



# 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, June 15, 2017  
9:30 a.m.*

- |                   |  |                               |
|-------------------|--|-------------------------------|
|                   | <b>I. Call to Order</b>                            | James Patteson<br>Chairperson |
| <b>9:30 a.m.</b>  | <b>II. AWTP Status Updates</b>                     | Aklile Tesfaye                |
|                   | 1. BPAWTP Performance                              |                               |
| <b>9:40 a.m.</b>  | <b>III. Division J - Northeast Boundary Tunnel</b> | Carlton Ray                   |
| <b>10:00 a.m.</b> | <b>IV. Action Items</b>                            | John Bosley/Len Benson        |

### Joint Use

1. 16-PR-DWT-41A - Supply and Delivery of Methanol, Colonial Chemicals
2. 16-PR-DWT-41B - Supply and Delivery of Methanol, Mitsubishi International
3. Contract No. 140150 - Anacostia River Combined Sewer Overflow Control Projects Division J – NE Boundary Tunnel, Salini Impregilo S.A. Healy JV
4. Contract No. 170050 - Emergency Sewer Main Infrastructure Repair & Replacement, Anchor Construction Corp.

### Non-Joint Use

1. None

- |                   |   |                 |
|-------------------|---|-----------------|
| <b>10:20 a.m.</b> | <b>V. St. Elizabeth Water Tank and PRV Projects</b> | Deidre Saunders |
|-------------------|---|-----------------|

- |                   |              |  |                               |
|-------------------|--------------|--|-------------------------------|
| <b>10:40 a.m.</b> | <b>VI.</b>   | <b>Water Quality Monitoring</b>  | Charles Kiely                 |
|                   |              | <b>1.</b> Coliform Testing<br><b>2.</b> LCR Compliance Testing   |                               |
| <b>10:45 a.m.</b> | <b>VII.</b>  | <b>Fire Hydrants Update</b>  | David Wall                    |
|                   |              | <b>1.</b> <a href="#">Status Report of Public Fire Hydrants</a><br><b>2.</b> <a href="#">Out of Service Fire Hydrant Map</a> |                               |
| <b>10:50 a.m.</b> | <b>VIII.</b> | <b>Other Business/Emerging Issues</b>  |                               |
| <b>10:55 a.m.</b> | <b>IX.</b>   | <b>Executive Session*</b>  |                               |
| <b>11:00 a.m.</b> | <b>X.</b>    | <b>Adjournment</b>   | James Patteson<br>Chairperson |

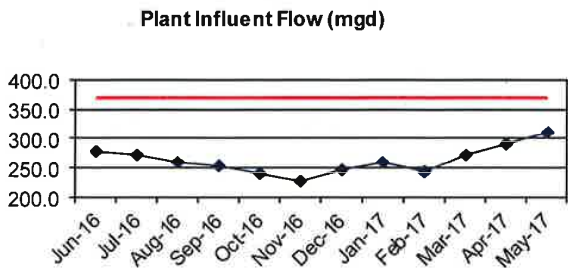
\* The DC Water Board of Directors may go into executive session at this meeting pursuant to the District of Columbia Open Meetings Act of 2010, if such action is approved by a majority vote of the Board members who constitute a quorum to discuss: matters prohibited from public disclosure pursuant to 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.** Assistant General Manager, Blue Plains. Prepare a presentation to the Committee about the DEMON Annamox process once the facility is commissioned. **[Scheduled for September 21, 2017 - EQ & OPs Mtg]**
- 2.** General Manager, DC Water: Arrange a tour of security facilities and command center for Committee members. **[TBD]**

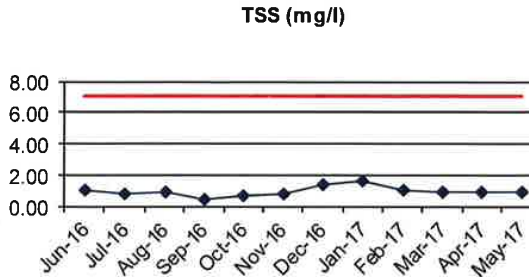
## BLUE PLAINS ADVANCED WASTEWATER TREATMENT PLANT PERFORMANCE REPORT – MAY 2017

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 310 MGD. There was 68 MG of Excess Flow during this reporting period. The following Figures compare the plant performance with the corresponding NPDES permit limits.



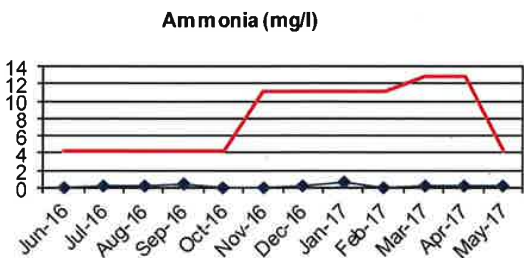
■ Influent Flow    — Average Design Capacity

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.



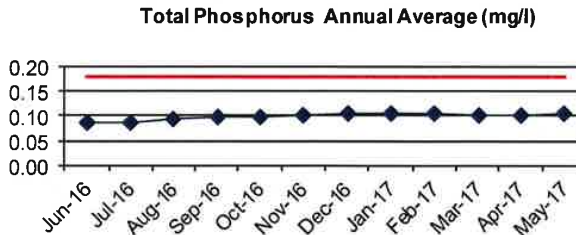
■ Effluent TSS    — Permit Limit

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



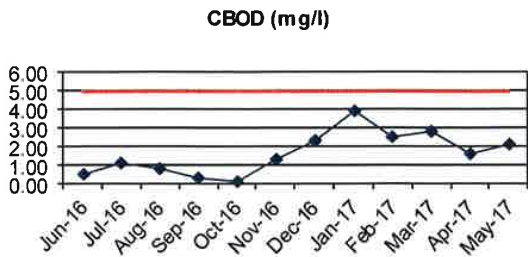
■ Effluent NH3    — Permit Limit

The Ammonia Nitrogen (NH<sub>3</sub>-N) is a measure of the nitrogen found in ammonia. For the month, effluent NH<sub>3</sub>-N concentration averaged 0.28 mg/L and is below the average 4.2 mg/L limit.



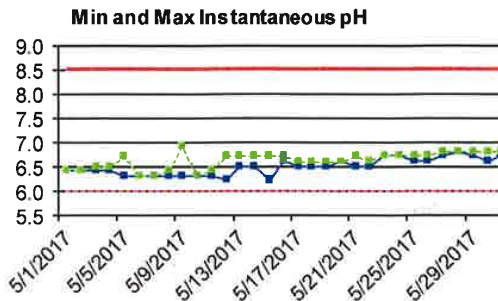
■ Effluent TP    — Permit Limit

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.



■ Effluent CBOD — Permit Limit

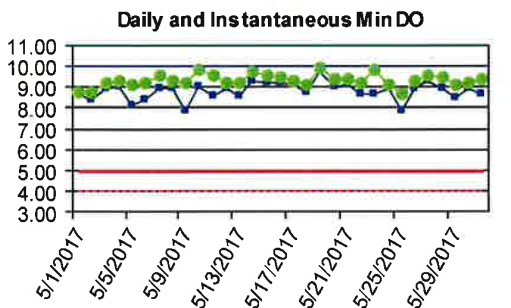
Carbonaceous Biochemical Oxygen Demand (CBOD) is a measure of the amount of dissolved oxygen required for the decomposition of organic materials. The effluent CBOD concentration averaged 2.08 mg/L (partial month), which is below the 5.0 mg/L limit.



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

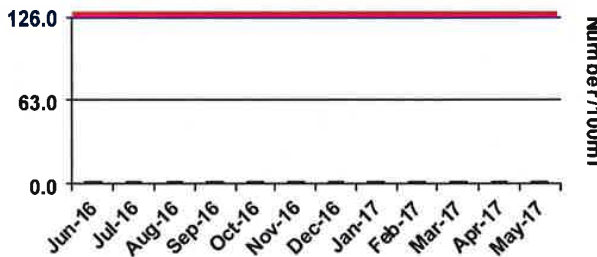
pH is a measure of the intensity of the alkalinity or acidity of the effluent. The minimum and maximum pH observed were 6.2 and 6.9 standard units, respectively. The pH was within the permit limits of 6.0 and 8.5 for minimum and maximum respectively.

**E. coli**



■ 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 8.7 mg/L. The minimum instantaneous DO reading is 7.9 mg/L. The minimum permit limits are 5.0 mg/L and 4.0 mg/L respectively.

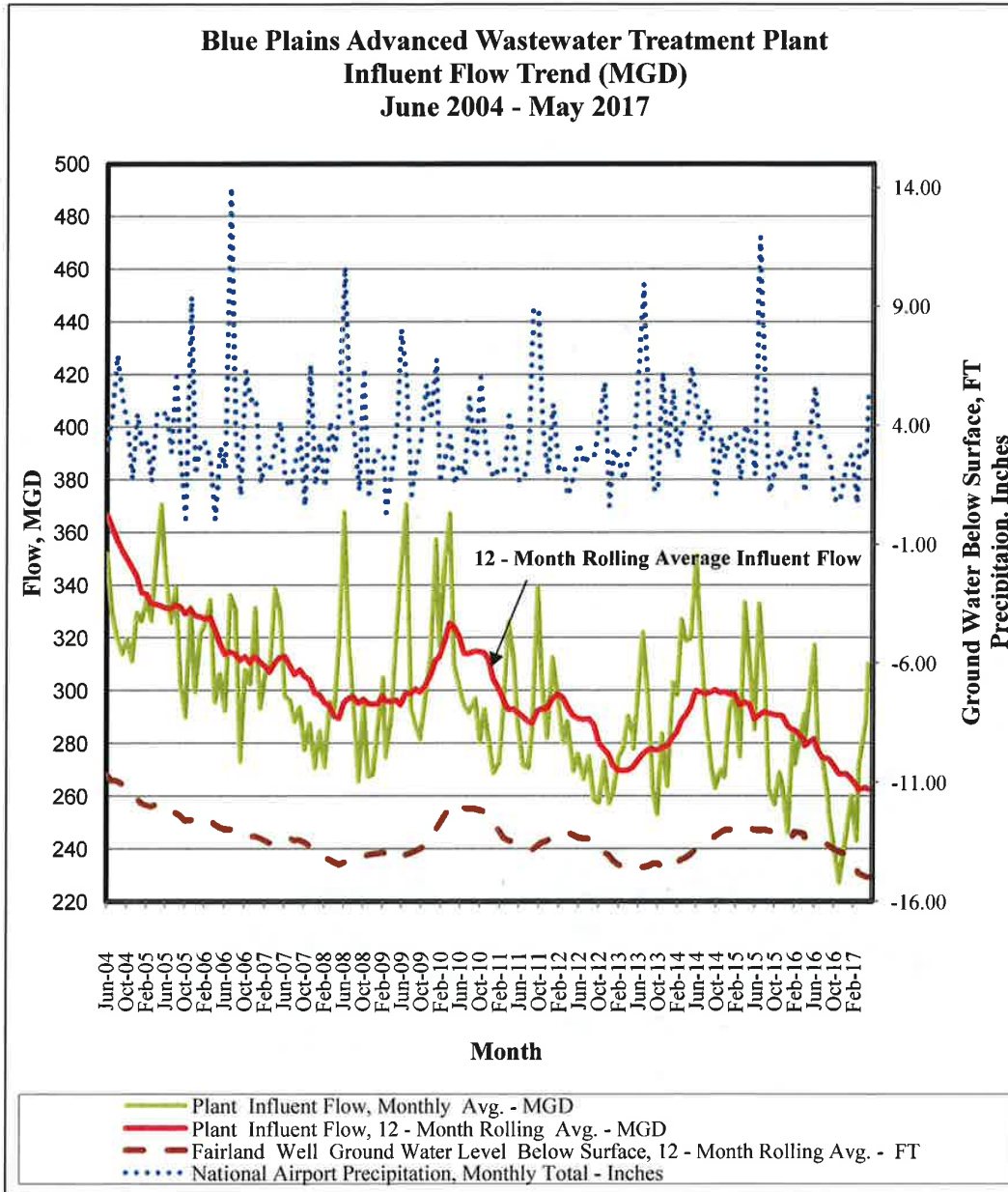


■ E. Coli Geomean — Permit Limit

E.coli is an indicator of disease causing organisms (pathogens). The E.coli permit limit is 126/100mL. The E coli geometric mean is 1.2 /100mL, and well below the permit limit.

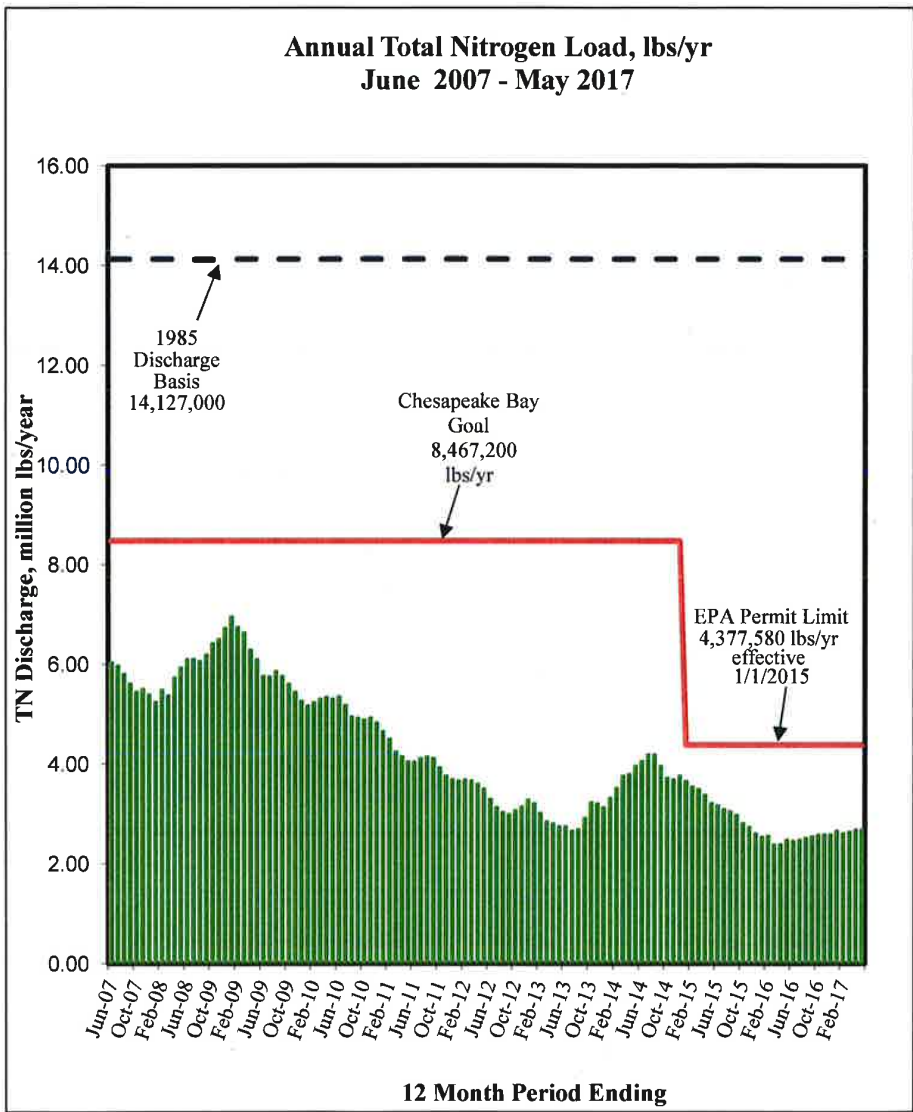
### Plant Influent Flow Trend

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



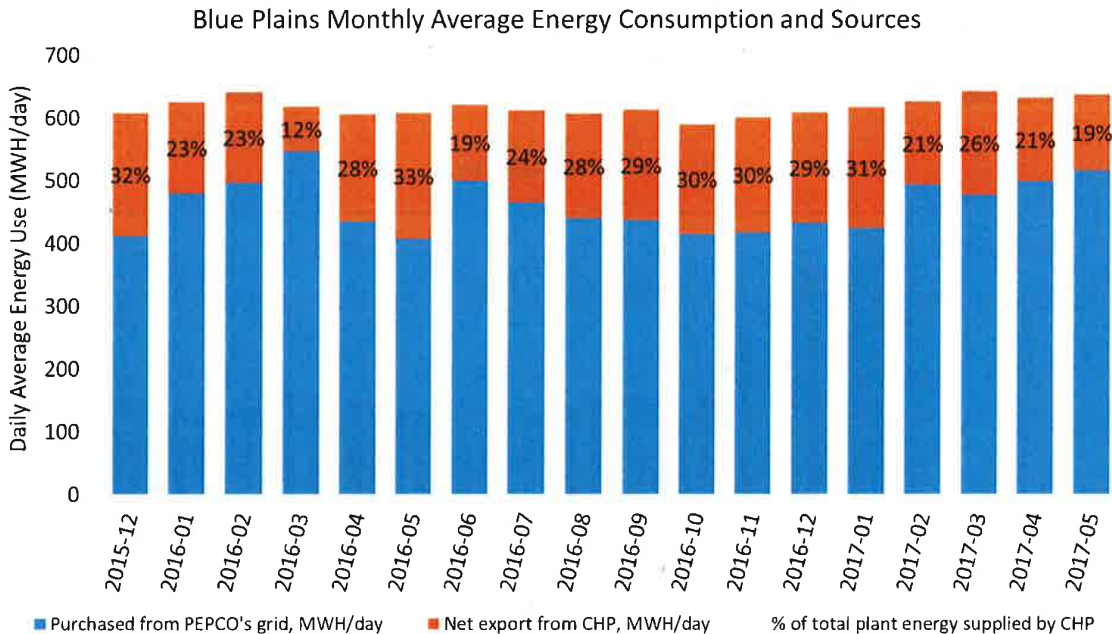
### Blue Plains Total Nitrogen (TN) Removal - Performance

The graph below shows the rolling 12-month total effluent TN discharge, in pounds per year, over a 10-year period ending May 2017. During the month, the TN average concentration and total load in the effluent were 3.73 mg/L and 296,800 lbs respectively. The effluent quality is on track to remain below the NPDES permit annual load limit of 4,377,580 lbs/year.



### Blue Plains Electricity Generation and Usage

In May 2017, the average energy consumed at Blue Plains was 636 megawatt hours per day (MWH/day) or 2.07 MWH of electricity per million gallon of wastewater processed through complete treatment. The Combined Heat and Power (CHP) facility generated an average of 121 MWH/day, making up for 19% of total energy consumed at Blue Plains. The remaining 515 MWH/day was purchased from PEPCO.



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 by CHP are indicated by the blue and orange highlights, respectively.

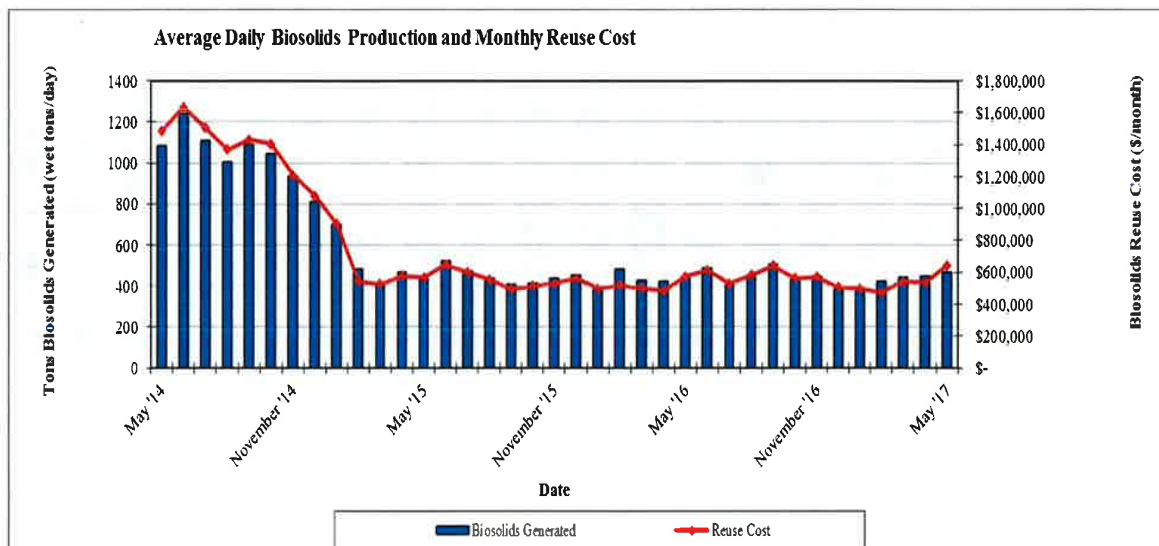
### Combined Heat and Power (CHP) Performance

In May the waste heat generated from the three combustion turbines was not enough to operate the waste heat boilers and meet the thermal hydrolysis/digestion steam demand. As a result, significant amounts of digester gas, typically used to operate the combustion turbines, was diverted to continuously operate an auxiliary boiler and supply adequate steam required to process solids through thermal hydrolysis and digestion. In addition, the air permit stipulates that only one turbine/waste heat boiler can remain in operation when the auxiliary boiler is in use. Therefore, CHP generated a net average of 121 MWH of electricity per day or 19% of the energy use at Blue Plains. Pepco Energy Services, the contract operator of CHP, is finalizing a contract with the original

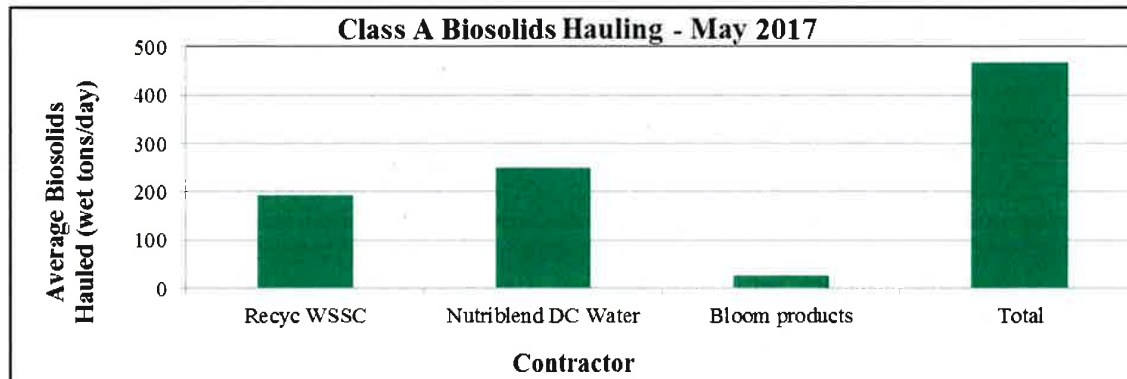
equipment manufacturer (OEM) of the waste heat boilers and duct burners to restore full steam generating capacity and cease continuous operation of the auxiliary boilers.

**RESOURCE RECOVERY**

In May, biosolids hauling averaged 468 wet tons per day (wtpd). The average percent solids for the Class A material was 30.3%. The graph below shows average daily biosolids produced and the associated monthly cost for reuse (transportation and application cost) for a three-year period ending May 2017. In May, diesel prices averaged \$2.75/gallon, and with the contractual fuel surcharge, the weighted average biosolids reuse cost (taking into account the marketed material) was \$40.45 per wet ton.



The average quantities of Class A biosolids transported and applied on farms by the two major contracts (WSSC's Recyc and DC Water's Nutriblend) and the quantities marketed as Bloom are shown on the graph below. In May, 676 wet tons of Bloom were distributed to nine (9) different customers.

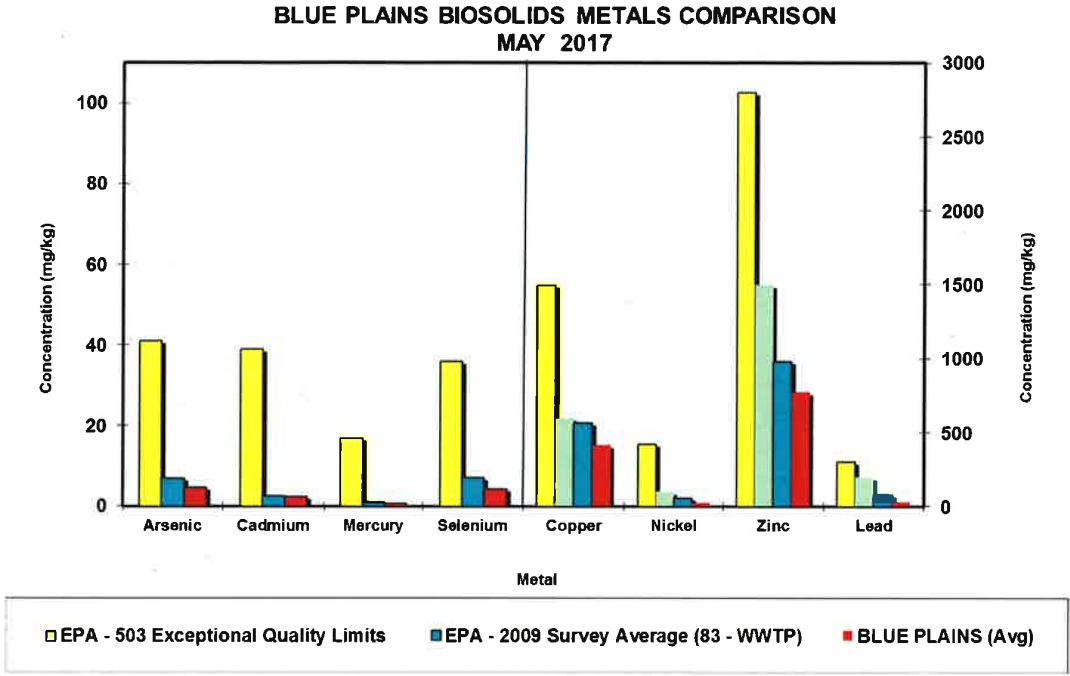




### Product Quality

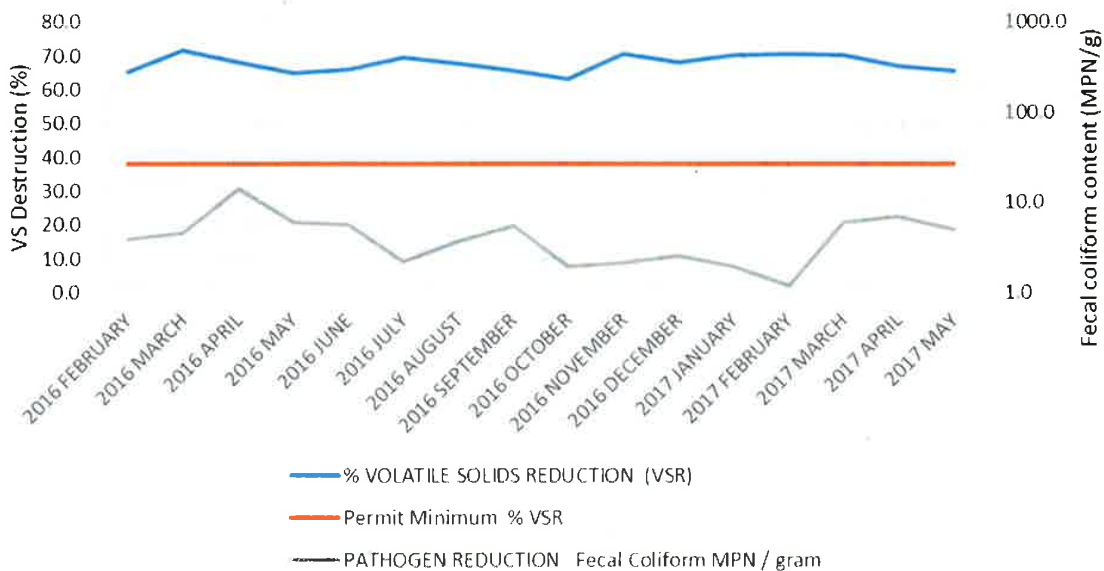
All biosolids produced during the month of May met Class A Exceptional Quality (EQ) requirements required by EPA.

The graph below shows the EPA regulated heavy metals average concentrations in the Class A biosolids. The concentrations are considerably below the regulated exceptional quality limits (EPA-503 Exceptional Quality Limits) and the national average (EPA-2009 Survey Average).



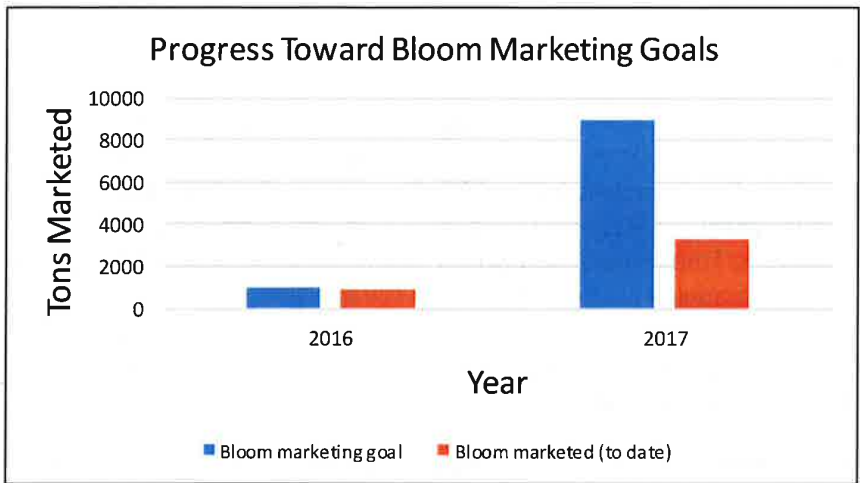
The graph below shows both Vector Attraction Reduction (VAR) and Fecal Coliform (FC) results in the Class A product, both of which are required to maintain the Class A Exceptional Quality (EQ) status. Vector Attraction Reduction is measured by the reduction in Volatile Solids (VS) or organic compounds that may be odorous and attract nuisance vectors such as flies and rodent. DC Water anaerobic digesters reduced VS by over 65%, well above the required 38% minimum. In addition, the graph shows fecal coliforms levels in the Class A product. Fecal coliforms are indicators of disease causing organism (pathogens), and must be below 1,000 MPN/g to meet Class A standards. The FC levels in the Class A product are two orders of magnitude less than the maximum allowable level.

### Blue Plains Class A Biosolids Fecal Coliform and Volatile Solids Reduction



**Bloom Marketing**

Bloom sales eclipsed the 3,000 ton total for the year, with sales to a new large nursery and garden center in Maryland. This partner is interested in serving as a distributor for Bloom, selling it under the Bloom name and helping to promote its use.



**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 focuses 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.

WEF Residuals and Biosolids Conference: The Future of Biosolids and Bioenergy

The research and development team had a significant participation this year in this well attended annual conference. We provided three podium presentations summarizing the most recent work to continue to improve biosolids treatment performance and capacity at Blue Plains. The following papers were presented:

Hasan M., Zhang Q., Riffat R., Al-Omari A., Murthy S., Higgins M., De Clippeleir M. (2017), "Mechanistically Understanding the Dewatering Fundamentals: Impact of Biological Systems and Thermal Hydrolysis on Cake Total Solids and Polymer Demand" Conference proceedings WEF Residuals and Biosolids, Seattle, WA.

Manning E., Romero A., Li B., Al-Omari A., Higgins M., Riffat R., Murthy S., and De Clippeleir H. (2017), "Can We Overcome Hydrolysis Limitation by Better Understanding the Impacts of Physics Within Anaerobic Digestion?" Conference proceedings WEF Residuals and Biosolids, Seattle, WA.

Li B., Romero A., Manning E., Higgins M., Al-Omari A., Murthy S., Riffat R., De Clippeleir H. (2017), "Does operation at increased Ammonia concentration impact hydrolysis rates?" Conference proceedings WEF Residuals and Biosolids, Seattle, WA.

### **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.

In addition to comprehensive testing to support operation of liquid stream processes, the laboratory analyzes 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.

This month the Main Laboratory continued analysis of the USEPA's Discharge Monitoring Report – Quality Assurance (DMR-QA) Study 37, which commenced on March 24, 2017 and concludes on July 7, 2017.

### **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 and other SWPPP compliance activities. Staff is also currently working on development of a new hauled waste fee structure.

### 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. Inspections and sampling were conducted at three (3) SIUs this month: WMATA Shepherd Parkway Bus Division; Watergate Power Plant (Greenpenz); and District Apartments Realty (groundwater remediation site). Sampling was also conducted at a fourth SIU: WMATA Bladensburg Bus Division. DC Water received monthly self-compliance monitoring reports for six (6) SIUs and one NSIU. All SIUs and NSIUs are in compliance with discharge standards for the current month.

DC Water currently manages 86 Temporary Discharge Authorization (TDA) permits, primarily for construction site discharges of groundwater and/or surface runoff in the combined sewer area. Three 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 32 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. Staff renewed two hauled waste permits this month. DC Water collected fees from 17 waste haulers this month, including those on a monthly payment plan option.

DC Water received 822 hauled waste loads (2,131,211 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.

### NPDES Permit Sampling

Pretreatment staff collected one wet weather and one dry weather 24-hour composite samples at outfall 002 and one wet weather grab sample at outfall 001 for low level PCB analysis.





District of Columbia Water and Sewer Authority  
George S. Hawkins, General Manager

---

***Briefing on:***

***DC CLEAN RIVERS PROJECT  
Northeast Boundary Tunnel Procurement***

***Briefing for:***

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

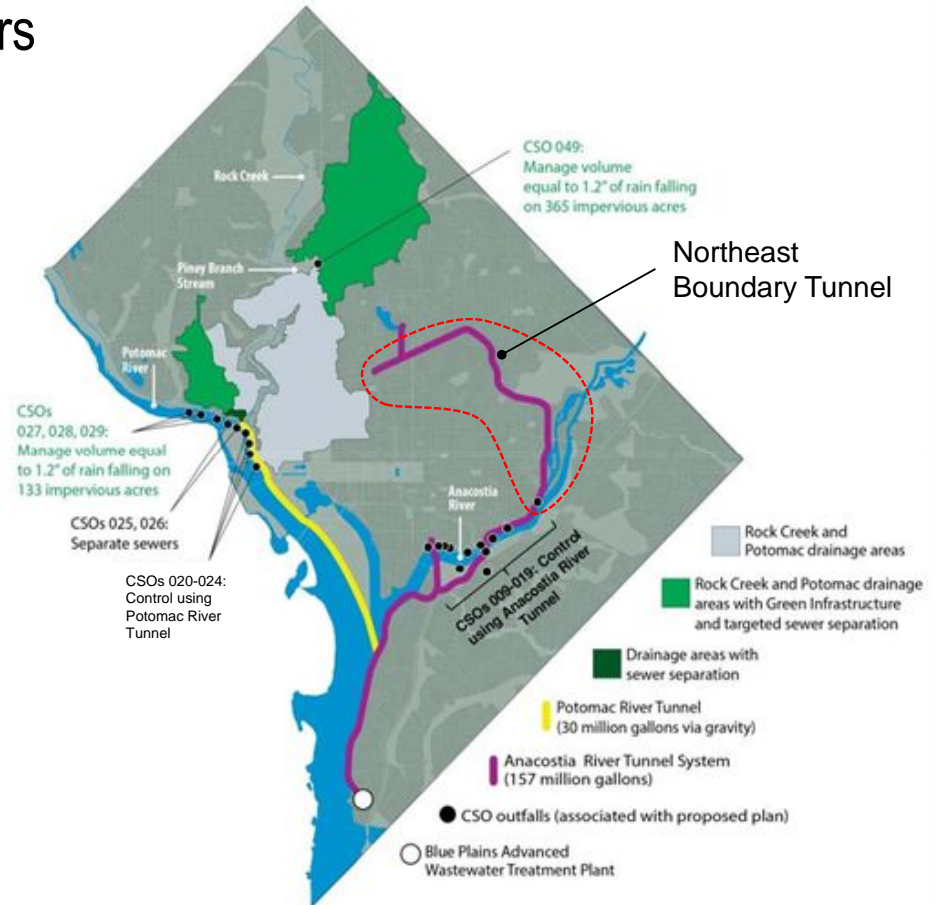
June 15, 2017



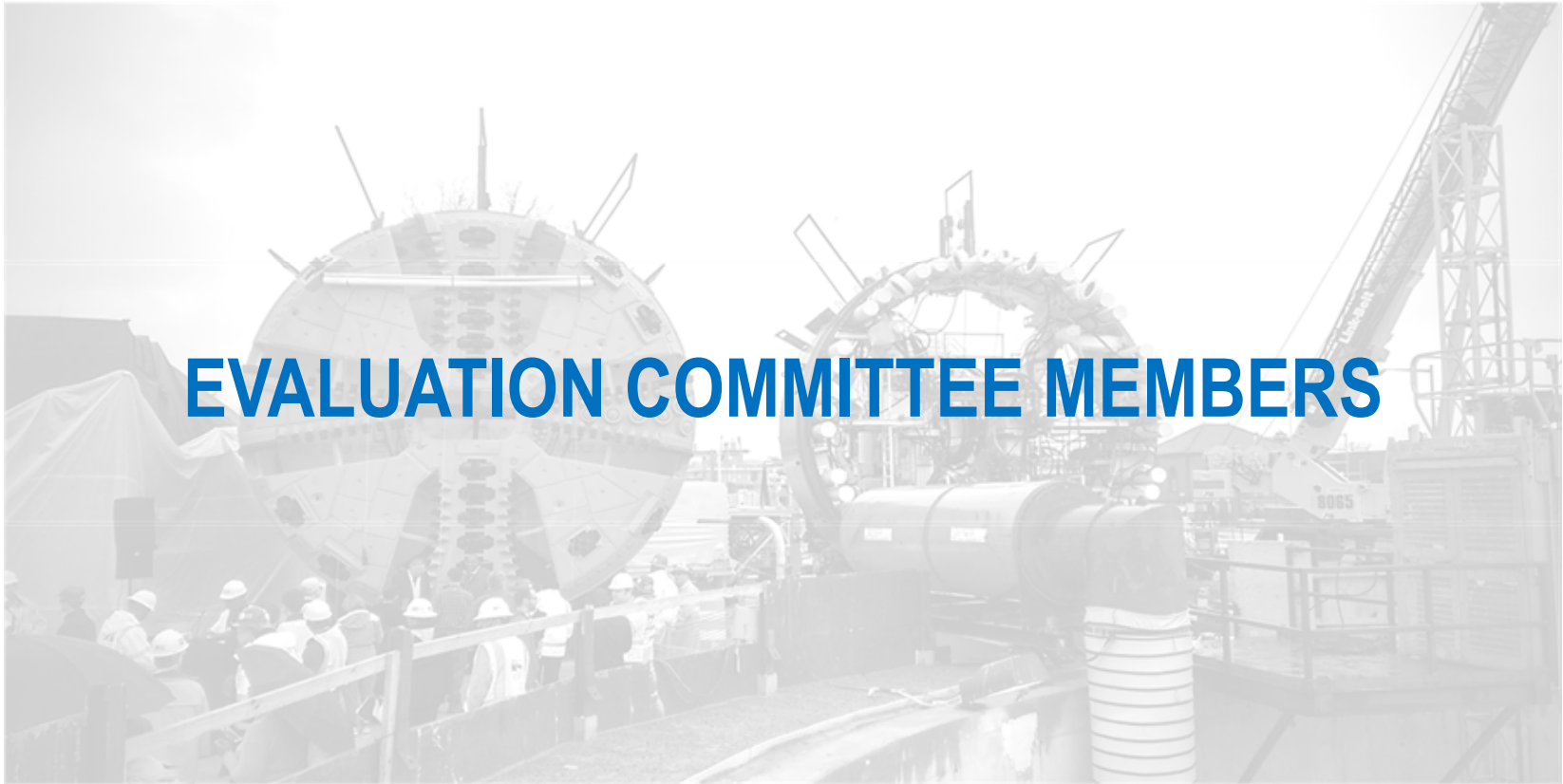
**DCWATER.COM**

# Agenda

- Evaluation Committee Members
- Northeast Boundary Tunnel
- Design-Build Procurement
  - Benefits
  - Process
  - Point Distribution
  - Results
- Recommendation







## Evaluation Committee Members

---

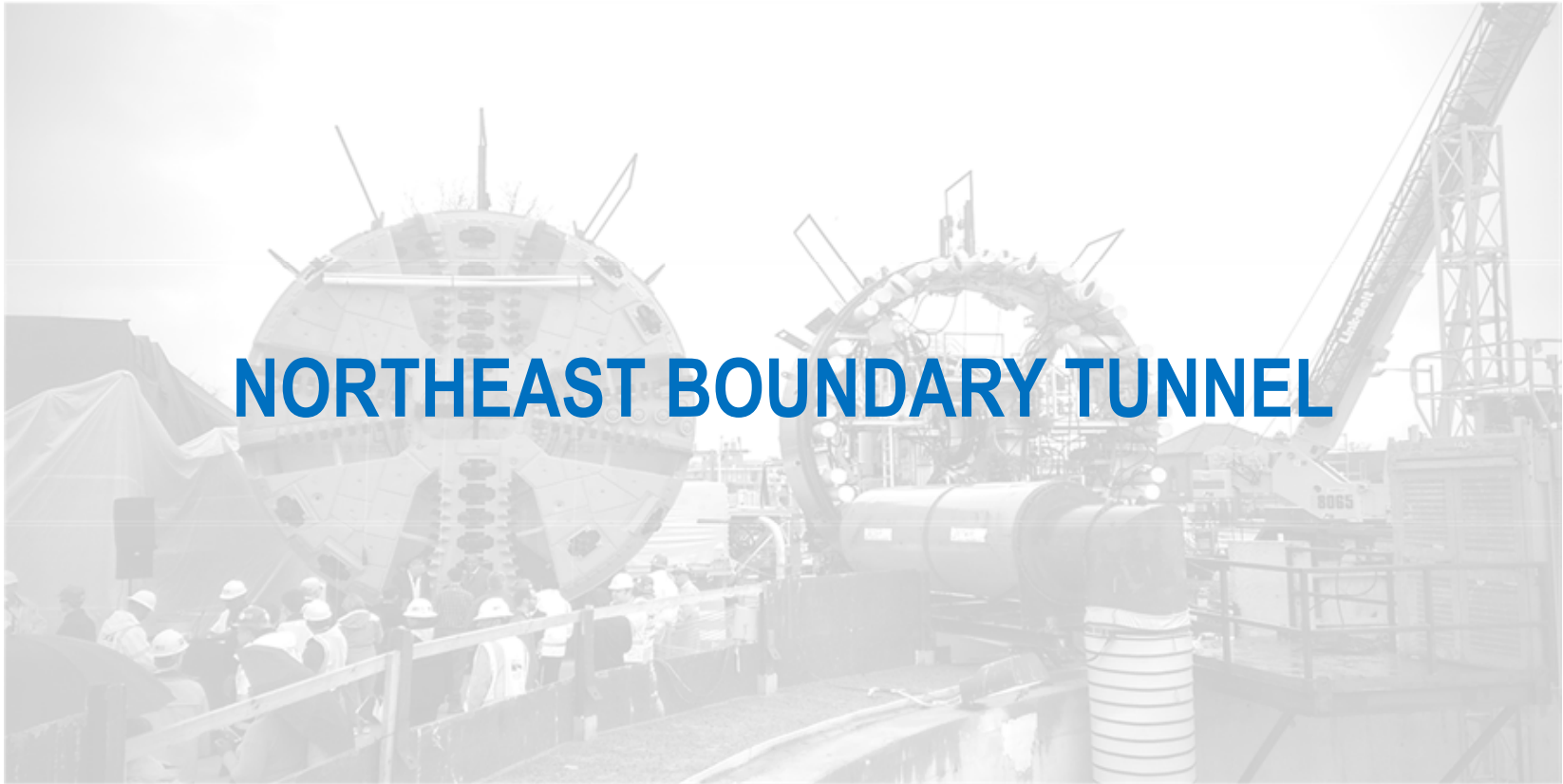
### Evaluation Committee (Voting Members)

Carlton Ray (DC Water)  
Christopher Allen (DC Water)  
Moussa Wone (DC Water)  
Bill Levy (DC Water)  
Cuthbert Braveboy (DC Water)  
Korey Gray (DC Water)  
Michael McGrath (Fairfax)  
Carol Mojica (WSSC)

### Technical Advisors (Non-Voting Members)

Ron Bizzarri (Greeley and Hansen)  
John Bosley (DC Water)  
Justin Carl (Greeley and Hansen)  
Rafael Castro (JCK Underground)  
Bill Edgerton (McMillen Jacobs Associates)  
Roger Ilsley (Project Review Board)  
Joel Kantola (JCK Underground)  
Mike Loulakis (Capital Project Strategies)





# Northeast Boundary Tunnel Magnitude of the Challenge

## ► Combined Sewer Overflows



CSO Discharge to Anacostia River

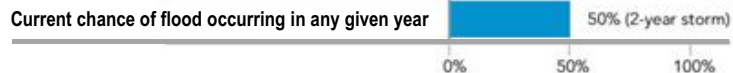


Trash in Anacostia River

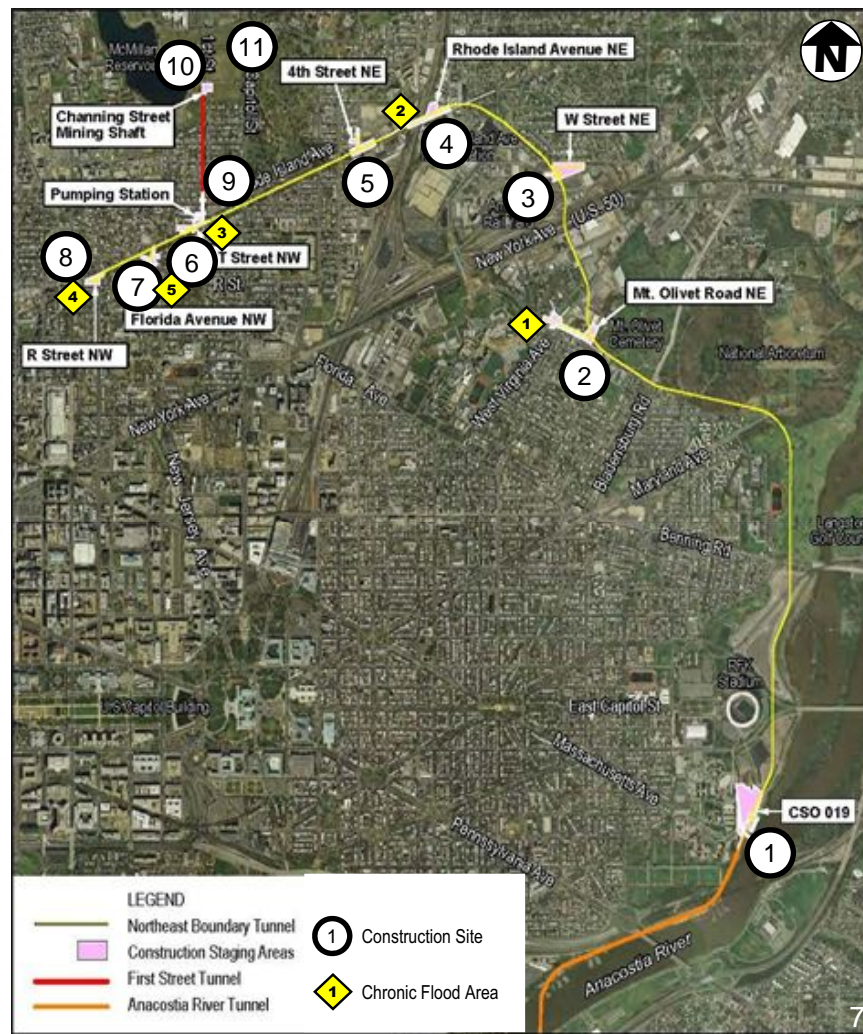
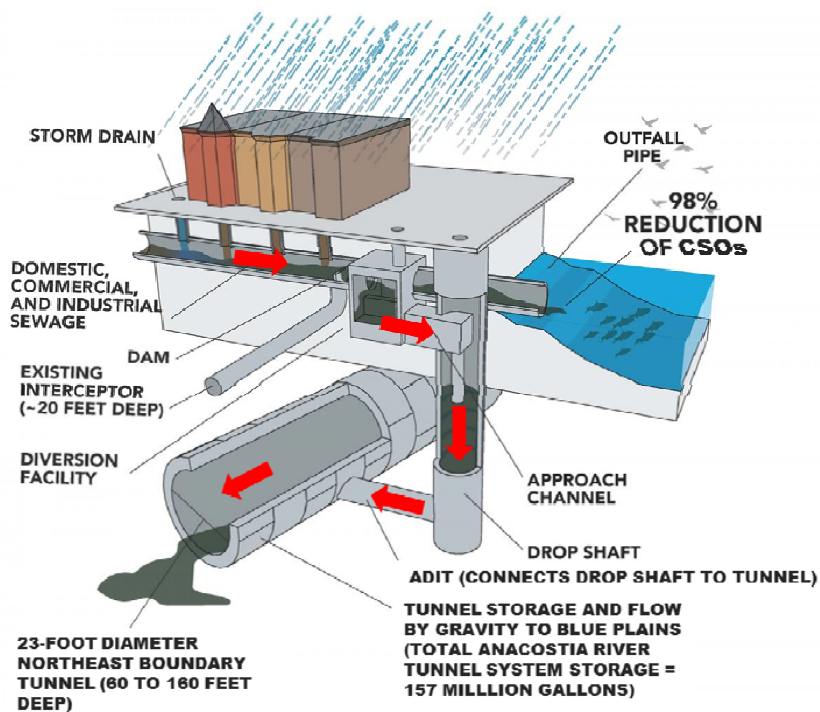
On average, **2.1 billion gallons** of untreated sewage and stormwater runoff (combined sewage) are discharged to the Anacostia River per year.

Bethesda  
Baptist Church

## ► Chronic Sewer Flooding



# Northeast Boundary Tunnel Alignment and Construction Sites



## Northeast Boundary Tunnel Major Components



First Street Tunnel Example: First and V Streets NW, Diversion Chambers and Drop Shaft

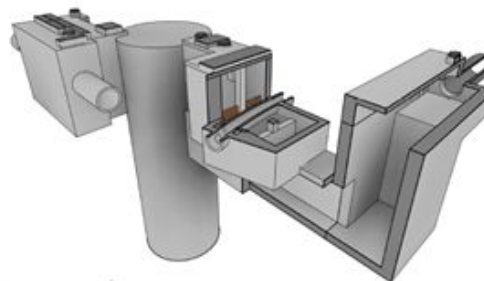
### Quick Facts:

- DC Water's largest project to date
- Largest component of Clean Rivers Project
- Final component of Mayor's Task Force action items
- 5 miles in length
- 23 feet in diameter

**A** 23-ft Dia, 27,000-ft long, Precast Concrete Tunnel



**B** 5 Diversion Chambers, 7 Drop Shafts, 6 Adits, Stormwater Inlets, Diversion Sewers, Vent Vaults



**C** 84,000 cfm Ventilation Control Facility (near Amtrak Yards)



## Northeast Boundary Tunnel Summary of Construction Sites\*

No.	Construction Site	Drop Shaft		Adit		Diversion Chamber	Stormwater Inlet(s)	Vent Vault	Ventilation Control Facility
		Dia.	Depth	Dia.	Length				
1	CSO 019	---- Mining Site, Shaft Cover Construction, Start-up and Commissioning ----							
2	Mt Olivet Road	25	115	14.5	48	X	X		X
3	W Street	50	140					X	X
4	Rhode Island Avenue	25	105	13	19	X	X	X	
5	4th Street	20	100	13	68	X		X	
6	T Street	15	70	8	27		X	X	
7	Florida Avenue	20	70	13	54	X		X	
8	R Street	38	70			X			X
9	Pumping Station (First Street Tunnel)			18.5	70	---- Demolition, Start-up and Commissioning ----			
10	Channing Street (First Street Tunnel, McMillan Stormwater Storage)	---- Demolition, Start-up and Commissioning ----							
11	Michigan Avenue (McMillan Stormwater Storage)	---- Demolition, Start-up and Commissioning ----							

\* All dimensions in feet

Note: Demolition refers to the removal of temporary facilities, previously constructed to provide flood relief in the Bloomingdale and LeDroit Park neighborhoods, that are no longer needed after the Northeast Boundary Tunnel is online in 2023.





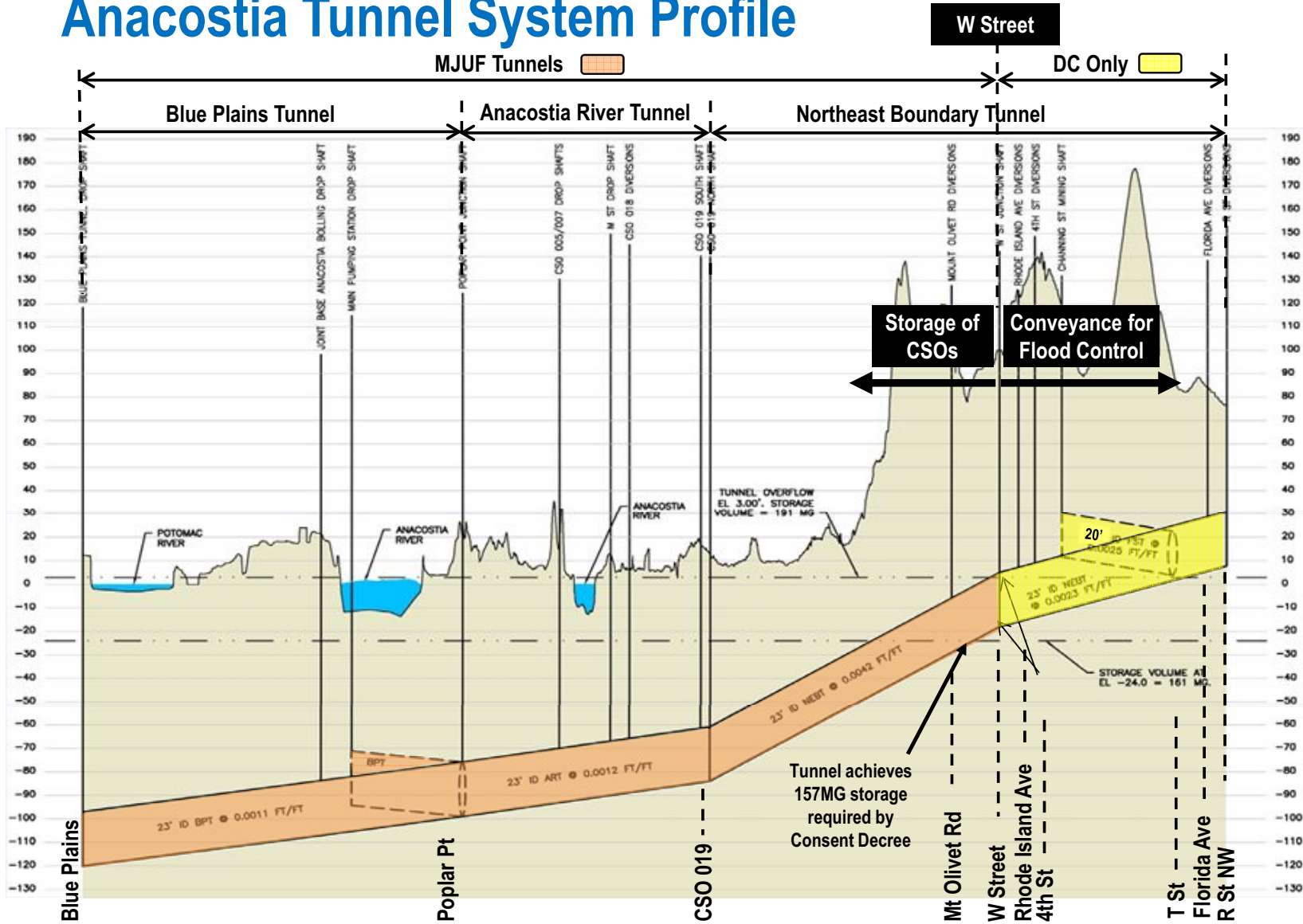
## Intermunicipal Agreement Cost Allocation 2012 Intermunicipal Agreement

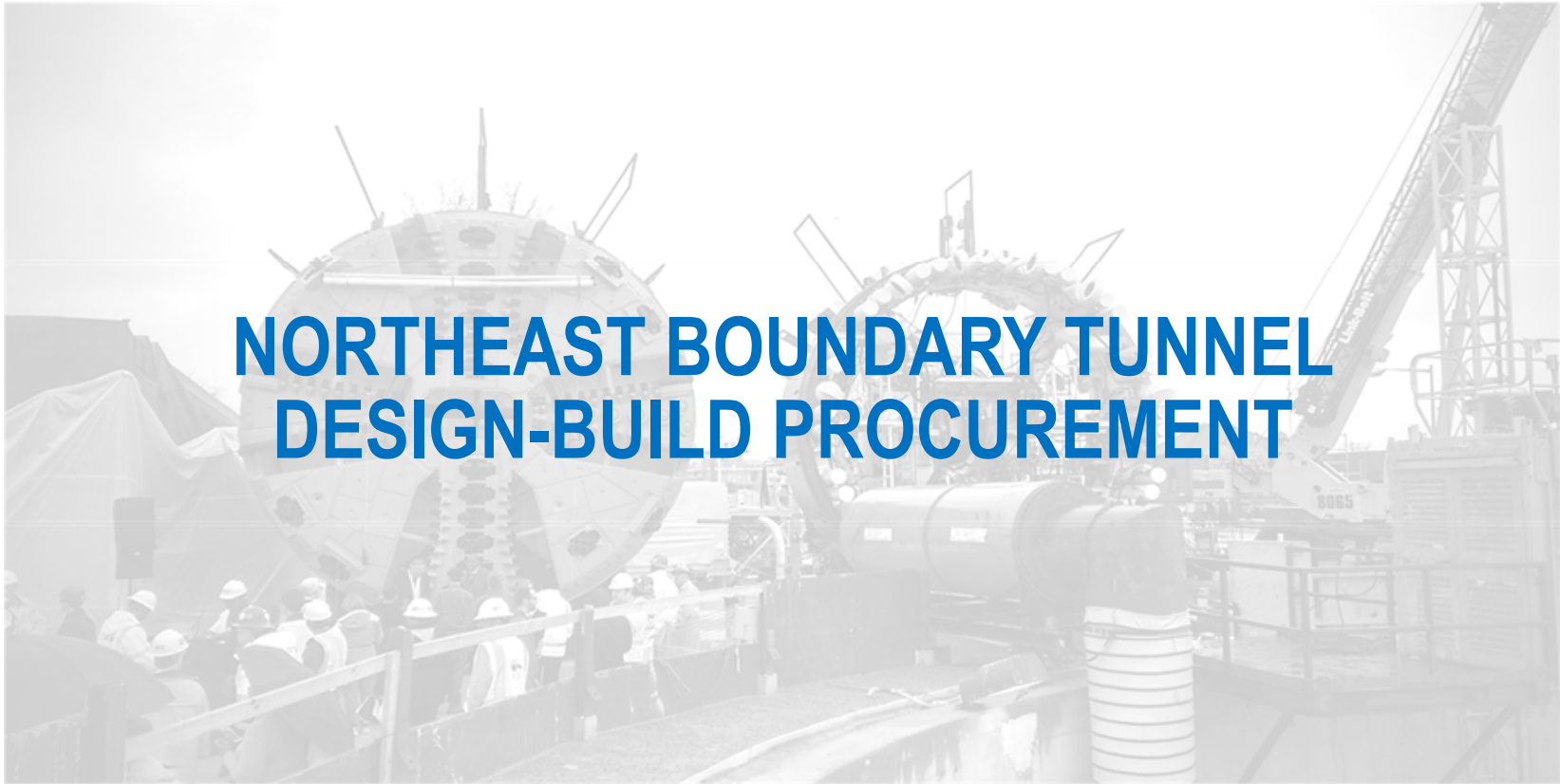
---

- Multi-Jurisdictional Use Facilities (MJUF)
  - DC Water shall make determinations of the extent to which any facility is utilized by one or more entities and is, therefore, a MJUF; (Sect 5.B.1)
  - Regional Committee recommends cost allocations to Leadership Committee for approval
  
- Operating Agreement #2, Section 3:
  - Suburbs pay proportionate share of capital cost of portion of LTCP determined to be MJUF (7.1%)
    - Note: Blue Plains Tunnel has a unique cost allocation because part of the tunnel was for total nitrogen removal, while part was for CSO control
  - Modification of LTCP – DC Water shall evaluate performance assumptions of any modifications to LTCP to determine if capital cost allocations should be modified and present findings to Regional Committee
  - Leadership Committee may adopt revisions to cost allocation



# Intermunicipal Agreement Cost Allocation Anacostia Tunnel System Profile





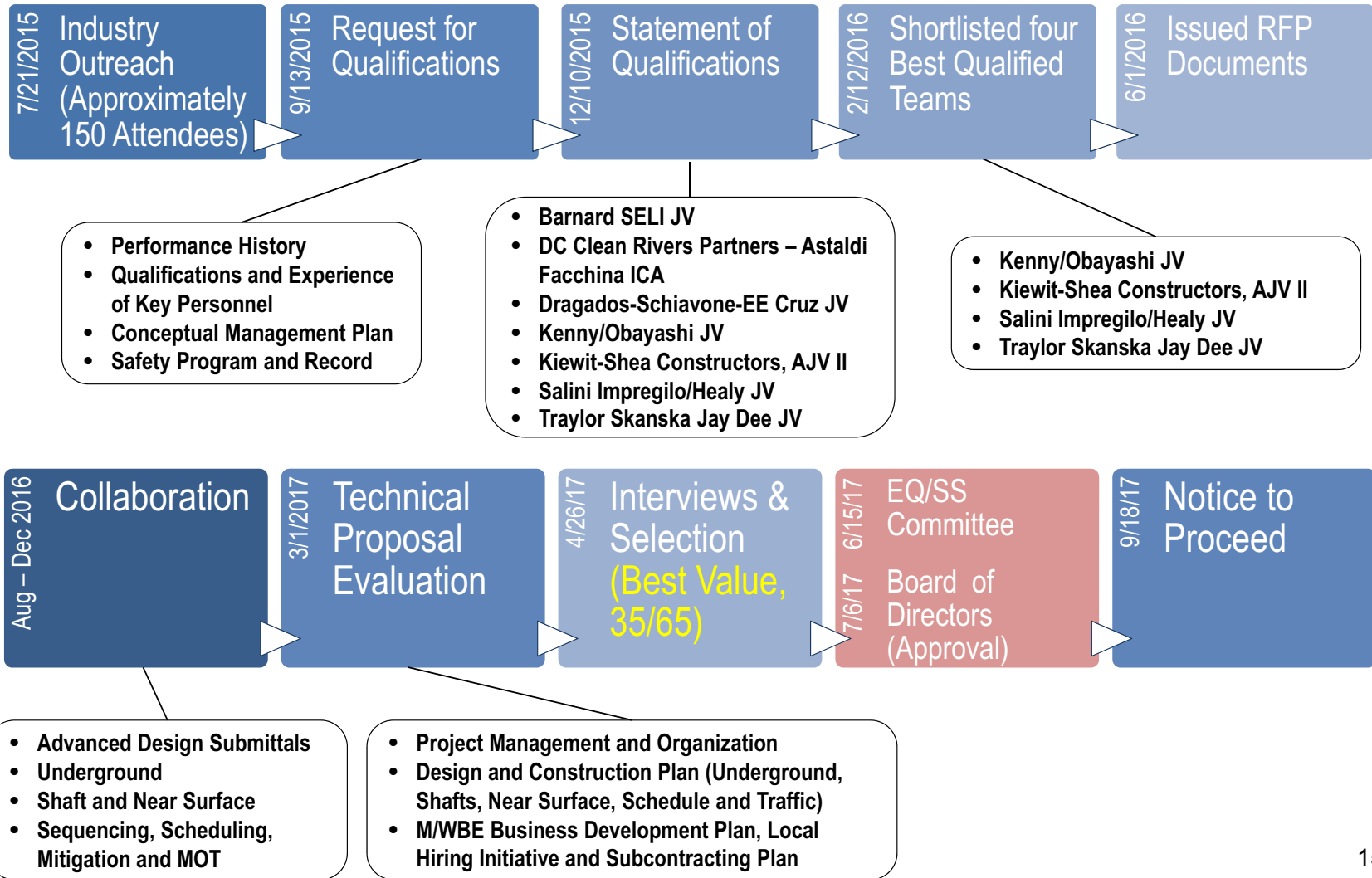
## Northeast Boundary Tunnel Design-Build Procurement Benefits

---

- Meet strict Consent Decree and Task Force milestones
- Allows contractor innovation
- Shortlisted teams assume a portion of the design responsibility
- During collaboration meetings:
  - Shortlisted teams become familiar with DC Water, thus minimizing bid contingencies
  - Information exchange minimizes future contract disputes
  - Emphasis on mitigation of neighborhood impacts



# Northeast Boundary Tunnel Design-Build Procurement Process



## Northeast Boundary Tunnel Design-Build Procurement Technical Proposal Evaluation

---

- **Technical Proposal Evaluation:**
  - Project Management and Organization 30%
  - Design and Construction Plan 60%
  - M/WBE Business Development Plan, Local Hiring Plan,  
and Subcontracting Plan 10%
  
- **Technical Proposal Score range (35-point scale):**
  - Low: 21.6
  - High: 29.8
  
- **Salini Impregilo SA Healy Joint Venture had the highest technical score**



## Northeast Boundary Tunnel Design-Build Procurement Price Proposal Results

---

- After evaluation of the Technical Proposals, Price Proposals were opened
- Bid Price range (65-point scale):
  - Low: \$579,975,000.00
  - High: \$687,114,197.00
- Salini Impregilo SA Healy Joint Venture had the lowest price proposal

**Salini Impregilo SA Healy Joint Venture had the highest technical score and lowest price proposal, therefore provided the best value technical and price proposal**







## Recommendation

---

- It is the Contracting Officer's recommendation that the Salini Impregilo SA Healy Joint Venture be awarded the Design-Build contract in the amount of \$579,975,000.00 (Award Amount)



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

**ACTION REQUESTED**

**GOODS AND SERVICES CONTRACT AWARD**

**Supply and Delivery of Methanol**

**(Joint Use)**

This contract action is to exercise option year 1 in the amount of \$7,052,000.00.

**CONTRACTOR/SUB/VENDOR INFORMATION**

<b>PRIME:</b> Colonial Chemicals, Inc. 916 West Lathrop Avenue Savanah, GA 31415	<b>SUBS:</b> N/A	<b>PARTICIPATION:</b> N/A
---	---------------------	------------------------------

**DESCRIPTION AND PURPOSE**

Base Period Contract Value:	\$5,363,280.00
Base Contract Period:	1 Year
No. of Option Years:	2
Modification Value:	\$490,000.00
Modification Dates:	06-01-2017 – 06-30-2017
<b>Option Year 1 Value:</b>	<b>\$7,052,000.00</b>
<b>Option Year 1 Dates:</b>	<b>07-01-2017 – 08-06-2018</b>

**Purpose of the Contract:**

To secure the consistent supply and delivery of methanol to meet the nitrogen discharge limits required by the EPA and our operating permit. Methanol is used by the Blue Plains Advanced Wastewater Treatment Plant as part of the process to reduce effluent nitrogen levels to meet EPA requirements. DC Water dual-sources methanol to assure a continuity of supply. Colonial Chemical was awarded 75% of our volume requirements, and Mitsubishi was awarded 25%.

**Contract Scope:**

Exercising option year 1 one month early became necessary as the base year fund is exhausted quicker than originally anticipated due to the increase in the methanol pricing although the amount of methanol consumption remained steady. DC Water methanol pricing is determined by the IHS market index which averaged 41% higher during the base year than the start of the base year. This yielded pricing that is still 8.2% lower than under the previous contract. The industry forecasts that methanol production and supply will likely increase in 2017, which is expected to stabilize industry pricing during option year 1. The new funding amount is calculated based on the latest market price forecast and forecasted consumption during the option year 1. A study is underway to reduce the ammonia load on the nitrification unit, and therefore reducing the nitrate load on the denitrification unit which will result in the lower consumption of methanol.

**Spending Previous Year:**

Cumulative Contract Value:	08-07-2016 to 08-06-2017: \$5,858,280.00
Cumulative Contract Spending:	08-07-2016 to 04-30-2017: \$4,165,105.23

**Contractor's Past Performance:**

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

No LBE/LSBE participation.

**PROCUREMENT INFORMATION**

<b>Contract Type:</b>	Fixed Price Requirement Contract	<b>Award Based On:</b>	Lowest Cost Technically Acceptable Offeror
<b>Commodity:</b>	Goods and Services	<b>Contract Number:</b>	16-PR-DWT-41A
<b>Contractor Market:</b>	Open Market with Preference Points for LBE and LSBE Participation		

**BUDGET INFORMATION**

<b>Funding:</b>	Operating	<b>Department:</b>	Wastewater Treatment
<b>Service Area:</b>	Blue Plains AWTP	<b>Department Head:</b>	Salil Kharkar

**ESTIMATED USER SHARE INFORMATION**

User	Share %	Dollar Amount
District of Columbia	41.92%	\$2,956,198.40
Washington Suburban Sanitary Commission	43.33%	\$3,055,631.60
Fairfax County	9.81%	\$691,801.20
Loudoun Water	4.29%	\$302,530.80
Other (PI)	0.65%	\$45,838.00
<b>TOTAL ESTIMATED DOLLAR AMOUNT</b>	<b>100.00%</b>	<b>\$7,052,000.00</b>

 / 6/7/17  
 Aklile Tesfaye  
 Assistant General Manager,  
 Blue Plains  
 Date

 / 6/7/17  
 Dan Bae  
 Director of Procurement  
 Date

 / 6/8/17  
 Robert Hunt  
 Acting Chief Finance Officer  
 Date

\_\_\_\_\_/\_\_\_\_\_  
 George S. Hawkins  
 General Manager  
 Date

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

**ACTION REQUESTED**

**GOODS AND SERVICES CONTRACT AWARD  
Supply and Delivery of Methanol  
(Joint Use)**

This contract action is to exercise option year 1 in the amount of \$2,373,000.00.

**CONTRACTOR/SUB/VENDOR INFORMATION**

<b>PRIME:</b> Mitsubishi International Corp. 655 Third Avenue New York, NY 10017	<b>SUBS:</b> N/A	<b>PARTICIPATION:</b> N/A
---	---------------------	------------------------------

**DESCRIPTION AND PURPOSE**

<b>Base Period Contract Value:</b>	\$1,925,000.00
<b>Base Contract Period:</b>	1 Year
<b>No. of Option Years:</b>	2
<b>Modification Value:</b>	\$74,000.00
<b>Modification Dates:</b>	06-01-2017 – 06-30-2017
<b>Option Year 1 Value:</b>	<b>\$2,373,000.00</b>
<b>Option Year 1 Dates:</b>	<b>07-01-2017 – 08-06-2018</b>

**Purpose of the Contract:**

To secure the consistent supply and delivery of methanol to meet the nitrogen discharge limits required by the EPA and our operating permit. Methanol is used by the Blue Plains Advanced Wastewater Treatment Plant as part of the process to reduce effluent nitrogen levels to meet EPA requirements. DC Water dual-sources methanol to assure a continuity of supply. Colonial Chemical was awarded 75% of our volume requirements, and Mitsubishi was awarded 25%.

**Contract Scope:**

Exercising option year 1 one month early became necessary as the base year fund is exhausted quicker than originally anticipated due to the increase in the methanol pricing although the amount of methanol consumption remained steady. DC Water methanol pricing is determined by the IHS market index which averaged 41% higher during the base year than the start of the base year. This yielded pricing that is still 8.2% lower than under the previous contract. The industry forecasts that methanol production and supply will likely increase in 2017, which is expected to stabilize industry pricing during option year 1. The new funding amount is calculated based on the latest market price forecast and forecasted consumption during the option year 1. A study is underway to reduce the ammonia load on the nitrification unit, and therefore reducing the nitrate load on the denitrification unit which will result in the lower consumption of methanol.

**Spending Previous Year:**

Cumulative Contract Value:	08-07-2016 to 08-06-2017: \$1,999,000.00
Cumulative Contract Spending:	08-07-2016 to 04-30-2017: \$1,425,236.16

**Contractor's Past Performance:**

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

No LBE/LSBE participation.

**PROCUREMENT INFORMATION**

<b>Contract Type:</b>	Fixed Price Requirement Contract	<b>Award Based On:</b>	Lowest Cost Technically Acceptable Offeror
<b>Commodity:</b>	Goods and Services	<b>Contract Number:</b>	16-PR-DWT-41B
<b>Contractor Market:</b>	Open Market with Preference Points for LBE and LSBE Participation		

**BUDGET INFORMATION**

<b>Funding:</b>	Operating	<b>Department:</b>	Wastewater Treatment
<b>Service Area:</b>	Blue Plains AWTP	<b>Department Head:</b>	Salil Kharkar

**ESTIMATED USER SHARE INFORMATION**

User	Share %	Dollar Amount
District of Columbia	41.92%	\$994,761.60
Washington Suburban Sanitary Commission	43.33%	\$1,028,220.90
Fairfax County	9.81%	\$232,791.30
Loudoun Water	4.29%	\$101,801.70
Other (PI)	0.65%	\$15,424.50
<b>TOTAL ESTIMATED DOLLAR AMOUNT</b>	<b>100.00%</b>	<b>\$2,373,000.00</b>

  
 \_\_\_\_\_ / 6/7/17  
 Date  
 Aklile Tesfaye  
 Assistant General Manager,  
 Blue Plains

  
 \_\_\_\_\_ / 6/7/17  
 Date  
 Dan Bae  
 Director of Procurement

  
 \_\_\_\_\_ / 6/8/17  
 Date  
 Robert Hunt  
 Acting Chief Finance Officer

\_\_\_\_\_  
 \_\_\_\_\_ / \_\_\_\_\_  
 Date  
 George S. Hawkins  
 General Manager

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

**ACTION REQUESTED**

**DESIGN-BUILD CONTRACT:**

**Anacostia River Combined Sewer Overflow Control Projects  
Division J – Northeast Boundary Tunnel  
(Joint Use)**

Approval to execute a design-build contract for \$579,975,000.00.

**CONTRACTOR/SUB/VENDOR INFORMATION**

<b>PRIME:</b>	<b>SUBS:</b>	<b>PARTICIPATION:</b>
Salini Impregilo S.A. Healy JV 2600 Independence Avenue, SE Washington, DC 20003	MBE/WBE Eligible Amounts:	
	<b>Design</b> <b>\$ 15,000,000.00</b>	
	MBE     \$ 4,940,268.00	32.9%
	WBE     \$ 741,140.00	4.9%
<u>Headquarters</u> Henderson, NV 89074	<b>Construction</b> <b>\$463,174,000.00</b>	
	MBE     \$113,842,000.00	24.6%
	WBE     \$ 17,853,000.00	3.8%
	Total Eligible     \$478,174,000.00	
	MBE/WBE Total    \$137,376,408.00	
	See Attachment A for List of Subs.	

**DESCRIPTION AND PURPOSE**

Contract Value, Not-To-Exceed:	\$ 579,975,000.00
Contract Time:	1930 Days     (5 Years, 3 Months)
Anticipated Contract Start Date:	09-18-2017
Anticipated Contract Completion Date:	12-30-2022
Proposal Due Date:	03-01-2017
Number of Firms Submitting Qualifications:	7
Number of Firms Shortlisted:	4

**Purpose of the Contract:**

Provide design services and construction of the Division J – Northeast Boundary Tunnel in support of the DC Clean Rivers Project.

This work is required by a Consent Decree and in accordance with the Mayor's Task Force Report.

**Contract Scope:**

- Design and construct approximately 26,700 feet of 23-foot minimum inside diameter soft-ground tunnel, with bolted/gasketed precast concrete liner from a mining shaft at CSO 019 to a drop shaft at the intersection of R Street NW and 6th Street NW near Rhode Island Avenue.
- Construct five diversion chambers to relieve the existing sewers during storm events and divert flow to the tunnel for conveyance and storage. The diverted flows will be directed to the tunnel via six dropshafts and five adits at approximately 60 to 140 feet below grade.
- Design and construct an underground connection between the First Street Tunnel and the Northeast Boundary Tunnel. Decommission the temporary First Street Tunnel Pump Station.
- Construct an above-grade ventilation control facility at 1241 W Street NE.

**Federal Grant Status:**

- The construction contract may be funded in part by prior congressional appropriations for CSO projects.

**PROCUREMENT INFORMATION**

<b>Contract Type:</b>	Fixed Price	<b>Award Based On:</b>	Best Value
<b>Commodity:</b>	Design and Construction	<b>Contract Number:</b>	140150
<b>Contractor Market:</b>	Open Market		

**BUDGET INFORMATION**

<b>Funding:</b>	Capital	<b>Department:</b>	DC Clean Rivers Project
<b>Service Area:</b>	Combined Sewer Overflow	<b>Department Head:</b>	Carlton Ray
<b>Project:</b>	CY		

**ESTIMATED USER SHARE INFORMATION**

**CY – Allocation (LTCP – CSO 019 to W Street)**

User	Share %	Dollar Amount
District of Columbia	92.90%	\$253,247,405.05
Federal Funds	0.00%*	\$
Washington Suburban Sanitary Commission	5.54%	\$ 15,102,159.57
Fairfax County	1.01%	\$ 2,753,281.80
Loudoun County & Potomac Interceptor	0.55%	\$ 1,499,311.87
<b>Total Estimated Dollar Amount</b>	<b>100.00%</b>	<b>\$272,602,158.29</b>

**CY – Allocation (CAPM – W Street to R Street)**

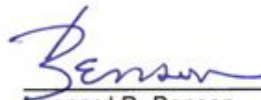
User	Share %	Dollar Amount
District of Columbia	100.00%	\$307,372,841.71
Federal Funds	0.00%*	\$
Washington Suburban Sanitary Commission	0.00%	\$
Fairfax County	0.00%	\$
Loudoun County & Potomac Interceptor	0.00%	\$
<b>Total Estimated Dollar Amount</b>	<b>100.00%</b>	<b>\$307,372,841.71</b>

**Total Combined Allocation**

User	Share %	Dollar Amount
District of Columbia	96.66%	\$560,620,246.76
Federal Funds	0.00%*	\$
Washington Suburban Sanitary Commission	2.60%	\$ 15,102,159.57
Fairfax County	0.48%	\$ 2,753,281.80
Loudoun County & Potomac Interceptor	0.26%	\$ 1,499,311.87
<b>Total Estimated Dollar Amount</b>	<b>100.00%</b>	<b>\$579,975,000.00</b>

\* Eligible for Federal Appropriation Funding. Appropriation funding is insufficient to fund all eligible contracts. Federal Appropriations Funding may be used if additional funding becomes available or if other eligible projects are postponed.

  
 Robert Hunt  
 Acting Chief Financial Officer  
 Date: 6/7/17

  
 Leonard R. Benson  
 Chief Engineer  
 Date: 6/5-17

  
 Dan Bae  
 Director of Procurement  
 Date: 6/7/17

  
 George S. Hawkins  
 General Manager  
 Date: / /

**DESIGN-BUILD CONTRACT 140150**  
**ANACOSTIA RIVER COMBINED SEWER OVERFLOW CONTROL PROJECTS**  
**DIVISION J – NORTHEAST BOUNDARY TUNNEL**  
**ATTACHMENT A**  
**SUBCONTRACTOR LISTING**

<b>SUBS:</b>		<b>PARTICIPATION:</b>	<b>AMOUNT:</b>
<u>Design Consultants</u>			
Subsurface & Tunnel Engineering LLC Frederick, Maryland 21704	MBE	13.99%	\$2,098,534
DLZ National, Inc Cleveland, Ohio 43113	MBE	9.63%	\$1,443,848
EBA Engineering, Inc. Laurel, Maryland 20707	MBE	8.44%	\$1,266,286
Concrete Consultants Group Bellefontaine, Ohio 43311	MBE	0.88%	\$131,600
Aldea Services LLC Frederick, Maryland 21704	WBE	4.94%	\$741,140
<u>Construction Subcontractors/Suppliers</u>			
Bulldog Distribution Trucking, LLC Beltsville, Maryland 20705	MBE	7.38%	\$34,203,000
Conseg, JV Beltsville, Maryland 20705	MBE	7.16%	\$33,171,000
Monumental Washington, DC 20032	MBE	4.15%	\$19,201,000
Bulldog Construction, Inc. Lanham, Maryland 20706	MBE	3.16%	\$14,627,000
EnTech Engineering, P.C. New York, New York 10004	WBE	2.61%	\$12,095,000
Ackerman & Baynes Baltimore, Maryland 21213	MBE	1.76%	\$8,170,000
EBA Engineering, Inc. Laurel, Maryland 20707	MBE	0.75%	\$3,469,000
Metro Petroleum, Inc. Airy, Maryland 21771	WBE	0.47%	\$2,200,000
Watkins Security Agency of DC, Inc. Washington, DC 20019	WBE	0.34%	\$1,589,000



**DESIGN-BUILD CONTRACT 140150**  
**ANACOSTIA RIVER COMBINED SEWER OVERFLOW CONTROL PROJECTS**  
**DIVISION J – NORTHEAST BOUNDARY TUNNEL**  
**ATTACHMENT A**  
**SUBCONTRACTOR LISTING**

<b>SUBS:</b>		<b>PARTICIPATION:</b>	<b>AMOUNT:</b>
Bay Associates Environmental, Inc. Baltimore, Maryland 21228	WBE	0.24%	\$1,100,000
EMC2 Rockville, Maryland 20850	MBE	0.22%	\$1,001,000
Aarons Concrete Pumping Westminster, Maryland 21158	WBE	0.19%	\$869,000

US EPA Fair Share objective for Design: MBE 28%/WBE 4%

US EPA Fair Share objective for Construction: MBE 32%/WBE 6%

Contractor is continuing to pursue opportunities to meet or exceed these goals as the final design is completed and the final construction needs are identified.

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

**ACTION REQUESTED**

**CONSTRUCTION CONTRACT:**

**Emergency Sewer Main Infrastructure Repair & Replacement Contract  
for FY18-FY20  
(Joint Use)**

Approval to execute a construction contract for \$ 19,993,824.95.

**CONTRACTOR/SUB/VENDOR INFORMATION**

<b>PRIME:</b>	<b>SUBS:</b>	<b>PARTICIPATION:</b>
Anchor Construction Corp. 2254 25 <sup>th</sup> Place, NE Washington, DC 20018  (MBE)	S&J Service, Inc. Hyattsville, MD	MBE 29.3%
	Steffron, LLC Washington, DC	MBE 3.0%
	Riviera Enterprises, Inc. Forestville, MD	MBE 0.3%
	TFE Resources, LTD. Pennsauken, NJ	WBE 4.0%
	R&R Contracting Utilities, Inc. Olney, MD	WBE 2.0%

**DESCRIPTION AND PURPOSE**

Contract Value, Not-To-Exceed:	\$19,993,824.95
Contract Time:	1096 Days (3 Years, 0 Months)
Anticipated Contract Start Date:	10-01-2017
Anticipated Contract Completion Date:	09-30-2020
Bid Opening Date:	05-17-2017
Bids Received:	2
Other Bids Received:	
Fort Myer Construction Corp.	\$22,366,255.90

**Purpose of the Contract:**

Provide repairs and extensions to the sewer system on an as-needed basis during normal work hours and provide limited 24-hour emergency work. This Contract allows DC Water to strategically utilize a combination of Sewer Services crews and contractor crews to respond to emergency conditions impacting the sewer system and when the backlog of scheduled work exceeds DC Water crews' ability to respond within a reasonable period of time.

If water main repair demands become critical and it is deemed to be in the best interest of DC Water, emergency water work may be assigned to emergency crews provided by this Contract.

The quantities established by DC Water for this contract were estimated and were used for the purpose of comparing the bids. Actual quantities assigned during the contract will be based on priority and the type of repairs required.

**Contract Scope:**

- Sewer Cleaning
- Sewer Rehabilitation
- Emergency Sewer Repairs

**PROCUREMENT INFORMATION**

<b>Contract Type:</b>	Unit Price	<b>Award Based On:</b>	Lowest responsive, responsible bidder
<b>Commodity:</b>	Construction	<b>Contract Number:</b>	170050
<b>Contractor Market:</b>	Open Market		

**BUDGET INFORMATION**


<b>Funding:</b>	Capital	<b>Department:</b>	Sewer Services
<b>Service Area:</b>	Sanitary, Combined Sewer Overflow, Stormwater	<b>Department Head:</b>	Cuthbert Braveboy
<b>Project:</b>	FN, FP, H5, H6, HM, HN, JH, JI		

**\*ESTIMATED USER SHARE INFORMATION**

User	Share %	Dollar Amount
District of Columbia	100.00%	\$ 19,993,824.95
Federal Funds	0.00%	\$
Washington Suburban Sanitary Commission	0.00%	\$
Fairfax County	0.00%	\$
Loudoun County & Potomac Interceptor	0.00%	\$
<b>Total Estimated Dollar Amount</b>	<b>100.00%</b>	<b>\$ 19,993,824.95</b>

\* Work under this contract will be assigned as needed under specific task orders. It is anticipated that Joint Use work may be assigned during the contract period. As tasks are developed for work associated with specific facilities and costs are developed, the individual users will be notified and billed according to agreed cost sharing.

  
 Robert Hunt  
 Acting Director of Finance  
 Date: 6/7/17

  
 Dan Bae  
 Director of Procurement  
 Date: 6/7/17

  
 Charles Kiely  
 Assistant General Manager  
 Customer Care & Operations  
 Date: 5/8/17

\_\_\_\_\_  
 George S. Hawkins  
 General Manager  
 Date

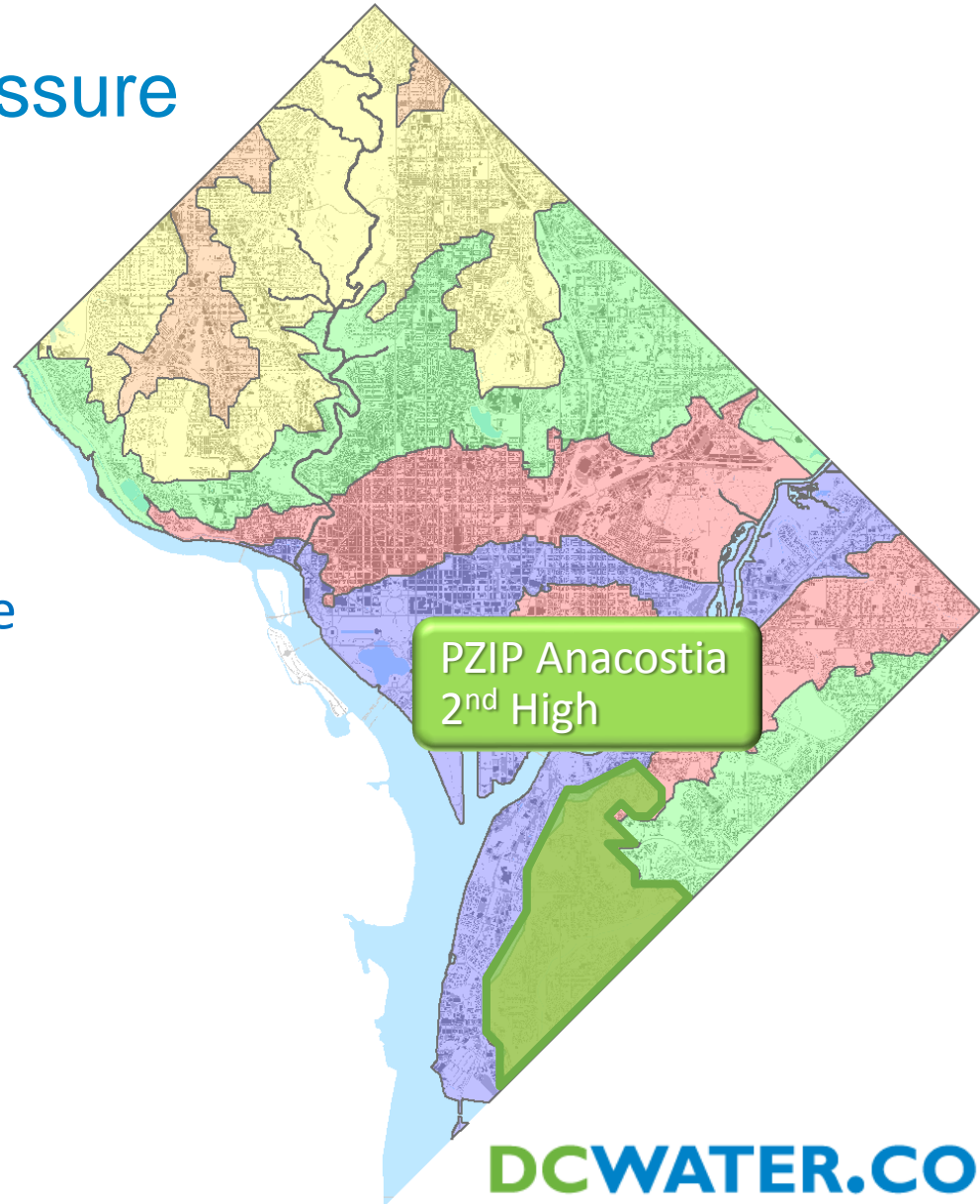


District of Columbia Water and Sewer Authority  
George S. Hawkins, General Manager

# Anacostia 2<sup>nd</sup> High Pressure Zone Improvement Program (**A2H PZIP**)

*Prepared for*  
DC Water's EQ & Ops Committee

*Prepared by*  
Deidre Saunders, Construction Manager  
Engineering and Technical Services and  
Jason Garz, Water Program Manager  
Mott MacDonald



**DCWATER.COM**

June 15, 2017

# Agenda for Today's Meeting

---

- Purpose of A2H PZIP
- Existing and planned service areas
- Capital projects required for creating A2H pressure zone
- Projects under construction
- Overview of tasks required to commission new zone
- Community Engagement

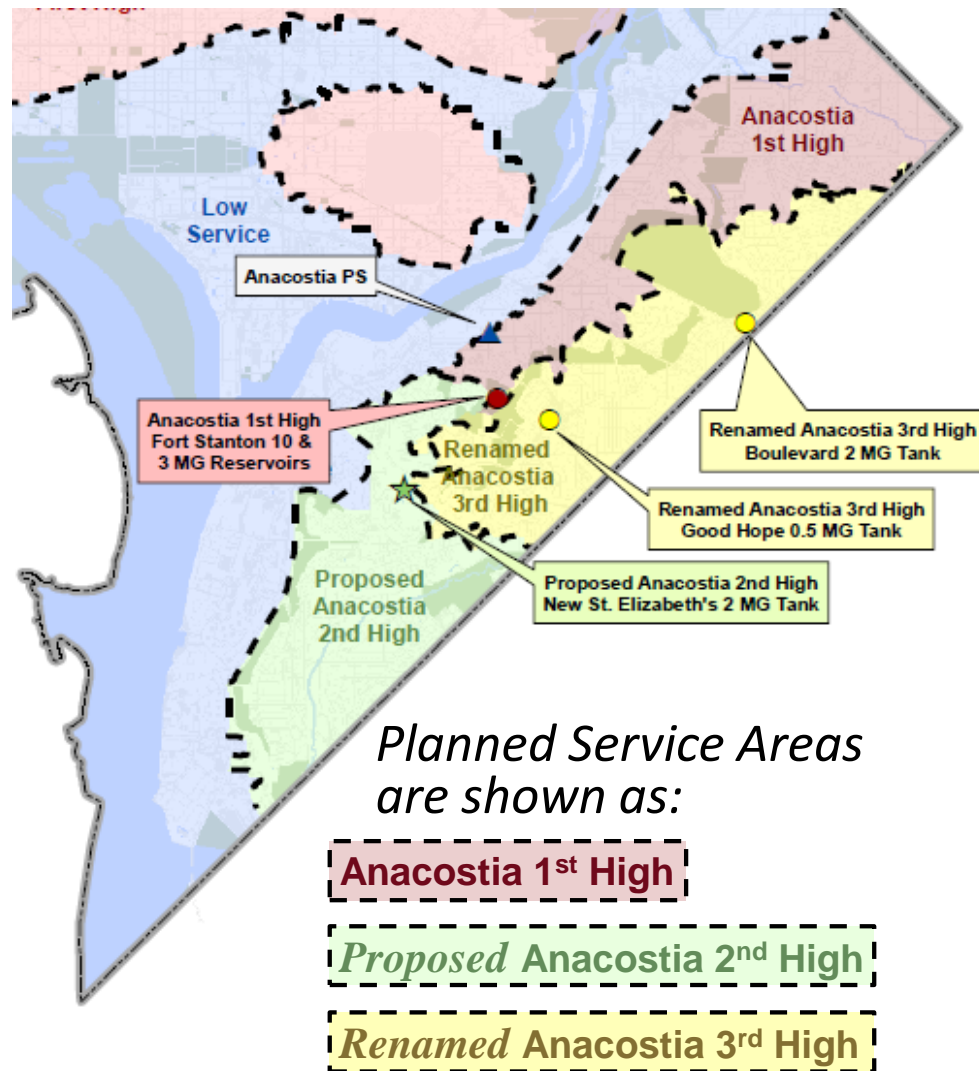
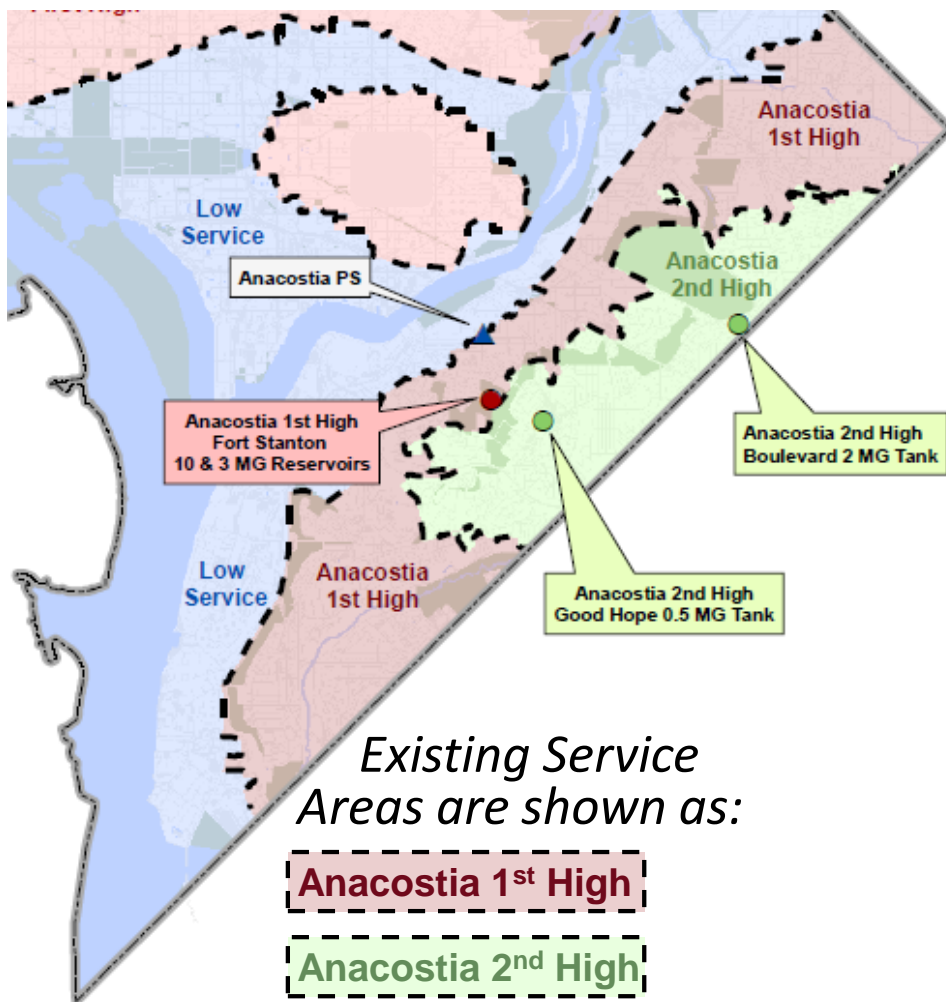


# Purpose of Anacostia 2<sup>nd</sup> High PZIP

- To address historically low water pressure in areas of southeast DC
  - Improve system reliability
  - Increase water pressure
  - Improve fire flows
- Solution
  - Create new pressure zone by dividing Anacostia 1<sup>st</sup> High into **Anacostia 1<sup>st</sup> High** and **Anacostia 2<sup>nd</sup> High**
  - Raise water pressure in Anacostia 2<sup>nd</sup> High by 22 psi
  - Implemented water system capital improvements over the last 10 years, cost of \$97 million to achieve this goal

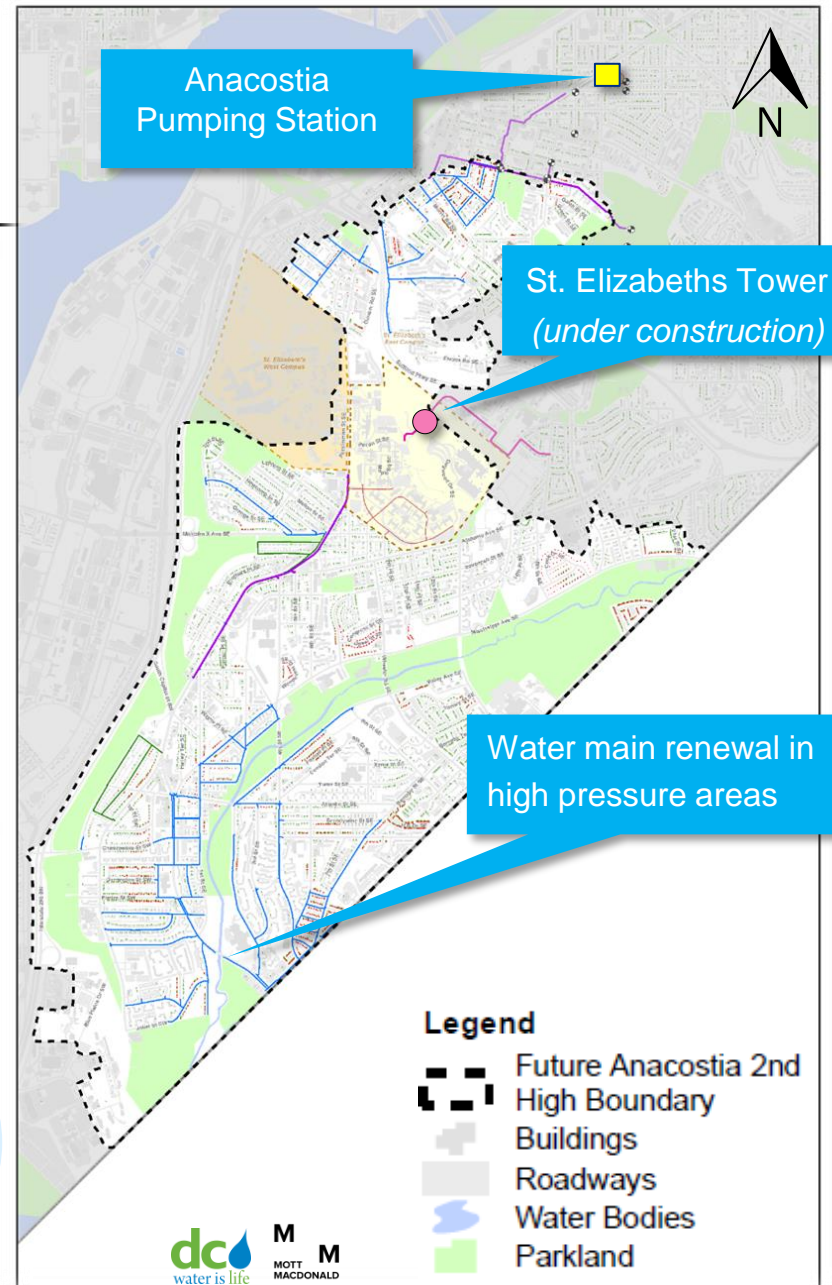


# Existing (*left*) and Planned Service Areas



# Projects Required to Create New A2H Pressure Zone

Overall Anacostia 2nd High Service Area Improvement Costs					
No.	Map Legend	Component Projects	Contract #	Cost at Completion	Construction Status
1		Small Diameter Water Main Replacements - High Pressure Areas	30040, 60060, 90160, 90250 & 110110	\$33,692,950	Complete (2012)
2		Small Diameter Water Main Replacements - All Other Project Areas	130050, 130120, 130200 & 140010	N/A	Complete (2012)
3		Large Diameter Water Main Replacements - Anacostia Transmission Mains	30050 & 60070	\$18,862,159	Complete (2003)
4		Replacement of Anacostia Pumping Station	40230	\$24,774,684	Complete (2008)
5		St. Elizabeths Tower and Mains	130170	\$13,400,000	Under Construction
6		Anacostia 2nd High Residential PRV Installations	170010	\$2,830,000	Under Construction
7		St. Elizabeths Mitigation		\$3,700,000	Under Design
8		St. Elizabeths East Campus Water Mains		N/A	Under Construction
<b>Total</b>				<b>\$97,259,793</b>	



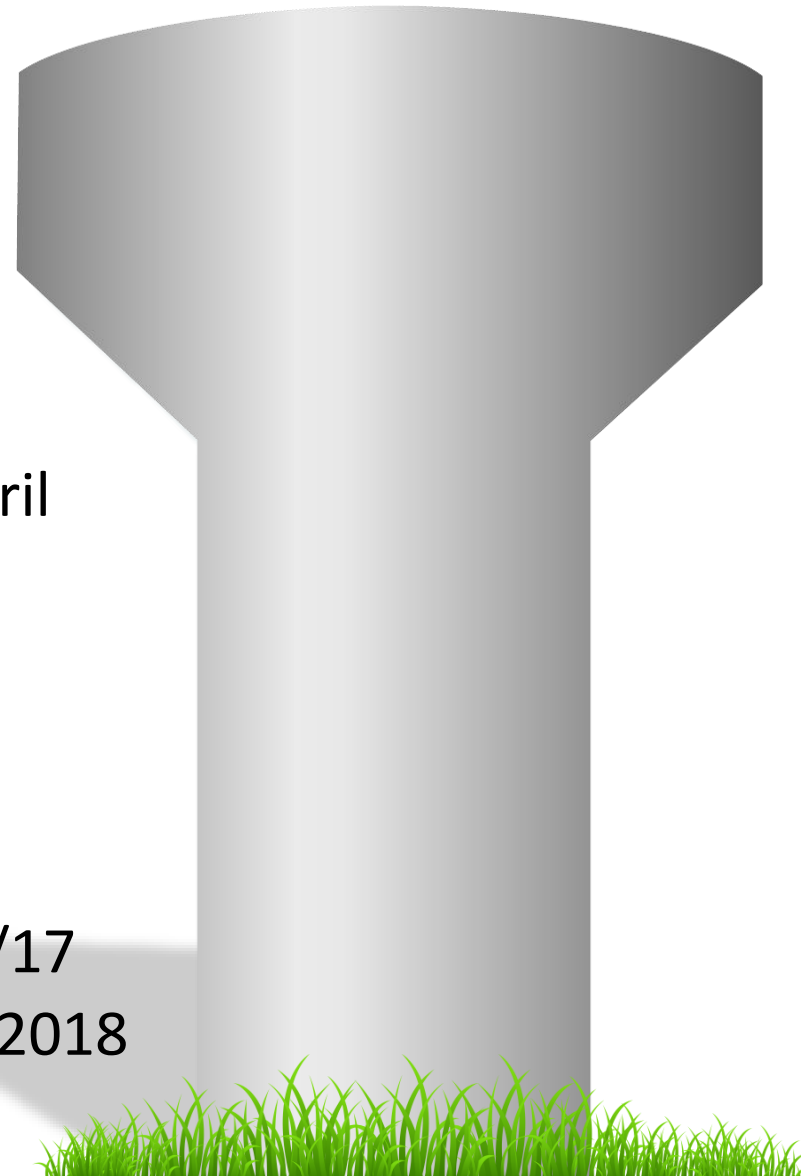
*Residential pressure reducing valve installations and the Water Tower are the “capstone projects” to be constructed under Anacostia 2<sup>nd</sup> High PZIP*



# Capstone Projects Under Construction

---

- St. Elizabeths 2 MG Elevated Water Tower in southeast DC
  - Construction began April 2016, currently 37% complete
  - Projected operational start by April 2018
  
- Installation of 1,670 residential pressure reducing valves
  - NTP issued April 2017
  - 588 signed agreements as of 6/2/17
  - Projected completion date, April 2018



# On-Going Projects and Tasks Required to Commission New Zone

- Anacostia Pumping Station readiness
  - Review and test design elements
  - Update standard operating procedures materials
- Transmission mains and boundary valves
  - Check and maintain boundary valves
- Construct St. Elizabeths 2 MG elevated water storage tower and connecting 24" transmission main
- Finalize and implement new zone commissioning plan in coordination with St. Elizabeths water tower and transmission main start-up
- Install pressure reducing valves in 1,670 homes that will experience water pressure >80 psi after water storage tower is operational as required by D.C. plumbing code



# On-going Projects and Tasks Required to Commission New Zone

---

- Continued public outreach- all levels
- Coordinate construction of facilities & infrastructure with Deputy Mayor for Planning and Economic Development (DMPED) on St. Elizabeths campus
- Coordinate St. Elizabeths Tower mitigation in conjunction with the community, the District, and Commission of Fine Arts



# DC Water Engagement with the Community

---

- There have been project briefings with the Ward 8 Council Members (Marion Barry, LaRuby May & currently Trayon White).
- We have also hosted Town Hall meetings from 2011 to 2016.
- Similar meetings with the Ward 8 ANC's (8A, 8B, 8C, 8D & 8E) have been held since 2014 (more recent 2016 & 2017).
- There are some issues with the PRV's which have been raised by the ANC's. We are actively addressing them and continue to meet with them to discuss.
- Additional community outreach has been and continues to be performed on various platforms, including, but not limited to:
  - Community Meetings (Homeowner and Civic Associations)
  - Special Interest Group Meetings
  - Phone
  - Email
  - USPS Mailings
  - Automated Appointment Reminder Calls
  - Website and Social Media
  - Door-to-Door Engagement



*DC Water presented the Anacostia 2<sup>nd</sup> High PRV project to SMD 8D02 residents on Monday, April 24, 2017.*

*Thank you*



*Questions*

*&*

*Answers*

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

	March Cmte. Report (Mar 01, 2017)	April Cmte. Report (Apr 04, 2017)	May Cmte. Report (May 03, 2017)	June Cmte. Report (Jun 01, 2017)
Public Fire Hydrants:	9,543	9,545	9,540	9,553
In Service:	9,487	9,497	9,492	9,503
Marked Out-of-Service (OOS)	56	48	48	50
OOS - defective requiring repair/replacement	41	42	23	27
<b>% OOS requiring repair or replacement (DC Water goal is 1% or less OOS)</b>	<b>0.43%</b>	<b>0.44%</b>	<b>0.24%</b>	<b>0.28%</b>
OOS - due to inaccessibility or temp construction work	15	6	25	23

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 June 1, 2017 50**

**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	1	3	4	0	0	0	3	11
Needs Valve Investigation for Low Flow/Pressure or Shut Test for Replacement	0	0	0	0	0	0	0	0
Needs Replacement	0	0	3	1	1	3	8	16

**Defective 27** ←

**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	0	0	0	15	1	0	0	16
Construction* - OOS	0	0	0	0	0	1	1	2
Obstructed Hydrant – OOS hydrant due to operation impeded by an obstruction.	0	0	0	3	0	0	2	5

**Others 23** ←

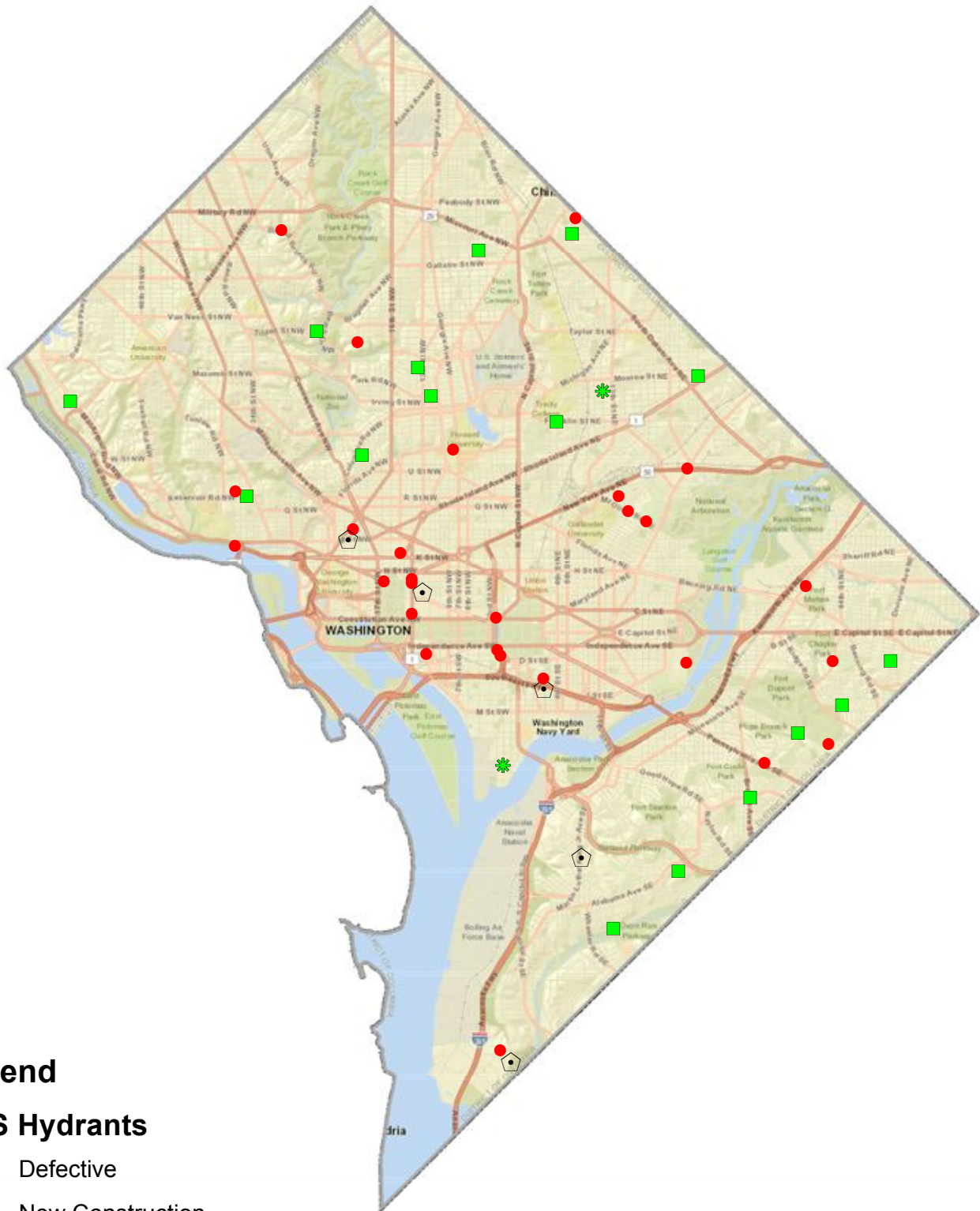
\*Fire hydrants not accessible due to construction activities. Also includes new hydrants which have not yet been commissioned or old hydrants which will be abandoned as part of ongoing construction projects.

**Status of Private Fire Hydrants-Based on FEMS Inspection Reporting**

Private Hydrants:	1,318
• In Service:	1,187
• Out-of-Service (OOS):	131

# Map of Public Out-of-Service Hydrants

June 1, 2017



## Legend

### OOS Hydrants

- Defective
- ✱ New Construction
- ⬠ Obstructed
- Temporary