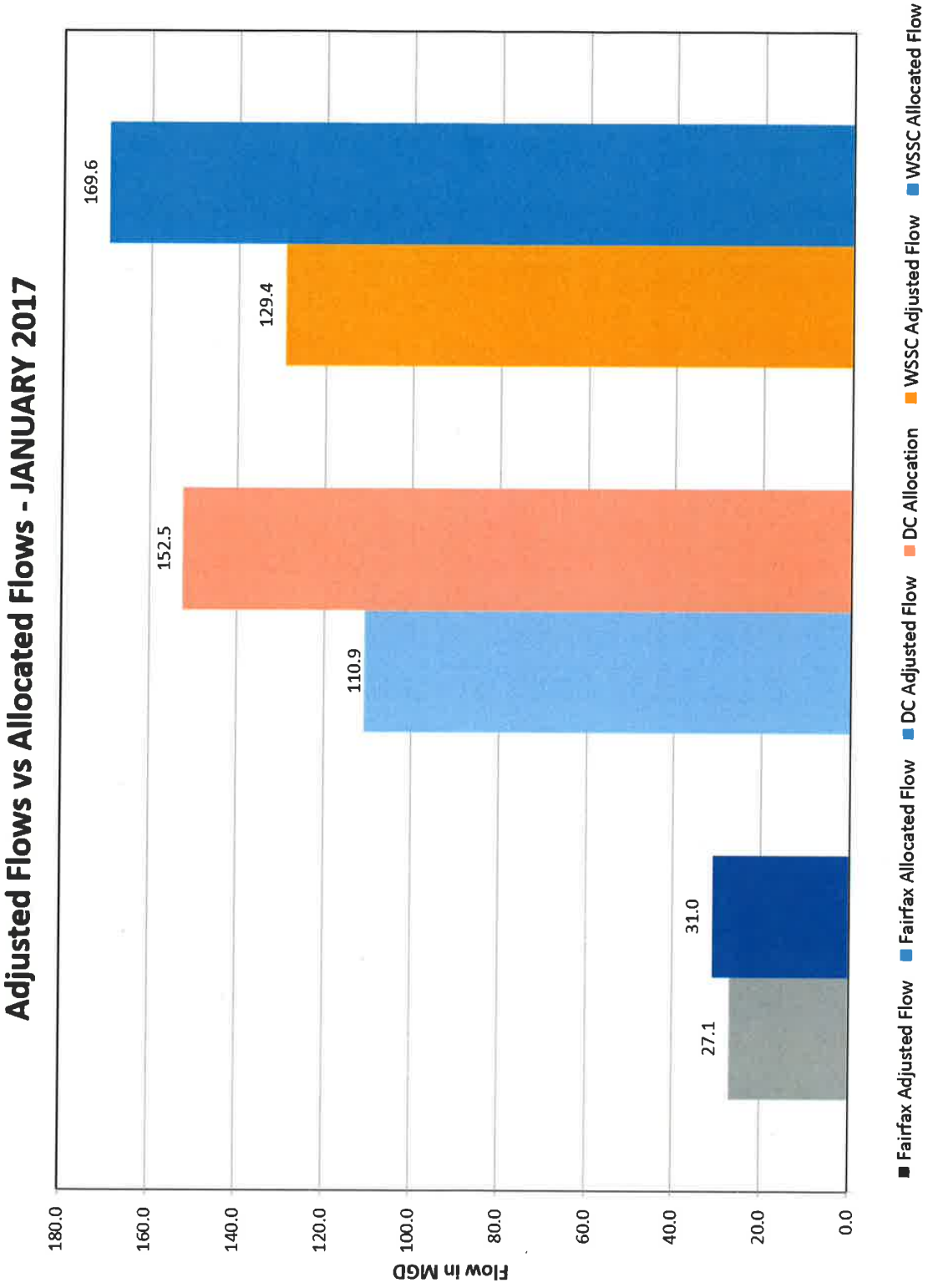
DC Water received 742 hauled waste loads (1,751,860 gallons) from permitted haulers this month. Manifest forms from each truck entering the plant are collected by the security guards and picked up daily by Pretreatment staff. Data is entered into an Excel spreadsheet to track the volume and type of loads being discharged daily and the results of sampling. Two hauled waste samples were collected this month.

An additional 59 hauled waste loads (294,000 gallons) of industrial hauled waste was received at the Loudoun Water septage receiving station (S-17) discharging to Blue Plains this month and was directly invoiced by DC Water since the waste was not typical domestic septage.

NPDES Permit Sampling

Pretreatment staff collected two 24-hour composite wet weather low level PCB samples at outfall 002 and one grab sample for low level PCB at outfall 001. Staff also collected bimonthly metals and low level mercury samples at outfall 002.

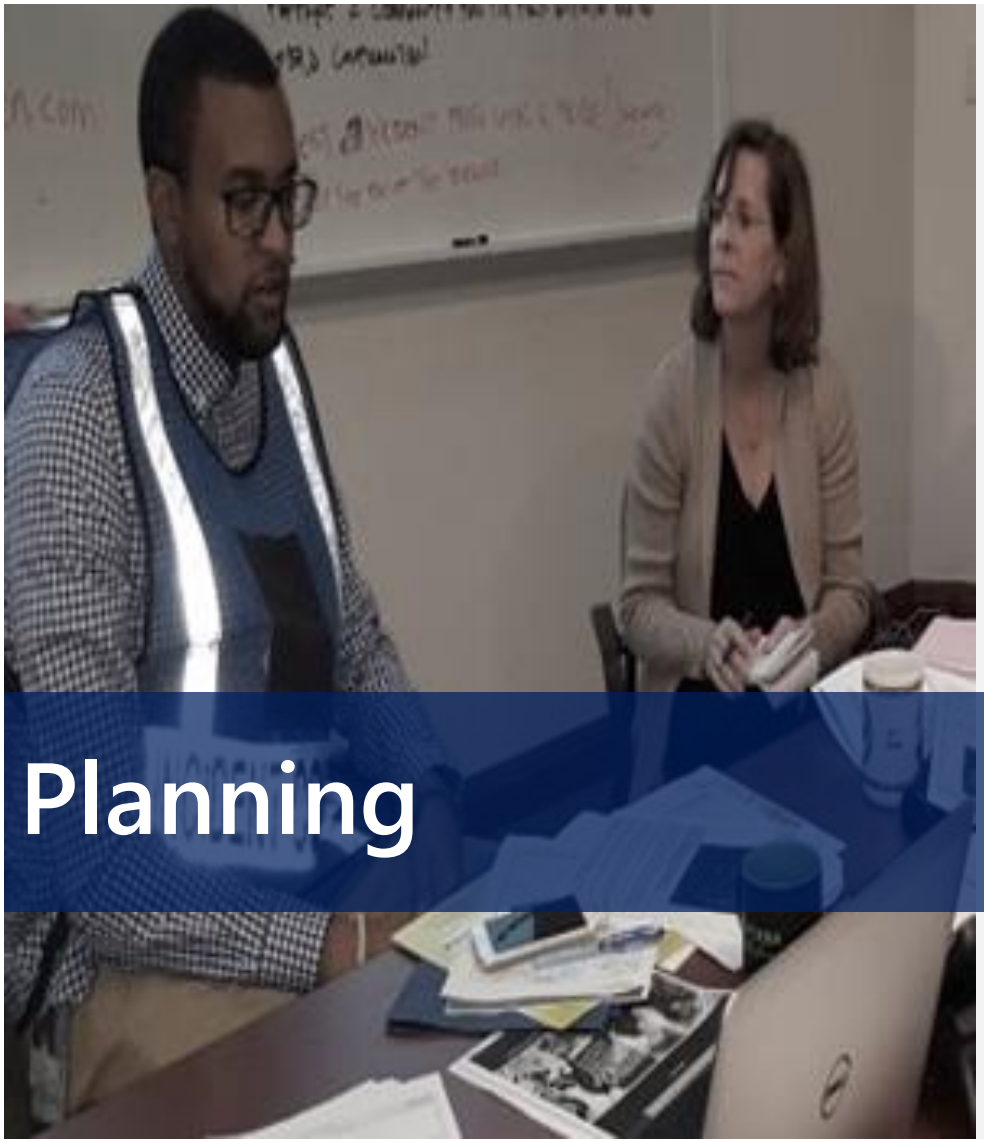

BLUE PLAINS
ADVANCED WASTEWATER TREATMENT PLANT
12 MONTH ROLLING AVERAGE FLOWS
AS OF THE MONTH OF JANUARY 2017
MGD
MONTH
2014-2015
2015 - 2016
2016-2017
2014-2015
2015-2016
2016-2017
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER
DECEMBER
430.0
410.0
390.0
370.0
350.0
330.0
310.0
290.0
270.0
250.0
298.7
288.2
272.8
289.5
298.6
214.7
290.3
299.5
277.7
290.6
299.2
280.7
300.3
283.0
290.7
299.5
283.4
291.3
292.0
298.7
283.7
299.4
290.6
286.4
291.0
299.9
289.1
294.6
293.8
288.3
295.6
290.7
290.7
294.2
288.3
294.4


Adjusted Flows vs Allocated Flows - JANUARY 2017
Flow in MGD
180.0
160.0
140.0
120.0
100.0
80.0
60.0
40.0
20.0
0.0
169.6
129.4
152.5
110.9
31.0
27.1
Fairfax Adjusted Flow
Fairfax Allocated Flow
DC Adjusted Flow
DC Allocation
WSSC Adjusted Flow
WSSC Allocated Flow

Emergency Management

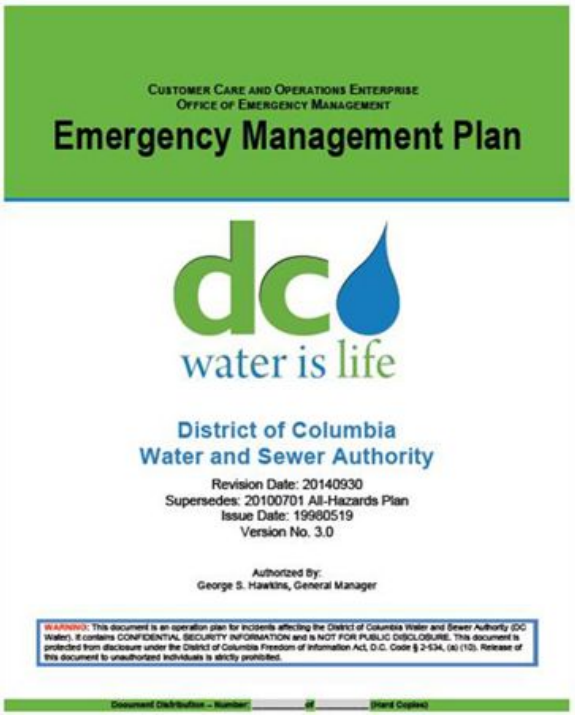
Jonathan Reeves, Chief OEM

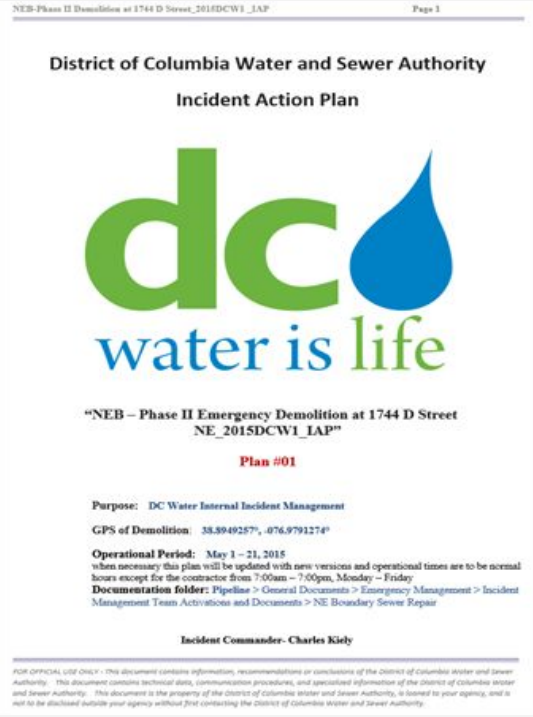
MISSION – to create and facilitate the development of a disaster resilient utility.



Planning

Plans, Policies and Procedures





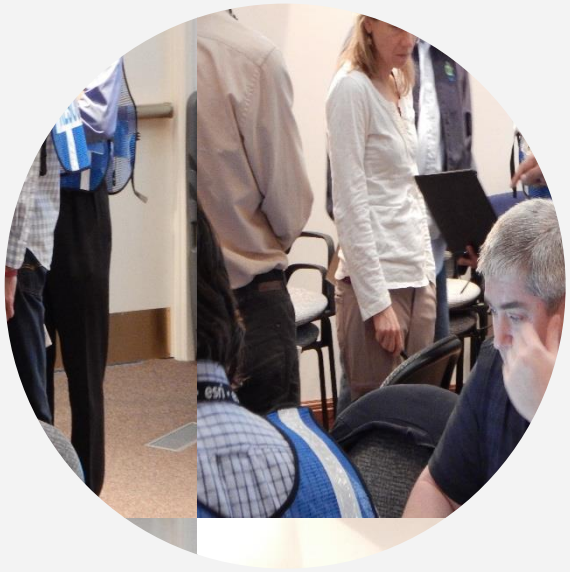
DC Water's OEM provides planning and operational support to the entire utility during emergencies.

OEM supports DC Water across all departments to ensure that DC Water is prepared to respond to natural and man-made hazards, crises and disasters

Preparedness

Training & Exercising the Plan

Assess and validate plans



Clarify roles and responsibilities

Identify opportunities for improvement

Trainings cover many aspects of DC Water's Emergency Management plans, procedures, and Incident Management Team capabilities.

Response

Incident Management Team

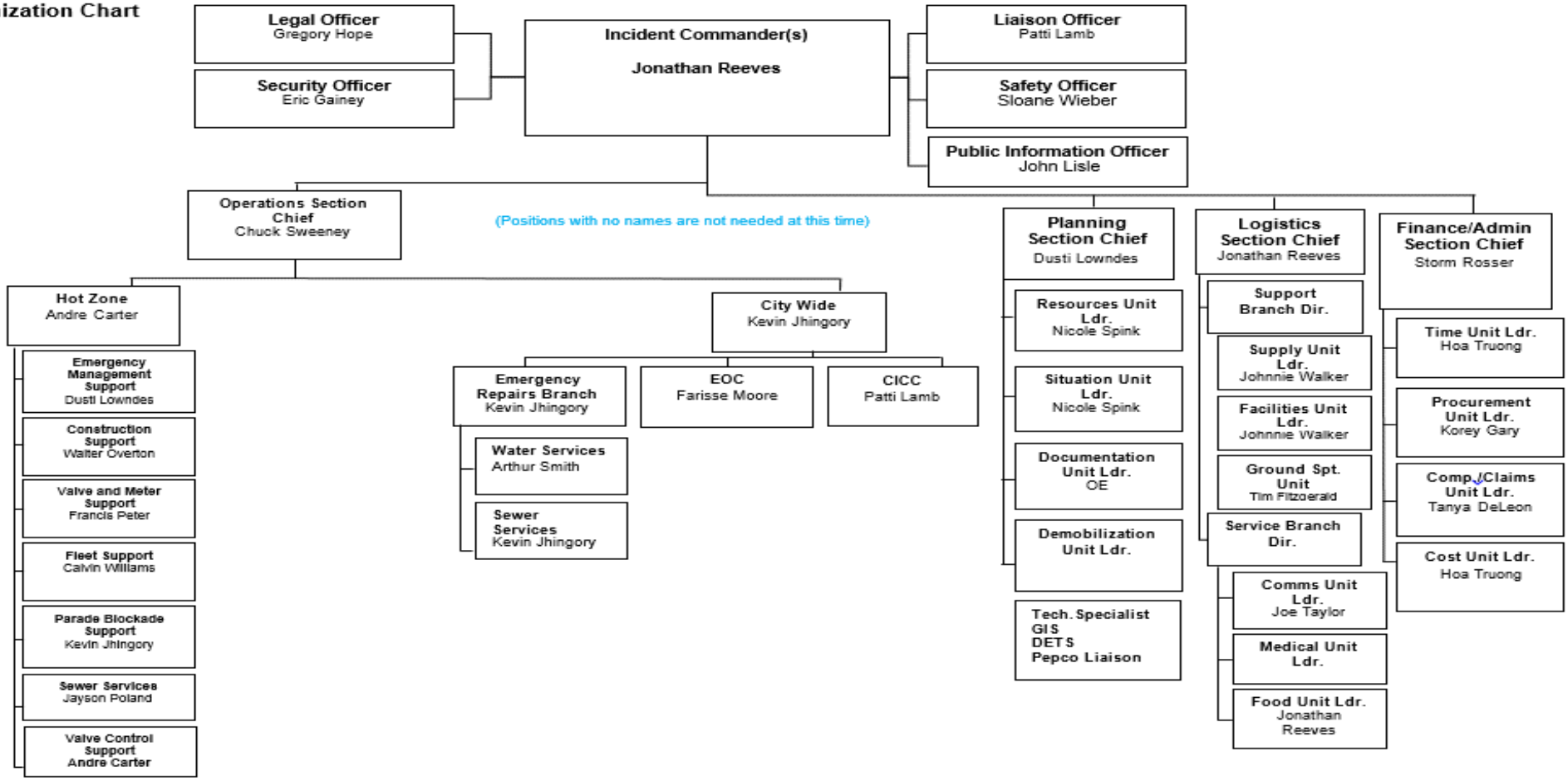
The Authority's Incident Management Team (IMT), is a standing team of incident command system (ICS) trained personnel, from different departments and programs, that provide the command and control infrastructure to facilitate the management, response and documentation of an incident or event.

INCIDENT ORGANIZATION CHART (ICS 207)

1. Incident Name: 2017 Presidential Inauguration

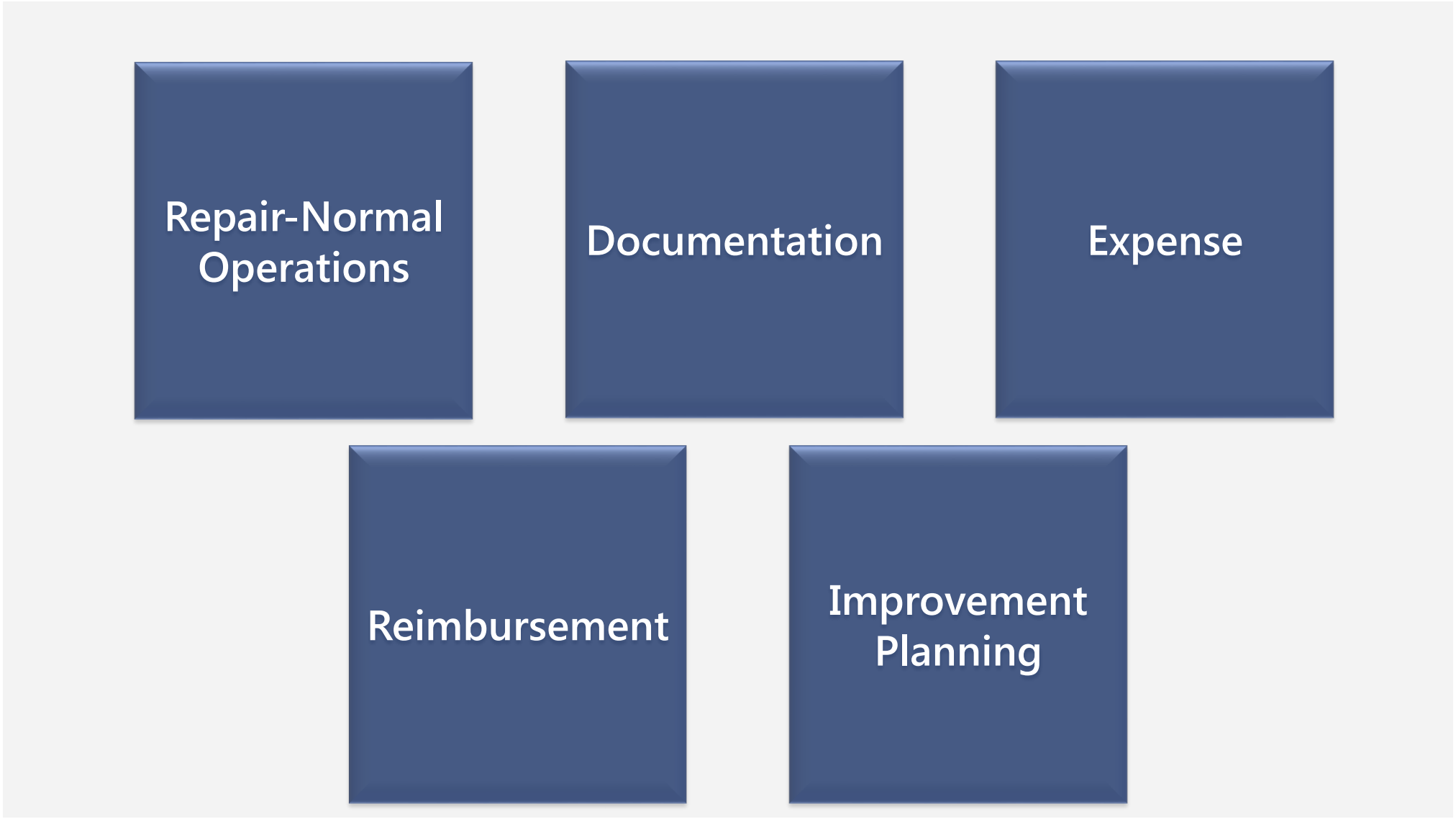
2. Operational Period: Date From: 1/20/2017 Date To: 1/20/2017 Time From: Time To:

3. Organization Chart



ICS 207 | IAP Page ___ | **4. Prepared by:** Name: Nicole Spink Position/Title: SitUnit Signature: _____ Date/Time: _____

Recovery


Repair-Normal Operations
Documentation
Expense
Reimbursement
Improvement Planning

Office of Emergency Management
301 Bryant St, NW
Washington, D.C 20001
(202) 612-3449
Dcwater.OEM@dcwater.com

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY
BOARD OF DIRECTORS CONTRACTOR FACT SHEET

ACTION REQUESTED

GOODS AND SERVICES CONTRACT OPTION YEAR

Document Management Services
(Joint Use)

Approval to exercise option year two (2) for Document Management Services contract in the amount of $389,409.84.

CONTRACTOR/SUB/VENDOR INFORMATION

PRIME:	SUBS:	PARTICIPATION:
Canon Solutions America, Inc. One Canon Park Melville, NY 11747	N/A	N/A

DESCRIPTION AND PURPOSE

Original Contract Value:	$389,409.84
Original Contract Dates:	04-23-2015 – 04-22-2016
No. of Option Years in Contract:	4
Option Year 1 Value:	$389,409.84
Option Year 1 Dates:	04-23-2016 – 04-22-2017
Modification Value:	($4,056.48)
Modification Dates:	08-23-2016 – 04-22-2017
Option Year 2 Value:	**$389,409.84**
Option Year 2 Dates:	**04-23-2017 – 04-22-2018**

Purpose of the Contract:

To contract for uninterrupted Document Management Services that includes managing the Reprographics Center, Mailroom Operations and Copier Maintenance services for the District of Columbia Water and Sewer Authority (DC Water) Department of Facilities Management.

Contract Scope:

The contract provides for the management of the Reprographics Center, Mail Room, and Document Management Services.

Spending Previous Year:

Cumulative Contract Value: 04-23-2015 to 04-22-2017: $774,763.20
Cumulative Contract Spending: 04-23-2015 to 01-31-2017: $681,585.11

Contractor's Past Performance:

According to the COTR, the Contractor's quality of workmanship; timeliness of deliverables; conformance to DC Water's policies, procedures and contract terms; and invoicing all meet expectations.

No LBE/LSBE participation.

PROCUREMENT INFORMATION

Contract Type:	Fixed Price	**Award Based On:**	Highest Rated Offeror
Commodity:	Services	**Contract Number:**	15-PR-DFS-05
Contractor Market:	Open Market with Preference Points for LBE and LSBE Participation		

BUDGET INFORMATION

Funding:	Operating	**Department:**	Facilities
Project Area:	DC Water Wide	**Department Head:**	Johnnie Walker

ESTIMATED USER SHARE INFORMATION

User - Operating	Share %	Dollar Amount
District of Columbia	83.65%	$325,741.33
Washington Suburban Sanitary Commission	12.07%	$47,001.77
Fairfax County	2.84%	$11,059.24
Loudoun Water	1.25%	$4,867.62
Other (PI)	0.19%	$739.88
TOTAL ESTIMATED DOLLAR AMOUNT	**100.00%**	**$389,409.84**

3/1/17
Rosalind R. Inge Date
Assistant General Manager
Support Services

3/1/17
Dan Bae Date
Director of Procurement

3/6/17
Mark Kim Date
Chief Financial Officer

George S. Hawkins Date
General Manager

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY
BOARD OF DIRECTORS CONTRACTOR FACT SHEET

ACTION REQUESTED

ENGINEERING SERVICES:

Capital Improvement Program Permit Support Services (Joint Use)

Approval to execute an Architectural and Engineering Services Agreement in an amount not to exceed $4,000,000.00 for first three years (Phase 1) of the contract. Phases 2 and 3 of this contract, consisting of one year each, will be awarded at DC Water's sole discretion pending acceptable performance and evaluation of program implementation for prior phase/s. Board of Directors approval of the contract modification(s) for the subsequent phase/s will be sought at that time.

CONTRACTOR/SUB/VENDOR INFORMATION

PRIME:	SUBS:		PARTICIPATION:
RK&K 300 M Street, SE Suite 880 Washington, DC 20003	Interagency, Inc, Washington, DC	MBE	26.0%
	Sheladia Associates Rockville, MD	MBE	2.8%
	SZ PM Consultants, Inc, Washington, DC	WBE	4.0%

DESCRIPTION AND PURPOSE

Contract Value, Not-to-Exceed:	$4,000,000	
Contract Time:	1,095 Days	(3 Years, 0 Months)
Anticipated Contract Start Date:	04-03-2017	
Anticipated Contract Completion Date:	04-02-2020	

Other firms submitting proposals/qualification statements:

ATCS/EBA *
McKissack & McKissack *
RDC/Louis Berger *

*Asterisk indicates short listed firms.

Purpose of the Contract:

To provide permitting support services, District Department of Transportation (DDOT) reviews and permit tracking for the development and implementation of a capital improvement program (CIP) in the District of Columbia and, for the Potomac Interceptor Sewer System in Maryland and Virginia. This includes the development of an electronic tracking management tool for CIP permit tracking/management as well as DDOT project review coordination.

Contract Scope:

- Provide permit staff support for all CIP projects in the District of Columbia and to a limited extent, in the neighboring jurisdictions.
- Develop a permit tracking tool.
- Coordinate DDOT project reviews.

PROCUREMENT INFORMATION

Contract Type:	Cost Plus Fixed Fee	**Award Based On:**	Highest Ranking Score
Commodity:	Engineering Services	**Contract Number:**	DCFA# 482-WSA
Contractor Market:	Open Market		

BUDGET INFORMATION

Funding:	Capital	**Department:**	Engineering and Technical Services
Service Area:	Water, Sanitary, Combined Sewer	**Department Head:**	Liliana Maldonado
Project:	AU, AV, ME		

ESTIMATED USER SHARE INFORMATION

User	**Share %	Dollar Amount
District of Columbia	100.00%	$4,000,000.00
Federal Funds	0.00%	$
Washington Suburban Sanitary Commission	0.00%	$
Fairfax County	0.00%	$
Loudoun County & Potomac Interceptor	0.00%	$
Total Estimated Dollar Amount	**100.00%**	**$4,000,000.00**

**Under the terms of the IMA, the capital costs associated with each joint use facility are to be split among the users in proportion to the peak flow each user is allocated. It is not possible, at this time, to allocate costs by individual facility. It is anticipated that as projects are developed for work associated with specific facilities and costs are developed, the individual users will be notified and billed accordingly.

3/9/17
Mark Kim Date
Chief Financial Officer

3/9/17
Dan Bae Date
Director of Procurement

3-6-17
Leonard R. Benson Date
Chief Engineer

George S. Hawkins Date
General Manager

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY
BOARD OF DIRECTORS CONTRACTOR FACT SHEET

ACTION REQUESTED

ENGINEERING SERVICES SUPPLEMENTAL AGREEMENT:

Gravity Thickener Upgrades – Phase II
(Joint Use)

Approval to execute Supplemental Agreement No. 04 for $1,206,136. The modification exceeds the General Manager's approval authority.

CONTRACTOR/SUB/VENDOR INFORMATION

PRIME:	SUBS:		PARTICIPATION:
HDR Engineering, Inc. 2600 Park Tower Drive Suite 100 Vienna, VA 22180-7342	Savin Engineers, PC Baltimore, MD	MBE	24.2%
	Diversified Engineering, Inc. Silver Spring, MD	MBE	5.9%
	HB Permitting, Inc. Washington, DC	MBE	0.5%
	PDH Associates, Inc. Potomac, MD	WBE	7.1%
	Clemson Engineering Hydraulics, Inc. Anderson, SC		3.7%

DESCRIPTION AND PURPOSE

Original Contract Value:	$1,100,000	
Value of this Supplemental Agreement:	$1,206,136	
Cumulative SA Value, including this SA:	$4,501,591	
Current Contract Value, Including this SA:	$5,601,591	
Original Contract Time:	365 Days	(1 Year)
Time extension, this SA:	0 Days	
Total SA contract time extension:	2,943 Days	(8 Years, 1 Month)
Contract Start Date:	02-23-2011	
Contract Completion Date:	03-15-2020	

Purpose of the Contract:

Provide engineering services for the development of upgrades to the Gravity Thickeners (GTs) and the Primary Sludge Screening and Degritting Building.

Original Contract Scope:

- Provide a concept design report and preliminary engineering services for improvements to the Gravity Thickener Facility.

Previous Supplemental Agreement Scope:

- Provide engineering services for detailed design and bidding including restoring GTs 5-6 to service; new equipment for GTs 7-10, covers and ventilation for GTs 1-10; new primary sludge degritting equipment; upgrades to electrical and controls systems.
- Preparation of a Commissioning Plan during design and an Operations and Maintenance (O&M) Manual during construction.

Current Supplemental Agreement Scope:

- Provide engineering services for detailed design of additional scope of work, including dilution of the degritter feed system and new pumps, new equipment for GTs 1-4, several improvements for operator safety and updates for changed site conditions.

Future Supplemental Agreement Scope:

- A future supplemental agreement is anticipated to provide professional services during construction for upgrades to the Gravity Thickener Facility.

PROCUREMENT INFORMATION

Contract Type:	Lump Sum/Cost Plus Fixed Fee	**Award Based On:**	Highest Ranking Score
Commodity:	Engineering Design Services	**Contract Number:**	DCFA #425-WSA
Contractor Market:	Open Market		

BUDGET INFORMATION

Funding:	Capital	**Department:**	Wastewater Engineering
Service Area:	Wastewater Treatment	**Department Head:**	Diala Dandach
Project:	BX		

ESTIMATED USER SHARE INFORMATION

User	Share %	Dollar Amount
District of Columbia	41.22%	$ 497,169.00
Washington Suburban Sanitary Commission	45.84%	$ 552,893.00
Fairfax County	8.38%	$ 101,074.00
Loudoun County & Potomac Interceptor	4.56%	$ 55,000.00
Total Estimated Dollar Amount	**100.00%**	**$1,206,136.00**

Mark Kim / 3/9/17
Chief Financial Officer — Date

Dan Bae / 3/9/17
Director of Procurement — Date

Leonard R. Benson / 3-6-17
Chief Engineer — Date

George S. Hawkins / _____
General Manager — Date

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY
BOARD OF DIRECTORS CONTRACTOR FACT SHEET

ACTION REQUESTED

CONSTRUCTION CONTRACT:

Anacostia 2nd High Residential Pressure Reducing Valve Installation (Non-Joint Use)

Approval to execute a construction contract for $1,497,405.00

CONTRACTOR/SUB/VENDOR INFORMATION

PRIME:	SUBS:	PARTICIPATION:
United Plumbing and Mechanical, LLC 70 I Street, S.E. #526 Washington, DC 20003	No MBE contractors* No WBE contractors*	 0.0% 0.0%

*The Contractor performed adequate subcontractor outreach, however, there was minimal interest from qualified MBE/WBE firms and no subcontractor proposals were received.

DESCRIPTION AND PURPOSE

Contract Value, Not-To-Exceed:	$1,497,405.00	
Contract Time:	365 Days	(1 Years, 0 Months)
Anticipated Contract Start Date (NTP):	04-15-2017	
Anticipated Contract Completion Date:	04-15-2018	
Bid Opening Date:	12/12/2016	
Bids Received:	3	
Other Bids Received		
Welsh and Rushe, Inc.	$ 2,886,813.00	
Anchor Construction Corporation	$ 3,860,710.00	

Purpose of the Contract:

To furnish and install domestic pressure reducing valves with integral thermal expansion bypass within private residences.

Contract Scope:

- Installation of approximately 1667 Residential Pressure Reducing Valves with Integral Thermal Expansion Bypass and Appurtenances.
- Miscellaneous demolition and removals of Residential Plumbing

PROCUREMENT INFORMATION

Contract Type:	Fixed Price	**Award Based On:**	Lowest responsive, responsible bidder
Commodity:	Construction	**Contract Number:**	170010
Contractor Market:	Open Market		

BUDGET INFORMATION

Funding:	Capital	**Department:**	Engineering and Technical Services
Service Area:	Water	**Department Head:**	Liliana Maldonado
Project:	MA		

ESTIMATED USER SHARE INFORMATION

User	Share %	Dollar Amount
District of Columbia	100.00%	$1,497,405.00
Federal Funds	0.00%	$
Washington Suburban Sanitary Commission	0.00%	$
Fairfax County	0.00%	$
Loudoun County & Potomac Interceptor	0.00%	$
Total Estimated Dollar Amount	**100.00%**	**$1,497,405.00**

3/9/17

Mark Kim / Date
Chief Financial Officer

3/9/17

Dan Bae / Date
Director of Procurement

3-6-17

Leonard R. Benson / Date
Chief Engineer

George S. Hawkins / Date
General Manager

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY
BOARD OF DIRECTORS CONTRACTOR FACT SHEET

ACTION REQUESTED

CONSTRUCTION CONTRACT:

Small Diameter Water Main Replacement 12a
(Non-Joint Use)

Approval to execute a construction contract for $14,079,200.00

CONTRACTOR/SUB/VENDOR INFORMATION

PRIME:	SUBS:		PARTICIPATION:
Capital Paving, Inc. 2211 Channing St NE Washington, DC 20018 (SLBE)	Aves Construction Corp. Temple Hills, MD	MBE	32.0%
	Acorn Supply & Distributing, Inc. White Marsh, MD	WBE	6.0%

DESCRIPTION AND PURPOSE

Contract Value, Not-To-Exceed:	$14,079,200.00
Contract Time:	715 Days (1 Year, 11 Months)
Anticipated Contract Start Date (NTP):	04-28-2017
Anticipated Contract Completion Date:	04-13-2019
Bid Opening Date:	12-14-2016
Bids Received:	6
Other Bids Received	
Sagres Construction Corporation*	$ 12,442,775.00
Fort Myer Construction Co.	$ 14,741,191.00
J. Fletcher Creamer & Son, Inc.	$ 14,946,171.00
Civil Construction LLC.	$ 14,994,615.00
Anchor Construction Corporation	$ 17,260,490.50

*Lowest bidder was deemed non responsive as they did not submit the required documentation demonstrating their compliance with the Environmental Protection Agency (EPA) MBE/WBE affirmative action steps.

Purpose of the Contract:

Replace water mains that have experienced failures, or have a history of low water pressure or water quality complaints.

Contract Scope:

- Replace approximately 4.0 miles of 16 inch diameter and smaller water mains and associated valves and appurtenances at various locations within Wards, 1, 5, 6, 7 and 8.
- Replace copper water services, 2 inch diameter and smaller, in public and private space.
- Install curb stop /curb stop box, meter box and penetration through building wall and connection to first fitting inside the building including installation of a shut-off valve and pressure reducing valve.
- Install permanent pavement and surface restoration.

Federal Grant Status:

- Construction contract is funded in part by a Federal grant.

PROCUREMENT INFORMATION

Contract Type:	Unit Price	**Award Based On:**	Lowest responsive, responsible bidder
Commodity:	Construction	**Contract Number:**	150050
Contractor Market:	Open Market		

BUDGET INFORMATION

Funding:	Capital	**Department:**	Engineering and Technical Services
Service Area:	Water	**Department Head:**	Liliana Maldonado
Project:	DE, BW		

ESTIMATED USER SHARE INFORMATION

User	Share %	Dollar Amount
District of Columbia	100.00%	$14,079,200.00
Federal Funds**	0.00%	$
Washington Suburban Sanitary Commission	0.00%	$
Fairfax County	0.00%	$
Loudoun County & Potomac Interceptor	0.00%	$
Total Estimated Dollar Amount	**100.00%**	**$14,079,200.00**

** Eligible for Federal Grant Funding at 80% of the District of Columbia share. Grant funding is insufficient to fund all eligible contracts. Federal Grant Funding may be used if additional funding becomes available or if other eligible projects are postponed.

3/8/17
Mark Kim Date
Chief Financial Officer

3/9/17
Dan Bae Date
Director of Procurement

3/8/17
Leonard R. Benson Date
Chief Engineer

George S. Hawkins Date
General Manager

150050 Fact Sheet-SDWMR 12a.v7 Prepared January 31, 2017

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY
BOARD OF DIRECTORS CONTRACTOR FACT SHEET

ACTION REQUESTED

CONSTRUCTION CONTRACT:

Bryant Street Pumping Station HVAC Improvements (Non-Joint Use)

Approval to execute a construction contract for $2,288,000.00

CONTRACTOR/SUB/VENDOR INFORMATION

PRIME:	SUBS:	PARTICIPATION:
W.M. Schlosser Company, Inc. 2400 51st Place Hyattsville, MD 20781	Prince Construction Co., Inc. Washington, DC MBE Roane's Rigging & Transfer, Inc. Owings Mills, MD WBE	33.2% 6.2%

DESCRIPTION AND PURPOSE

Contract Value, Not-To-Exceed:	$2,288,000.00	
Contract Time:	435 Days	(1 Year, 2 Months)
Anticipated Contract Start Date (NTP):	06-01-2017	
Anticipated Contract Completion Date:	08-10-2018	
Bid Opening Date:	02-01-2017	
Bids Received:	2	
Other Bids Received		
CPP Construction Company, Inc.	$2,935,000.00	

Purpose of the Contract:

To provide additional capacity and improvements to the existing Heating, Ventilation and Air Conditioning (HVAC) system at Bryant Street Pumping Station to help protect equipment from overheating and to maintain appropriate working environment temperatures for DC Water staff.

Contract Scope:

- Install a new supplementary air conditioning system for 3rd floor of pumping station building.
- Install new destratification fans for 3rd floor of pumping station building.
- Replace air conditioning system for 2nd floor Information Technology (IT) room of pumping station building.
- Provide various HVAC system improvements to the main pumping station building, meter shop, and warehouse office space.

PROCUREMENT INFORMATION

Contract Type:	Fixed Price	**Award Based On:**	Lowest responsive, responsible bidder
Commodity:	Construction	**Contract Number:**	140170
Contractor Market:	Open Market		

BUDGET INFORMATION

Funding:	Capital	**Department:**	Engineering and Technical Services
Service Area:	Water	**Department Head:**	Liliana Maldonado
Project:	JB		

ESTIMATED USER SHARE INFORMATION

User	Share %	Dollar Amount
District of Columbia	100.00%	$2,288,000.00
Federal Funds	0.00%	$
Washington Suburban Sanitary Commission	0.00%	$
Fairfax County	0.00%	$
Loudoun County & Potomac Interceptor	0.00%	$
Total Estimated Dollar Amount	**100.00%**	**$2,288,000.00**

3/9/17
Mark Kim / Date
Chief Financial Officer

3/9/17
Dan Bae / Date
Director of Procurement

3-6-17
Leonard R. Benson / Date
Chief Engineer

George S. Hawkins / Date
General Manager

Status Report of Public Fire Hydrants for DC Water Services Committee - March 1, 2017

	December Cmte. Report (Dec 05, 2016)	January Cmte. Report (Jan 05, 2017)	February Cmte. Report (Feb 01, 2017)	March Cmte. Report (Mar 01, 2017)
Public Fire Hydrants:	9,514	9,551	9,554	9,543
In Service:	9,457	9,496	9,492	9,487
Marked Out-of-Service (OOS)	57	55	62	56
OOS - defective requiring repair/replacement	41	40	44	41
% OOS requiring repair or replacement (DC Water goal is 1% or less OOS)	**0.43%**	**0.42%**	**0.46%**	**0.43%**
OOS - due to inaccessibility or temp construction work	16	15	18	15

Note: The number of public hydrants in the DC Water system fluctuates; this number fluctuates as hydrants are added and removed during development or construction activities as well as at the request of the Fire Dept.

Breakdown of Public Fire Hydrants Out-of-Service (OOS) as of March 1, 2017 56

Breakdown of Defective

	0-7 Days	8-14 Days	15-30 Days	31-60 Days	61-90 Days	91-120 Days	> 120 Days	Total
Hydrant Needs Repair/Investigation	4	1	0	0	0	0	3	8
Needs Valve Investigation for Low Flow/Pressure or Shut Test for Replacement	2	0	0	0	1	0	1	4
Needs Replacement	2	0	2	3	1	4	17	29
Defective								**41**

Breakdown of Others

	0-7 Days	8-14 Days	15-30 Days	31-60 Days	61-90 Days	91-120 Days	> 120 Days	Total
Temporarily OOS as part of operations such as a main repair	6	0	0	0	0	0	0	6
Construction* - OOS	0	1	0	0	0	0	5	6
Obstructed Hydrant – OOS hydrant due to operation impeded by an obstruction.	0	0	0	0	0	0	3	3
Others								**15**

**Fire hydrants not accessible due to construction activities. Also includes new hydrants which have not yet been commissioned or old hydrants which will be abandoned as part of ongoing construction projects.*

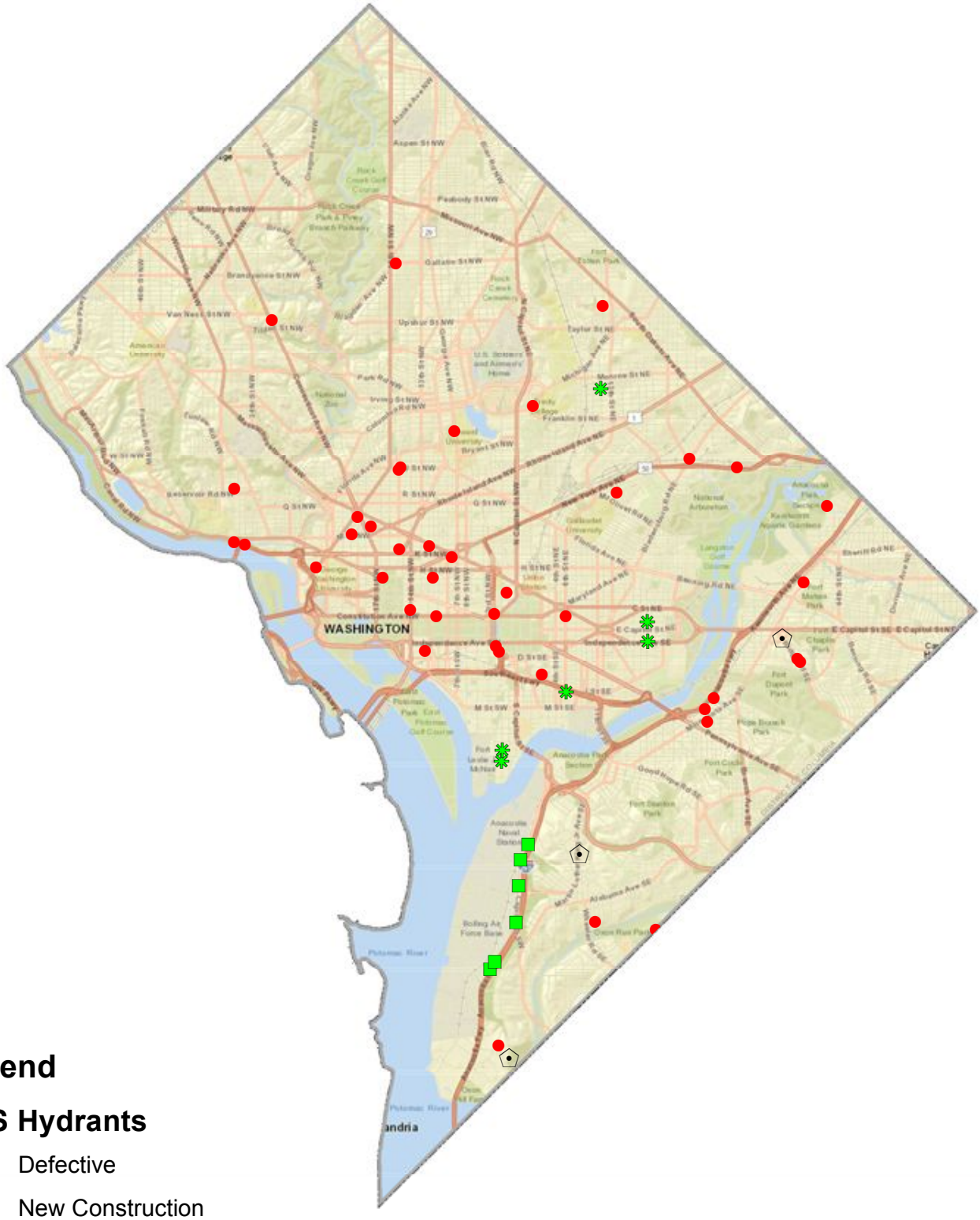
Status of Private Fire Hydrants-Based on FEMS Inspection Reporting

Private Hydrants: 1,319

- **In Service: 1,189**
- **Out-of-Service (OOS): 130**

Map of Public Out-of-Service Hydrants

March 1, 2017



Legend

OOS Hydrants

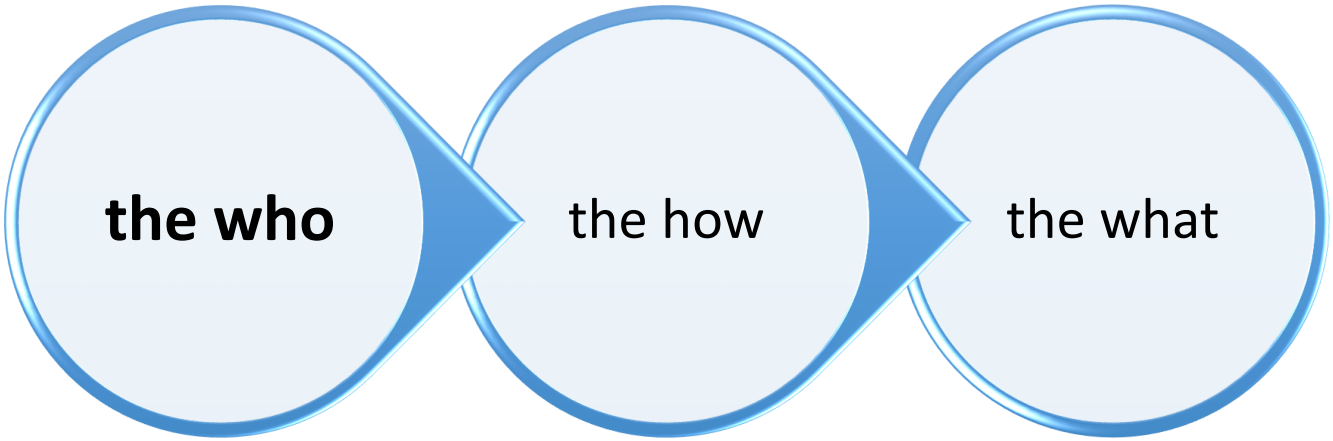
- Defective
- New Construction
- Obstructed
- Temporary

Drinking Water Quality & Technology Overview

Environmental Quality & Operations Committee

Jessica Edwards-Brandt, Director
March 16, 2017

agenda



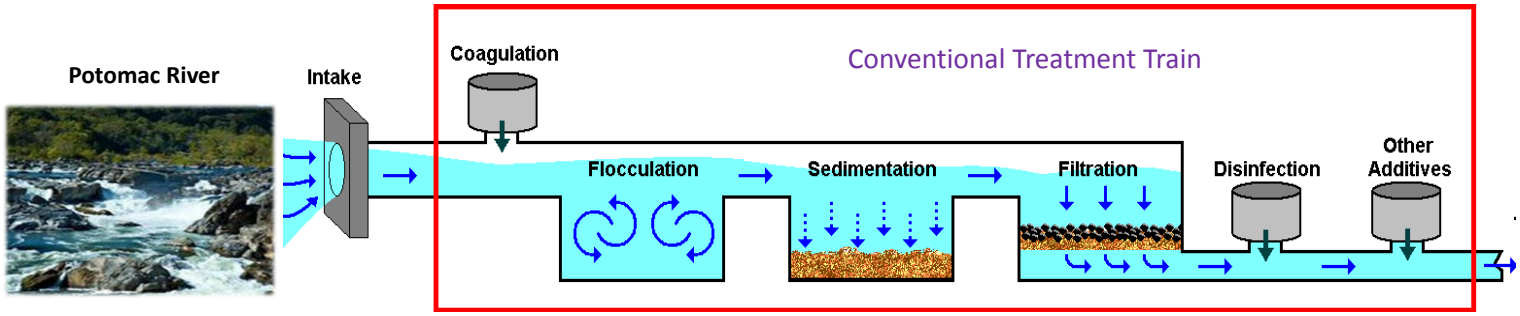
the who

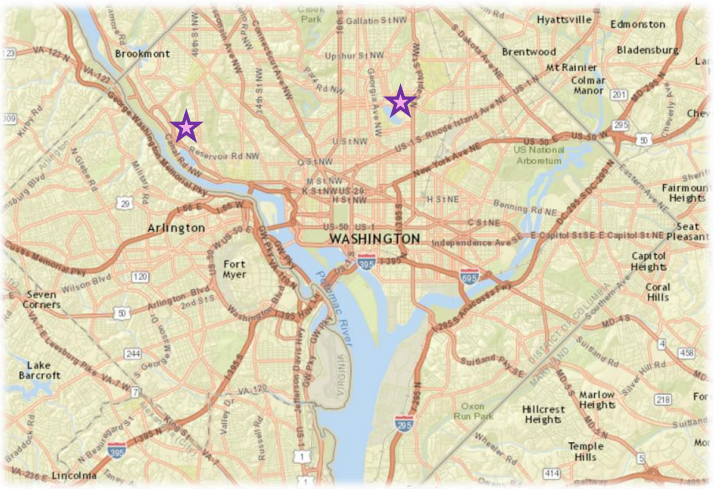
- the **Department of Water Quality & Technology**

Branch	Responsibilities
Drinking Water Division	Regulatory & Voluntary Monitoring Programs
Compliance	Cross Connection & Illegal Hydrant Usage
Drinking Water Research and Development	Research, Development, Innovation

- all working to provide outstanding drinking water

Drinking Water Treatment





Washington Aqueduct Army Corp of Engineers operates two water treatment plants:

Dalecarlia Water Treatment Plant

McMillan Water Treatment Plant

dc water is life

the what – Drinking Water Division

- Safe Drinking Water Act requires monitoring of **water quality**
  - **Lead & Copper Rule (LCR)**
    - **Minimum 100 samples from homes, every 6 months, stagnant water**
    - **OCCT (Optimal Corrosion Control Treatment) monitoring**
  - **Total Coliform Rule (TCR)**
    - **240 samples collected per month across District**
  - **Disinfection Byproduct Rule**
    - **Quarterly monitoring at 12 sites across District**
  - **Unregulated Contaminant Monitoring Rule (UCMR4)**

dc water is life

Water Quality Monitoring - Catching it All

- **Customer Complaints and investigations**
- **Main breaks**
- **Water main testing**
- **Hydrant testing**
- **Total Coliform Monitoring**
- **Schools & Daycare testing**
- **Online Monitoring**

And here is what it looks like….

dc water is life

Flushing

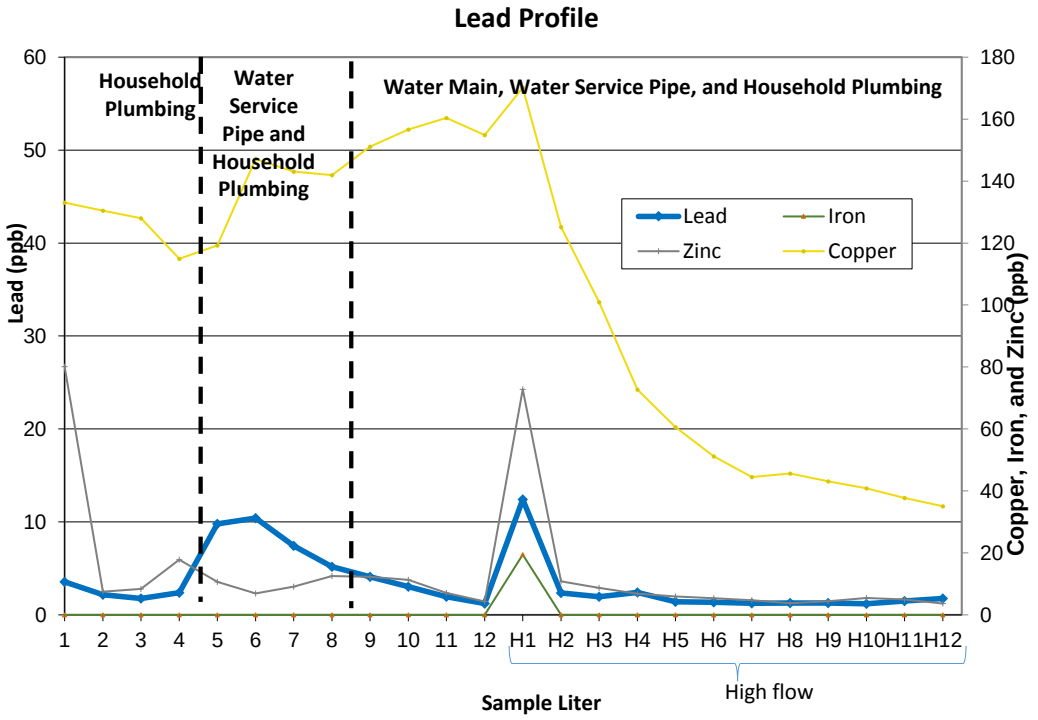
- **Background on flushing programs**
  - Unidirectional Flushing (UDF) program – close valves to direct flow in one direction, increasing flow rate to scour pipe
    - Flush half the system annually (includes new mains, areas with existing good water quality and low water age)
  - Water Quality Flushing Program - mixture of UDF and Spot flushing
    - Response to discolored water complaints (typically low chlorine residual, high iron and discolored water)
    - Multi-step process includes flushing, valve investigation, and water quality testing during flush
    - In 2014, Water Quality changed to focus on spot flushing in problem areas – significantly reduced complaints for these areas

- **Revised Flushing Program currently under review**
  - Reduce water age to improve chlorine residual
  - Flush all dead-ends
  - Minimize softening of scales and remove "loose scale"

dc water is life

Lead Programs

- Lead and Copper Rule – many requirements and details = excessive review
  - OCCT
- Customer Demand Lead Test Kit
- Lead service line replacement
  - Test kit
- Lead service line identification
  - 10 sample test kit
- Lead profiles and investigations
  - Onsite sample collection
- Sharing information with DOEE
- Lead pipe loop research
- Outreach



the what – Compliance Programs

- DC Municipal Regulations require code enforcement to protect **water quality**
  - **Cross Connection Control Program**
    - **60 surveys/month goal**
    - **Update regulations to include Enforcement Fines**
  - **Illegal Fire Hydrant Usage**
  - **Water Quality Investigations**

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the what – Research & Development

- Advance drinking water industry research and develop innovative technologies to benefit customers
  - **Distribution system research**
    - **Discolored water**
    - **Biostability**
    - **Flushing**
  - **Premise plumbing research**
    - **Lead**
    - **Microbial growth, opportunistic pathogens**
  - **Washington Aqueduct**
    - **Advanced treatment, biofiltration, distribution system evaluations**

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the stats…

- Over 5000 water samples collected annually
- Approximately 100 water quality related calls answered per month (half are lead related calls)
- Over 800 flushing jobs annually
- Over 500 voluntary lead test kits sent to customers in 2016
- At least 3 recent national and regional presentations related to lead service lines (The Expert, Maureen Schmelling!)
- Approximately 15 enforcement letters related to cross connections and backflow preventers sent per month
- At least 48 illegal fire hydrant connection investigations in 2016
- 13 water quality related studies since 2014 (industry wide and internal)

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questions

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