DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

Board of Directors

Meeting of the
Environmental Quality and Sewerage Services Committee
5000 Overlook Avenue, SW, Room 407
Thursday, December 17, 2015
9:30 a.m.

I. Call to Order — James Patteson, Chairperson

9:30 a.m. II. AWTP Status Updates — Aklile Tesfaye

1. BPAWTP Performance

9:40 a.m. III. Status Updates: Potomac Interceptor Sewer — Liliana Maldonado

1. Odor Abatement Project

9:50 a.m. IV. Wastewater Service Area Program Management Update — Len Benson

10:00 a.m. V. Action Items – Joint Use — Len Benson/Dan Bae

1. Contract No. DCFA #449 – AECOM Services of DC
2. Contract No. 15-PR-WWT-53A, Carter & Carter
3. Contract No. 15-PR-WWT-53B, PVS Technology
4. Contract No. WAS-12-029-AA-JR, M. C. Dean, Inc.
5. Contract No. 14-PR-DIT-01, Advanced Digital Systems
6. Contract No. 14-PR-DIT-02, IMG
7. Contract No. 14-PR-DIT-03, Mansai Corporation
8. Contract No. 14-PR-DIT-04, Mega-Tech
9. Contract No. 14-PR-DIT-05, MVS
10. Contract No. 14-PR-DIT-06, Namtra

10:15 a.m. VI. Clean Rivers Project Status Update Carlton Ray

10:25 a.m. VII. Other Business/Emerging Issues

10:30 a.m. VIII. Adjournment James Patteson
Chairperson

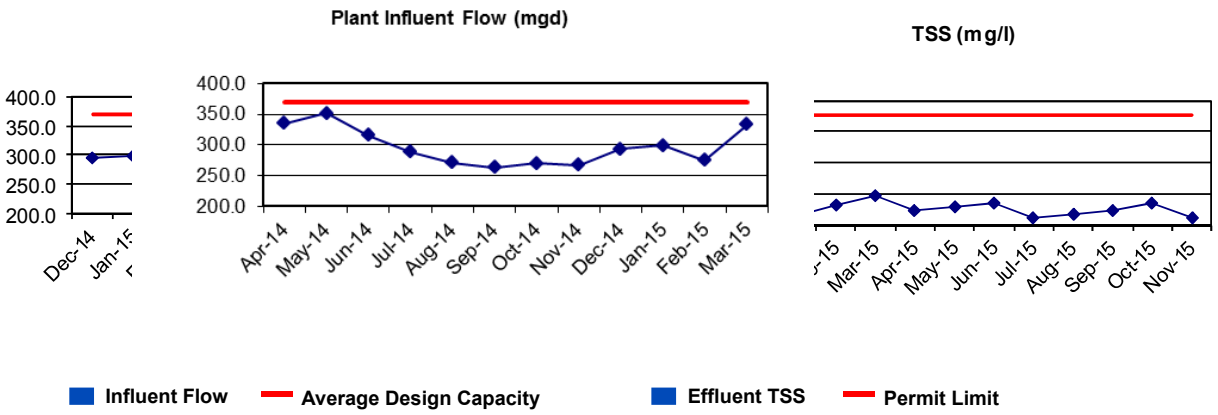
* The DC Water Board of Directors may go into executive session at this meeting pursuant to the District of Columbia Open Meetings Act of 2010, if such action is approved by a majority vote of the Board members who constitute a quorum to discuss: matters prohibited from public disclosure pursuant to 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. Revise/simplify electricity usage and source graphs from Pepco and CHP to show the information on one or two graphs. *{to be incorporated into this meeting's updated report}*
2. Evaluate fact sheet templates to provide for consistent and relevant information such as MBE/WBE commitments, number of option years, whether additional modifications are anticipated, etc. *{to be incorporated into this meeting's updated fact sheets}*
3. Provide a legend for the KPI dashboard graphs. *{to be incorporated into the next quarterly CIP update report}*

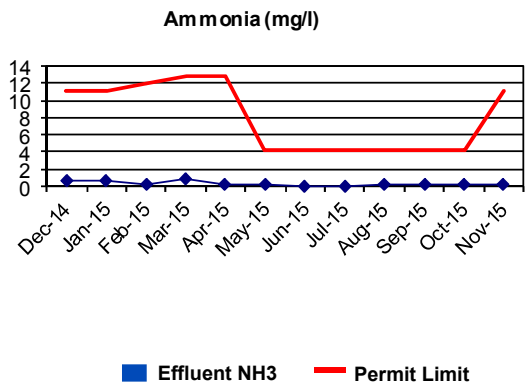
DEPARTMENT OF WASTEWATER TREATMENT
November 2015

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 264 MGD. There was 7 MG of Excess Flow during this reporting period. The following Figures compare the plant performance with the corresponding NPDES permit

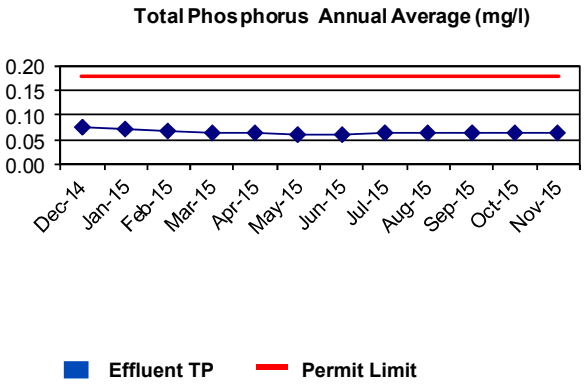


This graph illustrates the monthly average influent flow to the plant. The design average flow is 370 MGD. Blue Plains has a revised 4-hour peak flow capacity of 511 MGD through complete treatment. Flows up to 336 MGD in excess of the 511 MGD peak capacity receive primary treatment, disinfection and dechlorination.

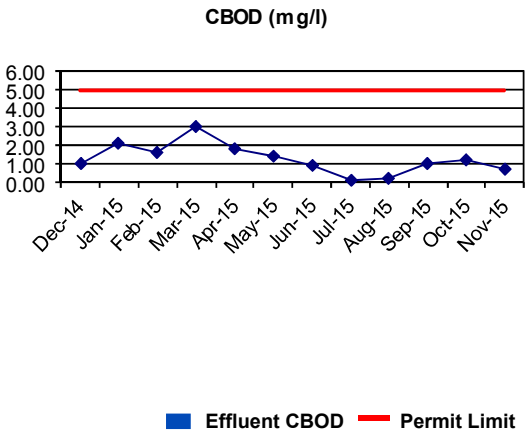
Effluent Total Suspended Solids (TSS) is a measure of the amount of solid material that remains suspended after treatment. The effluent TSS concentration for the month averaged 0.47 mg/L, which is below the 7.0 mg/L permit limit.



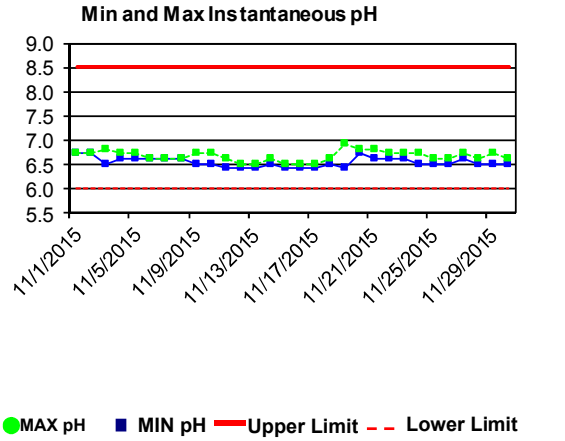
The Ammonia Nitrogen (NH3-N) is a measure of the nitrogen found in ammonia. For the month, effluent NH3-N concentration averaged 0.20 mg/L and is below the average 4.2 mg/L limit.



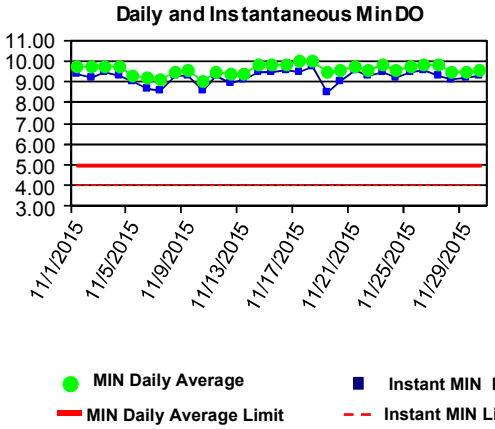
The Total Phosphorus (TP) is a measure of the particulate and dissolved phosphorus in the effluent. The annual average effluent TP concentration is 0.06 mg/L, which is below the 0.18 mg/L annual average limit.



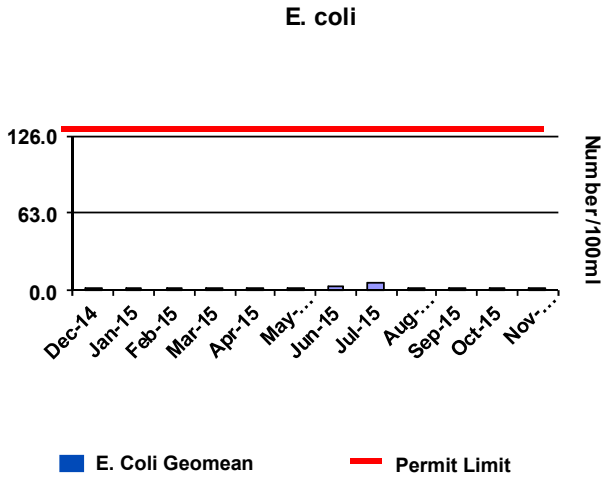
Carbonaceous Biochemical Oxygen Demand (CBOD) is a measure of the amount of dissolved oxygen required for the decomposition of organic materials. The effluent CBOD concentration averaged 0.68 mg/L (partial month) which is below the 5.0 mg/L limit.



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



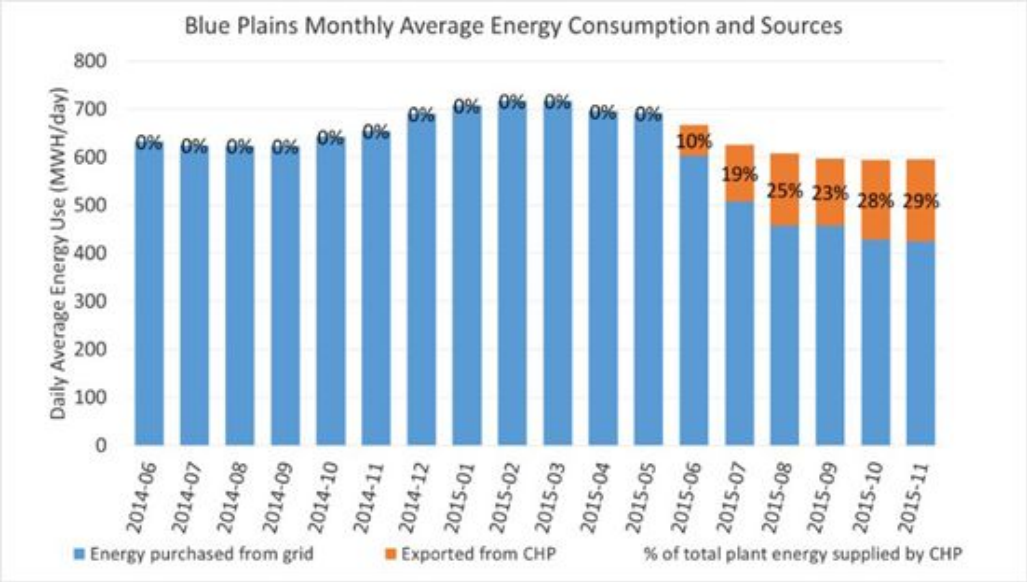
Dissolved Oxygen (DO) is a measure of the atmospheric oxygen dissolved in wastewater. The DO readings for the month are within the permit limits. The minimum daily average is 9.0 mg/L. The minimum instantaneous DO reading is 8.5 mg/L. The minimum permit limits are 5.0 mg/L and 4.0 mg/L respectively.



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

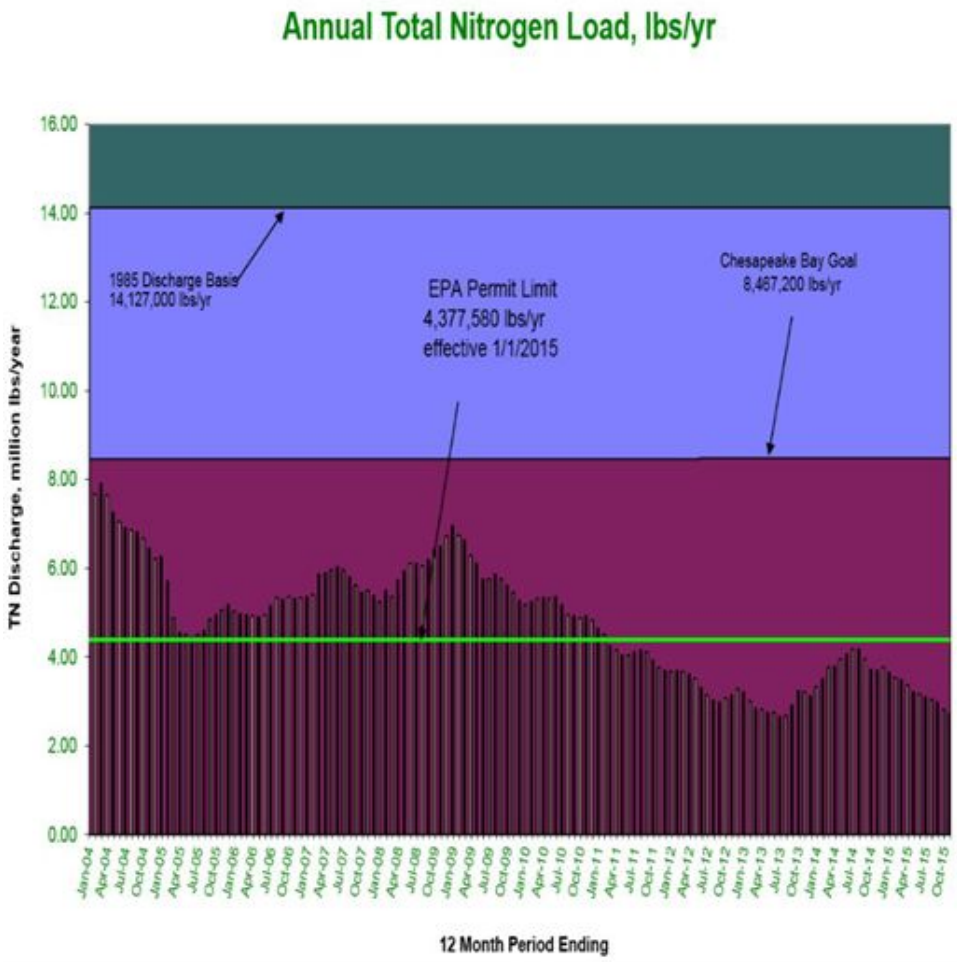
The average energy consumed at Blue Plains was 596 MWH/day for the month of November, while the average energy purchased from PEPCO decreased to 425 MWH/day. Performance testing and optimization of the CHP facility continued during this month. The CHP facility produced an average of 171 MWH/day, making up for 29% of total energy consumed at Blue Plains.



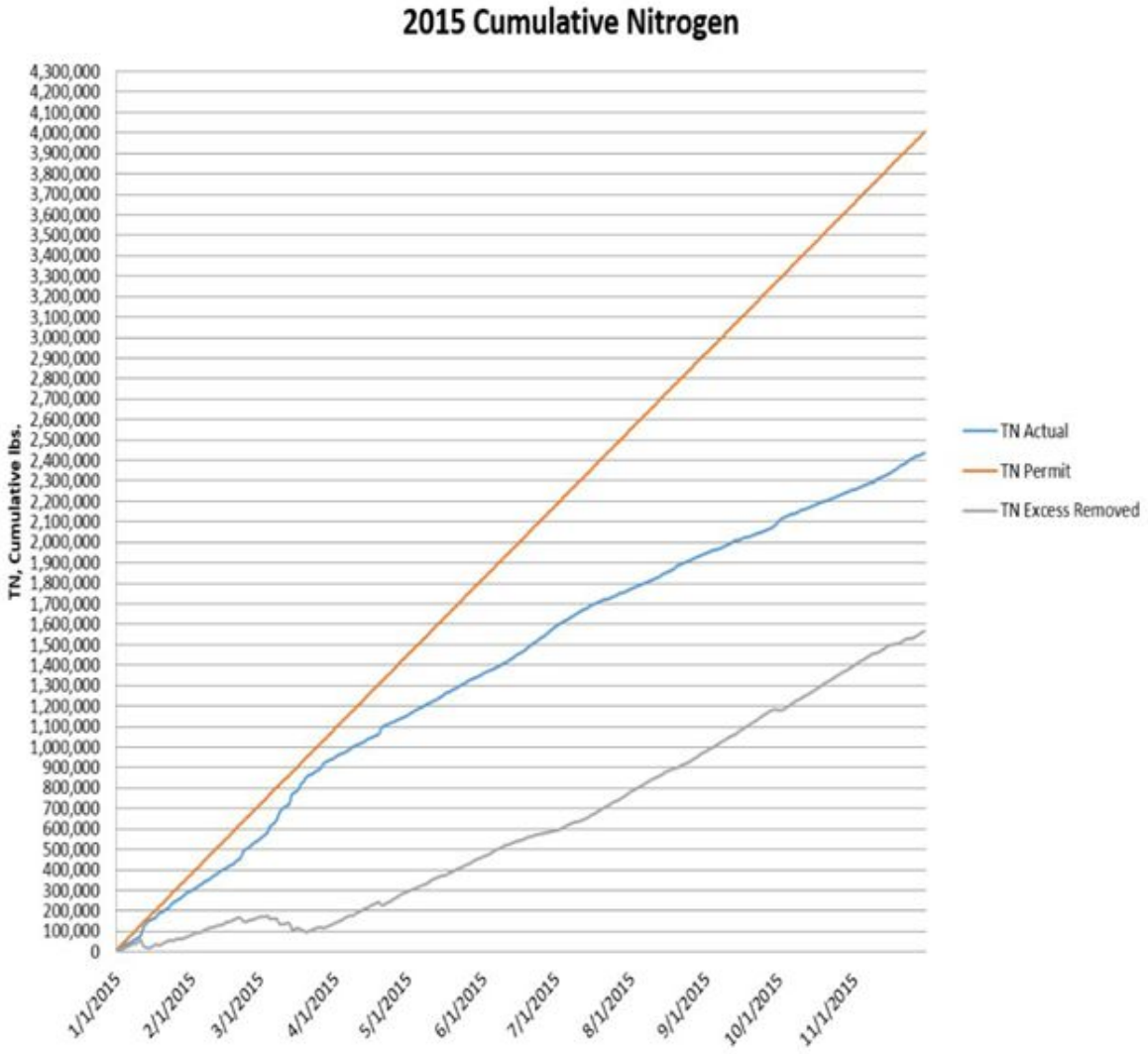
The graph above is based on power monitors installed at the Main Substation and CHP, and reflects total average energy consumed at Blue Plains in MWH/day. Of the total average use, the energy purchased from PEPCO and net energy supplied (exported) by CHP are indicated by the blue and orange highlights,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

BIOLOGICAL NUTRIENT REMOVAL PERFORMANCE

During the month the full-scale BNR process produced an effluent with average total nitrogen concentration of 2.76 mg/l. The figure below shows BluePlains effluent total nitrogen (TN) since the implementation of full scale BNR.

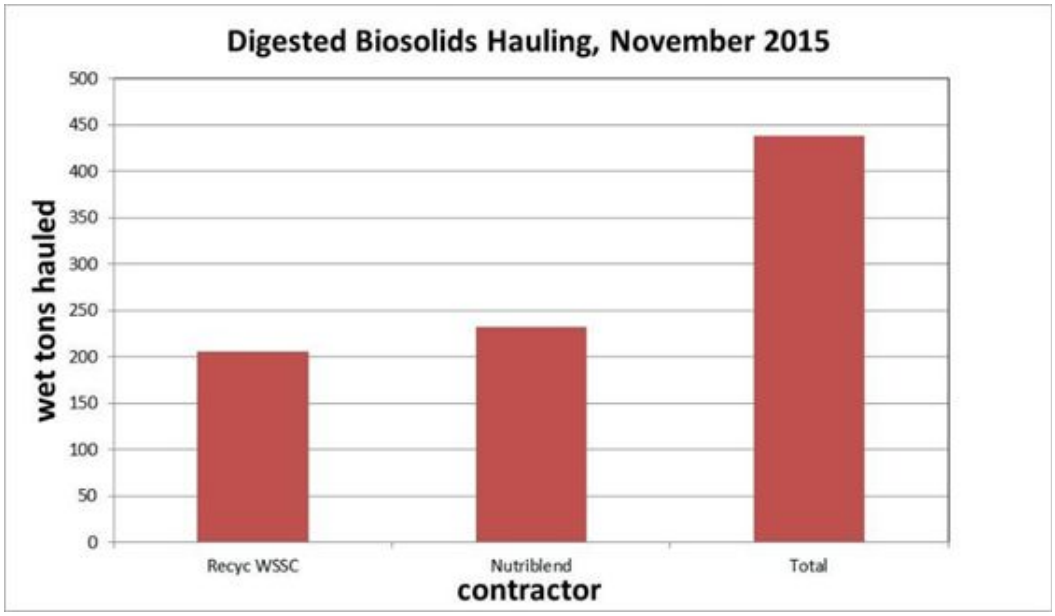


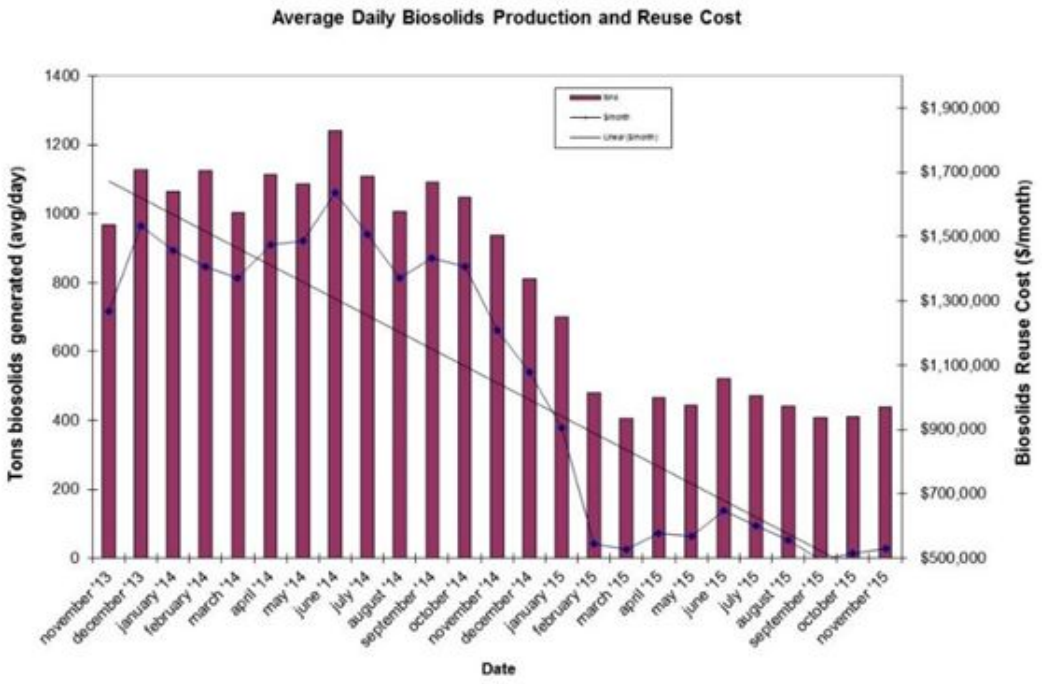
TN Removal at Blue Plains is on target to meet and exceed the limits for 2015 as seen in the graph below.



BLUE PLAINS RESOURCE RECOVERY REPORT – NOVEMBER 2015

In November, biosolids hauling averaged 438 wet tons per day (wtpd). The graph below shows the total hauling by contractor for the month of November. The average percent solids for the digested material was 30.6%. At the end of November the Cumberland County storage pad had approximately 11,561 tons (~25,000 tons capacity), Cedarville lagoon had approximately 0 tons of Blue Plains biosolids (~30,000 tons capacity), Goochland pad had 1000 tons, and Fauquier lagoon had 1126 tons (~15,000 tons capacity).

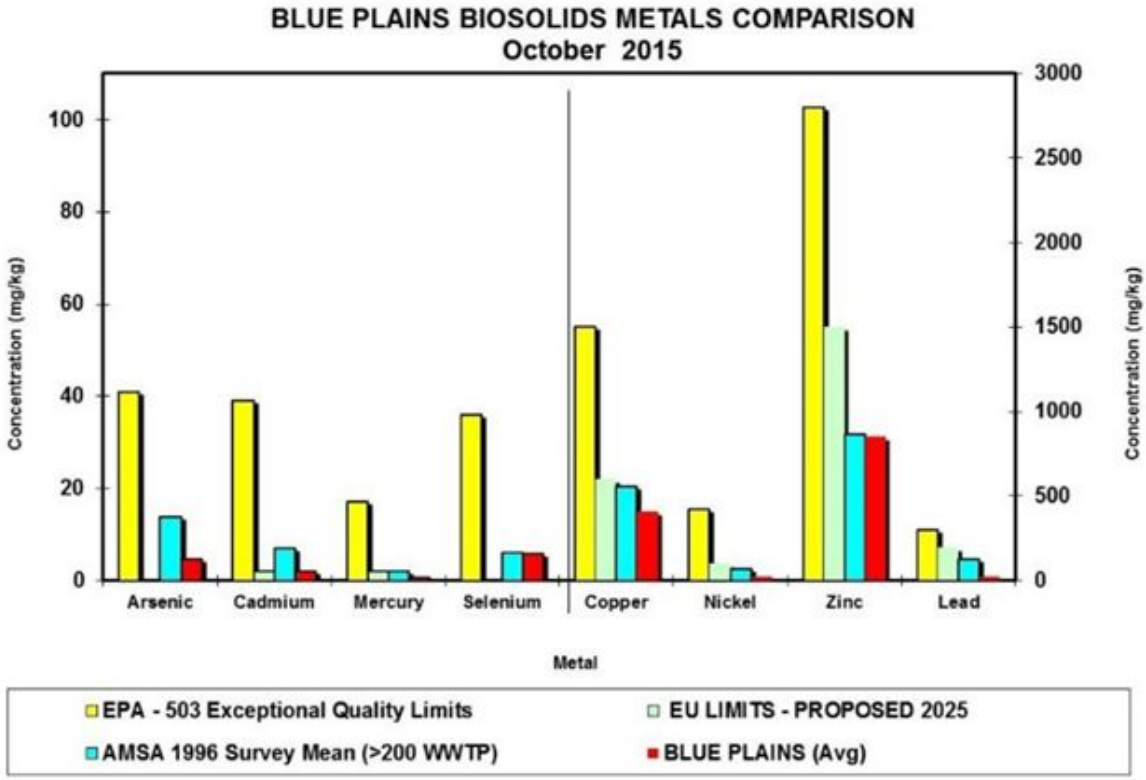




Please note the drop in biosolids management costs (second graph below, right vertical axis) due to the reduction in solids production since digesters came on line, and also due to the drop in fuel costs. In November, diesel prices averaged $2.60/gallon and with the contractual fuel surcharge the weighted average biosolids reuse cost in November for the two contracts (DC Water and WSSC) was $40.10/wet ton. For comparison, in November 2014 the average diesel price was $3.62/gal and the average contract cost was $42.88/wet ton.

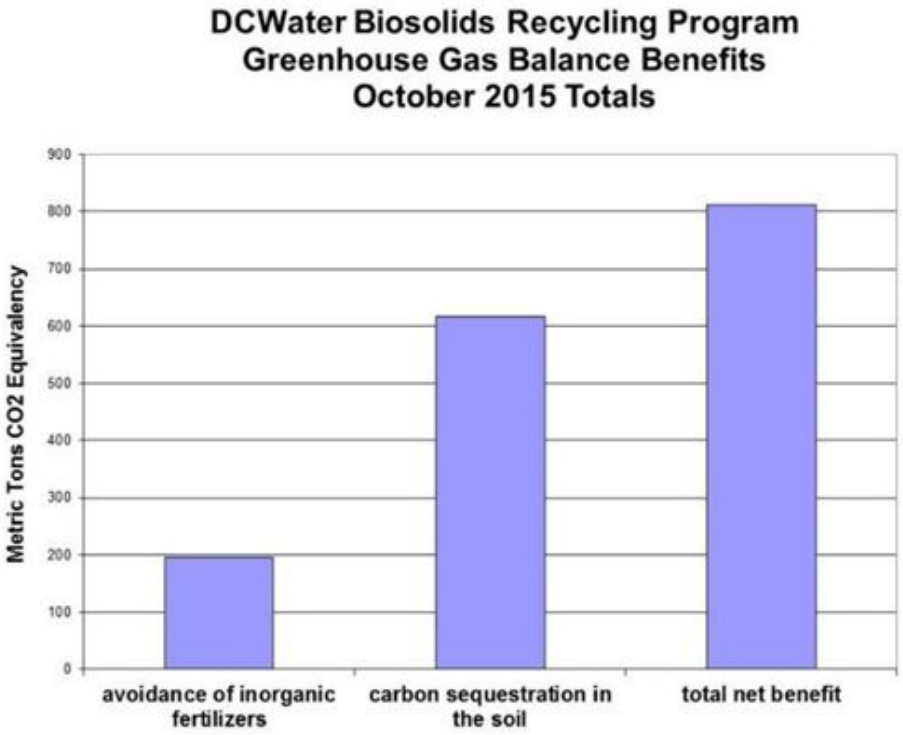
The graphs below show the EPA regulated heavy metals in the Blue Plains biosolids for the month of October 2015. As can be seen in the graphs, the Blue Plains levels are considerably below the regulated exceptional quality limits, the national average levels surveyed in 1996, and the European Union (EU) limits. The EU limits are more conservative than the USEPA limits, and Blue Plains biosolids metals content is lower than the EU standards as well.

Map of Blue Plains Biosolids Applications and Agricultural $'s for October 2015



Environmental Benefits

The quantity land applied in October coming directly from the plant and from storage facilities equaled 12,195 tons. Taking into account the fuel required to transport biosolids to the field, the net benefit of the land applied material is 812 metric tons CO_2 equivalent avoided emissions. This is equivalent to taking 1,654,292 car miles off the road in the month of October (assumes 20 mpg, 19.4 lb CO_2 equivalent emissions/gallon gas – EPA estimate). The cumulative total avoided carbon emission since December, 2006 is 141,858 metric tons CO_2 equivalent.

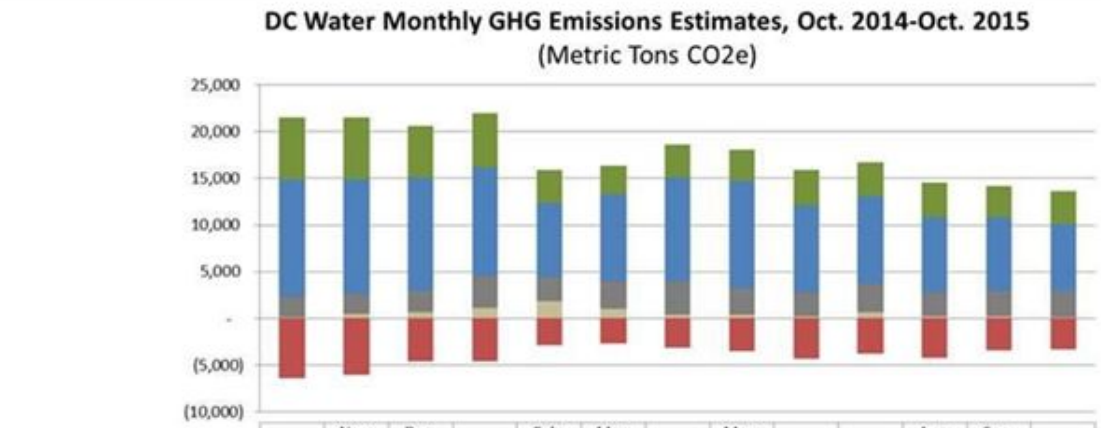


Highlights

Staff gave a presentation and tour to around a dozen journalists, editors and other members of the D.C. Science Writers Association, an organization with 500+ members founded in 1987. The tour focused on innovative DC Water projects and initiatives, including biosolids marketing, the new digesters, Clean Rivers' green infrastructure efforts and co-digestion. The participants had plans for various articles based on the tour. One blog has already been published:

http://www.lastwordonnothing.com/2015/11/17/taking-the-waste-out-of-wastewater/

DC Water Carbon Footprint



	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15
Biosolids Processing & Land App	6,598	6,626	5,586	5,796	3,501	3,107	3,516	3,342	3,827	3,631	3,781	3,377	3,502
Electricity	12,693	12,449	12,226	11,755	8,107	9,392	11,359	11,619	9,412	9,520	8,106	7,982	7,105
Vehicle (fuel usage)	127	89	86	98	98	78	95	71	77	104	92	80	70
Process Emissions	1,977	1,883	2,079	3,173	2,340	2,727	3,280	2,614	2,424	2,810	2,420	2,566	2,739
Natural Gas	119	481	650	1,149	1,856	1,061	360	388	173	679	173	197	167
Carbon Credits	(6,352	(6,056	(4,608	(4,583	(2,844	(2,690	(3,180	(3,527	(4,336	(3,775	(4,216	(3,367	(3,317

CLEAN WATER QUALITY AND TECHNOLOGY – NOVEMBER 2015

The Clean Water Quality and Technology department includes the research and development, pretreatment and laboratory programs.

Research and Development Program

The research and development team continues to work on research topics associated with the planning and operation of Blue Plains AWTP. The current focus of research is to optimize plant processes' capacities and to pave the road toward achieving energy neutral operations at Blue Plains.

Research Highlights – Nitrogen post polishing in single sludge short-cut nitrogen removal.

One of the main research areas at Blue Plains AWTP is nitrogen removal and the attempt to evaluate the feasibility and determine the design parameters for transitioning the current nitrification/denitrification process to a more efficient short-cut nitrogen removal process. In short-cut nitrogen removal processes, the organic carbon (E.g. methanol) requirement is significantly reduced. The research team demonstrated the feasibility of achieving shortcut nitrogen removal using anammox bacteria in a mainstream deammonification pilot-scale process. The anammox bacteria is capable of

removing ammonia and nitrite to nitrogen gas without the need for methanol. The pilot provided a proof of concept and showed that total nitrogen removal potential of ~70% can be achieved. The current strategy to achieve the shortcut nitrogen removal is to maintain residual ammonia concentrations above 2 mg N/L. This means that additional polishing to remove residual nitrogen, in the form of ammonia and most likely nitrate, is required to meet the stringent effluent discharge limit at Blue Plains. For example, the pilot effluent was composed of 1.5 mg N/L ammonia and 5 mg N/L of nitrate. The research team is conducting a study to evaluate the feasibility of this polishing step within the nitrogen removal system. In the post polishing step, denitrifying organisms and anammox organisms will be working together to remove nitrogen. First, denitrifying organisms will convert nitrate to nitrite. Then, denitrifying organisms and anammox will compete for nitrite as shown in **Exhibit A**. Some organic substrate (E.g. methanol) will be required for denitrifying organisms to convert nitrate to nitrite and/or nitrogen gas, however the amount is significantly lower than that required for full denitrification. The research questions associated with post polishing are the following:

- Question 1: What is the best external carbon source to be used?
- Question 2: What is the best carbon to nitrogen ratio to be used?
- Question 3: How to control the competition between denitrifying and anammox organisms?

Preliminary data generated from short-term tests with the mainstream deammonification sludge using various organic carbon substrates (including acetate, glycerol, methanol and ethanol) showed that these substrates potentially can be used for post-polishing. Acetate was the best candidate for inducing partial denitrification (i.e. converting nitrate to nitrite only). Methanol and ethanol may have toxic effects on anammox organisms as suggested by the literature. Since methanol is the carbon substrate in use at Blue Plains, long-term tests with methanol will be evaluated in the future to evaluate this issue.

Pilot results indicated that no single factor was responsible for success of nitrogen polishing. However, the key was related to balancing the activity rate between denitrifying organisms and anammox to achieve a balance between ammonium removal and total nitrogen removal rate. To confirm this statement, an additional set of activity tests was performed which showed that increasing the ratio between maximum anammox potential vs observed nitrate removal rate (induced by reducing COD dosing), resulted in increased partial denitrification (and thus ammonium removal) but also affected the total nitrogen removal in a negative way **[See Exhibit B]**. This was mainly due to the fact that nitrate removal rates determined total nitrogen rates more significantly while ammonium removal was limited by nitrite competition between anammox and

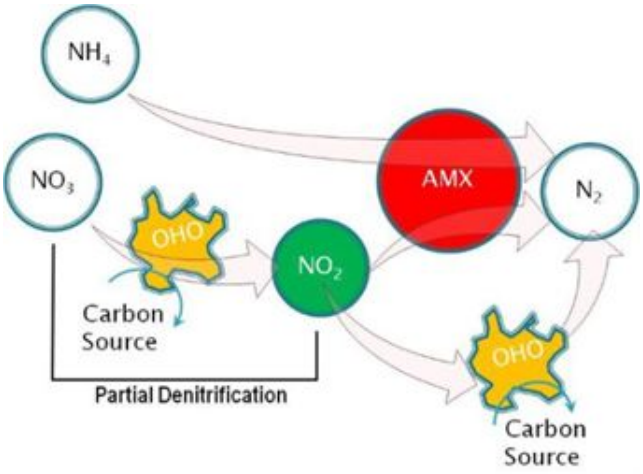


Exhibit A. Post polishing pathways for denitrifying and anammox organisms and competition over nitrite.

denitrifying organisms. A control strategy for carbon dosing will be evaluated in the next phase of pilot testing to achieve optimal nitrogen polishing.

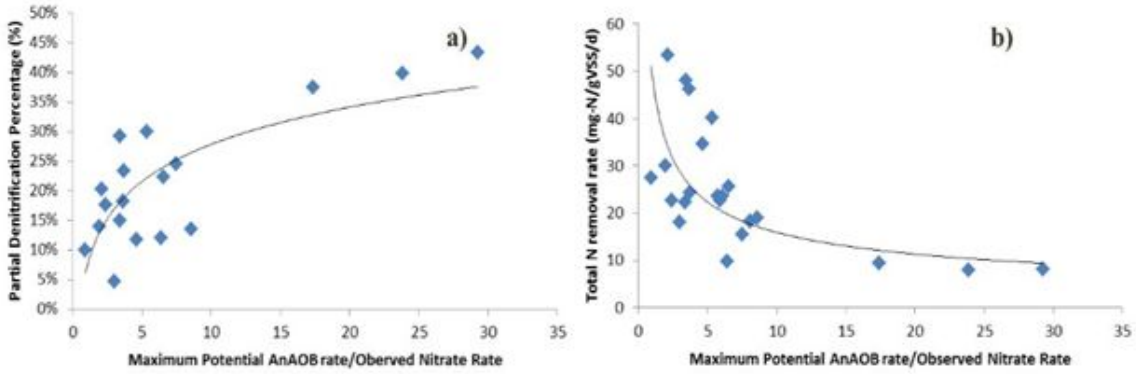


Exhibit B. a) Partial denitrification percentage (%) versus maximum anammox potential rate to observed nitrate removal rate ratio, b) Total N removal rate (mg-N/gVSS/d) versus the maximum anammox potential rate to observed nitrate removal rate ratio.

Blue Plains Pretreatment Program

The Blue Plains Pretreatment Program staff of two manages the Industrial Pretreatment Program, including temporary dewatering dischargers from construction 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 meeting, which was conducted this month.

Industrial Pretreatment Program

DC Water currently manages fifteen (15) Significant Industrial User (SIU) permits and sixteen (16) Non-Significant Industrial User (NSIU) wastewater discharge permits. One new NSIU permit was issued this month to Providence Hospital. One NSIU permit was also renewed this month for Joint Base Anacostia Bolling. DC Water is still waiting on payment from the Veterans Affairs Medical Center (VAMC) before their NSIU permit can be renewed.

One inspection was conducted this month for the SIU, Naval Support Facility (NSF) Carderock. Compliance monitoring was conducted at two SIUs this month: NSF Carderock and Dulles Airport. All SIUs and NSIUs are in compliance with discharge standards for the current month.

A Directive Letter was issued this month to Right Hour Auto/2201 Channing St., NE, in response to a complaint forwarded to DC Water from DOEE. The facility was allowing storm water and contaminants into the separate sanitary sewer via a trench drain on their property by the sidewalk in public space. A follow-up inspection of the facility was conducted this month with the owner.

DC Water currently manages 72 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 22 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. Two permits were renewed this month and one new hauler was permitted. DC Water collected fees from seven waste haulers this month, including those on a monthly payment plan option.

DC Water received 508 hauled waste loads (1,355,380 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. One portable toilet waste sample was collected from Dons Johns on October 8, 2015, and exceeded the discharge standard for zinc at 4.3 mg/L (limit is 3.4 mg/L). A Notice of Violation (NOV) was issued on October 23, 2015. A grease trap waste sample was collected from Magnolia Plumbing on October 13, 2015, and exceeded the discharge standard for pH at 4.8 (limit is 5.0 to 10.0), Total Petroleum Hydrocarbon (TPH) Oil and Grease at 220 mg/L (limit is 100 mg/L), copper at 7.0 mg/L (limit is 2.3 mg/L), and zinc at 39.5 mg/L (limit is 3.4 mg/L). A Notice of Violation was issued on November 4, 2015. No impact to the treatment plant was observed as a result of these exceedances.

NPDES Permit Sampling

Pretreatment staff collected two dry weather and one wet weather 24-hour composite samples at outfall 002 and grab sample at outfall 001 for low level PCB analysis using EPA Method 1668 this month, as well as additional samples at outfall 001 required for the NPDES permit renewal.

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 DCWater'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, and pH. Fecal coliform 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 continues to assist with additional TS and VS analyses to support DC Water's independent monitoring of the Main Process Train contractor's equipment performance testing (centrifuges).

The laboratory assists the Department of Sewer Services on a regular basis conducting microbiological analysis of water samples for E. Coli bacteria. Laboratory staff also participates in the WWOA Executive Board.

Potomac Interceptor Long-Term Odor Abatement
Status Report November 2015

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

Project Construction Status: Construction at the DC and three Maryland sites is complete. Construction at the two Virginia sites is ongoing and nearing completion. Project Specific details for each site are provided below.

1. DC Site (Site 1995):
   - The facility is operational. Media replacement activities were successfully completed on November 20. The facility is currently running, and no odor complaints have been received since the media replacement. A public outreach and data gathering effort is still ongoing to understand ground-level odor complaints received in late October.

2. Maryland Sites:
   - *Site 4 (Little Falls PS)* – The facility is running and no odor complaints have been received since the complaint logged during the first week of November. Vapor phase sampling was conducted on November 9, 2015 to quantify the exhaust odor concentrations from the original carbon, and both DMS and DMDS were detected in the exhaust stream in concentrations above the respective odor detection thresholds. The carbon will be replaced as funding becomes available.
   - *Site 17 (Beltway)* – The facility is running. No odor complaints were received during this period.
   - *Site 27 (Old Angler's Inn)* – The facility is operational and is currently running from 10 p.m. to 10 a.m. to avoid potential complaints from Old Angler's Inn. Lab samples were collected to determine the odor concentrations in the exhaust after treatment, and both DMS and DMDS were detected (17 and 9.9 ppb, respectively). A detailed investigation of the system performance and the state of the media is ongoing, and to date it has been determined that the air flow through the system was above design (which has since been addressed). Lab testing has also determined that 65% of the potassium permanganate is remaining, but that there is a coating of elemental sulfur on the zeolite that may be impacting performance. Additional testing on the media surface is ongoing.

3. Virginia Sites:
   - *Site 31 (Fairfax)* – Under Construction; 99.5% complete. The facility is operational, but has not been relinquished to DC Water. Media replacement activities were successfully completed on November 19th. The facility is currently running, and no odor complaints have been received since the media replacement. The facility has been approved by the Fairfax County Fire Marshall, and the heater is scheduled for delivery by December 30th. The O&M manuals are 99% complete, and one training session took place on November 24th, with the final training session scheduled for the week of December 14th. Repaving will follow media replacement activities. Work is ongoing for punch list items.
   - *Site 46 (Loudoun)* – Under Construction; 99.9% complete. The facility is running, but has not been relinquished to DC Water. Work is ongoing for punch list items. The building will be delivered to DC Water upon completion of training activities and submission of O&M manuals. No odor complaints were received during this period.

Design & Construction Activities	Projected	Actual	Status
	Date	Date	
Final Completion	1/31/16	TBD	Training, O&M, and punch list work is ongoing and nearing completion

Note: Daily observation for odor will continue to be conducted along the Interceptor.

Monthly PI Odor Control Facility (OCF) Status Dashboard
November 2015

Operational Status:

Site 4 (MD)	Facility is running, but odor complaint was received in early November. DMS and DMDS have been detected. Media to be replaced when funding becomes available.
Site 17 (MD)	Facility is running.
Site 27 (MD)	Facility running nightly to avoid potential odor complaints. Air flow has been adjusted and media coating has been identified as elemental sulfur. Additional media testing is ongoing.
Site 31 (VA)	Facility is running. Media replacement activities completed.
Site 46 (VA)	Facility is running.
Site 1995 (DC)	Facility is running. Media replacement activities completed. Public outreach effort underway.

Milestones and Accomplishments:

1. Completed media replacement activities at Sites 31 and 1995
2. Air flow has been adjusted down to design values at Sites 27, 31, and 1995
3. Training activities to be completed the week of December 14th; O&M Manuals are 99% complete

Legend - Operational Status

Facility is running
Status update
Issues to be resolved

Key Points:

1. Site 31 heater is scheduled to be delivered by December 30th
2. Substantial Completion is scheduled for December 31st
3. Final Completion is scheduled for January 31st

Construction Status:

PI Odor Control Facilities	Site 1995 - DC	Site 4 - MD	Site 17 - MD	Site 27 - MD	Site 31 - VA	Site 46 - VA
Completion of Sealing Vent Structures	May 22, 2013	November 21, 2013	November 22, 2013	May 2, 2013	June 4, 2015	June 4, 2015
Completion of Sealing Manholes	March 28, 2013	March 28, 2013	March 28, 2013	May 2, 2013	September 30, 2015	September 30, 2015
OD Completion Date	March 28, 2013	July 8, 2013	July 8, 2013	October 15, 2013	July 29, 2015	May 6, 2015
Service Manuals Complete or Forecast	July 16, 2015	July 16, 2015	July 17, 2015	July 17, 2015	December 30, 2015	December 30, 2015
Training Completion or Forecast	April 11, 2013	April 11, 2013	April 11, 2013	April 11, 2013	December 18, 2015	December 18, 2015
Substantial Completion Date or Forecast	June 17, 2013	December 27, 2013	December 9, 2013	October 15, 2013	December 31, 2015	December 31, 2015
Final Completion Date or Forecast	June 5, 2015	June 5, 2015	June 5, 2015	June 5, 2015	January 31, 2015	January 31, 2015
Media Replacement Date or Forecast	November 19, 2015	TBD	TBD	July 30, 2015	November 20, 2015	TBD

Dates: Green represents completed activity, Blue represents status update, Red represents delay

water is life

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

DCFA#449-WSA

Wastewater Treatment Program Management Contract – Phase 2

Presented to:
Environmental Quality and Sewerage Services Committee
Chairman: James Patteson

December 17, 2015

DCWATER.COM

Wastewater Treatment Program Manager

- Purpose of the contract:
  - Provide Program Management services for the professional planning, engineering, management and specialized technical services required to develop, manage and commission CIP projects under the Wastewater Treatment service area.
  - Provide continuous services to completion of all the nitrogen and related plantwide upgrades planned for meeting the consent decree date of March 23, 2018.
- Two-phased contract approved by Board November 1, 2012:
  - Phase 1 is completed. Notice to Proceed in January 2013.
  - Phase 2: continuation of services through consent decree date March 2018

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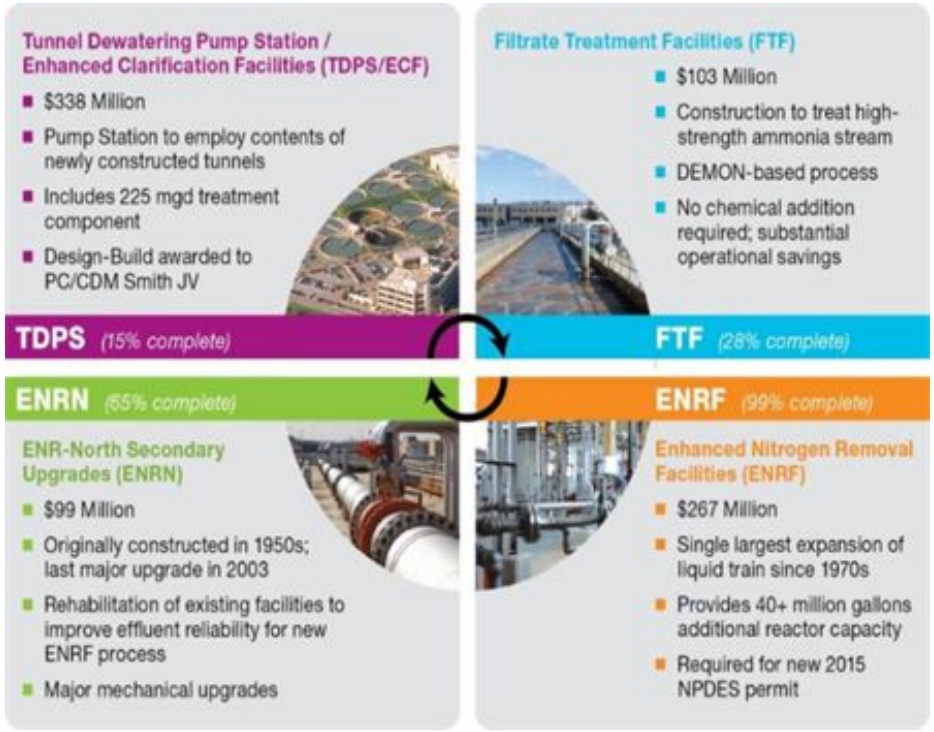
Phase 1 / Accomplishments *Traditional*

Traditional Program Management:

- ➢ CIP and Facility Planning
- Enhanced Nitrogen Removal Facility: successful design, construction and commissioning of the NPDES permit driven delivery of the facility.
- ENR-North Secondary Upgrades: successful design and support for on-going construction
- Filtrate Treatment Facility: successful design and support for on-going construction
- Tunnel Dewatering Pump Station/Enhanced Clarification Facilities: successful concept design, procurement for the Consent Decree driven DB contract and design finalization. On-going support for the delivery during the construction phase.



- ➢ Logistics
- Developed and managed site-wide logistics plan for efficient and safe site utilization by DC Water employees, consultants and contractors.
- ➢ Commissioning and Asset integration:
- Oversaw commissioning and integration of liquid and biosolids CIP projects into Blue Plains operation.

dc water is life

Phase 1 / Accomplishments *Non-Traditional*

Non-Traditional Program Management:

- ➢ Air Quality: comprehensive air permit support services to maintain compliance with both Federal and DC regulations
- Air permitting program development and support in permit negotiations and Title V permit application
- Odor control master plan
- Fuel Sulfur Monitoring Plan and Leak Detection and Repair Plan
- ➢ Plant wide support :
- Engineering studies/sitewide facility condition assessment and planning reports in support of the CIP planning process : Methanol Hazard Awareness, Uninterruptable Power Supply Upgrade, Nitrification Return Activated Sludge Line Assessment and rehab, Grit Chambers Condition Assessment.
- High Priority program: critical plant-wide issues and emergency responses that allow DC Water to continue meeting permit
- ➢ Technology and Innovations support
- Pilot support and feasibility studies
- ➢ Enterprise wide support
- Environmental Health and Safety Management System
- Lock Out Tag Out / Job Safety Analysis
- MBE/WBE compliance program

dc water is life

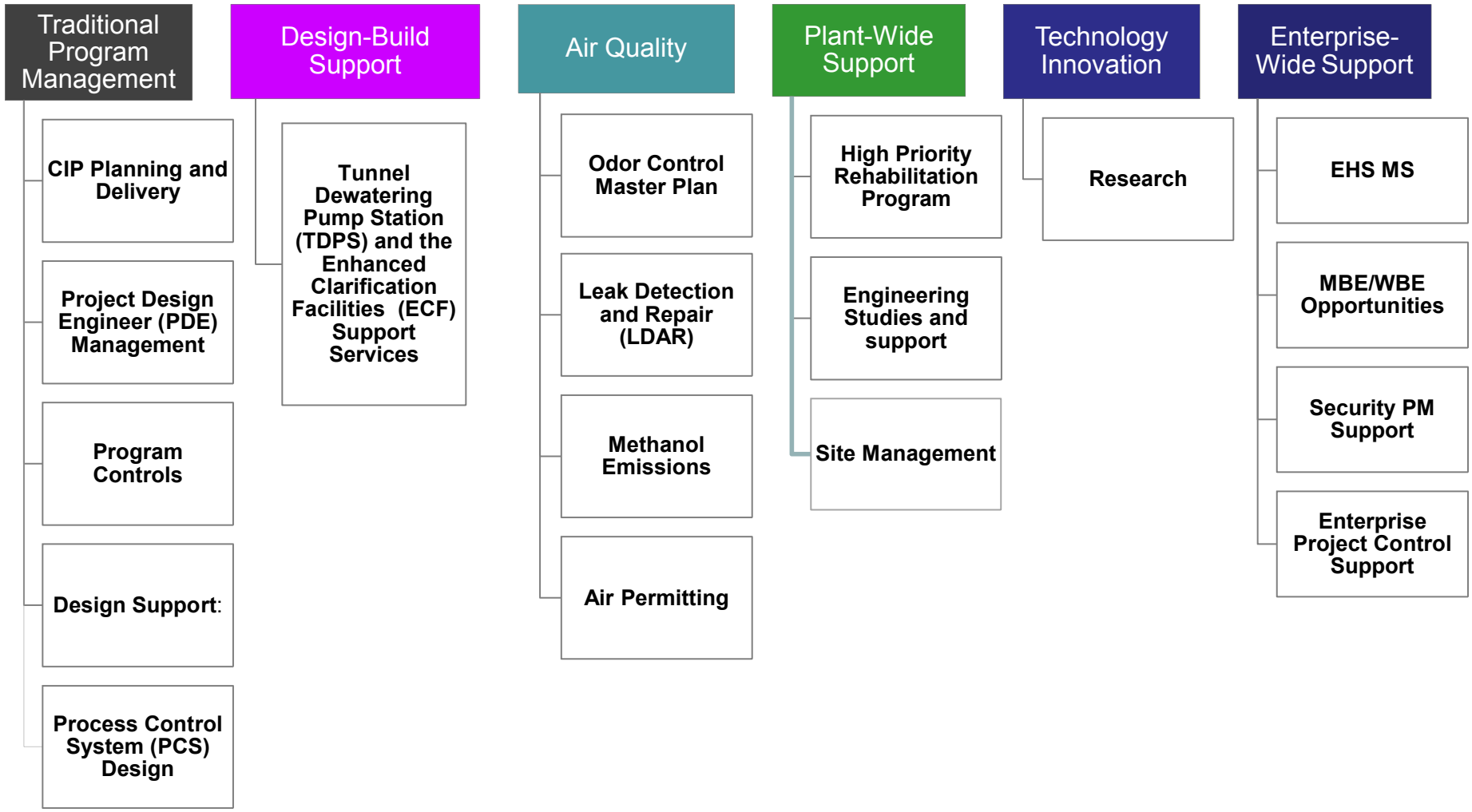
Phase 2 / On-going

Phase 2 is a continuation of Phase 1 services and brings to completion tasks and projects already underway in support of DC Water's most ambitious CIP program.

Continuation from Phase 1	**New Phase 2**
Traditional	Traditional
Develop and manage CIP development (Raw Wastewater Pump Station 2, Gravity Thickener, Filter Influent Pump Station)	Consolidation of Biosolids planning
Commissioning for FTF, ENRN and TDPS/ECF	All instrumentation, control and process control planning at Blue Plains
Complete the Facility Plan for Blue Plains	Asset Management support for CIP planning
Non-Traditional	Non-Traditional
Engineering and O&M support	Engineering and O&M support – New tasks
High Priority program services for rehabilitation work	High Priority program services for rehabilitation work
Air Quality	
Technology and Innovation	
Enterprise Wide Support	

dc water is life

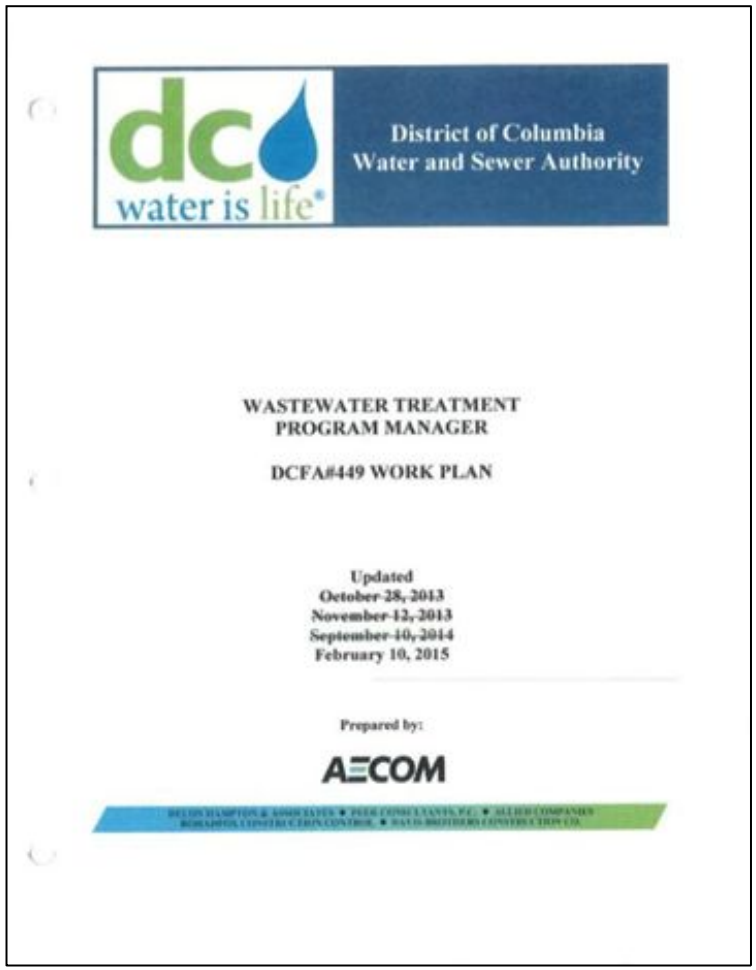
Phase 2 – Structure



Phase 2 - Work Planning

- Program activities authorized based on annual work plan
- Annual work plan will specify budget, schedule, staffing plan and anticipated deliverables
- Contract will be monitored for compliance with Fair Share Objectives Goals – 28% MBE and 4% WBE participation

Phase 1	Accomplishment
MBE	29.49%
WBE	4.28%


District of Columbia Water and Sewer Authority

WASTEWATER TREATMENT PROGRAM MANAGER

DCFA#449 WORK PLAN

Updated
~~October 28, 2013~~
~~November 12, 2013~~
~~September 10, 2014~~
February 10, 2015

Prepared by:

AECOM

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

ACTION REQUESTED

ENGINEERING SERVICES SUPPLEMENTAL AGREEMENT:

Wastewater Treatment Program Manager
(Joint Use)

Approval to execute a supplemental agreement to DCFA #449-WSA in an amount not to exceed $47,100,000.00. This modification will exceed the General Manager's approval authority.

CONTRACTOR/SUB/VENDOR INFORMATION

PRIME:	SUBS:		PARTICIPATION:
AECOM Services of DC, A Professional Corporation 2020 K Street NW, Suite 300 Washington, DC 20006-1806	The Allied Companies, LLC Washington, DC	MBE	8.1%
	Davis Brothers Construction Co., Inc. Richmond, VA	MBE	2.9%
	Delon Hampton & Associates Washington, DC	MBE	3.5%
	EPCM, Inc. Burke, VA	MBE	7.0%
	Loretta Caldwell and Associates Washington, DC	MBE	2.9%
	McKissack & McKissack Washington, DC	WBE	0.9%
	Rohadfox Construction Control Services Atlanta, GA	WBE	3.2%
	PEER Consultants, P.C. Washington, DC	MBE	4.2%
	Sigma Associates, Inc. Washington, DC	MBE	0.3%
	Enterprise Security Solutions Smithsburg, MD		2.9%
	EMA Washington , DC		0.9%
	Brown and Caldwell Alexandria, VA		0.8%

DESCRIPTION AND PURPOSE

Original Contract Value:	$63,000,000.00	
Value of this Supplemental Agreement:	$47,100,000.00	
Cumulative SA Value, including this SA:	$47,100,000.00	
Current Contract Value, Including this SA:	$110,100,000.00	
Original Contract Time:	2190 Days	(6 Years, 0 Months)
Time extension, this SA:	0 Days	
Total SA contract time extension:	0 Days	(0 Years, 0 Months)
Contract Start Date:	01-29-2013	
Contract Completion Date:	01-28-2019	

Purpose of the Contract:

To provide continuing professional engineering, program management and technical services to develop, manage, coordinate and commission projects at Blue Plains under the Wastewater Treatment service area. This contract is for a six-year program funded in two phases. The original agreement amount was approved to fund Phase 1 for the initial 3 year period. Phase 2 for the second 3 year period was pending satisfactory performance and progress under Phase 1, which has been achieved. This formal contract modification is necessary to authorize Phase 2 performance.

Original Contract Scope:

Provide professional engineering, management and technical services to develop, plan and manage projects within the Blue Plains Total Nitrogen Removal Program; Liquid Processing Program; and Plant-wide Projects Program, to ensure compliance with current and future NPDES, Consent Decree and Clean Air Act requirements.

Previous Supplemental Agreement Scope:

- None

Current Supplemental Agreement Scope:

Phase 2 continues and completes existing tasks initiated under Phase 1 and consists of knowledge and systems transfer component to DC Water for the following portfolios:

- Program Management : Oversee process planning and project management for both liquid and biosolids CIP projects at Blue Plains;
- Tunnel Dewatering Pumping Station / ECF Design Build Project; Support construction management team and provide commissioning support for the Blue Plains DCCR pumping and treatment component;
- Air Quality Program; Provide comprehensive air permit support services for compliance with both federal and DC regulations;
- Plant-Wide Support; Perform site-wide facility condition assessment and planning reports in support of the CIP planning process;
- Enterprise-wide Support; Support for Blue Horizon initiatives including Enterprise Wide Health and Safety Plan development;
- Research And Pilot Studies: Support key research and innovation activities such as co-digestion and deammonification;
- Completion of Facility / Master Plan: Develop key long-range facility and process planning road-map for Blue Plains

Future Supplemental Agreement Scope:

- None anticipated at this time

PROCUREMENT INFORMATION			
Contract Type:	Cost Plus Fixed Fee	**Award Based On:**	Highest Ranking Score
Commodity:	Engineering Services	**Contract Number:**	DCFA #449
Contractor Market:	Open Market		

BUDGET INFORMATION			
Funding:	Capital	**Department:**	Engineering and Technical Services
Service Area:	Wastewater	**Department Head:**	Liliana Maldonado
Project:	A2, AL, AM, EE, GP, IC, JF		

ESTIMATED USER SHARE INFORMATION

User	Share %	Dollar Amount
District of Columbia	41.22%	$19,414,620.00
Washington Suburban Sanitary Commission	45.84%	$21,590,640.00
Fairfax County	8.38%	$3,946,980.00
Loudoun County & Potomac Interceptor	4.56%	$2,147,760.00
Total Estimated Dollar Amount	**100.00%**	**$ 47,100,000.00**

11/10/2015
Gail Alexander-Reeves / Date
Director of Budget

for 11/15/15
Dan Bae / Date
Director of Procurement

11/10/15
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

GOODS AND SERVICES CONTRACT:

FERRIC CHLORIDE
(Joint Use)

Approval to execute a contract for the supply and delivery of Ferric Chloride in the amount of $3,325,000.00.

CONTRACTOR/SUB/VENDOR INFORMATION

PRIME:	SUBS:	PARTICIPATION:
Carter & Carter Enterprises, Inc. 212 Van Buren Street, NW Washington, DC 20012 (LSBE)		

DESCRIPTION AND PURPOSE

Contract Value, Not-To-Exceed:	$3,325,000.00
Contract Time:	5 Years
Anticipated Contract Start Date (NTP):	01-11-2016
Anticipated Contract Completion Date:	01-10-2017
Bid Opening Date:	11-20-2015
Bids Received:	3
Other Bids Received:	
Kemira Water Solutions, Inc	$3,255,000.00
PVS Technology	$3,832,500.00
Preference Points Received:	$100,000.00
Evaluation Bid Amount:	$3,225,000.00 (after deducting the preference points)

Purpose of the Contract:

DC Water uses approximately 25,000,000 pounds of liquid ferric chloride solution annually. Ferric chloride is used at DC Water's Blue Plains Advanced Wastewater Treatment Plant (AWTP) as a coagulant to aid in settling solids, and for the purpose of precipitating phosphorus. Wastewater Treatment desires to award the contract to two (2) vendors with different manufacturers to assure the continuity of supply and increased competition during the bidding phase.

The procurement method utilized was an Invitation for Bid (IFB) and 2 vendors were selected:

Carter & Carter	Selected to provide 70% of the ferric chloride solution due to the lowest bid amount (a certified LSBE firm and received a $100,000.00 price deduction).
PVS Technology	Selected to provide 30% of the ferric chloride solution due to the next lowest evaluation bid amount.
Kemira	Not selected because of the higher evaluation bid amount and their source (manufacturer) is also the same as Carter & Carter; thus not meeting the goal of 2 distinct manufacturers.)

This action is to contract with Carter & Carter Enterprises, Inc. for purchase of 17,500,000 pounds of liquid ferric chloride solution at annual contract value not to exceed $3,325,000.00. This represents approximately 70% of the ferric chloride needed this year.

A separate contract will be issued to purchase the remaining 7,500,000 pounds (30%) of ferric chloride needed from PVS Technology.

PROCUREMENT INFORMATION			
Contract Type:	Goods and Services	**Award Based On:**	Lowest responsive, responsible bidder
Commodity:	Ferric Chloride	**Contract Number:**	15-PR-WWT-53A
Contractor Market:	Open Market with Preference Points		

BUDGET INFORMATION			
Funding:	Operation	**Department:**	Wastewater Treatment
Service Area:	Blue Plains AWTP	**Department Head:**	Salil M. Kharkar

*ESTIMATED USER SHARE INFORMATION		
User	**Share %**	**Dollar Amount**
District of Columbia	41.63%	$1,384,197.50
Washington Suburban Sanitary Commission	42.96%	$1,428,420.00
Fairfax County	10.57%	$351,452.50
Loudoun County	4.25%	$141,312.50
Potomac Interceptor	0.59%	$19,617.50
	100.00%	**$3,325,000.00**

Gail Alexander-Reeves / 12/10/15
Director of Budget — Date

Dan Bae / 12/8/15
Director of Procurement — Date

Aklile Tesfaye / 12/10/15
Assistant General Manager
Blue Plains — Date

George S. Hawkins / _____
General Manager — Date

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

ACTION REQUESTED

GOODS AND SERVICE CONTRACT:

FERRIC CHLORIDE
(Joint Use)

Approval to execute a contract for the supply and delivery of Ferric Chloride in the amount of $1,447,500.00.

CONTRACTOR/SUB/VENDOR INFORMATION

PRIME:	SUBS:	PARTICIPATION:
PVS Technology 10900 Harper Avenue Detroit, MI 48213		

DESCRIPTION AND PURPOSE

Contract Value, Not-To-Exceed:	$1,447,500.00
Contract Time:	5 Years
Anticipated Contract Start Date (NTP):	01-11-2016
Anticipated Contract Completion Date:	01-10-2017
Bid Opening Date:	11-20-2015
Bids Received:	3
Other Bids Received	
Kemira Water Solutions, Inc	$1,395,000.00
Carter & Carter	$1,462,500.00
Preference Points Received:	0%
Evaluation Bid Amount:	$1,447,500.00

Purpose of the Contract:

DC Water uses approximately 25,000,000 pounds of liquid ferric chloride solution annually. Ferric chloride is used at DC Water's Blue Plains Advanced Wastewater Treatment Plant (AWTP) as a coagulant to aid in settling solids, and for the purpose of precipitating phosphorus. Wastewater Treatment desires to award the contract to two (2) vendors with different manufacturers to assure the continuity of supply and increased competition during the bidding phase.

The procurement method utilized was an Invitation for Bid (IFB) and 2 vendors were selected:

Carter & Carter	Selected to provide 70% of the ferric chloride solution due to the lowest bid amount (a certified LSBE firm and received a $100,000.00 price deduction).
PVS Technology	Selected to provide 30% of the ferric chloride solution due to the next lowest evaluation bid amount.
Kemira	Not selected because of the higher evaluation bid amount and their source (manufacturer) is also the same as Carter & Carter; thus not meeting the goal of 2 distinct manufacturers.)

This action is to contract with PVS Technology for purchase of up to 7,500,000 pounds of liquid ferric chloride solution at annual contract value not to exceed $1,447,500.00. This represents approximately 30% of the ferric chloride needed this year.

A separate contract will be issued to purchase the remaining 17,500,000 pounds (70%) of ferric chloride needed from Carter & Carter.

No LSBE participation with this procurement.

PROCUREMENT INFORMATION

Contract Type:	Goods and Services	**Award Based On:**	Lowest responsive, responsible bidder
Commodity:	Ferric Chloride	**Contract Number:**	15-PR-WWT-53B
Contractor Market:	Open Market with Preference Points		

BUDGET INFORMATION

Funding:	Operation	**Department:**	Wastewater Treatment
Service Area:	Blue Plains AWTP	**Department Head:**	Salil M. Kharkar

*ESTIMATED USER SHARE INFORMATION

User	Share %	Dollar Amount
District of Columbia	41.63%	$602,594.25
Washington Suburban Sanitary Commission	42.96%	$621,846.00
Fairfax County	10.57%	$153,000.75
Loudoun County	4.25%	$61,518.75
Potomac Interceptor	0.59%	$8,540.25
	100.00%	**$1,447,500.00**

_____ / 12/10/15
Gail Alexander-Reeves — Date
Director of Budget

_____ / 12/8/15
Dan Bae — Date
Director of Procurement

_____ / 12/10/15
Aklile Tesfaye — Date
Assistant General Manager
Blue Plains

_____ / _____
George S. Hawkins — Date
General Manager

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

ACTION REQUESTED

GOODS AND SERVICES CONTRACT

Electrical Power Distribution Equipment
Joint Use

Approval to exercise option year three (3) of the electrical power distribution equipment contract in the amount of $2,527,000.00.

CONTRACTOR/SUB/VENDOR INFORMATION

PRIME:	SUBS:	PARTICIPATION:
M. C. Dean, Inc. 22461 Shaw Road Dulles, VA 20166		

DESCRIPTION AND PURPOSE

Base Year Contract Value:	$2,490,000.00
Contract Base Period:	03-26-2013 – 03-25-2014
Number of Option Years:	4
Option Year (1) Values:	$2,490,000.00
Option Year (1) Dates:	03-26-2014 – 03-25-2015
Option Year (2) Values:	$2,960,000.00
Option Year (2) Dates:	03-26-2015 – 03-25-2016
Option Year (3) Values:	**$2,527,000.00**
Option Year (3) Dates:	**03-26-2016 – 03-25-2017**

Purpose of the Contract:

DC Water Maintenance Services and Distribution Conveyance Systems departments have a continuing need for annual maintenance of high and low voltage switchgear throughout DC Water facilities.

Original Contract Scope:

To provide supervisory personnel and technicians, as well as materials and supplies, needed for the maintenance of high and low voltage switchgear to ensure reliable electric power for the overall operation of DC Water facilities.

Spending Previous Year:

Cumulative Contract Value:	03-26-2013 to 03-25-2016: $7,940,000.00
Cumulative Contract Spending:	03-26-2013 to 12-08-2016: $6,336,699.69

PROCUREMENT INFORMATION

Contract Type:	Fixed Price	**Award Based On:**	Best Value
Commodity:	Service	**Contract Number:**	WAS-12-029-AA-JR
Contractor Market:	Open Market with Preference Points		

JOINT-USE (DIRECT)

BUDGET INFORMATION

Funding:	Operating	**Department:**	Maintenance Services
Service Area:	Blue Plains	**Department Head:**	Anthony Mack

ESTIMATED USER SHARE INFORMATION

User	Share %*	Dollar Amount
District of Columbia	41.63%	$843,840.10
Washington Suburban Sanitary Commission	42.96%	$870,799.20
Fairfax County	10.57%	$214,253.90
Loudoun County	4.25%	$86,147.50
Potomac Interceptor	0.59%	$11,959.30
TOTAL ESTIMATED DOLLAR AMOUNT	**100.00%**	**$2,027,000.00**

*NOTE: Actual usage and cost by facility (either joint-use or non-joint use) varies each fiscal year and are charged to IMA participants based on actual costs at joint-use facilities (i.e., Blue Plains, Potomac Pumping Station, etc.). Services provided to non-joint facilities (i.e., Bryant Street Pumping Station) are charged directly to District ratepayers. In prior fiscal years, the majority of services provided under this contract have been for joint use facilities and for indicative purposes; the user shares shown above reflect Blue Plain's usage.

JOINT USE (INDIRECT)

BUDGET INFORMATION

Funding:	Operating	**Department:**	Department of Distribution Conveyance System
Service Area:	DC Water-Wide	**Department Head:**	Charles Sweeney

ESTIMATED USER SHARE INFORMATION

User	Share %	Dollar Amount
District of Columbia	84.40%	$422,000.00
Washington Suburban Sanitary Commission	11.41%	$57,050.00
Fairfax County	2.87%	$14,350.00
Loudoun County	1.16%	$5,800.00
Potomac Interceptor	0.16%	$800.00
TOTAL ESTIMATED DOLLAR AMOUNT	**100.00%**	**$500,000.00**

12/10/15

Gail Alexander- Reeves / Date
Director of Budget

12/8/15

Dan Bae / Date
Director of Procurement

12/10/15

Aklile Tesfaye / Date
Assistant General Manager
Blue Plains

George S. Hawkins / Date
General Manager

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

ACTION REQUESTED

GOODS AND SERVICES CONTRACT OPTION YEAR:

Information Technology Professional Services (Joint Use)

Approval to execute option year two (2) for information technology professional services for the not-to-exceed amount of $600,000.00.

CONTRACTOR/SUB/VENDOR INFORMATION

PRIME:	SUBS:	PARTICIPATION:
Advance Digital Systems 10560 Main Street, Suite 214 Fairfax, Virginia 22030 (LSBE)		

DESCRIPTION AND PURPOSE

Original Contract Value:	$567,312.00
Original Contract Dates:	02-01-2014—01-31-2015
No. of Option Years in Contract:	2
Option Year (1) Values:	$650,000.00
Option Year (1) Dates:	02-01-2015—01-31-2016
Option Year (2) Values:	**$600,000.00**
Option Year (2) Dates:	**02-01-2016—01-31-2017**

Purpose of the Contract:

To contract for IT Professional Services for the District of Columbia Water and Sewer Authority (DC Water) Information Technology department.

Original Contract Scope:

To provide professional services to implement and support the Enterprise Document Management System, Lan/Wan and Helpdesk support.

Spending Previous Year:

Cumulative Contract Value:	02-01-2014 to 01-31-2016:	$1,217,312.00
Cumulative Contract Spending:	02-01-2014 to 11-30-2015:	$515,912.25

Contractor's Past Performance:

The contractor's past performance has been satisfactory.

PROCUREMENT INFORMATION

Contract Type:	Firm Fixed Labor Rate	**Award Based On:**	Highest Ranking Score
Commodity:	IT Professional Services	**Contract Number:**	14-PR-DIT-02
Contractor Market:	Open Market with LBE and LSBE Preference Participation		

BUDGET INFORMATION

Funding:	Operating	**Department:**	Information Technology
Service Area:	DC Water wide	**Department Head:**	Thomas Kuczynski

ESTIMATED USER SHARE INFORMATION

User	Share %	Dollar Amount
District of Columbia	84.40%	$506,400.00
Washington Suburban Sanitary Commission	11.41%	$68,460.00
Fairfax County	2.87%	$17,220.00
Loudoun County	1.16%	$6,960.00
Other (Potomac Interceptor)	0.16%	$960.00
TOTAL ESTIMATED DOLLAR AMOUNT	100.00%	**$600,000.00**

Gail Alexander-Reeves / 12/10/15
Director of Budget — Date

Dan Bae / 12/8/15
Director of Procurement — Date

Thomas Kuczynski / 12/9/15
Chief information Officer
Information Technology — 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 OPTION YEAR:

Information Technology Professional Services (Joint Use)

Approval to execute option year two (2) for information technology professional services for the not-to-exceed amount of $300,000.00.

CONTRACTOR/SUB/VENDOR INFORMATION

PRIME:	SUBS:	PARTICIPATION:
IMG, Inc. 5418 Seminary Road Alexandria, Virginia 22311 (LSBE)		

DESCRIPTION AND PURPOSE

Original Contract Value:	$406,832.00
Original Contract Dates:	02-01-2014—01-31-2015
No. of Option Years in Contract:	2
Option Year (1) Values:	$400,000.00
Option Year (1) Dates:	02-01-2015—01-31-2016
Option Year (2) Values:	**$300,000.00**
Option Year (2) Dates:	**02-01-2016—01-31-2017**

Purpose of the Contract:

To contract for IT Professional Services for the District of Columbia Water and Sewer Authority (DC Water) Information Technology department.

Original Contract Scope:

Provides SCADA and LAN/WAN IT support.

Spending Previous Year:

Cumulative Contract Value:	02-01-2014 to 01-31-2016:	$806,832.00
Cumulative Contract Spending:	02-01-2014 to 11-30-2015:	$642,514.00

Contractor's Past Performance:

The contractor's past performance has been satisfactory.

PROCUREMENT INFORMATION

Contract Type:	Firm Fixed Labor Rate	**Award Based On:**	Highest Ranking Score
Commodity:	IT Professional Services	**Contract Number:**	14-PR-DIT-02
Contractor Market:	Open Market with LBE and LSBE Preference Participation		

BUDGET INFORMATION

Funding:	Operating	**Department:**	Information Technology
Service Area:	DC Water wide	**Department Head:**	Thomas Kuczynski

ESTIMATED USER SHARE INFORMATION

User	Share %	Dollar Amount
District of Columbia	84.40%	$253,200.00
Washington Suburban Sanitary Commission	11.41%	$34,230.00
Fairfax County	2.87%	$8,610.00
Loudoun County	1.16%	$3,480.00
Other (Potomac Interceptor)	0.16%	$480.00
TOTAL ESTIMATED DOLLAR AMOUNT	100.00%	**$300,000.00**

12/10/15
Gail Alexander-Reeves Date
Director of Budget

12/8/15
Dan Bae Date
Director of Procurement

12/8/15
Thomas Kuczynski Date
Chief information Officer
Information Technology

George S. Hawkins Date
General Manager

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

ACTION REQUESTED

GOODS AND SERVICES CONTRACT OPTION YEAR:

Information Technology Professional Services (Joint Use)

Approval to execute option year two (2) for information technology professional services for the not-to-exceed amount of $450,000.00.

CONTRACTOR/SUB/VENDOR INFORMATION

PRIME:	SUBS:	PARTICIPATION:
Mansai Corporation 7335A Hanover Parkway Greenbelt, Maryland 20770 (LSBE)		

DESCRIPTION AND PURPOSE

Original Contract Value:	$363,408.00
Original Contract Dates:	02-01-2014—01-31-2015
No. of Option Years in Contract:	2
Option Year (1) Values:	$315,000.00
Option Year (1) Dates:	02-01-2015—01-31-2016
Option Year (2) Values:	**$450,000.00**
Option Year (2) Dates:	**02-01-2016—01-31-2017**

Purpose of the Contract:

To contract for IT Professional Services for the District of Columbia Water and Sewer Authority (DC Water) Information Technology department.

Original Contract Scope:

To provide professional services for our Enterprise Systems and Helpdesk support.

Spending Previous Year:

Cumulative Contract Value:	02-01-2014 to 01-31-2016:	$678,408.00
Cumulative Contract Spending:	02-01-2014 to 11-30-2015:	$508,611.50

Contractor's Past Performance:

The contractor's past performance has been satisfactory.

PROCUREMENT INFORMATION

Contract Type:	Firm Fixed Labor Rate	**Award Based On:**	Highest Ranking Score
Commodity:	IT Professional Services	**Contract Number:**	14-PR-DIT-03
Contractor Market:	Open Market with LBE and LSBE Preference Participation		

BUDGET INFORMATION

Funding:	Operating	**Department:**	Information Technology
Service Area:	DC Water wide	**Department Head:**	Thomas Kuczynski

ESTIMATED USER SHARE INFORMATION

User	Share %	Dollar Amount
District of Columbia	84.40%	$379,800.00
Washington Suburban Sanitary Commission	11.41%	$51,345.00
Fairfax County	2.87%	$12,915.00
Loudoun County	1.16%	$5,220.00
Other (Potomac Interceptor)	0.16%	$720.00
TOTAL ESTIMATED DOLLAR AMOUNT	100.00%	**$450,000.00**

12/10/15
Gail Alexander-Reeves Date
Director of Budget

12/8/15
Dan Bae Date
Director of Procurement

12/9/15
Thomas Kuczynski Date
Chief information Officer
Information Technology

/
George S. Hawkins Date
General Manager

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

ACTION REQUESTED

GOODS AND SERVICES CONTRACT OPTION YEAR:

Information Technology Professional Services (Joint Use)

Approval to execute option year two (2) for information technology professional services for the not-to-exceed amount of $650,000.00.

CONTRACTOR/SUB/VENDOR INFORMATION

PRIME:	SUBS:	PARTICIPATION:
Mega-Tech 701 West Broad Street, Suite 411 Falls Church, Virginia 22046 (LSBE)		

DESCRIPTION AND PURPOSE

Original Contract Value:	$480,920.00
Original Contract Dates:	02-01-2014—01-31-2015
No. of Option Years in Contract:	2
Option Year (1) Values:	$450,000.00
Option Year (1) Dates:	02-01-2015—01-31-2016
Option Year (2) Values:	**$650,000.00**
Option Year (2) Dates:	**02-01-2016—01-31-2017**

Purpose of the Contract:

To contract for IT Professional Services for the District of Columbia Water and Sewer Authority (DC Water) Information Technology department.

Original Contract Scope:

To continue to provide professional services for Maximo, GIS Systems, and Helpdesk support.

Spending Previous Year:

Cumulative Contract Value:	02-01-2014 to 01-31-2016:	$930,920.00
Cumulative Contract Spending:	02-01-2014 to 11-30-2015:	$832,813.00

Contractor's Past Performance:

The contractor's past performance has been satisfactory.

PROCUREMENT INFORMATION

Contract Type:	Firm Fixed Labor Rate	**Award Based On:**	Highest Ranking Score
Commodity:	IT Professional Services	**Contract Number:**	14-PR-DIT-06
Contractor Market:	Open Market with LBE and LSBE Preference Participation		

BUDGET INFORMATION

Funding:	Operating	**Department:**	Information Technology
Service Area:	DC Water wide	**Department Head:**	Thomas Kuczynski

ESTIMATED USER SHARE INFORMATION

User	Share %	Dollar Amount
District of Columbia	84.40%	$548,600.00
Washington Suburban Sanitary Commission	11.41%	$74,165.00
Fairfax County	2.87%	$18,655.00
Loudoun County	1.16%	$7,540.00
Other (Potomac Interceptor)	0.16%	$1,040.00
TOTAL ESTIMATED DOLLAR AMOUNT	100.00%	**$650,000.00**

Gail Alexander-Reeves / 12/08/15
Director of Budget

Dan Bae / 12/8/15
Director of Procurement

Thomas Kuczynski / 12/9/15
Chief information Officer
Information Technology

George S. Hawkins /
General Manager

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

ACTION REQUESTED

GOODS AND SERVICES CONTRACT OPTION YEAR:

Information Technology Professional Services (Joint Use)

Approval to execute option year two (2) for information technology professional services for the not-to-exceed amount of $550,000.00.

CONTRACTOR/SUB/VENDOR INFORMATION

PRIME:	SUBS:	PARTICIPATION:
MVS, Inc. 1401 14th Street, NW, Suite 200 Washington, DC 20005 (LSBE)		

DESCRIPTION AND PURPOSE

Original Contract Value:	$408,590.72
Original Contract Dates:	02-01-2014—01-31-2015
No. of Option Years in Contract:	2
Option Year (1) Values:	$350,000.00
Option Year (1) Dates:	02-01-2015—01-31-2016
Option Year (2) Values:	**$550,000.00**
Option Year (2) Dates:	**02-01-2016—01-31-2017**

Purpose of the Contract:

To contract for IT Professional Services for the District of Columbia Water and Sewer Authority (DC Water) Information Technology department.

Original Contract Scope:

To provide professional services for Network/Data Operations, Engineering, Oracle DBA and Helpdesk support.

Spending Previous Year:

Cumulative Contract Value:	02-01-2014 to 01-31-2016:	$758,590.72
Cumulative Contract Spending:	02-01-2014 to 11-30-2015:	$448,767.20

Contractor's Past Performance:

The contractor's past performance has been satisfactory.

PROCUREMENT INFORMATION

Contract Type:	Firm Fixed Labor Rate	**Award Based On:**	Highest Ranking Score
Commodity:	IT Professional Services	**Contract Number:**	14-PR-DIT-05
Contractor Market:	Open Market with LBE and LSBE Preference Participation		

BUDGET INFORMATION

Funding:	Operating	**Department:**	Information Technology
Service Area:	DC Water wide	**Department Head:**	Thomas Kuczynski

ESTIMATED USER SHARE INFORMATION

User	Share %	Dollar Amount
District of Columbia	84.40%	$464,200.00
Washington Suburban Sanitary Commission	11.41%	$62,755.00
Fairfax County	2.87%	$15,785.00
Loudoun County	1.16%	$6,380.00
Other (Potomac Interceptor)	0.16%	$880.00
TOTAL ESTIMATED DOLLAR AMOUNT	100.00%	**$550,000.00**

Gail Alexander-Reeves / Date
Director of Budget

Dan Bae / 12/8/15
Date
Director of Procurement

Thomas Kuczynski / 11/9/15
Date
Chief information Officer
Information Technology

George S. Hawkins / Date
General Manager

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

ACTION REQUESTED

GOODS AND SERVICES CONTRACT OPTION YEAR:

Information Technology Professional Services (Joint Use)

Approval to execute option year two (2) for information technology professional services for the not-to-exceed amount of $650,000.00.

CONTRACTOR/SUB/VENDOR INFORMATION

PRIME:	SUBS:	PARTICIPATION:
Namtra Business Solutions 11800 Sunrise Valley Drive, Suite 317 Reston, Virginia 20191 (LSBE)		

DESCRIPTION AND PURPOSE

Original Contract Value:	$927,378.24
Original Contract Dates:	02-01-2014—01-31-2015
No. of Option Years in Contract:	2
Option Year (1) Values:	$740,000.00
Option Year (1) Dates:	02-01-2015—01-31-2016
Option Year (2) Values:	**$650,000.00**
Option Year (2) Dates:	**02-01-2016—01-31-2017**

Purpose of the Contract:

To contract for IT Professional Services for the District of Columbia Water and Sewer Authority (DC Water) Information Technology department.

Original Contract Scope:

To provide professional services to our Maximo, Enterprises and Lan/Wan systems.

Spending Previous Year:

Cumulative Contract Value:	02-01-2014 to 01-31-2016:	$1,667,378.24
Cumulative Contract Spending:	02-01-2014 to 11-30-2015:	$1,271,034.65

Contractor's Past Performance:

The contractor's past performance has been satisfactory.

PROCUREMENT INFORMATION

Contract Type:	Firm Fixed Labor Rate	**Award Based On:**	Highest Ranking Score
Commodity:	IT Professional Services	**Contract Number:**	14-PR-DIT-04
Contractor Market:	Open Market with LBE and LSBE Preference Participation		

BUDGET INFORMATION

Funding:	Operating	**Department:**	Information Technology
Service Area:	DC Water wide	**Department Head:**	Thomas Kuczynski

ESTIMATED USER SHARE INFORMATION

User	Share %	Dollar Amount
District of Columbia	84.40%	$548,600.00
Washington Suburban Sanitary Commission	11.41%	$74,165.00
Fairfax County	2.87%	$18,655.00
Loudoun County	1.16%	$7,540.00
Other (Potomac Interceptor)	0.16%	$1,040.00
TOTAL ESTIMATED DOLLAR AMOUNT	100.00%	**$650,000.00**

12/10/15
Gail Alexander-Reeves Date
Director of Budget

12/8/15
Dan Bae Date
Director of Procurement

12/10/15
Thomas Kuczynski Date
Chief information Officer
Information Technology

/
George S. Hawkins Date
General Manager

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

Briefing on:

DC Clean Rivers Project
Quarterly Update

Briefing for:

Environmental Quality & Sewerage Services Committee

November 19, 2015

DCWATER.COM

Agenda

- Overview of Anacostia Projects
- Kennedy Center – CSO 021 Diversion Facility
- Summary

Appendix – Project Updates

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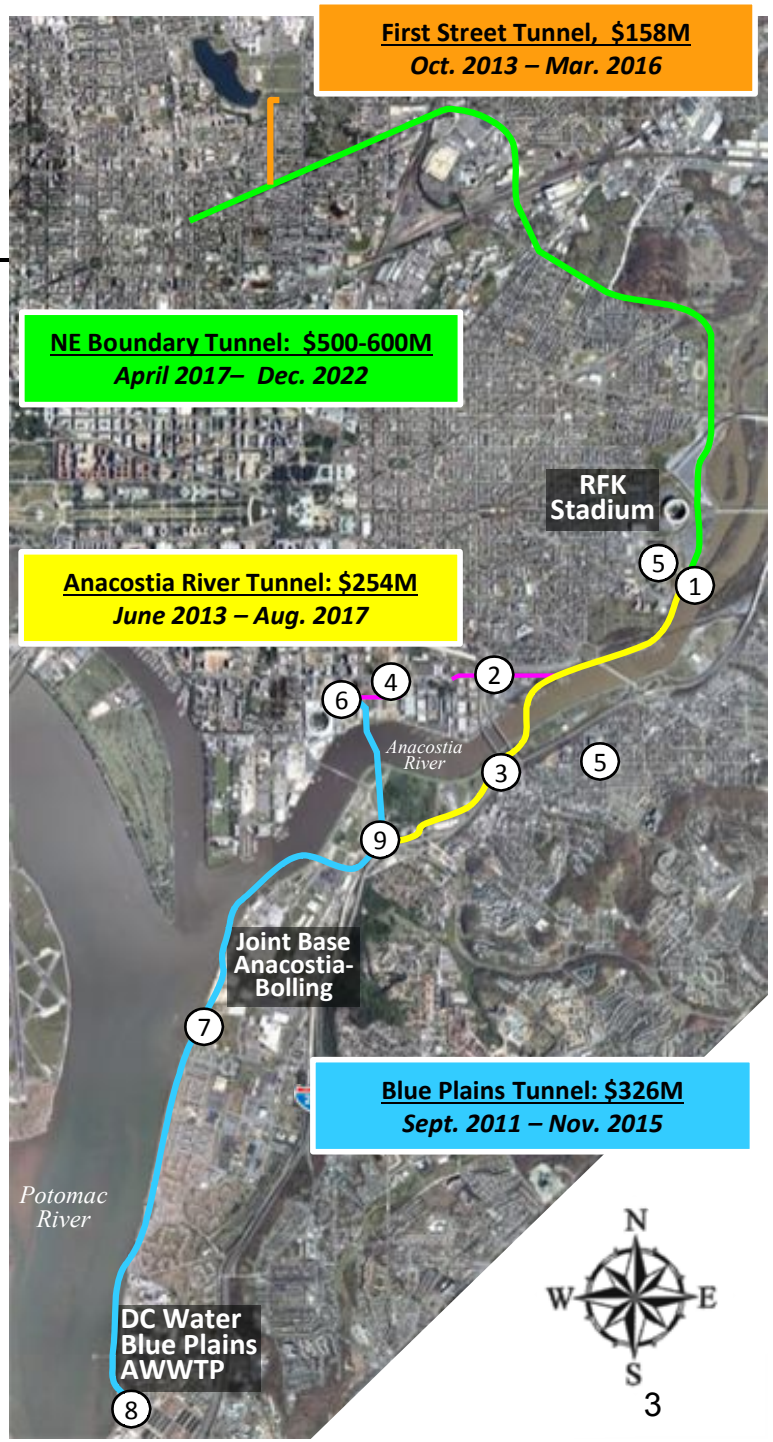
Anacostia River Projects: Implementation on Schedule

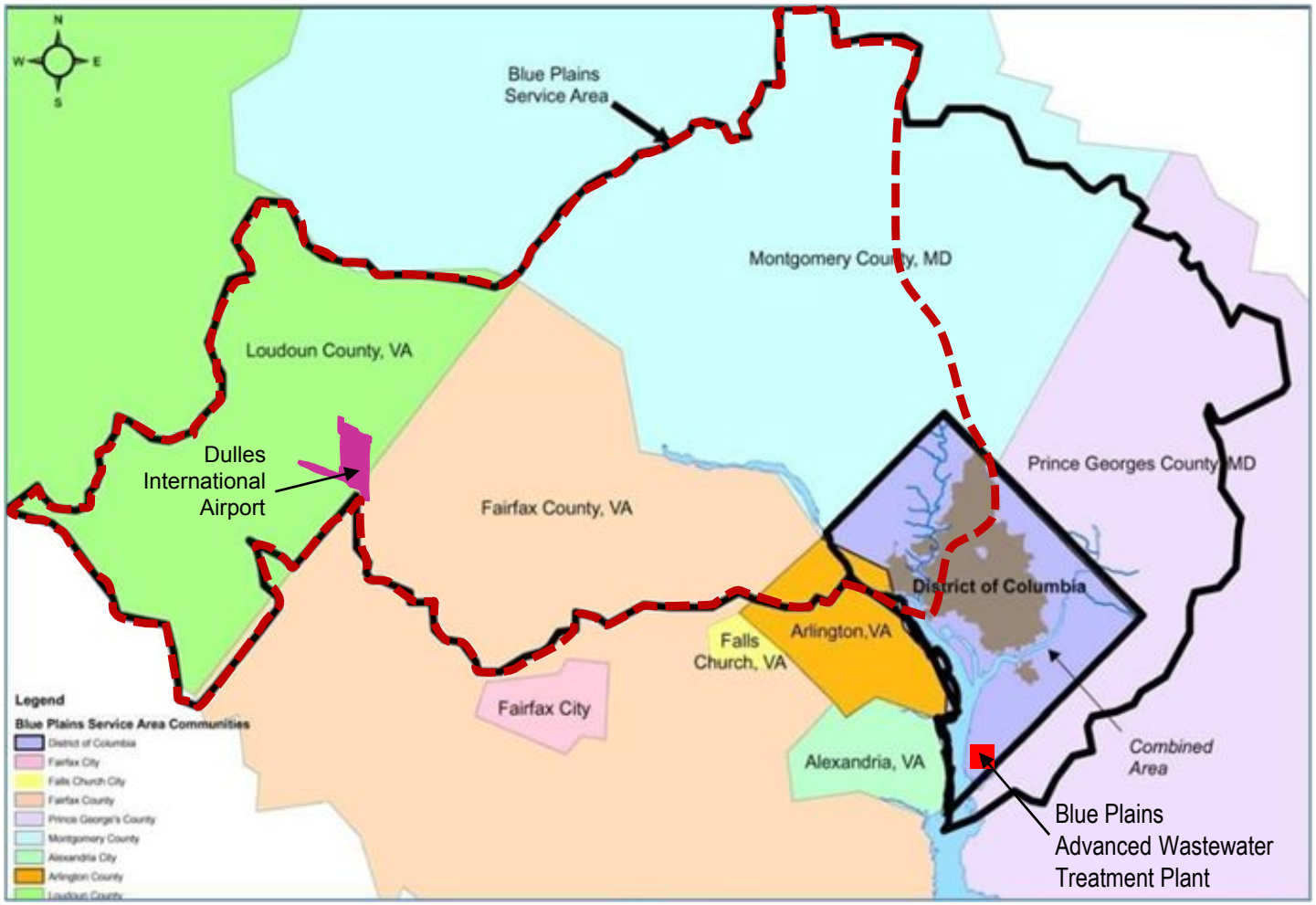
2011	2012	2013	2014	2015
	M St Diversion Sewer $31M (Const. Completed Dec 2014)	LID @ Various DC Water Facilities $4M *Dec* (Const. Completed Mar 2014)	Main PS $53M *May*	Blue Plains Tunnel PS/ECF $215M *Nov*
1 CSO 019 $28M *Sept* (Const. Completed Aug 2013)	2 CSO 007 $5M *Apr* Const. (Com-pleted Feb 2013)	5 Tingey St Diversion Sewer $17M *July* (Const. Completed Mar 2014)	6 JBAB Overflow & Diversion $40M *Oct*	9 Poplar Point PS $53M *Jan*

Months shown on timeline indicate construction start dates.



KENNEDY CENTER – CSO 021 DIVERSION FACILITIES

Drainage Area Served by Sewers Under Kennedy Center & Potomac Pumping Station



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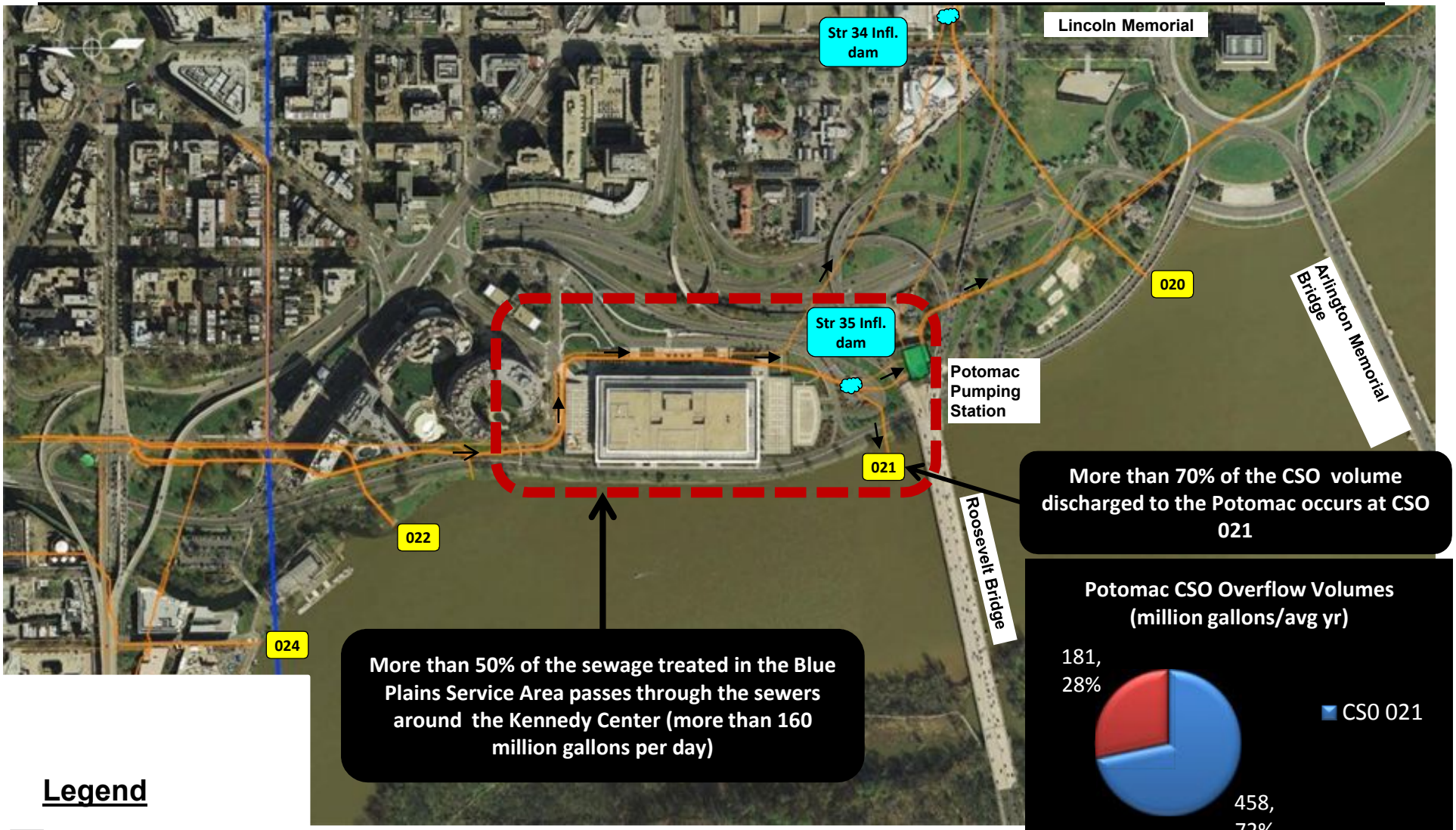
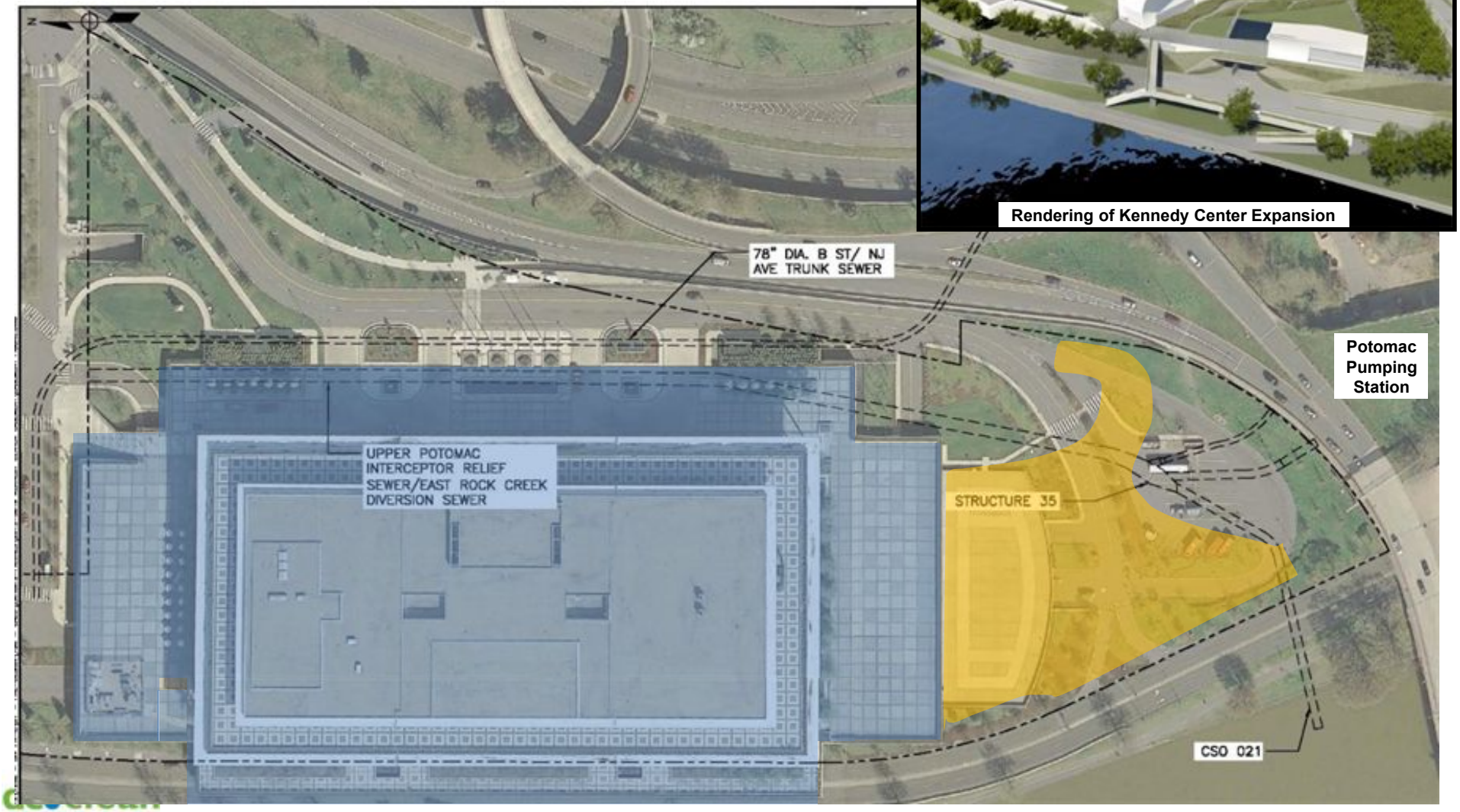
5

Sewers passing Through Kennedy Center are Critical Assets for Greater Metropolitan Washington Area



6

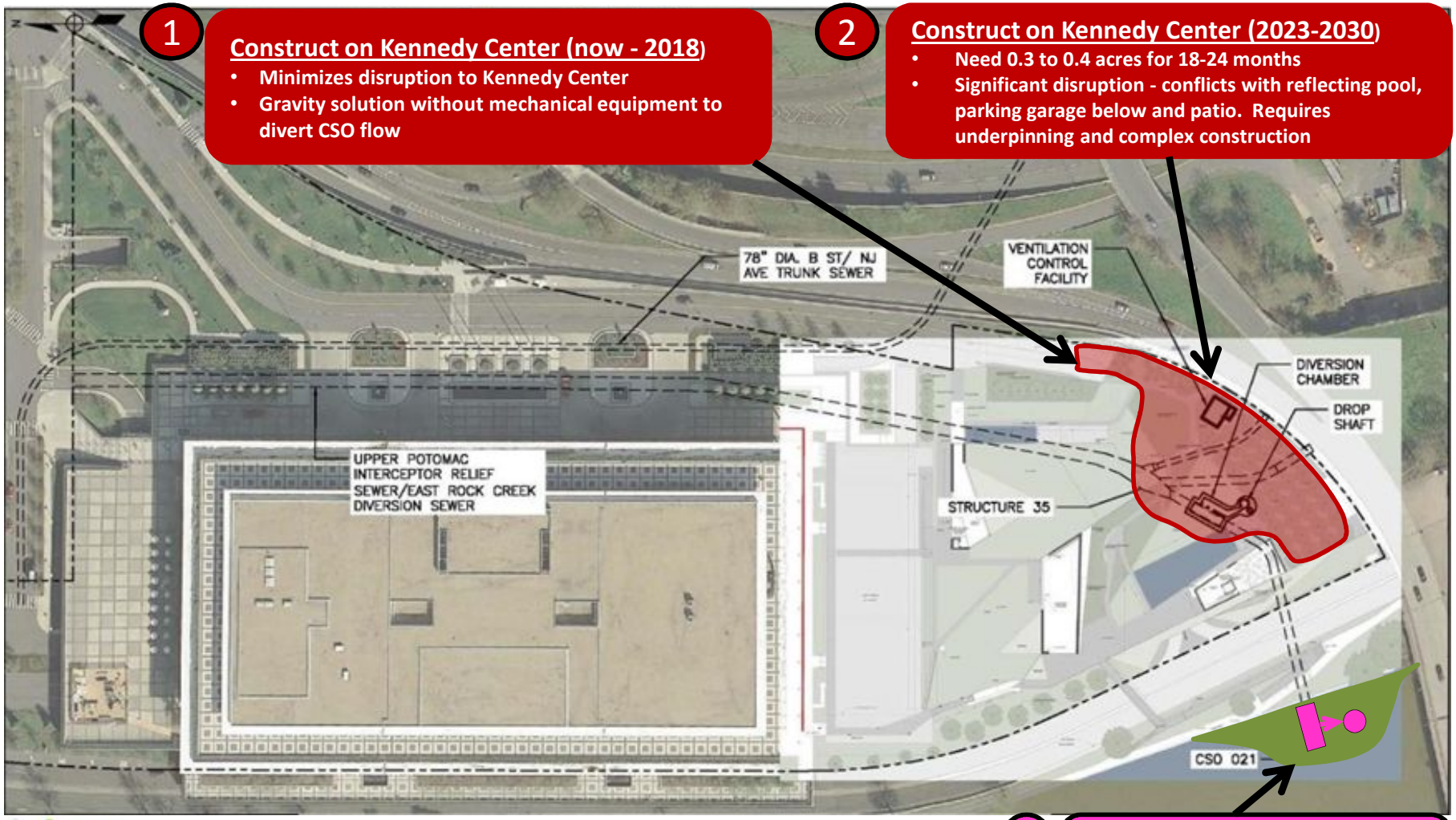
Kennedy Center Expansion will Limit Options for Intercepting CSO 021 in the Future



Legend

- Existing Structures on top of CSO 021
- Expansion structures on top of CSO 021

Evaluation of CSO 021 Diversion Locations
Alternatives 1, 2 and 3



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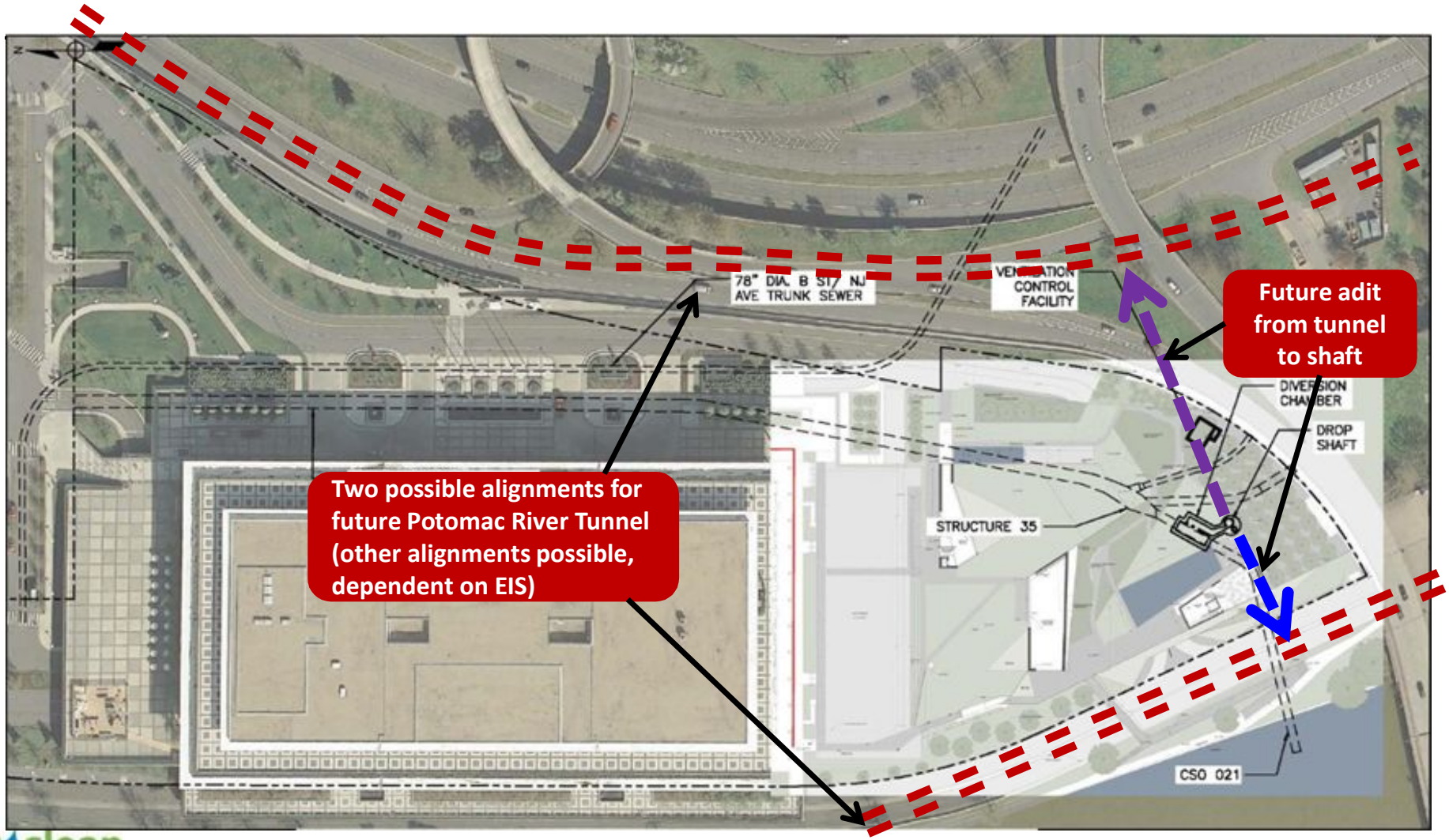
Conclusion: Alternative 1 is recommended

Future Connection to Potomac River Tunnel



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Procurement Approach
(As Provided by DC Water Procurement Regulations and Procurement Manual)

- DC Water and Kennedy Center finalizing MOU for DC Water to construct CSO 021 facilities during Kennedy Center Expansion
- DC Water has prepared 100% design
- Davis (Kennedy Center's Contractor) will solicit bids from a minimum of three (3) DC Water approved subcontractors
- DCW and Davis agree on Not To Exceed Price, consisting of:
  - Maximum Bid Price (GMP)
  - Contractor Contingency Based on Bid Price
  - Davis Management Expense and Fee Based on Bid Price
- Davis follows all DC Water contracting requirements:
  - First Source Employment
  - M/WBE Requirements
  - Davis Bacon prevailing wages
- Contract Form was developed by DC Water General Counsel's office

DCW has option of using another contractor if fair agreement with Davis cannot be reached

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Benefits of Approach

- Risk associated with protecting existing Kennedy Center facilities would be to Davis, who is best to manage risk by sequencing work appropriately.
- Obtaining permits is more efficient due to Davis's existing permits and agreements.
- Coordination of CSO 021 project with expansion project will be responsibility of Davis; risk of conflicts between contractors sharing adjacent sites would be minimized.
- Avoiding future disruption, risks and costs associated with future construction after Expansion is completed

- Similar approach was successful with Forest City for Tingey St. Diversion

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Kennedy Center Next Steps

- **Early 2016:** Finalize MOU between DC Water and Kennedy Center
  - MOU will provide for granting permanent easements for existing sewers and new CSO facilities
- **Jan-Feb 2016:** solicit & evaluate bids from Davis' subcontractors, finalize agreement
- **March-April 2016:** EQ&SS and Board Approval
- **April 2016:** Award Contract

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SUMMARY

Summary

On Track To Meet CD Milestones + On Budget

Construction:

- Overall physical construction percent complete for awarded projects is approximately 65%

Upcoming Procurements:

- Bid Documents for Div U (Northeast Boundary Tunnel Utility Relocations) is planned for January 2016
- RFP for Div J (Northeast Boundary Tunnel) is planned for June 2016

APPENDIX –
MAJOR ACCOMPLISHMENTS
FY 2015 QUARTER 4 UPDATE

Division A – Blue Plains Tunnel
Progress at-a-Glance

As of October 1, 2015

Design-Builder: **Traylor-Skanska Jay Dee JV**
Contract Price: $330M Percent Complete: 93%

MPS-DS Shaft & Structures
- Tremie slab complete
- CIP liner walls 100% complete
- Vortex structure complete
- Drop pipe complete

COMPLETE

PP-JS Shaft & Structures
- Tremie slab complete
- CIP concrete liner complete
- Drop Pipe complete
- Permanent cover and retaining wall complete

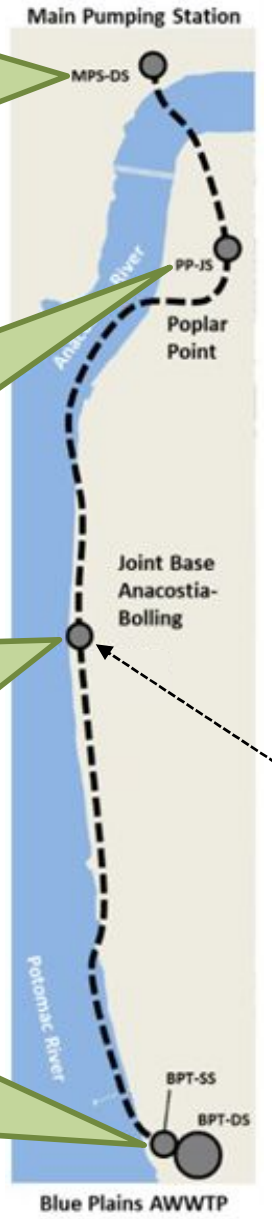
COMPLETE

BAFB-DS Shaft & Structures
- CIP Concrete liner wall complete
- Drop pipe complete
- Vortex and Overflow channel SOE complete

$300K remaining

BPT-DS&SS Shaft & Structures
- BPT-SS CIP concrete liner 100% complete
- BPT-DS Base Slab 100% Complete
- BPT-DS CIP Concrete Liner 100% Complete

$2M remaining



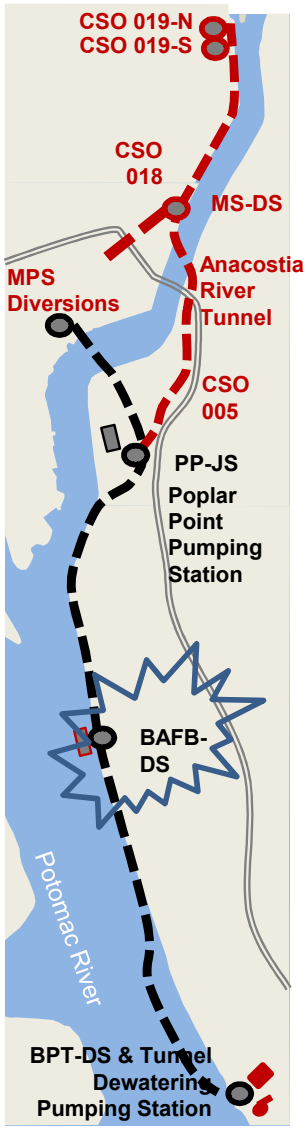
Tunnel Boring Machine & Precast Segments
- TBM mining 100% complete.
- Tunnel demobilization (% complete as of 10/27/2015)
  - ✓ Tunnel Demobilized (100%)
  - ✓ Utilities Removed (100%)
  - ✓ Rail Removed (100%)
  - ✓ Conveyor Removed (100%)
  - ✓ Remove Mucking System (75%)

<$10K Tunnel Cleaning Remaining

Div D – JBAB Overflow and Diversion Structures

As of October 1, 2015

Design-Builder: **Corman Construction**
Contract Price: $40M - Percent Complete: 7%



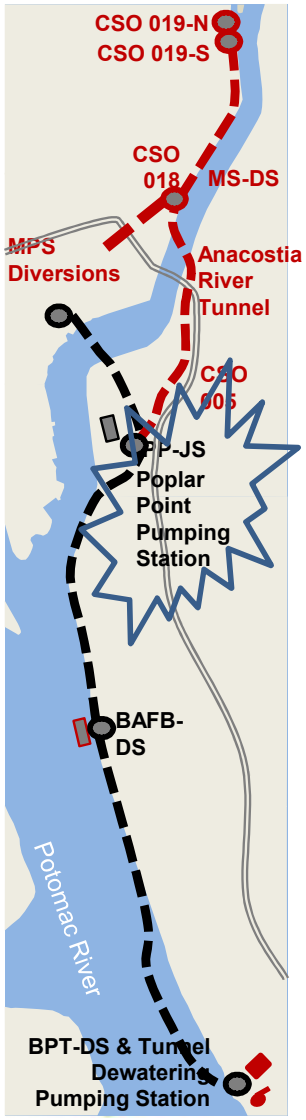
JBAB Diversion Structure is designed to capture flow from the Potomac Outfall Sewers to convey it to the BPAWWTP via BPT. JBAB Overflow Structure will allow overflow to the Anacostia when BPT is at capacity.

- Continued installing Sheet Pile Support of Excavation for Diversion Chamber
- Started work on the 54” Storm Drain
- Division A on site to trim tunnel segments

Div Z - Poplar Point Pumping Station Replacement and Main Outfall Sewers Diversion

As of October 1, 2015

Contractor: **EE Cruz**
Contract Price: $53.4M - Percent Complete 13%



The Poplar Point Pumping Station serves the sewer system on the east side of the Anacostia. It lifts sewage from the Anacostia Main Interceptor up into the outfall sewers for conveyance to Blue Plains.

- Completed excavation for Emergency Overflow Structure (EOS)
- Started excavation for Pumping Station and Discharge Connection Chamber

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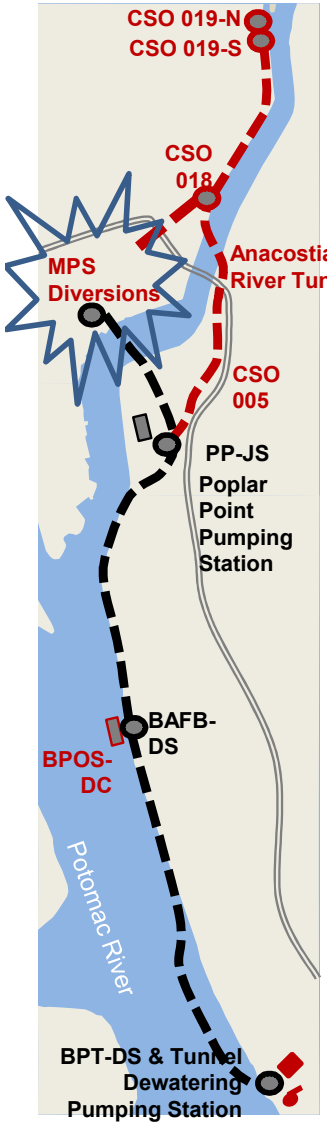
Div I – Main Pumping Station (MPS) Diversions

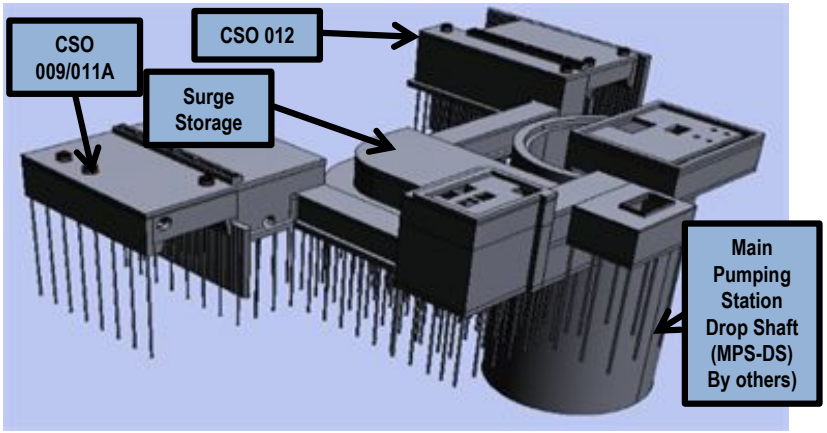
As of October 1, 2015

Design-Builder: **Corman Construction**
Contract Price: $53M - Percent Complete: 16%

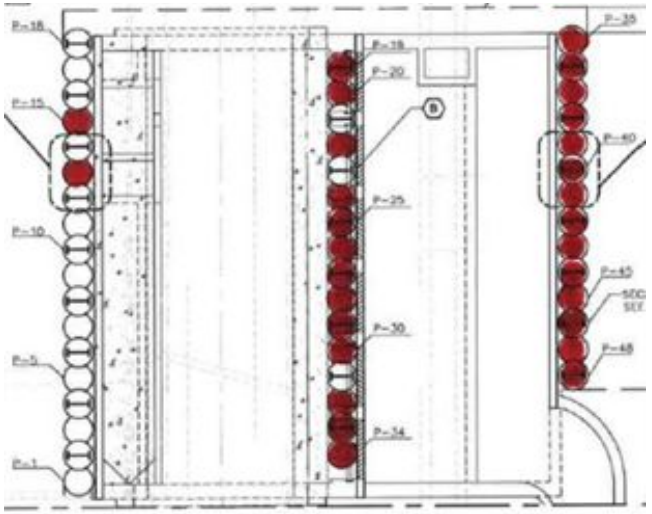


MPS Diversions intercept flows from Tiber Creek Sewer, Canal Street Sewer and New Jersey Ave Trunk Sewer and redirects them to BPT during wet weather.

- Instrumentation installation ongoing.
- Installed 91 of 152 secant piles (60%). Currently installing secant piles at CSO 009/011
- Completed installation of 24" Combined Sewer Pipe



CSO 009/011



Secant Pile Installed

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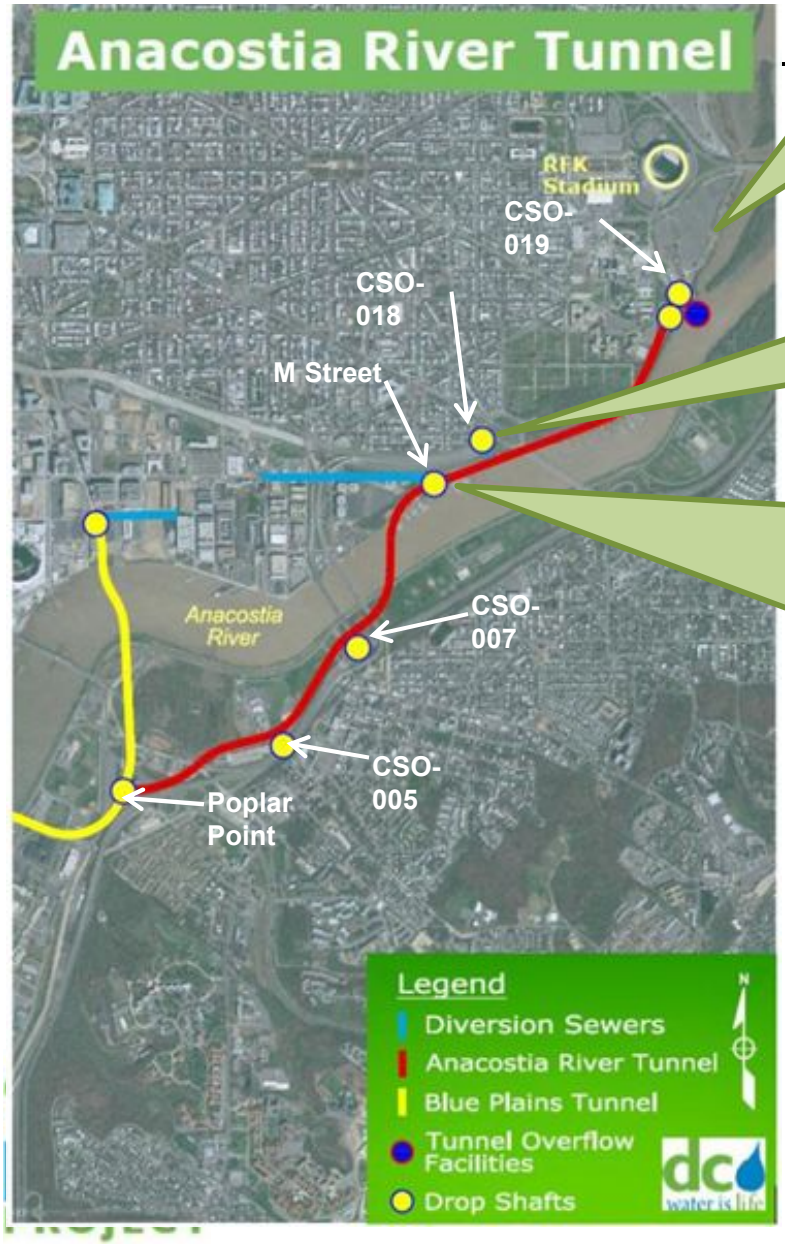
Division H – Anacostia River Tunnel
Progress at-a-Glance

Financials as of October 1, 2015

Design-Builder: **Impregilo Healy Parsons Joint Venture (IHPJV)**
Contract Price: $253.9M Percent Complete: 45%



CSO 019-CSA Shafts & ISCT
- Completed ground remediation efforts for ISCT recovery
- Completed ISCT Tunnel Excavation
- Installing surface TBM mining support equipment

$ 15.7M completed to-date
$ 3.2M remaining

CSO 018-CSA Shaft and Structure
- Completed shaft excavation
- Placed shaft concrete base slab

$ 2.6M completed to-date
$ 12.7M remaining

M Street CSA Shaft and Site Prep
- Placed four of eleven CIP concrete shaft final lining lifts (40 v.f.)
- Installing rebar for remaining lifts

$ 5.9M completed to-date
$ 3.9M remain

CSO 007-CSA Shaft and Structure
- Installed phase I sheet piling, drilled jet grout holes
- Began excavation of shaft, approx. 10 v.f. (8%)

$ 1.1M completed to-date
$ 3.55M remaining

CSO 005-CSA Shaft and Structure
- Relocating NPS sewer line
- Prep for deep dewatering well installation

$ 1.5M completed to-date
$ 4.7M remaining

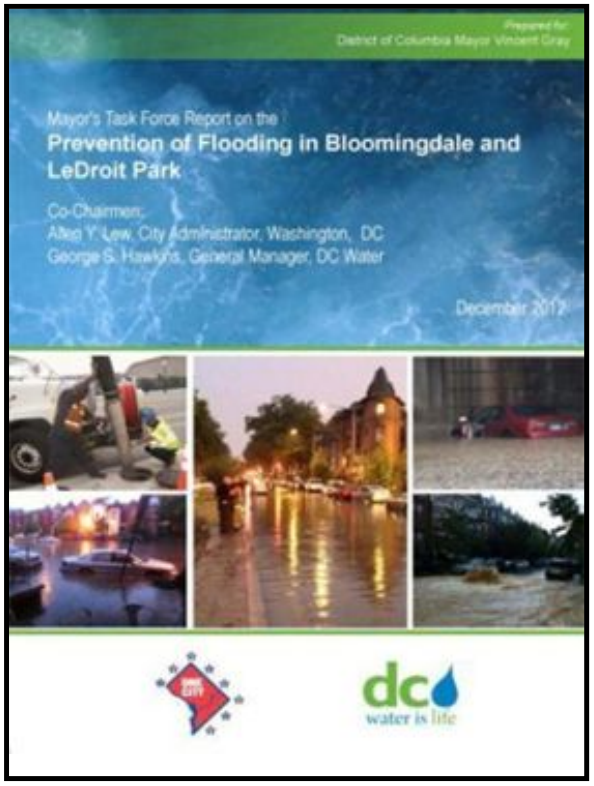
Tunnel Boring Machine & Precast Segments
- Installed TBM and partial trailing gear
- TBM commissioning ongoing
- Installed TBM thrust frame
- Segment Production (1911 Rings)

$ 21.625M TBM payment to-date
$ 3.375M TBM payment remaining

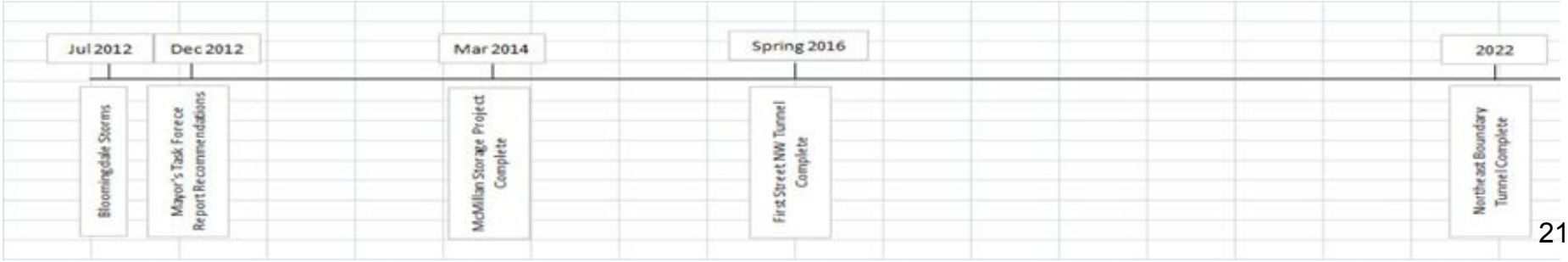
$ 15.8M Segment/Forms payment to-date
$ 2.6M Segments remaining

20

Mayor's Task Force Report on the Prevention of Flooding in Bloomingdale and LeDroit Park



Mayor's Task Force Report (Dec 2012)



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Division P – First Street Tunnel
Progress at-a-Glance

Financials as of September 30th, 2015

Design-Builder: **Skanska Jay Dee JV**
Contract Price: $157.6M Percent Complete: 67.25%

Adams Street – Drop Shaft
- Poured CIP lining Lift 1-5

$0.9M completed to-date
$0 remaining

AS-NSS – Diversion Chamber
- Continue installing and welding wales for bracing level 1 & 2
- Continue excavating at bracing Level 1

$2.7M completed to-date
$1.5M remaining

AS-A – Adit Tunnel
- Started SEM Excavation

$3.5M completed to-date
$1.3M remaining

Pumping Station – Drop Shaft
- Poured CIP lining Lift 1-5

$0.7M completed to-date
$0 remaining

PS-A – Adit Tunnel
- Continue freeze formation Adit
- Started SEM Excavation

$1.5M completed to-date
$0.7M remaining

TBM Mining & Lining

- Changed TBM Set up:
  - Disconnect umbilicals
  - Installed Gantries
  - Start testing & commissioning

- Continued mining 368 ft
- Installed ring No 73

$4.5M completed to-date
$8.2M remaining

V Street NCS-DC & DC

- Continue excavating level 3
- Welding bracing level 2.

$3.5M completed to-date
$2.3M remaining

V Street Adit Tunnel

- Continued Sequential Excavation Method (SEM) Top Heading.
- Continued Shotcrete operation

$2.4M completed to-date
$1.2M remaining

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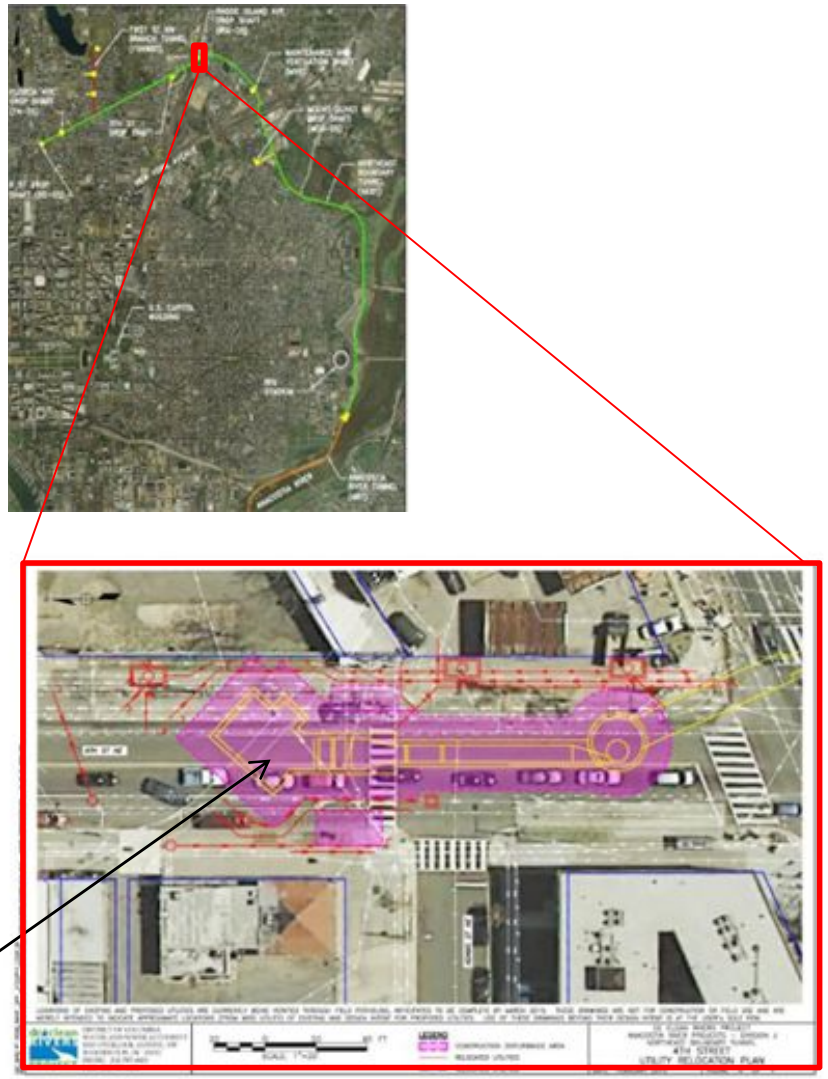
Div U: NEBT Utility Relocations

- Purpose: Clear surface work sites to make way for Tunnel Contractor
- Submitted 90% contract documents to DC Water
- Continued to hold meetings with various DC Water Departments, Washington Gas, Pepco, Verizon and Comcast to discuss utility relocations
- RFQ issued in July 2015
- SOQs to be received on October 15, 2015
- Bid documents planned for February 2016 and Bids in March 2016
- Construction is planned to start in May 2016 and continue for 18 months



Zone to be cleared of utilities

Example:4th & Rhode Island Ave NE

Div J: Northeast Boundary Tunnel

- 23 foot diameter tunnel, 70 to 180 feet deep, 28,600 feet long, 7 shafts and 6 diversion structures.
- Estimated construction value : $500 - $600 million
- Delivery Method: Design-Build

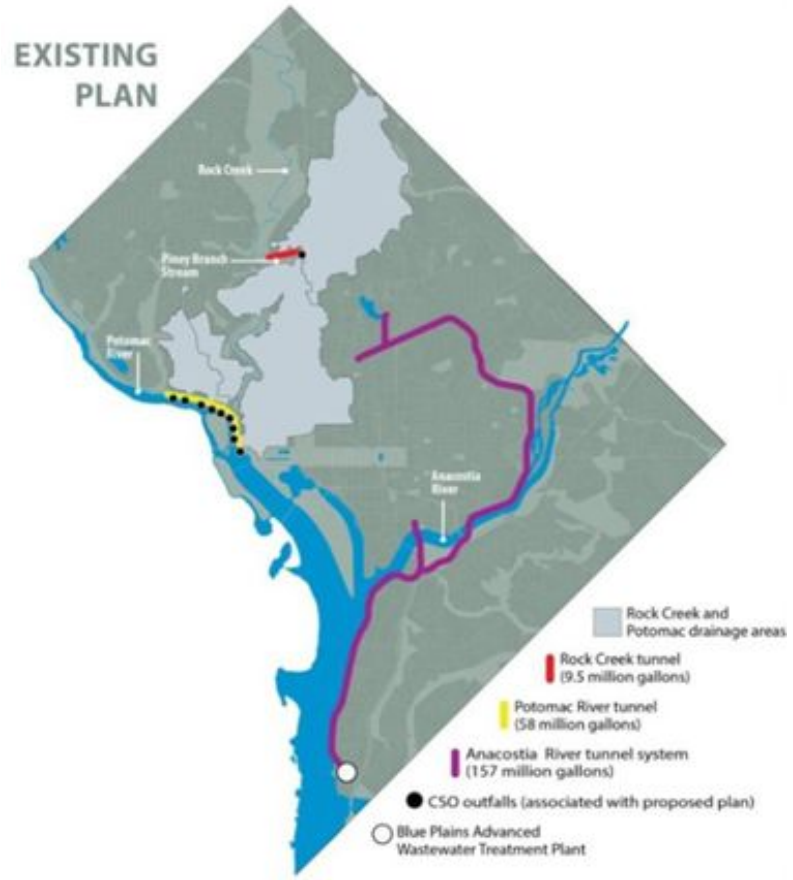
Dates					
Design	Construction				
	RFQ	RFP	NTP Design	NTP Const	Completion
DB	Oct-15	Feb-16	Apr-17	Apr-18	2022

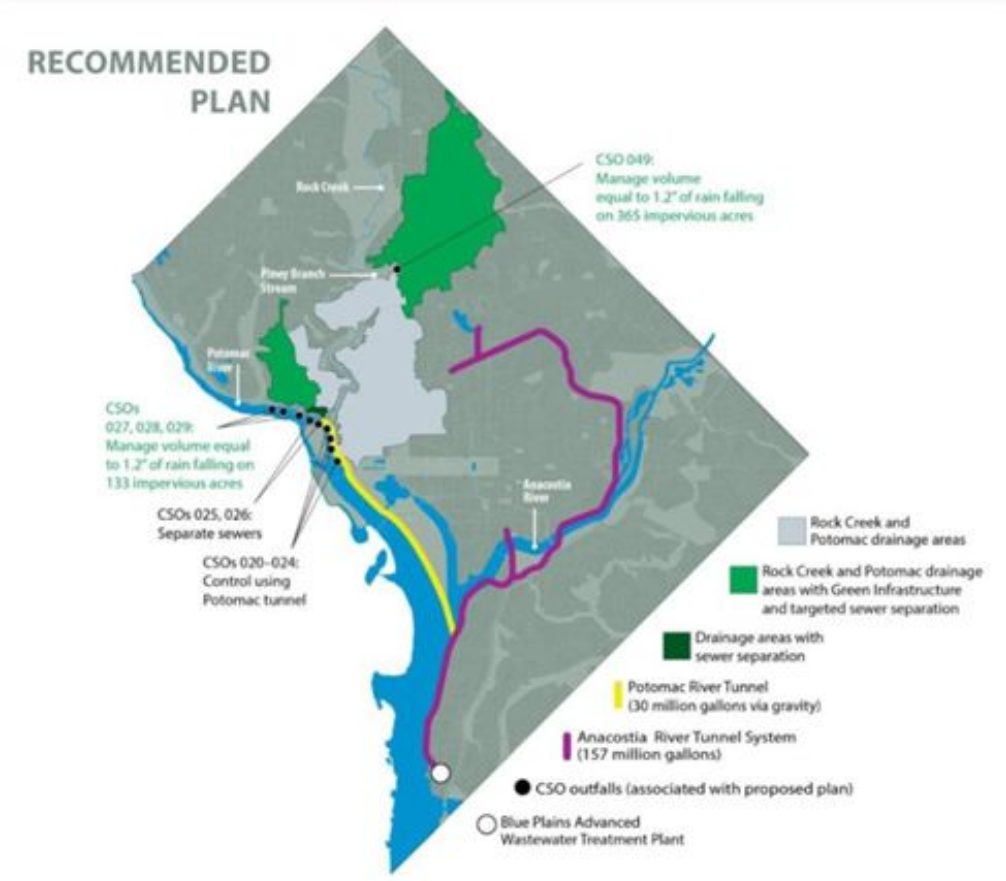
Div J: Northeast Boundary Tunnel

- Submitted the 90% Request for Proposal Documents to DC Water, Project Review Board and Review Team
- Advertised the Northeast Boundary Tunnel Request for Qualifications
- Held the Industry Outreach meeting for Northeast Boundary Tunnel and Utility Relocations contracts. Representatives from 94 firms, of which 20 are M/WBE, were present
- Received comments on the 90% Construction Staging Area Package (Traffic Study) from the District Department of Transportation and provided responses.
- All easements / properties are acquired including CSX Transportation and the National Arboretum

dc clean RIVERS PROJECT

Consent Decree Modification





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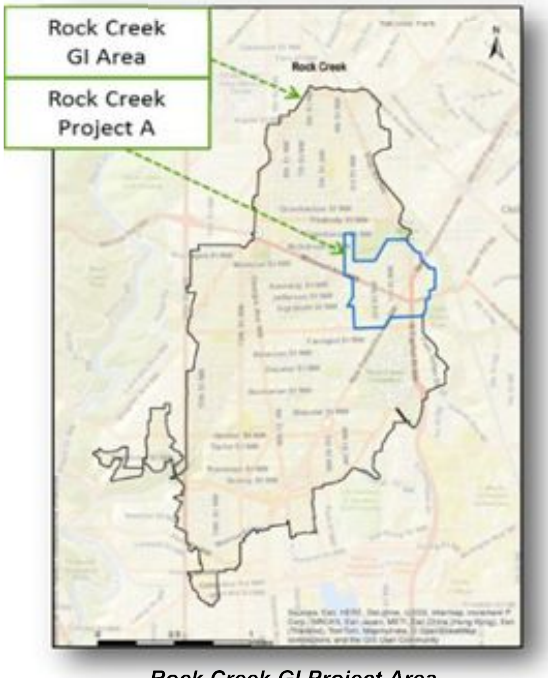
GI Implementation:
Selection Criteria for First GI Projects

- **Rock Creek Project A (RC-A)/ Potomac River Project A (PR-A)**
  - Project areas have been defined
  - Selection criteria includes:
    - Maximized Volume Capture
    - Minimized Cost
    - Feasibility of Design and Construction
    - Synergy with DC Agencies (DDOT, DOEE)
    - Coordination with Review Agencies/Organizations (SHPO, CFA, NCPC, DOEE, DDOT, etc.)
    - Compatibility with Neighborhood Needs and Aesthetics (i.e. Cultural/historic Resources, Neighborhood Character, etc.)
    - Maximizing Triple Bottom Line Benefits
    - Pre- and Post- Construction Monitoring
    - Facilitation of Maintenance

Potomac River GI Project Area



Rock Creek GI Project Area

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GI Implementation: RC-A and PR-A Schedules

- Rock Creek Project A, RC-A:
  - **RFP Development (currently underway)**: 2015 – mid 2016
  - **Procurement**: mid 2016 – early 2017
  - **Design-Build**: early 2017 – 2019
  - **Monitoring:** 2019 – 2020


Example Pervious Pavement in Alley

- Potomac River Project A, PR-A:
  - **RFP Development (currently underway)**: 2015 - late 2016
  - **Procurement**: late 2016 – mid 2017
  - **Design-Build**: mid 2017 – 2019
  - **Monitoring:** 2019 – 2020


Example Bioretention in Planter

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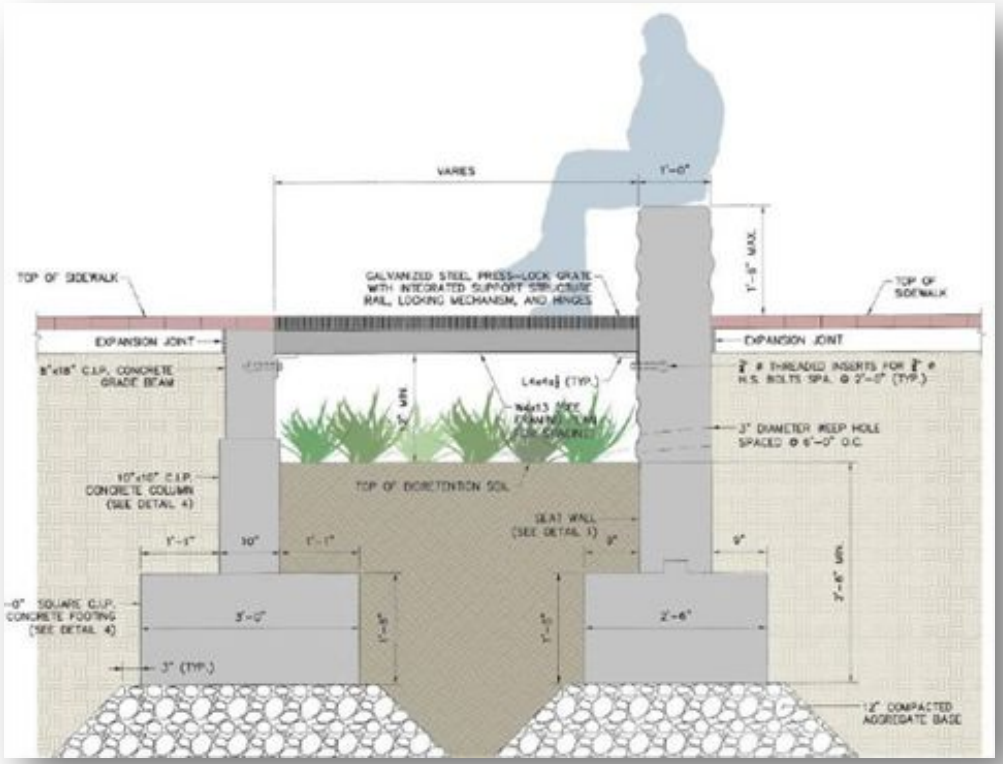
GI Challenge

- **Kansas Avenue Green Infrastructure Parks Project**
  - 50% design complete for two triangle parks
  - To be constructed under RC-A
- **Kennedy Street Green Infrastructure Streetscape Project**
  - 90% design complete for streetscape
  - To be constructed with DDOT's Kennedy Street Improvements Project



Example Bioretention with Seat Wall for Kennedy Street Green Infrastructure Streetscape Project

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Early Action GI Collaboration with Schools

- Concept Plans completed for Washington Latin PCS and Paul PCS and school administrations have provided formal support
- Washington Latin PCS Concept Design Includes:
  - Downspout disconnection, rain barrels, swale, bioretention, outdoor classroom space, and interpretive signage
- Paul PCS Draft Concept Includes:
  - Downspout disconnection, bioretention, interpretive signage, and seat walls
- Projects anticipated to be constructed under RC-A

Green Jobs MOA: GI Certification Program

- **Schedule Drivers:**
  - Late 2016: First Technical Training
  - Early 2017: First Certification Exam
- **Status:**
  - Call held with partner utilities on October 19, 2015
  - Outreach continues with partner utilities on formalizing participation
  - Body of knowledge compilation underway to gather/leverage existing resources
  - Job analysis to begin in early December to identify baseline skillsets

Pilot Green Roof Maintenance Training Program

Potomac River Tunnel: Impact of Consent Decree Modification

Item	Existing LTCP	Recommended Plan (Consent Decree Modification)
1. Tunnel Storage	58 million gallons	30 million gallons
2. Configuration	Separate tunnel	Interconnected with Anacostia River Tunnel System
3. Pumping Station	New tunnel dewatering pumping station near National Mall	Drains by gravity to Blue Plains
4. Operation	Tunnel pumping station discharges to existing Potomac Force Mains	Simple – gravity operation
5. Schedule	Complete by 2025	Complete by 2030

Significant benefits to ratepayers

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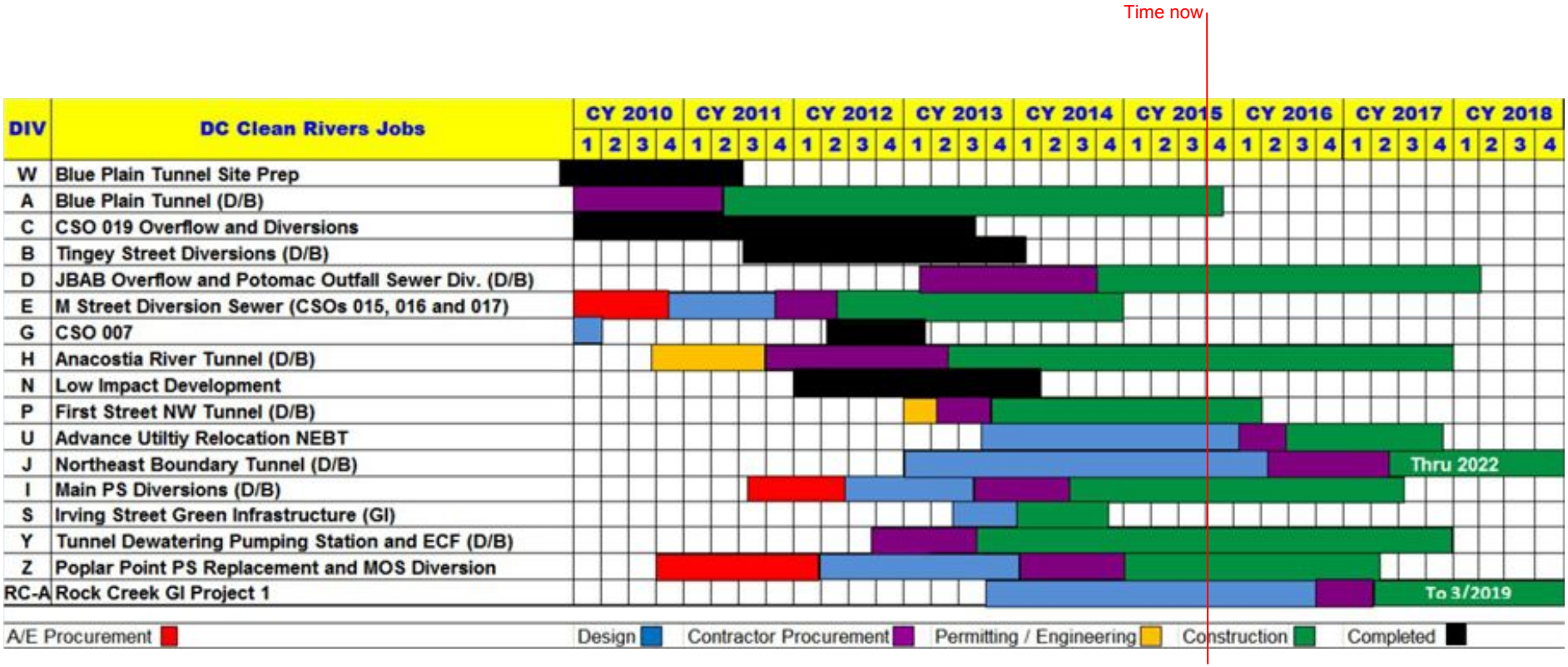
DC Clean Rivers Schedule



DIV	DC Clean Rivers Jobs	CY 2017	CY 2018	CY 2019	CY 2020	CY 2021	CY 2022	CY 2023	CY 2024	CY 2025
		1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
	Potomac Projects									Thru 6/2027
	Rock Creek Projects									Thru 3/2030

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DC Clean Rivers CIP Budget

Program Funding	Proj. No.	Project & Discription		CIP Budget Cost ($ Billions) FY15 Approved	Facility Plan
CSO	BA	Low Impact Development Projects	Projects	0.003	2008
			Subtotal	**0.003**	
CSO	CY	Anacostia River Projects	Projects	1.903	2008
			Subtotal	**1.903**	
CSO	CZ	Potomac River Projects	Projects (1)	0.410	2018
			Risk Allowance (2)	0.000	2019
			Subtotal	**0.410**	
CSO	DZ	Rock Creek Projects	Projects (1)	0.076	2019
			Subtotal	**0.076**	
BTN	EG, FS, H7	ENR Related Projects (Blue Plains Tunnel, JBAB Overflow and Diversion Structures, BP Site Prep)	Projects	0.237	2008
			Subtotal	**0.237**	
			Total	**2.630**	
			Reimbursement by the district:	**-0.059**	
			Revised Total:	**2.571**	

Projects required for nutrient removal at Blue Plains.

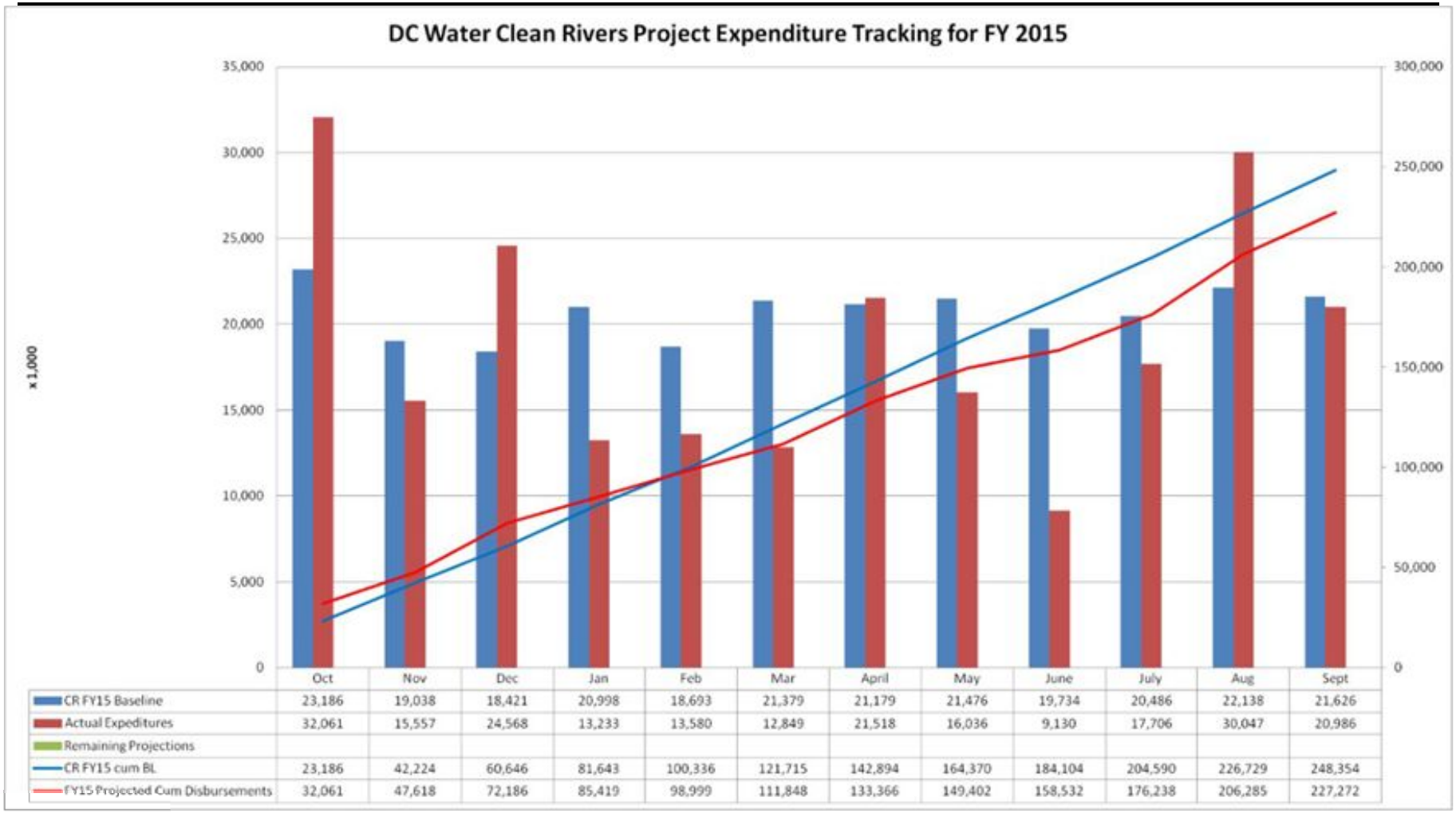
(1) Consent Decree modifications are not reflected in CIP budgets above.

(2) Cost estimates for projects CZ and DZ were prepared in 2001 and do not reflect the current scope of work. Cost for these projects will be re-estimated once a better definition of scope is made available.

(3) Risk allowance is for work that can be needed for tunnel construction as more information becomes available on:

- Soil conditions and tunneling under existing structures
- Complying with third party requirements (e.g., NPS)
- Unknown hazardous material

FY2015 Spending Status



	Oct	Nov	Dec	Jan	Feb	Mar	April	May	June	July	Aug	Sept
CR FY15 Baseline	23,186	19,038	18,421	20,998	18,693	21,379	21,179	21,476	19,734	20,486	22,138	21,626
Actual Expeditures	32,061	15,557	24,568	13,233	13,580	12,849	21,518	16,036	9,130	17,706	30,047	20,986
Remaining Projections												
CR FY15 cum BL	23,186	42,224	60,646	81,643	100,336	121,715	142,894	164,370	184,104	204,590	226,729	248,354
FY15 Projected Cum Disbursements	32,061	47,618	72,186	85,419	98,999	111,848	133,366	149,402	158,532	176,238	206,285	227,272

- Fiscal year 2015 actual expenditure came at 91.5% of planned expenditure. Variance is attributed to a ground inflow incident at the ART.

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