

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, May 18, 2017
9:30 a.m.*

- | | | | |
|-------------------|--------------|--|----------------------------|
| | I. | Call to Order | Howard Gibbs
Vice Chair |
| 9:30 a.m. | II. | AWTP Status Updates | Aklile Tesfaye |
| | | 1. BPAWTP Performance | |
| 9:40 a.m. | III. | Clean Rivers Update Status | Carlton Ray |
| 9:50 a.m. | IV. | Action Items | John Bosley/Len Benson |
| | | 1. Capital Construction and Engineering Fact Sheet Overview | Paul Guttridge |
| | | Joint Use | |
| | | 1. DCFA #445 - Poplar Point Pumping Station Replacement, O'Brien and Gere, LLC | |
| | | Non-Joint Use | |
| | | 1. None | |
| 10:00 a.m. | V. | CIP Quarterly Update | Paul Guttridge |
| 10:10 a.m. | VI. | Main and O Campus Update | George Hawkins |
| 10:25 a.m. | VII. | Water Quality Monitoring | Charles Kiely |
| | | 1. Coliform Testing | |
| | | 2. LCR Compliance Testing | |
| 10:30 a.m. | VIII. | Other Business/Emerging Issues | |

10:40 a.m. IX. Executive Session*

11:00 a.m. X. Adjournment

Howard Gibbs
Vice Chair

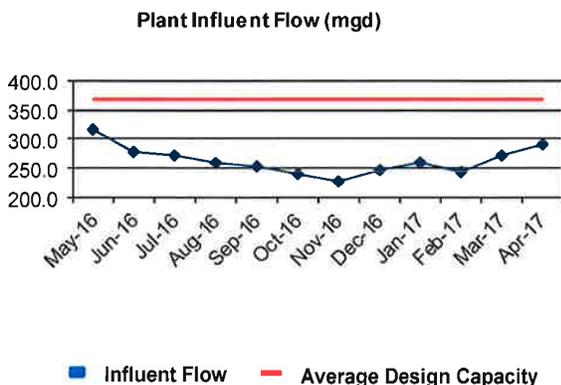
Follow-up Items from Prior Meetings:

1. Assistant General Manager, Blue Plains. Prepare a presentation to the Committee about the DEMON Annamox process once the facility is commissioned. **[TBD]**
2. General Manager, DC Water: Arrange a tour of security facilities and command center for Committee members. **[TBD]**
3. Chief Procurement Officer, DC Water: Make arrangements to invite Committee members during presentations to the Governance Committee regarding performance of completed contracts. **[Presented at the Governance Committee Meeting, May 10, 2017]**
4. General Manager, DC Water: Schedule meeting with the Retail Rates Committee to discuss potential modifications to the Water Service Replacement Fee structure. **[Scheduled for Retail Rates Meeting, May 25, 2017]**

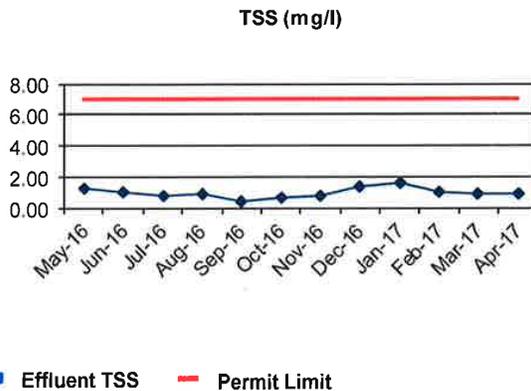
* The DC Water Board of Directors may go into executive session at this meeting pursuant to the District of Columbia Open Meetings Act of 2010, if such action is approved by a majority vote of the Board members who constitute a quorum to discuss: matters prohibited from public disclosure pursuant to 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.

BLUE PLAINS ADVANCED WASTEWATER TREATMENT PLANT PERFORMANCE REPORT – APRIL 2017

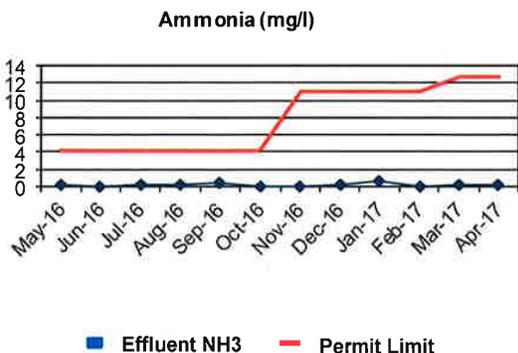
Average plant performance for the month was excellent with all effluent parameters well below the seven-day and monthly NPDES permit requirements. The monthly average influent flow was 290 MGD. There was 42 MG of Excess Flow during this reporting period. The following Figures compare the plant performance with the corresponding NPDES permit limits.



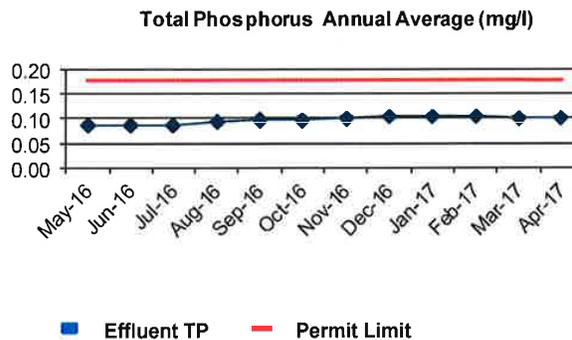
This graph illustrates the monthly average influent flow to the plant. The design average flow is 370 MGD. Blue Plains has a revised 4-hour peak flow capacity of 511 MGD through complete treatment. Flows up to 336 MGD in excess of the 511 MGD peak capacity receive primary treatment, disinfection and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



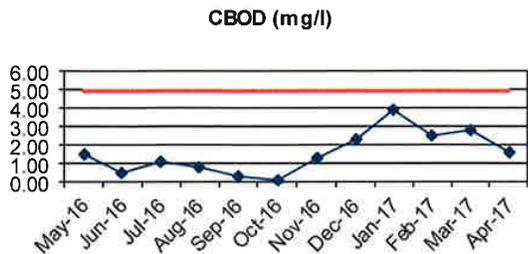
Effluent Total Suspended Solids (TSS) is a measure of the amount of solid material that remains suspended after treatment. The effluent TSS concentration for the month averaged 0.93 mg/L, which is below the 7.0 mg/L permit limit.



The Ammonia Nitrogen (NH₃-N) is a measure of the nitrogen found in ammonia. For the month, effluent NH₃-N concentration averaged 0.12 mg/L and is below the average 12.8 mg/L limit.

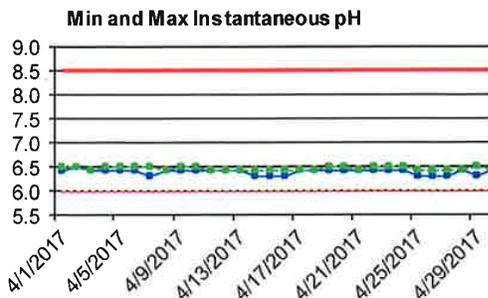


The Total Phosphorus (TP) is a measure of the particulate and dissolved phosphorus in the effluent. The annual average effluent TP concentration is 0.10 mg/L, which is below the 0.18 mg/L annual average limit.



■ Effluent CBOD — Permit Limit

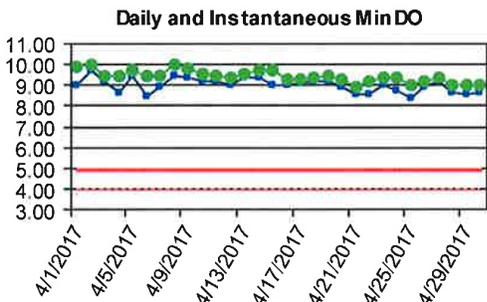
Carbonaceous Biochemical Oxygen Demand (CBOD) is a measure of the amount of dissolved oxygen required for the decomposition of organic materials. The effluent CBOD concentration averaged 1.58 mg/L (partial month), which is below the 5.0 mg/L limit.



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

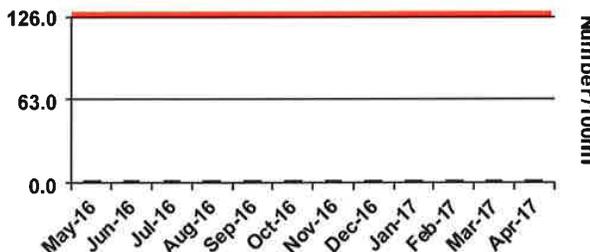
pH is a measure of the intensity of the alkalinity or acidity of the effluent. The minimum and maximum pH observed were 6.3 and 6.5 standard units, respectively. The pH was within the permit limits of 6.0 and 8.5 for minimum and maximum respectively.

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 8.9 mg/L. The minimum instantaneous DO reading is 8.4 mg/L. The minimum permit limits are 5.0 mg/L and 4.0 mg/L respectively.

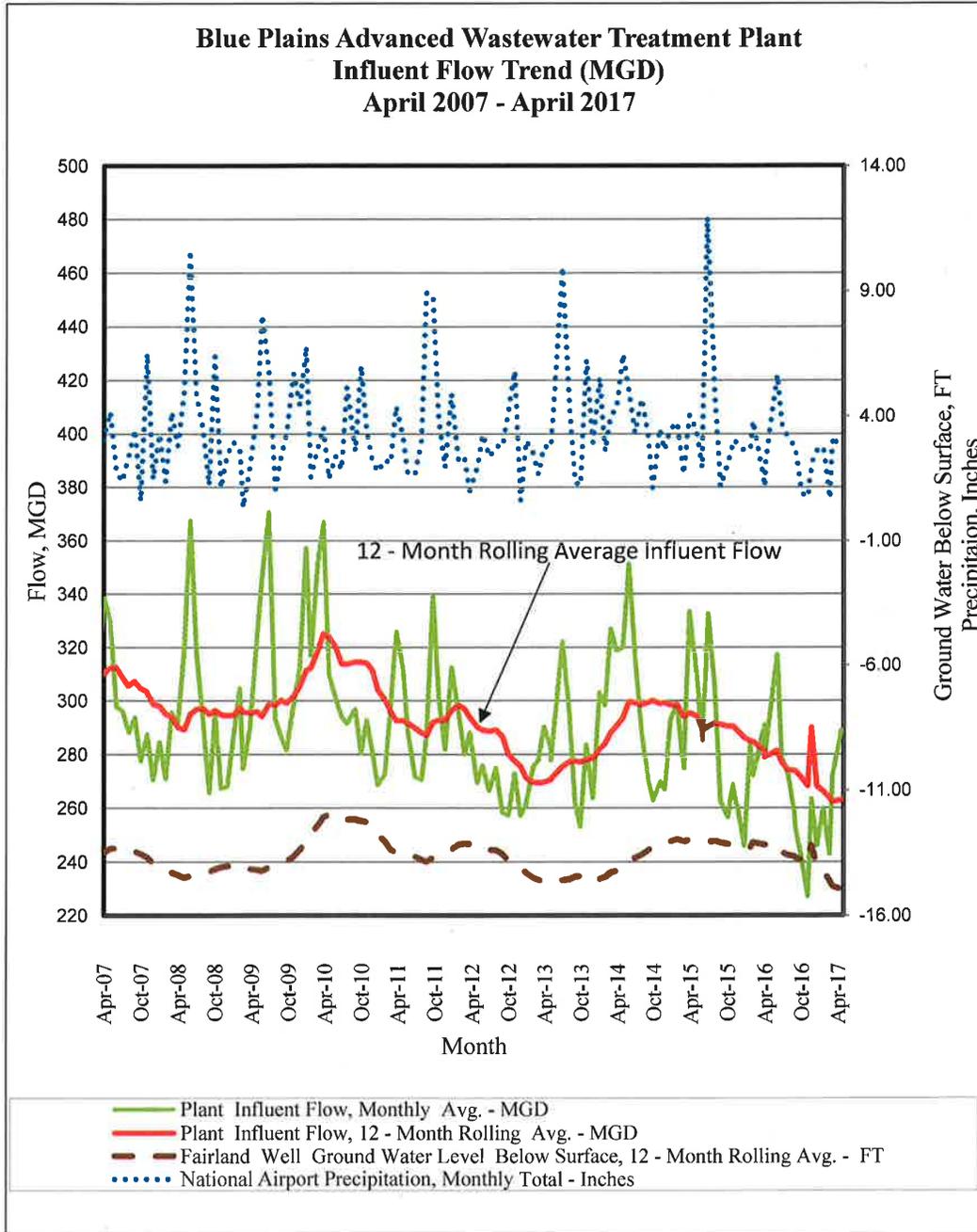


■ E. Coli Geomean — Permit Limit

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

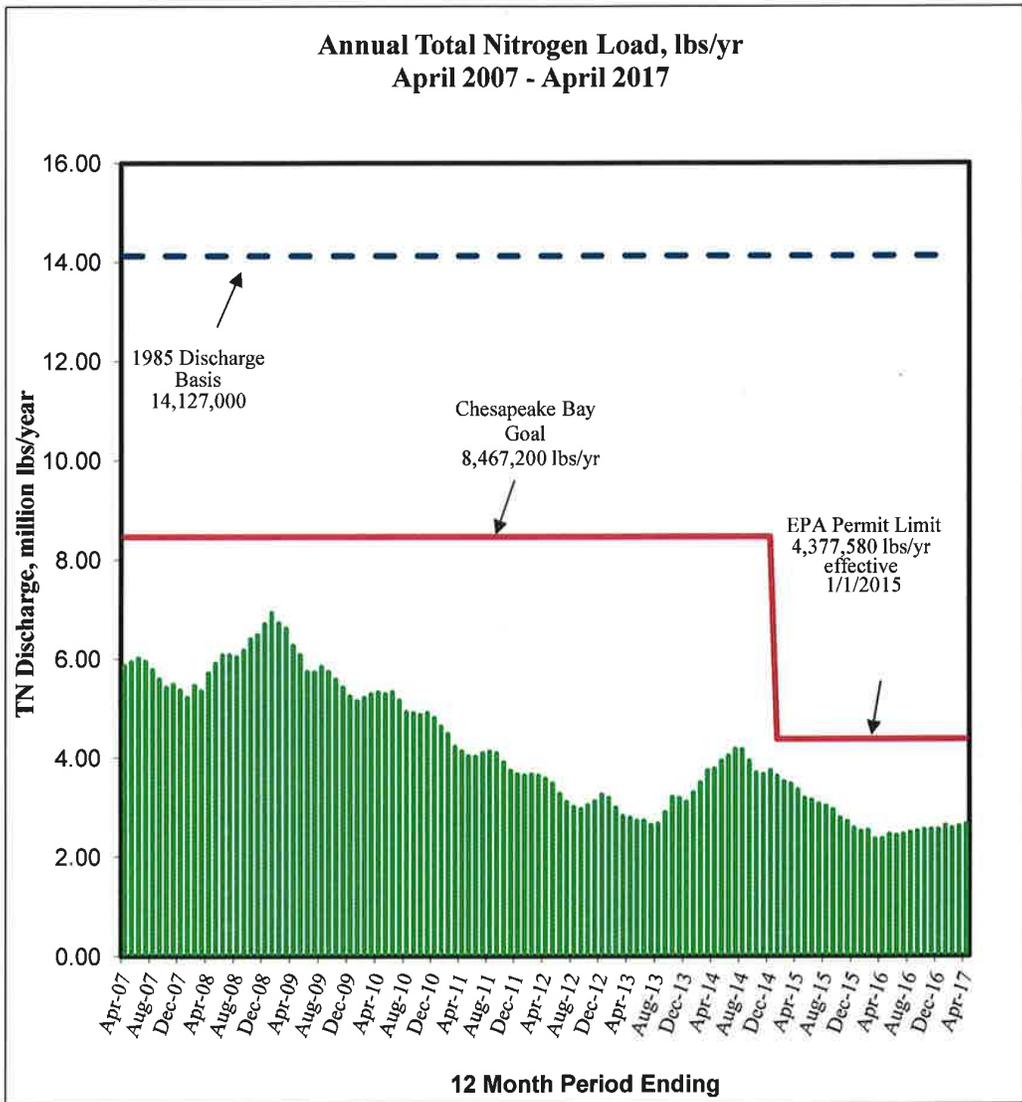
Plant Influent Flow Trend

The graph below shows influent flow trend to the plant over a 10-year period ending April 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.



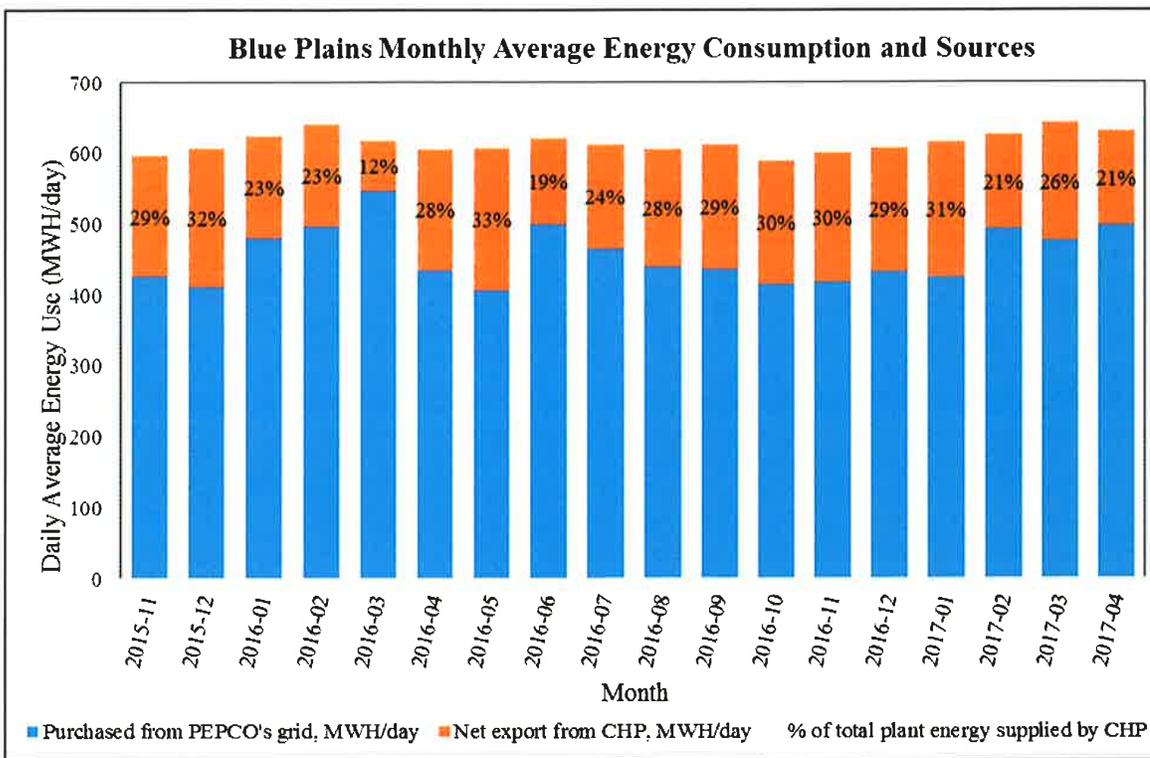
Blue Plains Total Nitrogen (TN) Removal - Performance

The graph below shows the rolling 12-month total effluent TN discharge, in pounds per year, over a 10-year period ending April 2017. During the month, the TN average concentration and total load in the effluent were 3.48 mg/L and 251,850 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 April 2017, the average energy consumed at Blue Plains was 631 megawatt hours per day (MWH/day) or 2.18 MWH of electricity per million gallon of wastewater processed through complete treatment. The Combined Heat and Power (CHP) facility generated an average of 133 MWH/day, making up for 21% of total energy consumed at Blue Plains. The remaining 498 MWH/day was purchased from PEPCO.



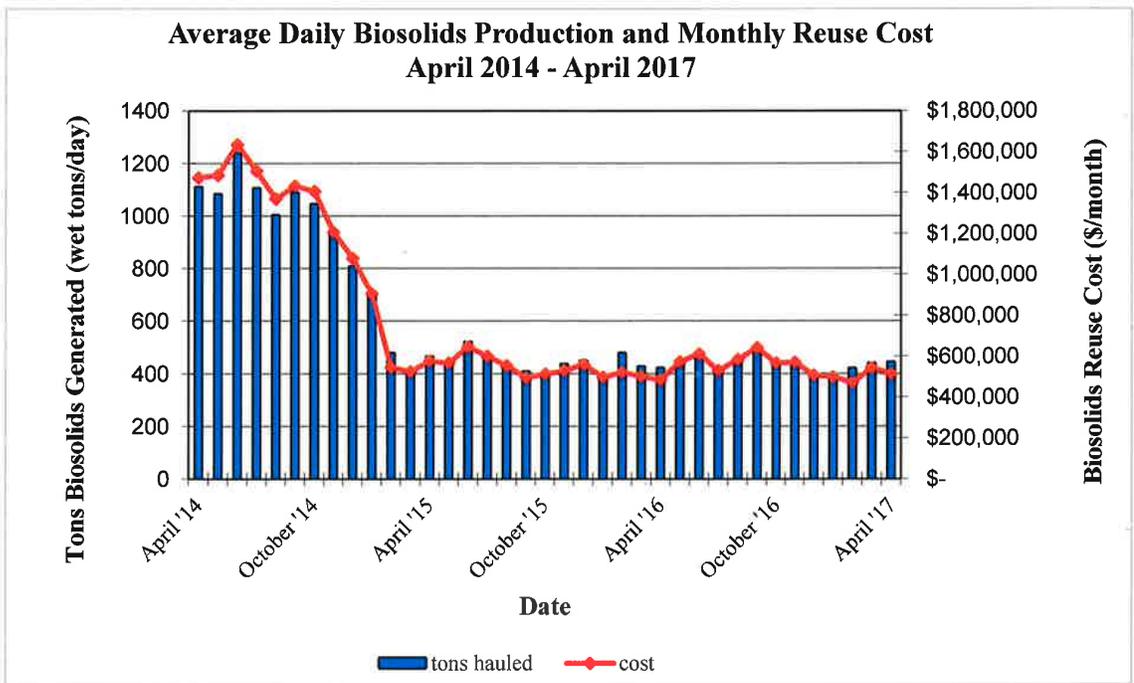
The graph above is based on power monitors installed at the Main Substation and CHP, and reflects average energy consumed at Blue Plains in MWH/day. Of the total use, the energy purchased from PEPCO and net energy supplied by CHP are indicated by the blue and orange highlights, respectively.

Combined Heat and Power (CHP) Performance

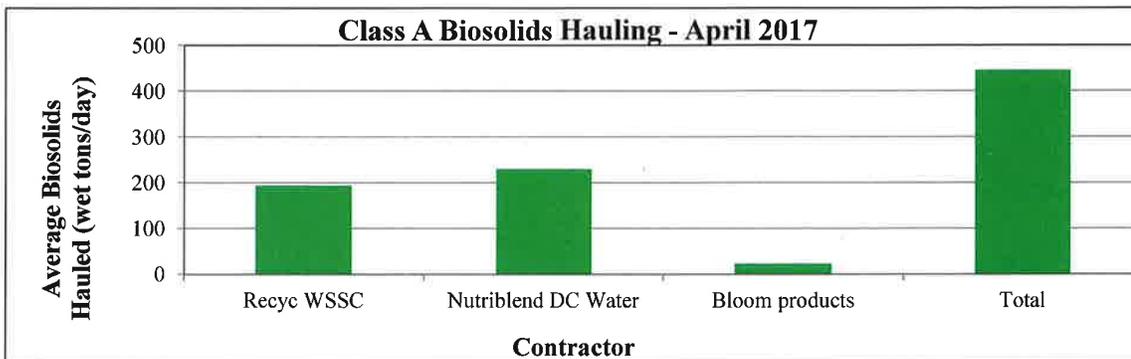
In April, the net electricity produced was lower as compared to the previous months. Scheduled annual preventative maintenance (PM) and corrective maintenance (CM) activities on combustion turbines and waste heat boilers reduced generation capacity. As a result, CHP generated a net average of 133 MWH of electricity per day or 21% of the energy use at Blue Plains. Annual PM of combustion turbines and waste heat boilers are required to sustain a long-term reliability of these assets. When one turbine/waste heat boiler pair is taken out of service for PM inspections and to complete the corresponding CM activities derived from the PM inspections, the auxiliary boiler is placed in operation to meet the thermal hydrolysis steam demand. However, the air permit stipulates that only one turbine/waste heat boiler can remain in operation when the auxiliary boiler is in use. The second turbine/waste heat boiler pair must be taken out of service to offset the emissions from the auxiliary boiler and comply with the allowable limit. Additional CM activities are schedule during the month of May to repair/correct deficiencies, observed in the waste heat boiler, during the completed PM inspections.

RESOURCE RECOVERY

In April, biosolids hauling averaged 446 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 April 2017. In April, diesel prices averaged \$2.77/gallon, and with the contractual fuel surcharge, the weighted average biosolids reuse cost (taking into account the marketed material) was \$38.80 per wet ton.



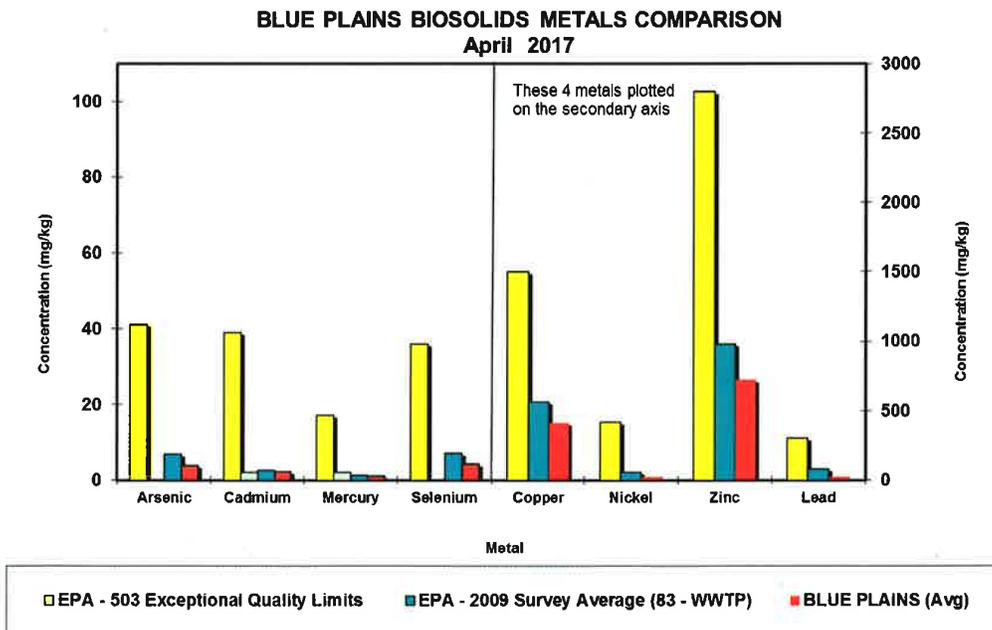
The average quantities of Class A biosolids transported and applied on farms by the two major contracts (WSSC's Recyc and DC Water's Nutriblend) and the quantities marketed as Bloom are shown on the graph below. In April, 676 wet tons of Bloom were distributed to 9 different customers.



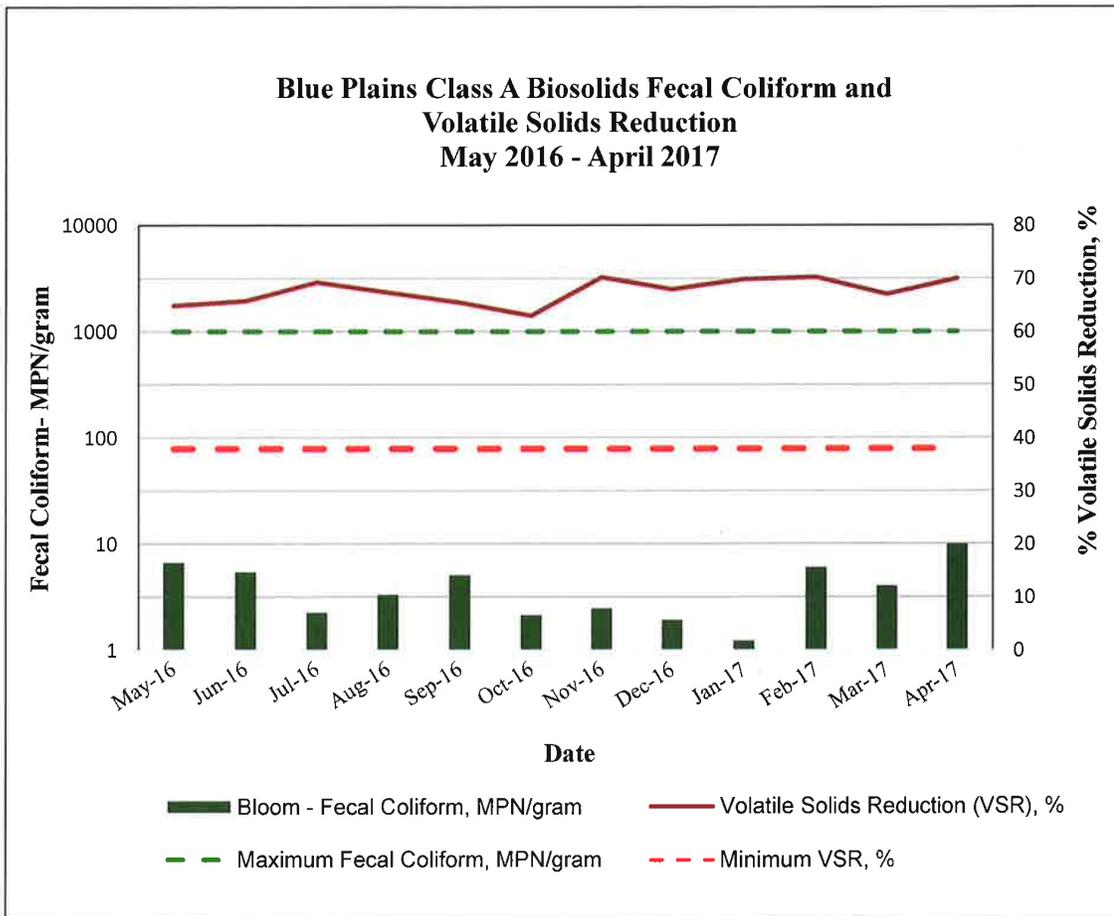
Product Quality

All biosolids produced during the month of April 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).

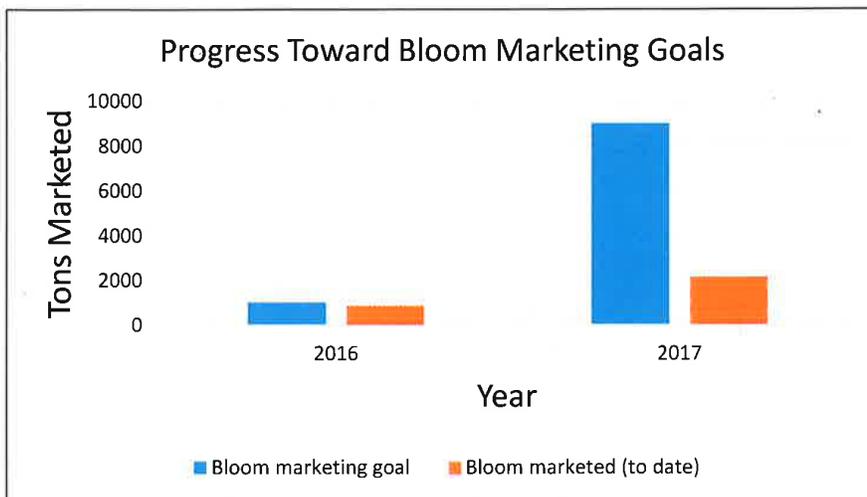


The graph below shows both Vector Attraction Reduction (VAR) and Fecal Coliform (FC) results in the Class A product, both of which are required to maintain the Class A Exceptional Quality (EQ) status. Vector Attraction Reduction is measured by the reduction in Volatile Solids (VS) or organic compounds that may be odorous and attract nuisance vectors such as flies and rodent. DC Water anaerobic digesters reduced VS by over 65 percent, well above the required 38 percent 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.



Bloom Marketing

Bloom sales eclipsed the 2,000 ton total for the year, with sales to a new large nursery and garden center in MD. This partner is interested in serving as a distributor for Bloom, selling it under the Bloom name and helping to promote its use.



Distribution and Marketing Permit Update

Currently, the Bloom program possesses permits to distribute and market Bloom in Washington DC, Maryland, and Pennsylvania. Staff is working with Maryland Department of Environment (MDE) to obtain a letter of authorization for potential soil blenders, a requirement for their use of biosolids products. The requirement is simply for “written authorization” from MDE, but it is unclear what is required to obtain “written authorization”. Staff is meeting with MDE to determine this and develop a template for soil blenders. The application for the Virginia distribution and marketing permit is submitted and under review by the Virginia Department of Environmental Quality. Receipt of the final draft permit is expected by summer of this year.

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.

Understanding the impact of thermal hydrolysis and biological systems on cake dryness and polymer demand

Introduction

Wastewater treatment utilizes a combination of physical, chemical and biological processes to transform and capture pollutants. Solids generated in these processes are further treated to meet EPA standards for land application as Class A biosolids. At Blue Plains, these processes include gravity thickening of primary sludge, dissolved air flotation thickening of biological solids, screening, pre-dewatering using centrifuges, thermal hydrolysis process (THP), anaerobic digestion, and final dewatering using belt filter presses. Although costs for biosolids processing at Blue Plains were greatly reduced as a result of the recent biosolids facility upgrades, costs for polymer and cake hauling are still significant.

Each solids treatment step affects the dewatering properties of the solids. Developing a deeper understanding of the mechanisms that affect the ease and effectiveness of the dewatering processes will help provide a foundation for optimizing these processes to improve performance and reduce costs. Factors affecting the total solids content (%TS) of dewatered sludge cake are not well known. For example, raw primary sludge solids normally dewater very well. Biological solids such as activated sludge solids and anaerobically digested biosolids tend to be more difficult to dewater and the cake solids have a lower %TS content (or higher moisture). Thermal hydrolysis of solids normally improves the dewaterability and also improves the disintegration of organic substances leading to the release of cell contents. Combining thermal hydrolysis with anaerobic digesters results in improved dewaterability characteristics compared to anaerobic digestion alone. However, although THP has been shown to greatly impact the dewaterability of sludges, the extent of the impact and the mechanisms for the improvement have not been well studied.

Several researchers have investigated factors affecting dewatering. Zhou et al. (2002) found a direct correlation between the dewatering rate and the quantity of extracellular polymeric substances (EPS) in the sludge. Later, Higgins et al. (2004) showed a good linear correlation between the protein content of the solids and the optimum polymer dose (OPD) measured for a number of different digested sludge types. However, in this evaluation, results for thermally hydrolyzed solids and thermophilic digestion solids

appeared to be outliers and did not correlate well with results obtained for other sludges. It is generally accepted that charge neutralization plays an important role in sludge conditioning by polymers, however it is not well proven.

The objectives of a recent study at Blue Plains was to identify sludge characteristics that would allow us to predict dewaterability of sludges in a global manner, e.g. to identify parameters that can explain differences in dewaterability for different types of solids including primary solids, biological solids, thermally hydrolyzed solids and digested biosolids. Characteristics of solids from each stage of the Blue Plains solids treatment system (Figure 1) were evaluated in combination with determination of optimum polymer dose, cake solids and capture efficiency. In addition to solids collected at different steps within the treatment process, samples of digested solids were processed through thermal hydrolysis, a second time, using the Cambi pilot unit and were evaluated.

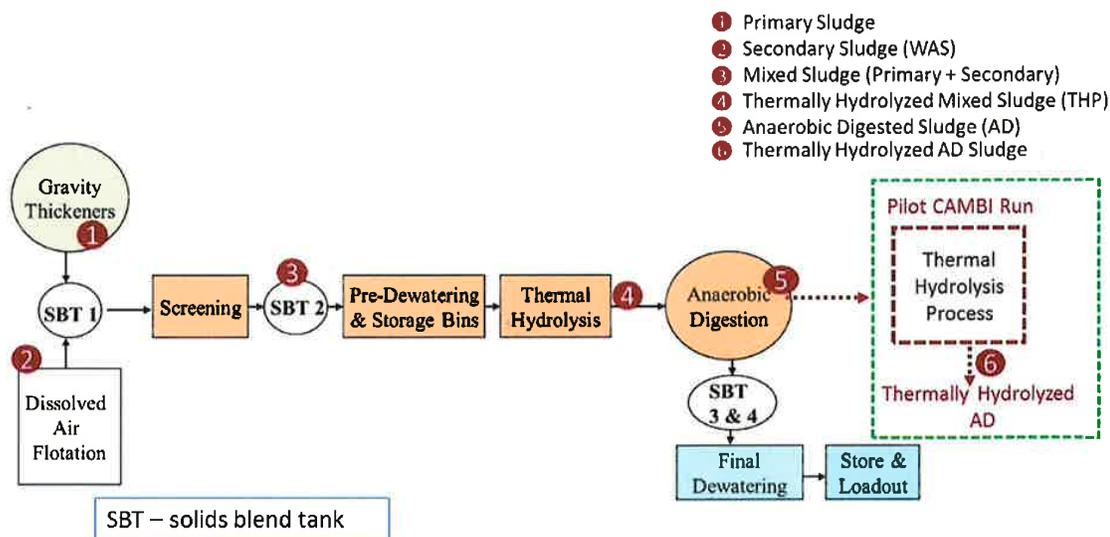


Figure 1. Schematic of Blue Plains AWTP Solids Treatment Processes and Location of Samples Collected for Dewatering Study

The study revealed that two global parameters, surface charge and the percentage of bound water, can be used to predict the optimum polymer dose (OPD) and the cake %TS for any sludge. Surface charge was found to provide a good correlation with polymer requirements. For example, primary sludge was found to require a higher optimum polymer dose than secondary (biological) sludge and the surface charge of the particles in the primary sludge were also higher (solids exhibited a higher negative charge). A global linear relationship between surface charge and optimum polymer dose for the sludge samples evaluated in this study is shown in Figure 2.

Bound water is a key parameter to predict %TS in the dewatered cake. Bound EPS can be used as a surrogate for bound water to easily predict the %TS for any sludge. The global relationship between bound EPS and cake %TS for various sludge samples from this study is shown in Figure 3.

The study details were presented in the Water Environment Federation (WEF) Residuals and Biosolids conference in April, 2017. The paper title was “Mechanistically Understanding the Dewatering Fundamentals: Impact of Biological Systems and Thermal Hydrolysis on Cake Total Solids and Polymer Demand”.

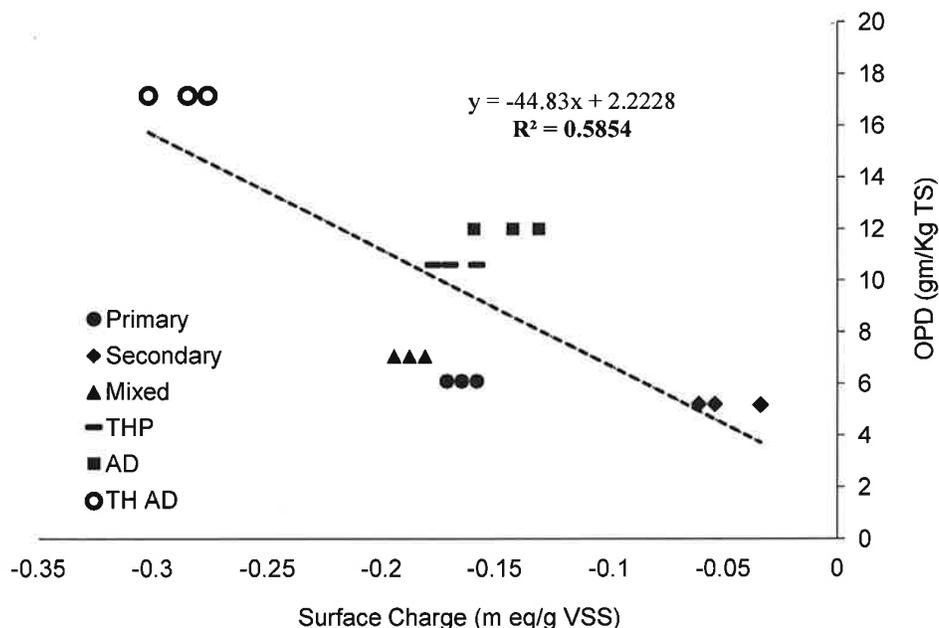


Figure 2. Global Correlation between Surface Charge and Optimum Polymer Dose (OPD) for Various Sludges (Primary, Secondary, Mixed, Thermally Hydrolyzed (THP), Anaerobically digested (AD), Thermally Hydrolyzed Anaerobically Digested (TH AD)).

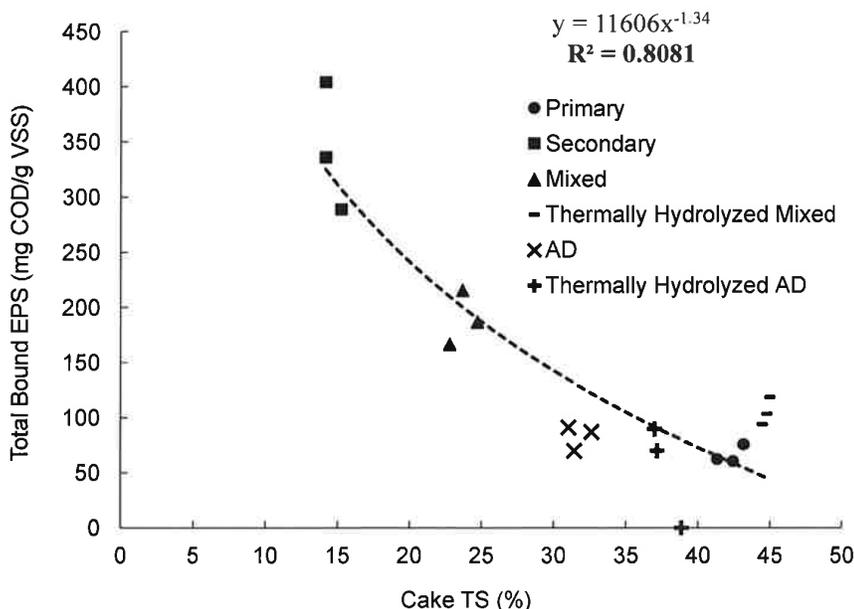


Figure 3. Global correlation between extracellular polymeric substance (EPS) and cake %TS for various sludges (Primary sludge, secondary sludge, blended/mixed sludge, thermally hydrolyzed sludge, anaerobically digested, anaerobically digested thermally hydrolyzed).

Blue Plains Main Laboratory

The Main Laboratory staff conducts analyses on Blue Plains AWTP effluent for National Pollutant Discharge Elimination System (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.

Blue Plains Pretreatment Program

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

Industrial Pretreatment Program

DC Water currently manages fourteen (14) Significant Industrial User (SIU) permits and sixteen (16) Non-Significant Industrial User (NSIU) wastewater discharge permits. One SIU permit was reissued and reclassified as an NSIU this month for WMATA Western Bus Division. Inspections were conducted at four of the WMATA facilities this month: Bladensburg Bus Division; Western Bus Division; Northern Bus Division; and Brentwood Rail Yard. 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.

The 2016 annual pretreatment program reports were received from the jurisdictions this month and compiled for the combined 2016 annual pretreatment program report submittal to EPA Region III.

DC Water currently manages 81 Temporary Discharge Authorization (TDA) permits, primarily for construction site discharges of groundwater and/or surface runoff in the combined sewer area. Six new TDA permits were issued this month. All TDA discharges are currently in compliance with pretreatment standards. Pretreatment staff collected one sample from the Tunnel Dewatering Pumping Stations/Enhanced Clarification (TDPS/ECF) project to assist with their TDA permit compliance requirement.

Hauled Waste Program

As of the end of the current month, the hauled waste program had 35 permitted haulers authorized to discharge domestic septage, portable toilet waste, grease trap waste, groundwater or surface runoff, and other types of waste, if approved in advance and have been characterized and meet pretreatment standards. DC Water collected fees from ten waste haulers this month, including those on a monthly payment plan option.

DC Water received 807 hauled waste loads (2,301,347 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. Staff also collected the quarterly influent, effluent, and biosolids samples this month including the annual priority pollutant analyses. Staff collected Toxicity Characteristics Leaching Procedure (TCLP) samples this month for the various solid waste materials generated on site.



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

Briefing on:

*DC Clean Rivers Project
Quarterly Update*

Briefing for:

Environmental Quality & Operations Committee Meeting

May 18, 2017



DCWATER.COM

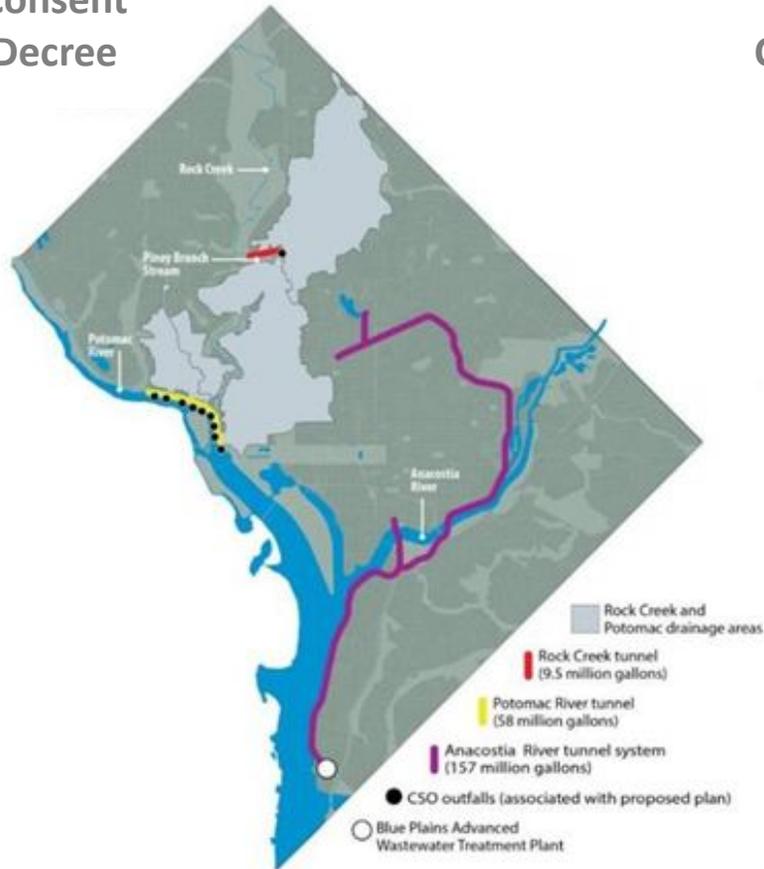
Agenda

- Overview
- Progress Summary
- Spending Status
- Schedule Status

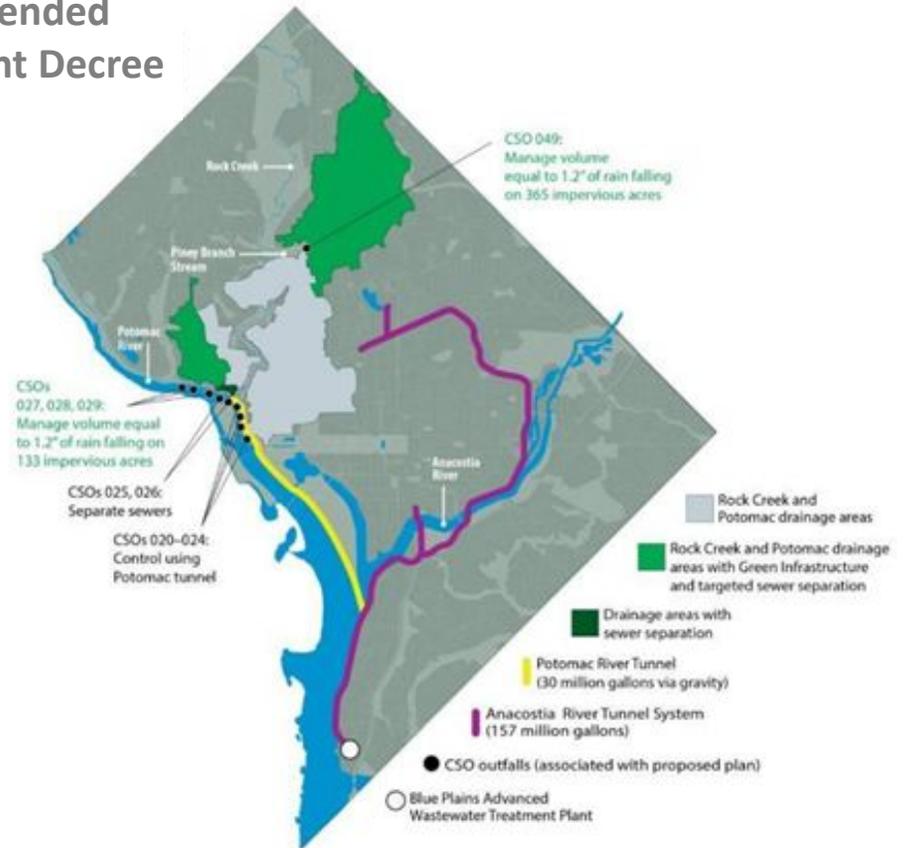


Amended Consent Decree (Jan 14, 2016)

Consent Decree



Amended Consent Decree

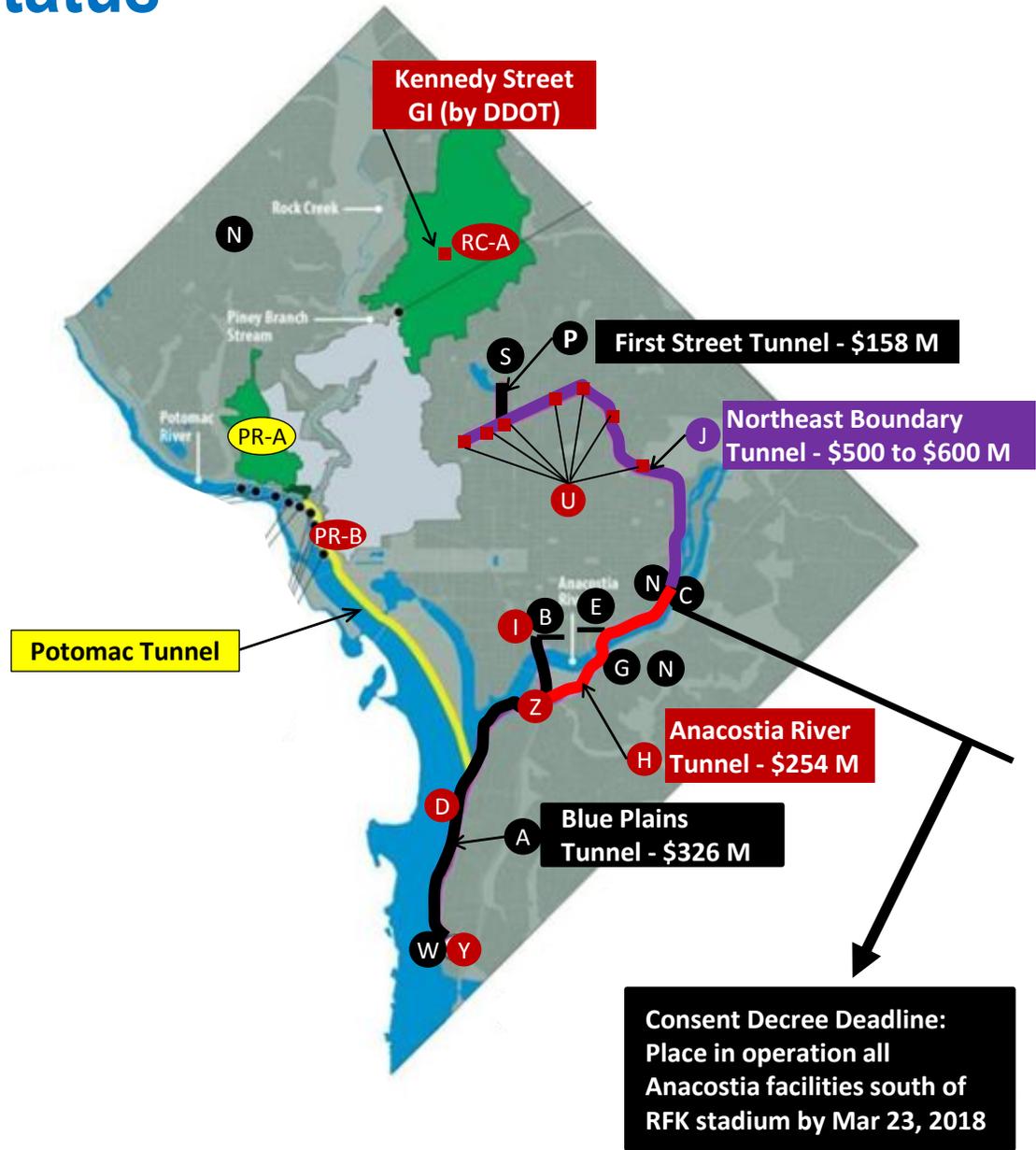


- Gave us an additional 5 years
- Deferred \$400 M± in spending for Potomac Tunnel



Clean Rivers Project Status

Division	Name
Completed Projects █	
W	Blue Plains Tunnel Site Prep
A	Blue Plains Tunnel
C	CSO 019 Overflow and Diversions
B	Tingey Street Diversions
E	M Street Diversion Sewer
G	CSO 007 Diversion Facilities
N	Low Impact Development @ DC Water Facilities
P	First Street Tunnel
S	Irving Street Green Infrastructure
Projects in Construction █	
H	Anacostia River Tunnel
D	JBAB Overflow & Diversion Facilities
I	Main Pumping Station Diversions
U	Northeast Boundary Utility Relocations
Z	Poplar Point Pump Station & MOS Diversion
Y	Blue Plains Tunnel Dewatering Pumping Station and Enhanced Clarification Facility (Managed by DWE)
PR-B	CSO 021 Diversions at Kennedy Center
RC-A	Rock Creek Green Infrastructure Project A
RC-B	Kennedy Street Green Infrastructure (by DDOT)
Projects in Procurement █	
J	Northeast Boundary Tunnel – plan to submit contract for EQ & Operations Committee approval at next meeting
Projects in Planning or Design █	
PR-A	Potomac River GI Project A
--	Potomac Tunnel EIS

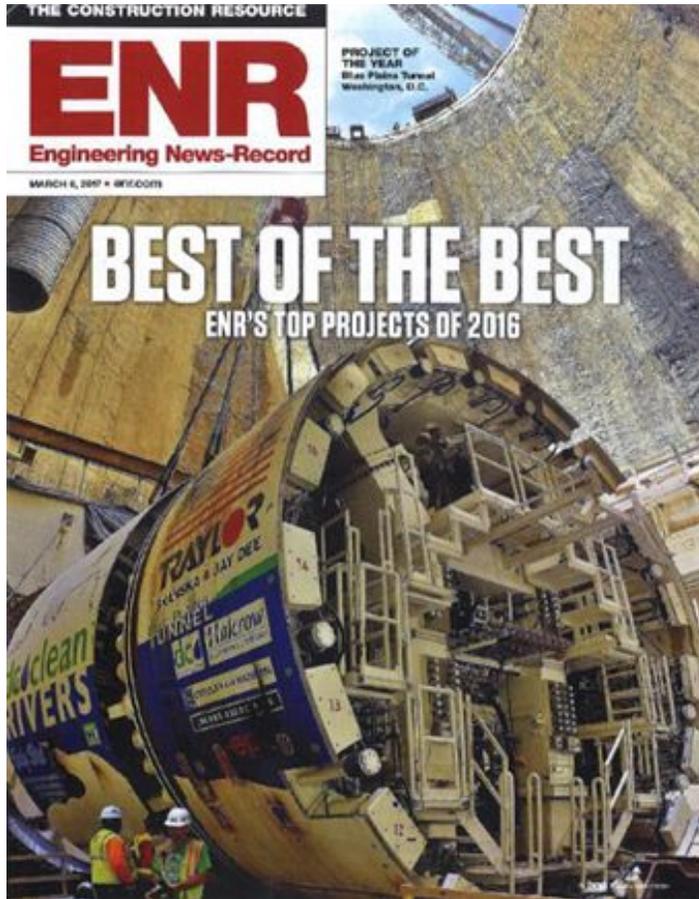


PROGRESS SUMMARY

APPENDIX – MAJOR ACCOMPLISHMENTS FY 2017 QUARTER 1 UPDATE



Blue Plains Tunnel – ENR Project of the Year



- Awarded April 13/14, 2017
- First Design-Builder project for DC Water
- 100 year design life → 100 year Green Century Bond
- Binocular mining shaft
- On-time and under budget
- Completed more than 1.6 million person-hours without a lost time accident
- Exceeded MBE/WBE Goals

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



Key Map

Design-Builder: Impregilo Healy Parsons Joint Venture
Contract Price: \$253.9M Percent Complete: 84%

Financials as of March 25, 2017



CSO 019-CSA South Shaft/Diversion Chamber/Approach Channel/ISCT

- In the South Shaft, IHPJV placed concrete for the Surge Riser Lift #2.
- In the Diversion Chamber, IHPJV placed concrete for the Invert Slab and started installing rebar for lift #1 of the walls
- In the Approach Channel, IHPJV placed the mud slab and start wire cutting the slurry wall
- IHPJV is conducting water pressure testing of the ISCT bulkhead



\$ 27.29M completed to-date
\$ 8.74M remaining

CSO 005-CSA Shaft/NSS/Adit

- IHPJV placed concrete in CSO 005 for the Drop Pipe Lift #6
- IHPJV placed concrete for the adit collar
- IHPJV placed concrete for the Front Walls Part 1 of the Approach Channel



\$ 3.61M completed to-date
\$ 2.58M remaining

CSO 018-CSA Approach Channel/NSS/Adit

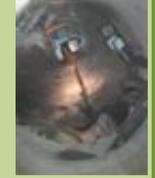
- IHPJV launched the MTBM for the adit
- IHPJV placed concrete for the roof slab of the OCVF, invert and walls placed for approach channel
- IHPJV completed wire cutting the slurry wall



\$ 7.39M completed to-date
\$ 6.37M remaining

Poplar Point (PPJS) Shaft

- IHPJV completing shaft cleanup for CIP operations
- Completed TBM removal



\$ 0.21M completed to-date
\$ 1.65M remaining

M Street CSA Approach Channel/Shaft

- IHPJV placed mud mat at the bottom of the approach channel
- IHPJV/Trueline completed wire cutting the slurry wall between the Approach Channel and the Shaft



\$ 8.88M completed to-date
\$ 1.92M remain

CSO 007-CSA Shaft/NSS/Adit

- IHPJV placed concrete for the adit collar
- IHPJV placed concrete for the Drop Shaft Lift #5
- Began CIP operations for OCVF and approach channel



\$ 2.96M completed to-date
\$ 2.30M remaining

Nannie has completed main 23' diameter tunnel from RFK to Poplar Point and is demobilized from the site



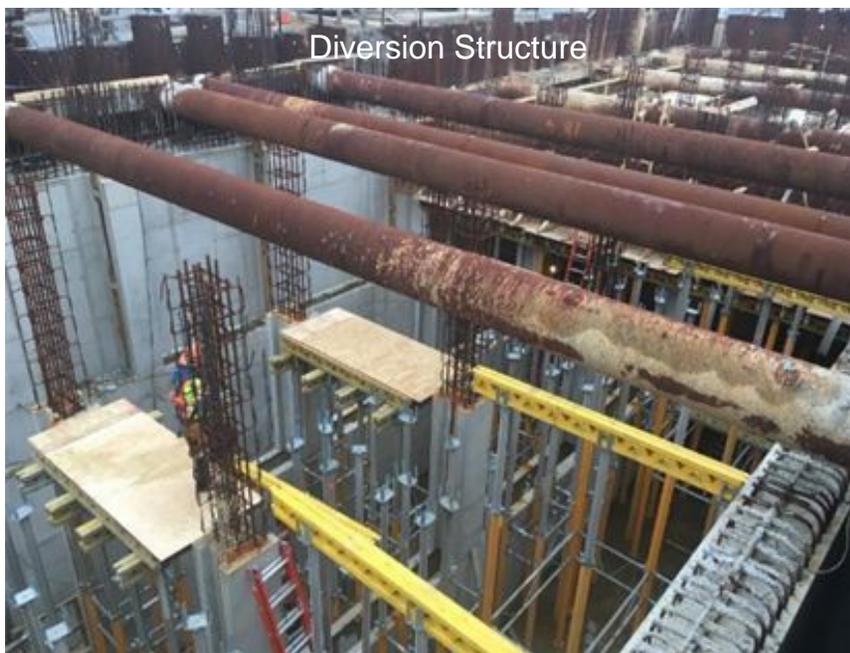
Div D – JBAB Overflow and Diversion Structures



Design-Builder: Corman Construction
Contract Price: \$40M - Percent Complete: 61%
As of April 1, 2017

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

- Diversion Structure concrete is approx. 60% complete
- Approach Channel concrete is approx. 88% complete
- Overflow Structure concrete is approx. 43% complete
- Ventilation Facility concrete is approx. 61% complete



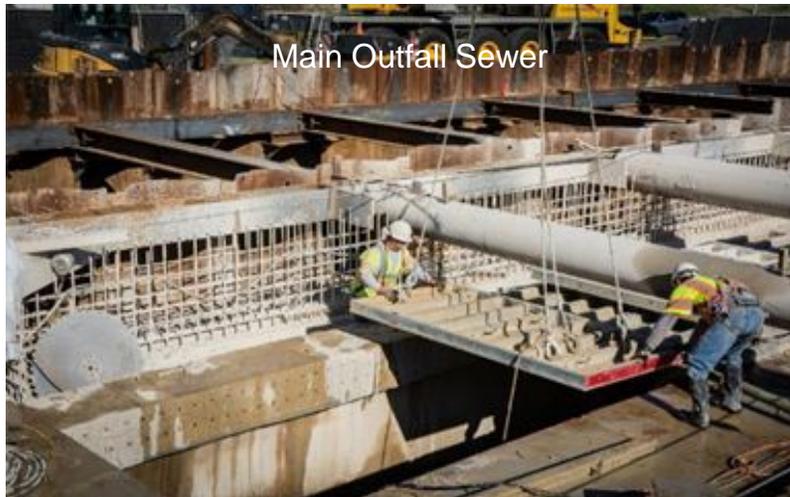
Div Z - Poplar Point Pumping Station Replacement and Main Outfall Sewers Diversion



Contractor: EE Cruz
Contract Price: \$53.4M - Percent Complete 63%
As of April 1, 2017

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

- Pump Station concrete is approx. 85% complete
- Discharge Connection Chamber concrete is approx. 95% complete
- Main Outfall Sewer concrete is approx. 30% complete
- Completed 90% of the Water Line Relocation at Anacostia Main Interceptor Diversion Chamber (AMI-DC)
- Installed 70% of Ductile Iron Force Main for Pumping Station



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



- Project was procured based on low bid, not best value
- E.E. Cruz bid \$5 M lower than the next bidder on the project
- This has potentially led to construction delays and challenges as they try to complete project within the low bid amount
 - Additional construction management and engineering services will be required due to schedule delays
 - Liquidated damages are in contract to offset DC Water costs, but may not be able to recoup all costs due to differing site condition claims
- Example differing site condition claim: tunnel under Suitland Parkway designed to bring flow to the new pumping station has had much slower production than anticipated and will require some corrective work
- Plan to manage project to meet Consent Decree deadline of 3/23/2018
 - Continue to focus on schedule, quality and safety
 - DC Water team providing additional oversight to meet consent decree schedule



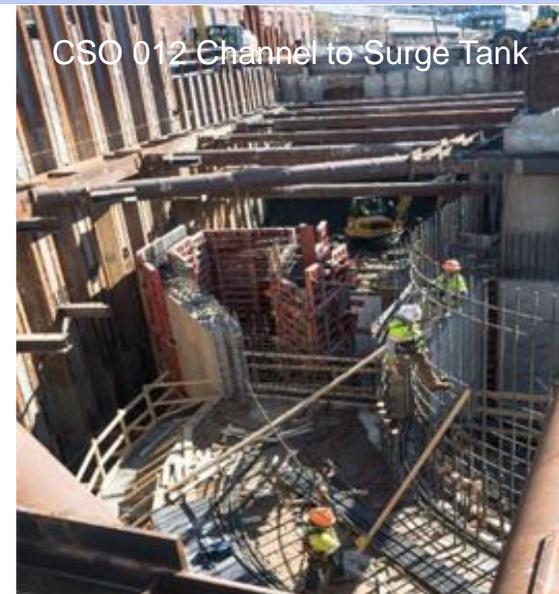
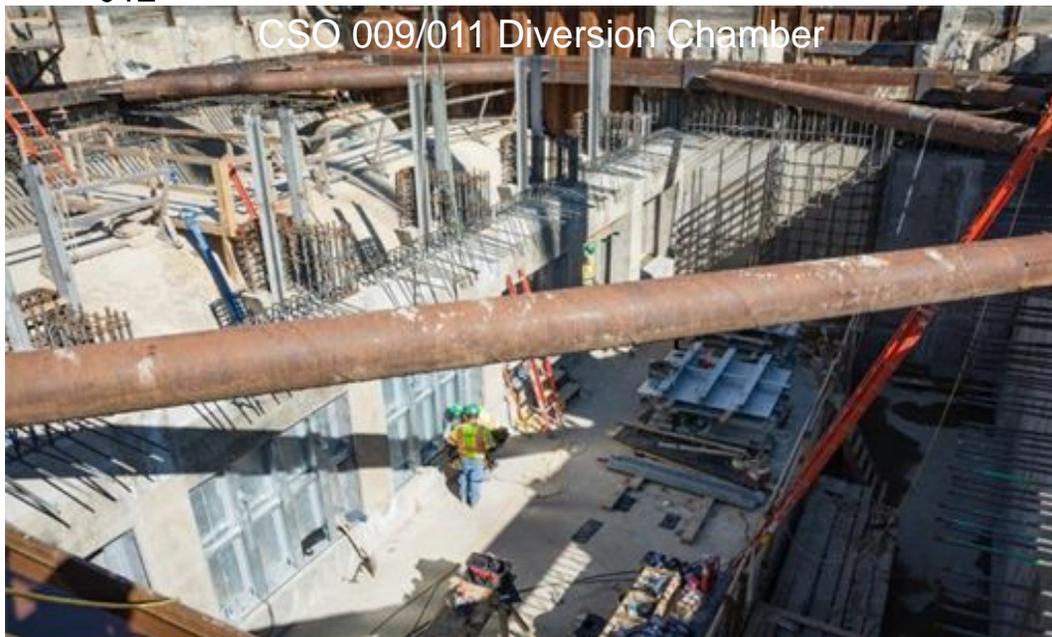
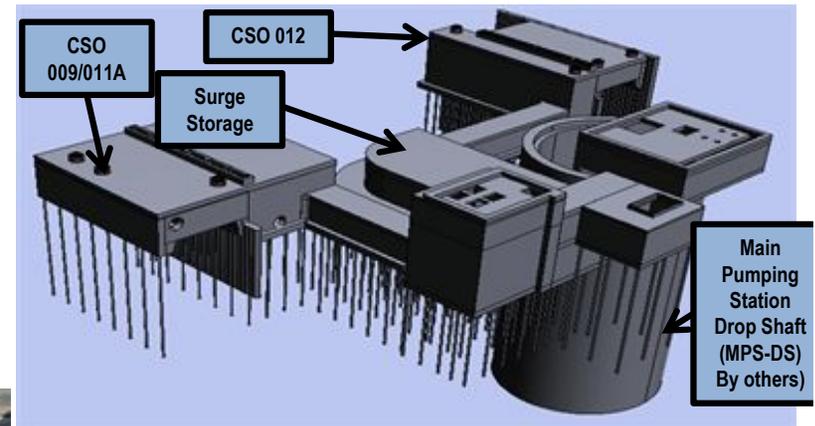
Div I – Main Pumping Station (MPS) Diversions



Design-Build: Corman Construction
Contract Price: \$53M - Percent Complete: 64%
As of April 1, 2017

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.

- Completed approx. 75% of CSO 009/011 Diversion Chamber
- Completed approx. 80% of CSO 012 Diversion Chamber
- Completed approx. 80% of Surge Tank / Junction Chamber
- Completed approx. 40% of Venting Facility
- Completed approx. 50% of Channel from CSO 009 to CSO 012



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



Project Complete

Project Underway by DETS

Procurement



1. SHORT-TERM (COMPLETED)

- Installation of storm drains and a five-foot-wide storm sewer
- Backwater valve and rain barrel program

2. MEDIUM-TERM (COMPLETED)

IRVING STREET GREEN INFRASTRUCTURE PROJECT

- 0.4 million gallons of bioretention facilities

MCMILLAN STORMWATER STORAGE PROJECT

- Repurpose Sand Filtration cells as stormwater storage, in-line sewer storage
- 3.6 million gallons

FIRST STREET TUNNEL PROJECT

- New 9 million gallon tunnel

SMALL DIAMETER WATER MAIN PROJECT (DETS PROJECT)

- Work being finalized

3. LONG-TERM (2023)

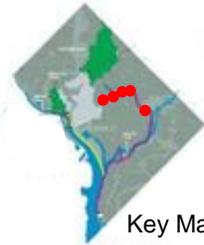
NORTHEAST BOUNDARY TUNNEL PROJECT

- A large, deep sewer tunnel that will increase the capacity of the sewer system and control CSO discharges, completion in 2023

**Neighborhood celebration
June 3, 2017 – You're invited!**



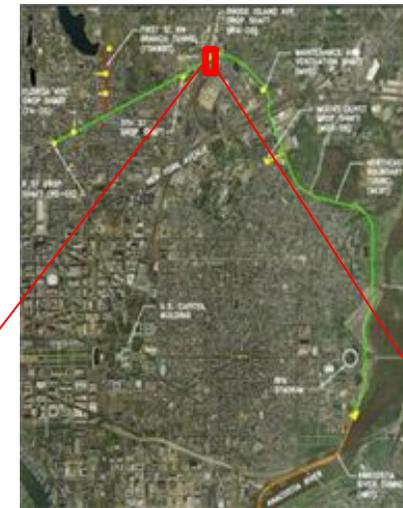
Div U: NEBT Utility Relocations



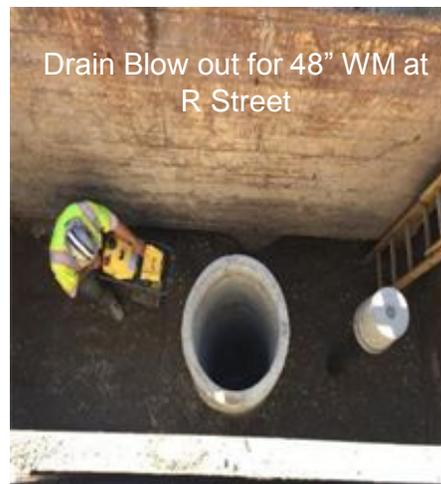
Contractor: Fort Myer Construction
Contract Price: \$16.99M Percent Complete: 52%
Financials as of April 1, 2017

Purpose: Clear surface work sites to make way for NEBT Tunnel Contractor

- Completed 70% of R Street Water Main Relocations
- Completed 86% of R Street Sewer Relocations
- Completed 100% of 4th Street Water Main Relocations
- Completed 93% of 4th Street Sewer Relocations
- Completed 66% of Mt. Olivet Drop Shaft Water Main Relocations
- Completed 100% of Mt. Olivet Drop Shaft Sewer Relocations
- Completed 10% of Mt. Olivet Diversion Chamber Water Relocations
- Completed 36% of Florida Avenue Water Relocations



Zone to be cleared of utilities

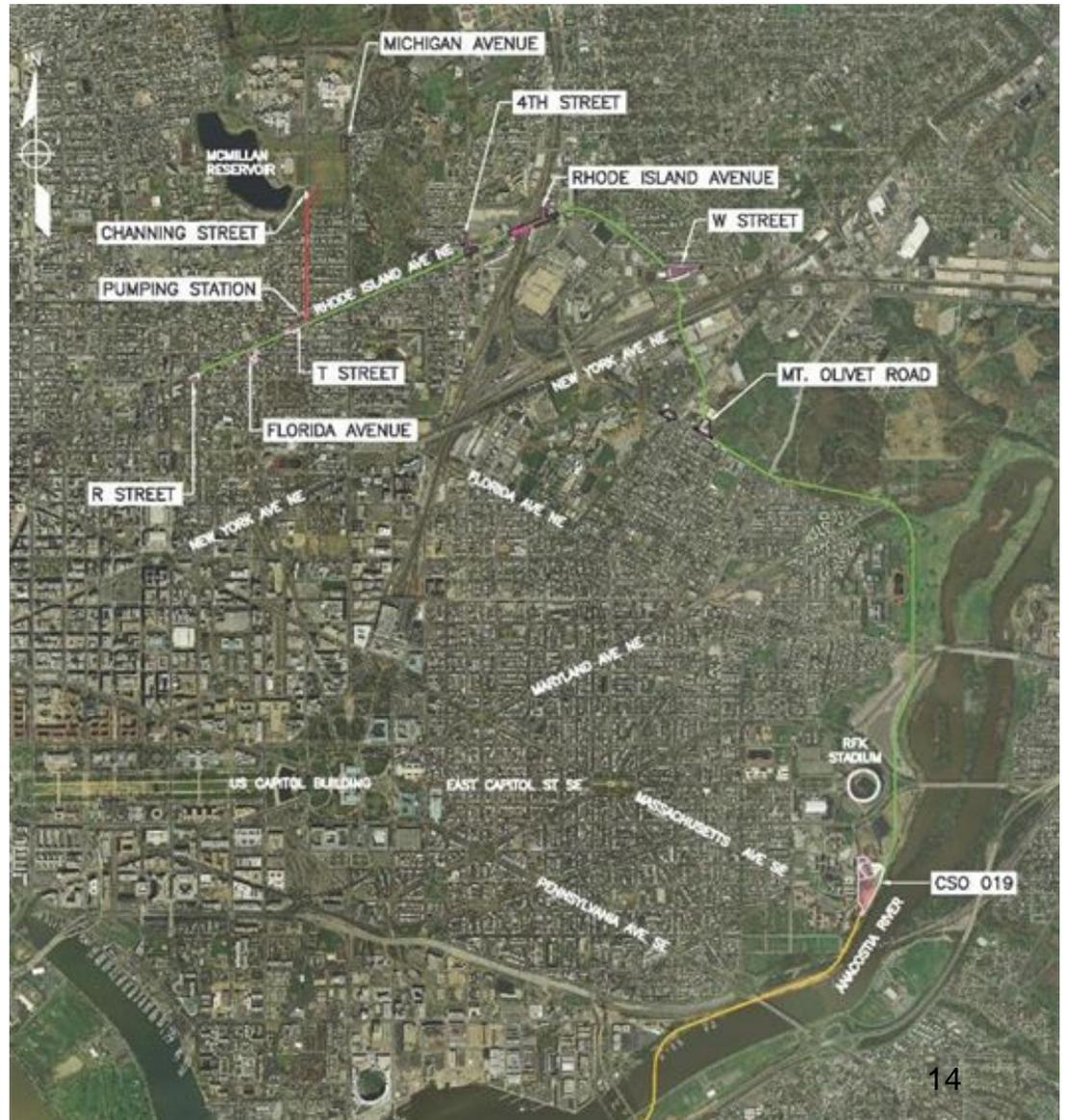


Example: 4th & Rhode Island Ave NE 13

Division J – Northeast Boundary Tunnel



- 23 foot diameter tunnel
- 60 to 140 feet deep
- 27,000 feet long
- 7 shafts and 5 diversion chambers, stormwater inlets
- Estimated design-build value: \$550 – \$600 million



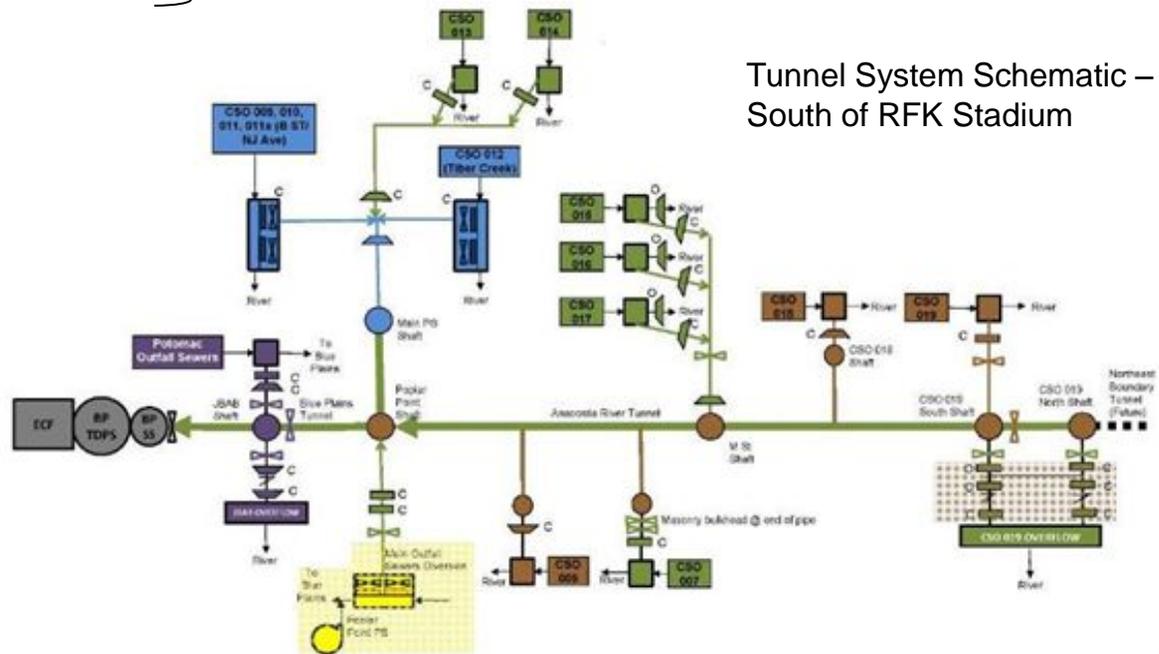
Milestone	Date
Issue RFP Documents	June 1, 2016 (Completed)
Collaboration	June 2016 – January 2017 (Completed)
Technical Evaluation	March 2017 – May 2017 (Completed)
EQ & Operations committee reviews proposed contract award	June 15, 2017 Meeting
Board reviews proposed contract award	July 6, 2017 Meeting
NTP	September 18, 2017
Construction Complete	August 2023

Anacostia River Tunnel Commissioning Awareness

- Consent Decree: system south of RFK must be placed in operation by March 23, 2018
- Plan for how to accomplish is included in each of the existing the contractor's work requirements (all divisions)
- Global commissioning awareness meeting held March 31, 2017, with quarterly update meetings between now and the Consent Decree deadline
- Monthly coordination meetings between contractors with interfaces
- Important because of interconnections in system

- Attended by multiple DC Water Departments, contractors, CMs and engineers
- Make sure plan is coordinated – get everyone on the same page
- Address safety
- Address contractor interfaces and scheduling
- Identify issues, areas for improvements

**Be ready to receive flow
March 23, 2018**



Div PR-B – CSO 021 Diversion Facilities (Kennedy Center)



Design-Builder: Davis Construction
Contract Price: \$33.95M - Percent Complete: 39%
As of April 1, 2017

Clean Rivers - CSO 021 Diversion

Facilities intercept flows from the CSO 021 and redirects them to future Potomac River Tunnel during wet weather

- Completed Installation of CSO 021 slip lining
- Completed installation of Secant Piles
- Completed 50% of Diversion Chamber excavation and 25% of SOE installation



Installation of Flume Pipe for 108" Outfall Sewer



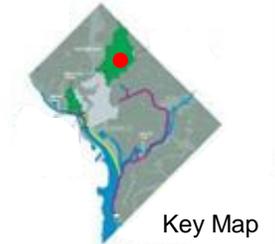
Regular coordination on a tight construction site

Kennedy Center for the Performing Arts (KCPA) Expansion

Rehearsal space, parking garage, pavilions, reflecting pool and other enhancements constructed by KCPA



A convergence of culture and nature



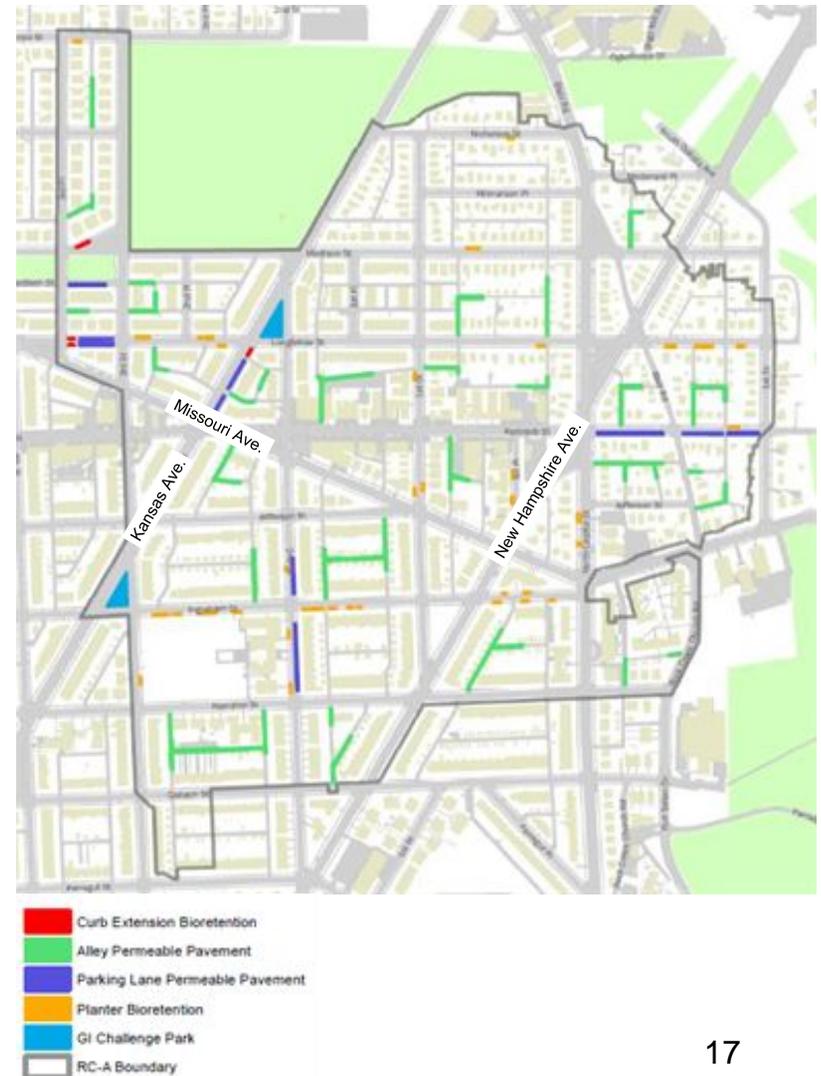
Division RC-A: Rock Creek GI Project A

Project Schedule:

Item	Status
Request For Proposal (RFP) Development	Complete
Procurement	Complete
Design-Build Notice to Proceed	Complete - February 2017 (CD deadline Mar 30, 2017)
Place in Operation	CD Deadline Mar 30, 2019

- Project facilities to be designed, permitted, and constructed in three phases:
 - Phase 1: 60% design for five facilities submitted for permitting review April 24, 2017

Project Boundary:





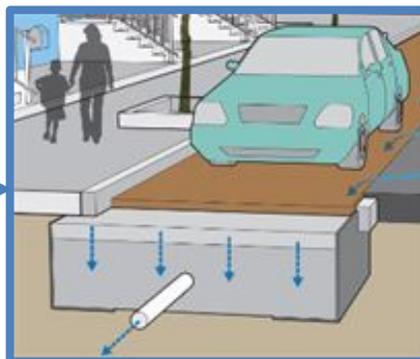
Division PR-A: Potomac River Project A

- **RFP Development Underway, includes:**

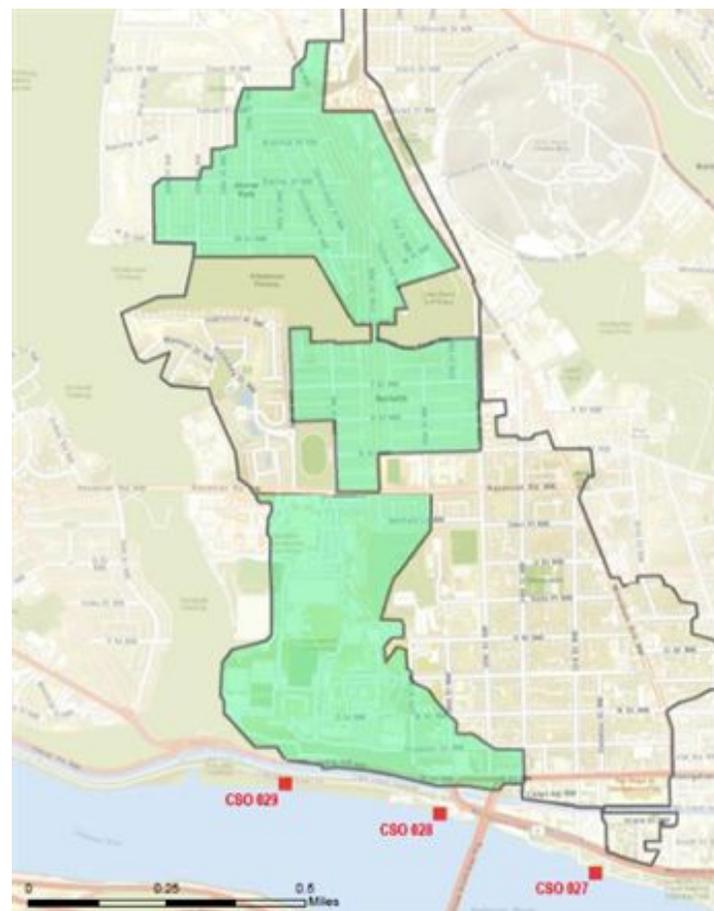
- Planter Bioretention

- Curb Extension Bioretention

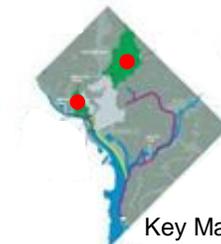
- Alley Permeable Pavement
- Parking Lane Permeable Pavement



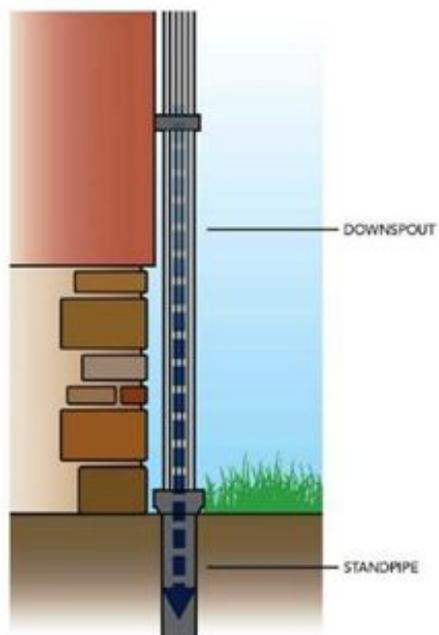
Project Boundary:



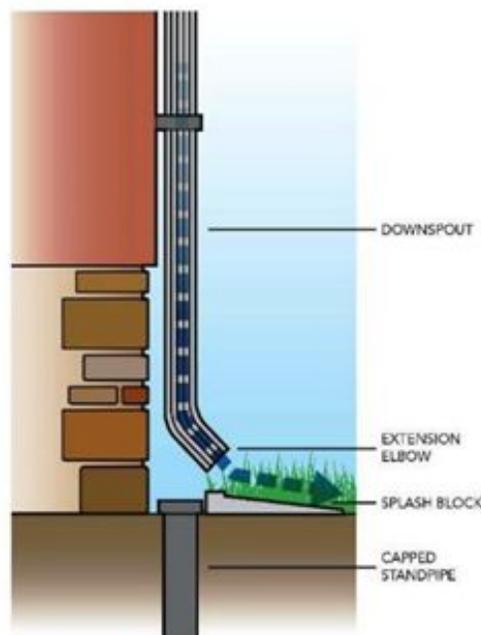
Drain the Rain!



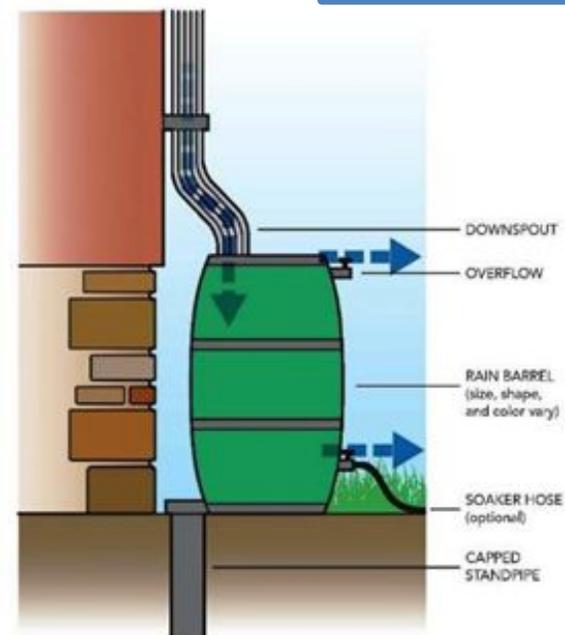
- **Voluntary, Free Downspout Disconnection Program with Rain Barrels**
 - Canvassing started in pilot program areas in May to audit properties and enroll residents
 - First disconnections already completed with GI Champions



DOWNSPOUT CONNECTED TO SEWER SYSTEM



DOWNSPOUT DISCONNECTED FROM SEWER SYSTEM



DOWNSPOUT CONNECTED TO RAIN BARREL

Kennedy Street GI Challenge Streetscape Project



- **Kennedy Street Green Infrastructure Streetscape Project**
 - Being constructed with DDOT's Kennedy Street Improvements Project
 - GI Challenge block anticipated to begin construction late May



Groundbreaking – October 21, 2016



DDOT – Kennedy Street NW Improvement
(Georgia Avenue – New Hampshire Avenue NW)

GI Challenge Streetscape
(100 Block Kennedy Street NW)



Green Jobs MOA: GI Certification Program

- **Status:**
 - Training:
 - Second round of DC training completed in April and May 2017 with 2 cohorts led by:
 - University of the District of Columbia
 - Washington Parks and People
 - Exam:
 - Second National GI Certification Program (NGICP) exam to be held June 6, 2017
 - 14 partner jurisdictions formalized to date (commitments totaling \$700K)
 - Website live: www.ngicp.org
 - Governing Body, Strategic Advisory Group, and Technical Advisory Group meeting regularly



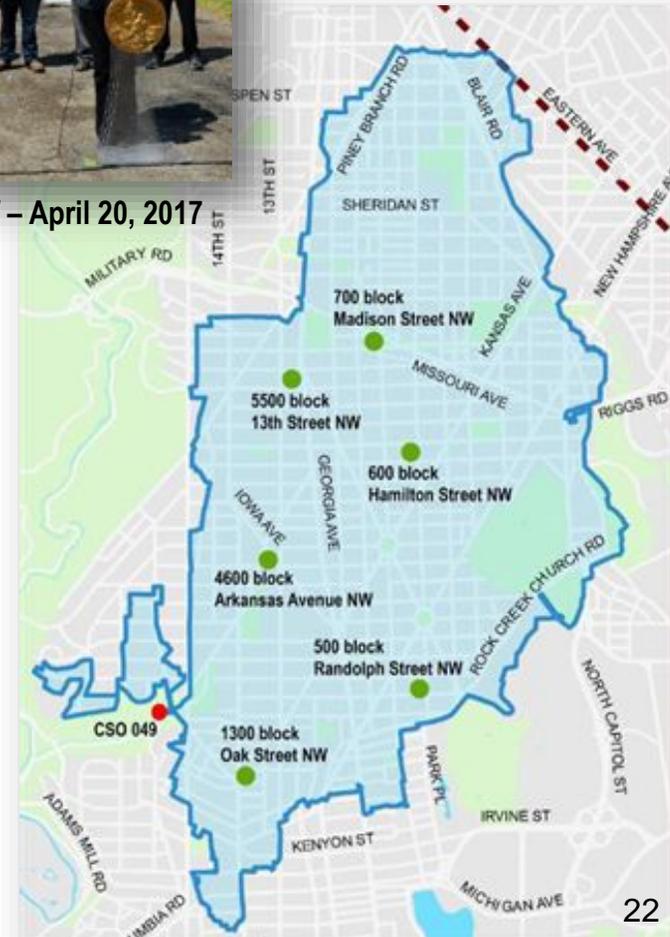
Green Alley Partnership with DDOT



- DC Water has partnered with DDOT to construct permeable pavement with alley work
 - Standard green alley approach to facilitate construction and permitting
 - Blanket permit via DOEE secured to allow for fast implementation
 - AlleyPalooza 5 launched April 20, 2017
 - DC Water funding construction of six alleys under green alley partnership



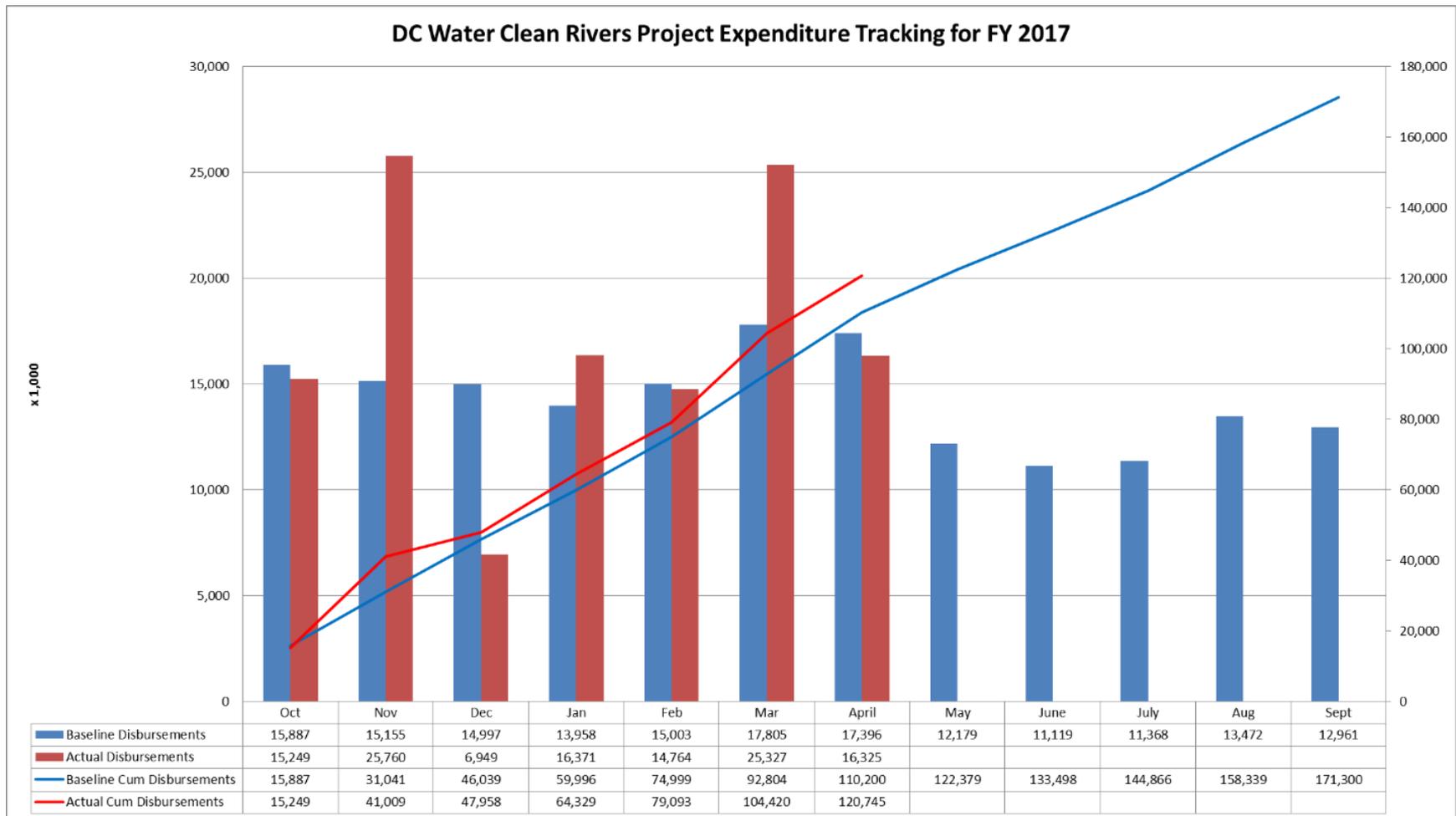
AlleyPalooza 5 Kickoff – April 20, 2017



Benefits:

- Reduces costs for DC Water’s GI Program for CSO control
- Advances District’s *Sustainable DC Plan*
- Reduces disruption for residents

FY2017 Spending Status



The projected disbursements for project CY - Anacostia Long Term Control Plan are \$29.5M above the baseline disbursement due to a ramp up in the construction activity in order to meet the Consent Decree date of March 23rd, 2018 to place in operation all Anacostia controls south of RFK stadium. In addition, baseline disbursement projections did not include expenditures for risks that have materialized on the Anacostia River Tunnel job (ground inflow incident) and the First Street Tunnel job (cumulative delay impacts); resulting in an increase of spending over the baseline projections. However, risks such as these were contemplated when the contracts were procured and funds are included in the Board-approved contract amounts. As a result, it is projected that both jobs will be completed within the Board-approved contract cost.



Capital Construction and Engineering Fact Sheet Overview

EQ and Ops Committee May 18, 2017



The Fact Sheet is a public document summarizing a requested contract action for Committee review, and Board review and approval

- A Fully-Approved Fact Sheet Allows the Associated Contract Action to be Executed. Fact Sheet Process:
 - Engineering prepares the Fact Sheet
 - Finance reviews budget and spending information
 - Signatures by Chief Engineer, Procurement Director, CFO
 - Review by Committee and recommend to the full Board for approval.
 - If approved, signature by General Manager
- Contract Actions Necessitating a Fact Sheet
 - New contracts >\$1 million
 - Contract modifications (Change orders or Supplemental Agreements) >\$500 thousand
 - Contract modifications causing the total approved value to cross \$1 million
- Fact Sheet Contents
 - Contractor; subcontractor(s); MBE/WBE status
 - Summary of historical funding approvals and spending
 - Contract scope and purpose
 - Budget information
 - Signatures



The Fact Sheet first page summarizes the requested contract action, what the contract entails and why

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY BOARD OF DIRECTORS CONTRACTOR FACT SHEET		
ACTION REQUESTED		
CONSTRUCTION CONTRACT: Small Diameter Water Main Replacement 12a (Non-Joint Use)		
Approval to execute a construction contract for \$14,079,200.00		
CONTRACTOR/SUB/VENDOR INFORMATION		
PRIME: Capital Paving, Inc. 2211 Channing St NE Washington, DC 20018 (SLBE)	SUBS: Aves Construction Corp. Temple Hills, MD Acorn Supply & Distributing, Inc. White Marsh, MD	PARTICIPATION: MBE 32.0% WBE 6.0%
DESCRIPTION AND PURPOSE		
Contract Value, Not-To-Exceed:	\$14,079,200.00	
Contract Time:	715 Days (1 Year, 11 Months)	
Anticipated Contract Start Date (NTP):	04-28-2017	
Anticipated Contract Completion Date:	04-13-2019	
Bid Opening Date:	12-14-2016	
Bids Received:	6	
Other Bids Received		
Sagres Construction Corporation*	\$ 12,442,775.00	
Fort Myer Construction Co.	\$ 14,741,191.00	
J. Fletcher Creamer & Son, Inc.	\$ 14,946,171.00	
Civil Construction LLC.	\$ 14,994,615.00	
Anchor Construction Corporation	\$ 17,260,490.50	
*Lowest bidder was deemed non responsive as they did not submit the required documentation demonstrating their compliance with the Environmental Protection Agency (EPA) MBE/WBE affirmative action steps.		
Purpose of the Contract: Replace water mains that have experienced failures, or have a history of low water pressure or water quality complaints.		
Contract Scope:		
<ul style="list-style-type: none"> Replace approximately 4.0 miles of 16 inch diameter and smaller water mains and associated valves and appurtenances at various locations within Wards, 1, 5, 6, 7 and 8. Replace copper water services, 2 inch diameter and smaller, in public and private space. Install curb stop /curb stop box, meter box and penetration through building wall and connection to first fitting inside the building including installation of a shut-off valve and pressure reducing valve. Install permanent pavement and surface restoration. 		
Federal Grant Status:		
<ul style="list-style-type: none"> Construction contract is funded in part by a Federal grant. 		



Title information, including contract title and the contract action requested

Contractor and subcontractors; MBE/WBE status

Summary of contract funding approvals. Base term, bid opening date, other bids received.

(Section layout and information varies for each of the 4 typically presented Fact Sheet types used for Capital Construction and Engineering contracts) See slide 5

“Purpose of the Contract” describes service being provided.

“Contract Scope” describes the work that is to be done by the contractor.

“Federal Grant Status” describes whether or not this project is funded in part by a Federal grant.



The Fact Sheet second page summarizes budgetary information supporting the request, and has approval signatures

PROCUREMENT INFORMATION

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

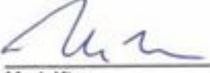
BUDGET INFORMATION

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

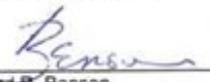
ESTIMATED USER SHARE INFORMATION

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

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


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


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


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

_____, _____
 Date
 George S. Hawkins
 General Manager

Type of contract and how it was awarded

“Budget Information” header with DC Water end user

Funding “split” shows how the funding will be attributable to the User Jurisdictions. The split:

- varies by funding source (operating vs. capital);
- depends on the facility associated with the contract;
- is determined by Engineering, and for Joint Use , the IMA regional committee and tech sub committee.
- Along with Budget Information, the tables may be repeated two or more times if there are more than one end user or funding source.

Signatures.

- Chief Engineer, for other cognizant assistance GM level manager signature signifies agreement to the contract action and expenditure.
- Procurement signature means the Fact Sheet and supporting information meet the requirements of the requested contract action.
- CFO signature means Finance confirms budget availability.
- GM signature indicates Board approval, and as Contracting Officer, that the requested contract action may be executed



Capital construction and engineering uses 4 typically presented types of fact sheets

1. CONSTRUCTION CONTRACT

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

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

2. CONSTRUCTION CONTRACT CHANGE ORDER

Original Contract Value:	\$65,041,931.00
Value of this Change Order:	\$ 3,085,000.00
Cumulative CO Value, including this CO:	\$ 3,085,000.00
Current Amended Contract Value, including this CO:	\$68,126,931.00
Original Contract Time:	1095 Days (3 years)
Time extension, this CO:	0 Days
Total CO contract time extension:	0 Days
Contract Start Date (NTP):	03-13-2015
Anticipated Contract Completion Date:	03-12-2018
Cumulative CO % of Original Contract:	4.7%
Contract Completion to Date %:	8%

3. ENGINEERING SERVICES

Contract Value, Not-To-Exceed:	\$10,000,000
Contract Time:	1,922 Days (5 Years, 3 Months)
Anticipated Contract Start Date:	06-26-2017
Anticipated Contract Completion Date:	09-30-2022
Other firms submitting proposals/qualification statements:	
Arcadis*	
O'Brien & Gere Engineers	
Simpson Gumperts & Heger*	

* Asterisk indicates short listed firms.

4. ENGINEERING SERVICES SUPPLEMENTAL AGREEMENT

Original Contract Value:	\$4,891,074.00
Value of this Supplemental Agreement:	\$1,992,719.57
Cumulative SA Value, including this SA:	\$1,992,719.57
Current Contract Value, Including this SA:	\$6,883,793.57
Original Contract Time:	958 Days (2 Years, 8 Months)
Time Extension, this SA:	335 Days
Total SA contract time extension:	335 Days (0 Years, 11 Months)
Contract Start Date:	11-15-2014
Contract Completion Date:	05-31-2018

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

ACTION REQUESTED

ENGINEERING SERVICES SUPPLEMENTAL AGREEMENT:

**Poplar Point Pumping Station Replacement
(Joint Use)**

Approval to execute Supplemental Agreement No. 02 for \$995,829. The modification exceeds the General Manager's approval authority.

CONTRACTOR/SUB/VENDOR INFORMATION

PRIME:	SUBS:	PARTICIPATION:
O'Brien and Gere, LLC 4201 Mitchellville Road Bowie, MD 20716	Bryant Associates, Inc. Hyattsville, MD	MBE 28.0%
<u>Headquarters</u> Syracuse, NY 13221	Phoenix Engineering, Inc. Parkton, MD	WBE 4.0%
	COWI (formerly Jenny Engineering) Springfield, NJ	10.0%

DESCRIPTION AND PURPOSE

Original Contract Value:	\$3,200,000.00	
Value of this Supplemental Agreement:	\$ 995,829.00	
Cumulative SA Value, including this SA:	\$2,552,336.00	
Current Contract Value, including this SA:	\$5,752,336.00	
Original Contract Time	1750 Days	(4 Years, 10 Months)
Time Extension, this SA:	232 Days	
Total SA Time Extension:	597 Days	(1 Year, 8 Months)
Contract Start Date:	01-26-2012	
Contract Completion Date:	06-30-2018	

Purpose of the Contract:

Provide engineering design and related services for a new pumping station to replace the existing deteriorating Poplar Point Pumping Station that has been in operation since 1915. The work also includes replacement of the existing Barry Road Sewer crossing I-295 which has failed.

This work is required to comply with a Consent Decree and DC Water's NPDES Permit.

Original Contract Scope:

- Provide civil, architectural, mechanical process, HVAC, instrumentation, and electrical design services, and support activities, and preparation of contract documents for Poplar Point Pumping Station Replacement, approximately 1,000 lineal feet of trenchless 54-inch sewer and approximately 400 lineal feet of sewer from Barry Road to the pumping station crossing I-295.

Current Supplemental Agreement Scope:

- Provide extended engineering services during construction due to unanticipated construction contractor construction delays. These delays have required additional reviews of shop drawings and requests for information (RFIs), differing site conditions claims analyses, and other engineering analyses which were not included in the contract.

Future Supplemental Agreement Scope:

- No future supplemental agreement is anticipated at this time.

PROCUREMENT INFORMATION

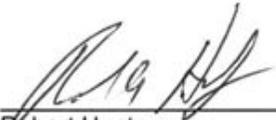
Contract Type:	Lump Sum/ Cost Plus Fixed Fee	Award Based On:	Highest Ranking Score
Commodity:	Engineering Services	Contract Number:	DCFA-445
Contractor Market:	Open Market		

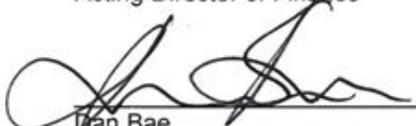
BUDGET INFORMATION

Funding:	Capital	Department:	DC Clean Rivers Project
Service Area:	Combined Sewer Overflow	Department Head:	Carlton M. Ray
Project:	CY		

ESTIMATED USER SHARE INFORMATION

User	Share %	Dollar Amount
District of Columbia	90.00%	\$896,246.10
Federal Funds	0.00%	\$
Washington Suburban Sanitary Commission	10.00%	\$ 99,582.90
Fairfax County	0.00%	\$
Loudoun County & Potomac Interceptor	0.00%	\$
Total Estimated Dollar Amount	100.00%	\$995,829.00


 _____ 5/11/17
 Robert Hunt Date
 Acting Director of Finance


 _____ 5/11/17
 Dan Bae Date
 Director of Procurement


 _____ 5-10-17
 Leonard R. Benson Date
 Chief Engineer

 George Hawkins Date
 General Manager

District of Columbia Water and Sewer Authority

Capital Improvement Program Report



**FY-2017 2nd Quarter
January 1st through March 31st, 2017**

**Board of Directors
Environmental Quality and Operations Committee**

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

May 2017

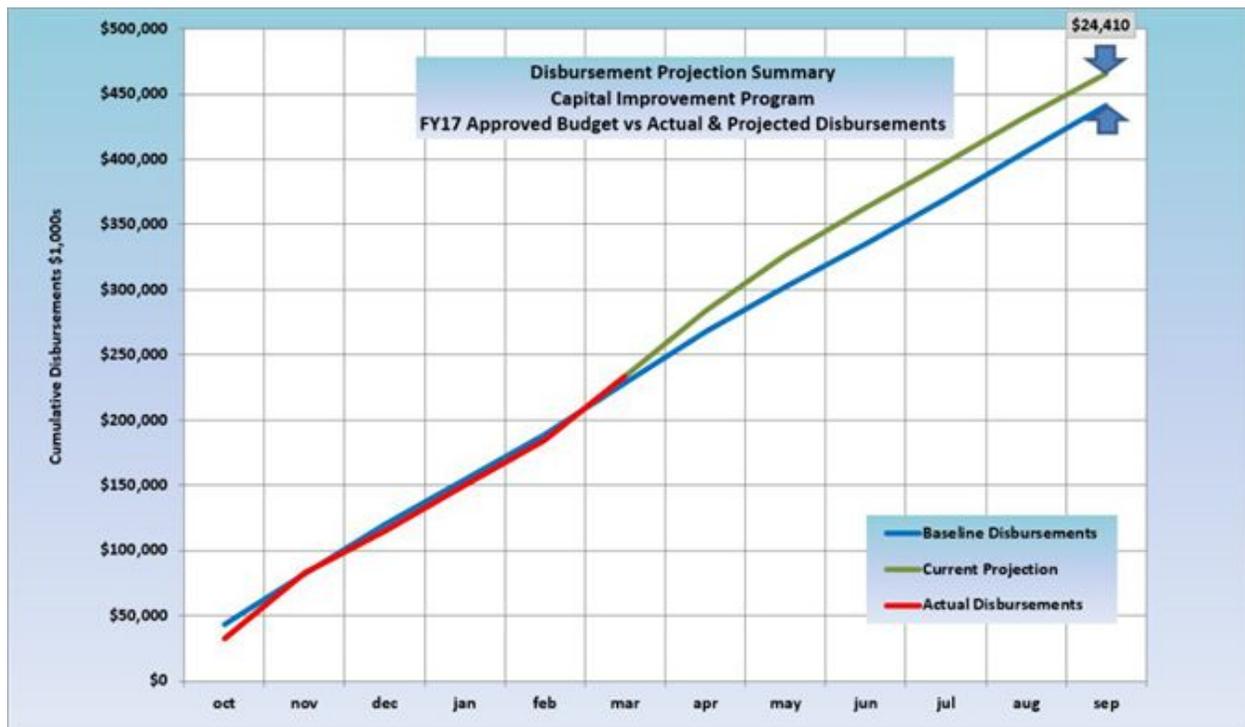


Capital Improvement Program Report 2nd Quarter FY2017

CIP Disbursement Performance

Current projected program disbursements through the end of the fiscal year compared with the approved FY17 baseline are shown in the chart below:

Disbursement Summary



Current projected fiscal year 2017 CIP disbursements are \$465,564,000 through the end of September 2017, which is \$24.4M (5.5%) above the baseline disbursement projection of \$441,154,000.

Current disbursement projections within the service areas are as follows:

Non Process Facilities

Baseline Disbursements \$34,150,000
 Projected Disbursements \$33,064,000 (\$1.1M below baseline projection)

There are no significant project variances.



Capital Improvement Program Report 2nd Quarter FY2017

Wastewater Treatment Service Area

Baseline Disbursements \$123,789,000
 Projected Disbursements \$130,954,000 (\$7.2M above baseline projection)
 Significant project variances are listed below:

- *Solids Processing Projects – (\$4.0M above baseline)*
 - The disbursements for project XA – New Digestion Facilities are projected to be \$2.6M above the baseline largely due to the execution of Change Orders and retention releases of CHP and FDF.
- *Nitrogen Removal Facilities - (\$3.3M above baseline)*
 - The projected disbursements for project E9 - Nitrogen Removal Facilities are \$3.0M above baseline partly due to an equitable adjustment payment resulting from a changed condition associated with high ground water at the ENRF drop shaft.
 - The projected disbursements for project E8 - Enhanced Clarification Facilities are \$4.2M above the baseline mainly due to greater than anticipated spending due to recovery efforts from slower progress in FY16.
 - The disbursements for project EE - Filtrate Treatment Facilities are projected to be \$5.4M below the baseline largely due to greater than anticipated payments that occurred at the end of FY16 after the FY17 disbursement baseline was established

CSO Service Area

Baseline Disbursements \$184,387,000
 Projected Disbursements \$210,782,000 (\$26.4M above baseline projection)
 Significant project variances are listed below:

- *DC Clean Rivers Program Area – (\$24.5M above baseline)*
 - The projected disbursements for project CY - Anacostia Long Term Control Plan are \$29.5M above the baseline disbursement due to a ramp up in the construction activity in order to meet the Consent Decree date of March 23rd 2018 to place in operation all Anacostia controls south of RFK stadium. In addition, baseline disbursement projections did not include expenditures for risks that have materialized on the Anacostia River Tunnel job (ground inflow incident) and the First Street Tunnel job (cumulative delay impacts); resulting in an increase of spending over the baseline projections. However, risks such as these were contemplated when the contracts were procured and funds are included in the Board-approved contract amounts. As a result, it is projected that both jobs will be completed within the Board-approved contract cost.

Stormwater Service Area

Baseline Disbursements \$1,706,000
 Projected Disbursements \$1,308,000 (\$0.4M below baseline projection)
 There are no significant project variances for this service area.



Capital Improvement Program Report 2nd Quarter FY2017

Sanitary Sewer Service Area

Baseline Disbursements \$38,302,000

Projected Disbursements \$33,294,000 (\$5.0M below baseline projection)

There are no significant project variances for this service area:

- There are no significant project variances in the Sewer Service Area, however; the Sanitary Ongoing Sewer Projects and Sanitary Interceptor/Trunk Force Main Programs - have several small individual project variances, which collectively contributed to the projected \$5M below baseline disbursements for the Service Area.

Water Service Area

Baseline Disbursements \$58,819,000

Projected Disbursements \$56,163,000 (\$2.7M below baseline projection)

There are no significant project variances for this service area this period.



Capital Improvement Program Report 2nd Quarter FY2017

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

All priority 1 projects are on schedule and within budget.

Large Contract Actions Anticipated – 6 Month Look-Ahead

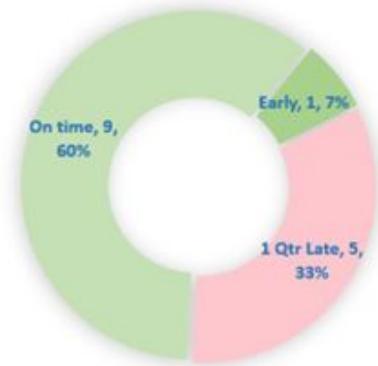
Project	Name	Contract Type	Joint Use?	Cost Range	Committee	BOD
H6	Emergency Sanitary Sewer Main IR&R Contract FY18- FY20	Construction	Yes	\$15M - \$20M	EQ&Ops Jun	Jul
CY	Northeast Boundary Tunnel	Construction	Yes	\$500M-\$600M	EQ&Ops Jun	Jul
DE	Small Diameter Watermain Rehab 12b	Construction	No	\$5M - \$10M	EQ&Ops Sep	Oct
F1	Small Diameter Watermain Rehab 13a	Construction	No	\$5M - \$10M	EQ&Ops Sep	Oct



Capital Improvement Program Report 2nd Quarter FY2017

Schedule - Key Performance Indicators, Capital Improvement Program

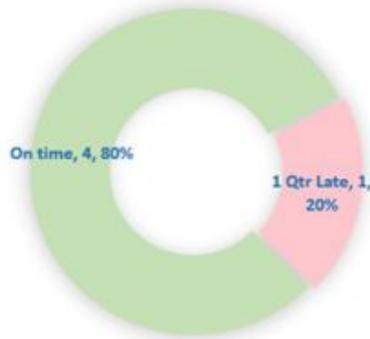
KPI Performance Through End Quarter 2
All KPIs



For the 2nd Quarter, four of the Key Performance Indicators (KPIs) were achieved on time; the other four remaining planned KPIs were not achieved, as follows:

1. GA01 - *Sewer Rehab 4* Substantial Completion – not achieved due to delays in permitting process.
2. NG04 – *Storm PS Rehab* Design Start Postponed due to scope change during planning phase and subsequent budget increase not within FY17 budget limit.
3. DE01 – *SDWMR 12a* NTP not issued due to contested bid.
4. XA10 – *Biosolids CHP* Mech. Completion not met due to CAMBI sludge valve leaking slowing final testing.

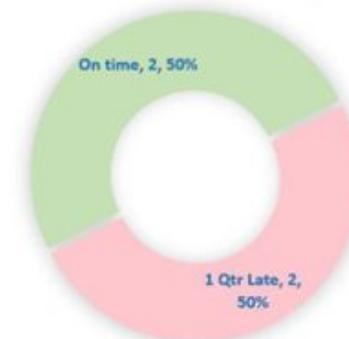
KPI Performance Through End Quarter 2
Design Start



KPI Performance Through End Quarter 2
Construction Start



KPI Performance Through End Quarter 2
Construction Substantial Completion





Capital Improvement Program Report 2nd Quarter FY2017

FY2017 - KPI Report

DS	Design Start	Planned		On time	
CS	Construction Start	Early		1 Quarter Late	
CSC	Construction Substantial Completion			> 1 Quarter Late	
CO/PC	Consent Oder/Permit Compliance				

Qtr.	Project	Job Name	KPI Name	QUARTER				To Date
				1	2	3	4	
1	G800	Small Local Sewer Rehab 2	CSC					On time
1	CY25	Div P - First Street NW Branch Tunnel (Bloomingdale)	CSC					On time
1	G101	Rehab of Sewers in Georgetown	CS					On time
1	O302	Small Dia Watermain Repl 11b	CS					1 Qtr Late
1	IL10	Creekbed Sewer Rehabilitation Rock Creek Oregon Avenue	CS					On time
1	J001	B Street/New Jersey Ave. Trunk Sewer Rehab	DS					On time
1	F102	Small Diameter Water Main Repl 13B	DS					On time



Capital Improvement Program Report 2nd Quarter FY2017

FY2017 - KPI Report

DS	Design Start	Planned		On time	
CS	Construction Start	Early		1 Quarter Late	
CSC	Construction Substantial Completion			> 1 Quarter Late	
CO/PC	Consent Oder/Permit Compliance				

Qtr.	Project	Job Name	KPI Name	QUARTER				To Date
				1	2	3	4	
2	GA01	Small Local Sewer Rehab 4	CSC					1 Qtr Late
2	XA10	Biosolids Combined Heat and Power (CHP)	CSC					1 Qtr Late
2	DE01	Small Diameter Water Main Repl 12A	CS					1 Qtr Late
2	DZ02	Div RC-A - Rock Creek Project 1 (GI)	CS					On time
2	F201	Small Diameter Water Main Repl 14A	DS					On time
2	FA03	Soldiers Home Reservoir Upgrade	DS					On time
2	NG04	Stormwater Pumping Stations Rehabilitation - Non-Grant Activities	DS					1 Qtr Late



Capital Improvement Program Report 2nd Quarter FY2017

FY2017 - KPI Report

DS	Design Start	Planned		On time	
CS	Construction Start	Early		1 Quarter Late	
CSC	Construction Substantial Completion			> 1 Quarter Late	
CO/PC	Consent Oder/Permit Compliance				

Qtr.	Project	Job Name	KPI Name	QUARTER				To Date
				1	2	3	4	
3	BI01	Enhanced Nitrogen Removal (ENR) North	CSC					On time
3	G601	Sanitary Sewer Rehab and Repair Phase 2 (SUB)	CSC					On time
3	O301	Small Dia Watermain Repl 11a	CSC					On time
3	Q302	Pope Branch Stream Restoration and Sewer Replacement	CSC					On time
3	I802	Large Valve Replacements 12	CSC					On time
3	FQ01	FQ01 Main & O St. PS Intermediate Upgrades	CS					On time
3	CZ07	Potomac Project 1 (GI)	CS					Early
3	IM09	Joyce Road/Morrow Dr Sewer Rehabilitation	DS					On time



Capital Improvement Program Report 2nd Quarter FY2017

FY2017 - KPI Report

DS	Design Start	Planned		On time	
CS	Construction Start	Early		1 Quarter Late	
CSC	Construction Substantial Completion			> 1 Quarter Late	
CO/PC	Consent Oder/Permit Compliance				

Qtr.	Project	Job Name	KPI Name	QUARTER				To Date
				1	2	3	4	
4	EE01	Biosolids Filtrate Treatment Facilities	CSC					On time
4	G100	Lining & Repair of Local Sewers	CSC					On time
4	I801	Large Valve Replacements 11R	CSC					On time
4	CY14	Div J - Northeast Boundary Tunnel	CS					On time
4	DE02	Small Diameter Water Main Repl 12B	CS					On time
4	LZ03	PI Phase 1 Pipe Rehab at Clara Barton Pkwy	DS					On time
4	F202	Small Diameter Water Main Repl 14B	DS					On time



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

Main & O Campus Update

**Headquarters (HQO) Development
Fleet, Sewer Services & Floatable Debris Relocation**

Briefing for DC Water Board of Directors

**Environmental Quality & Operations Committee
May 18, 2017**

**Finance & Budget Committee
May 25, 2017**



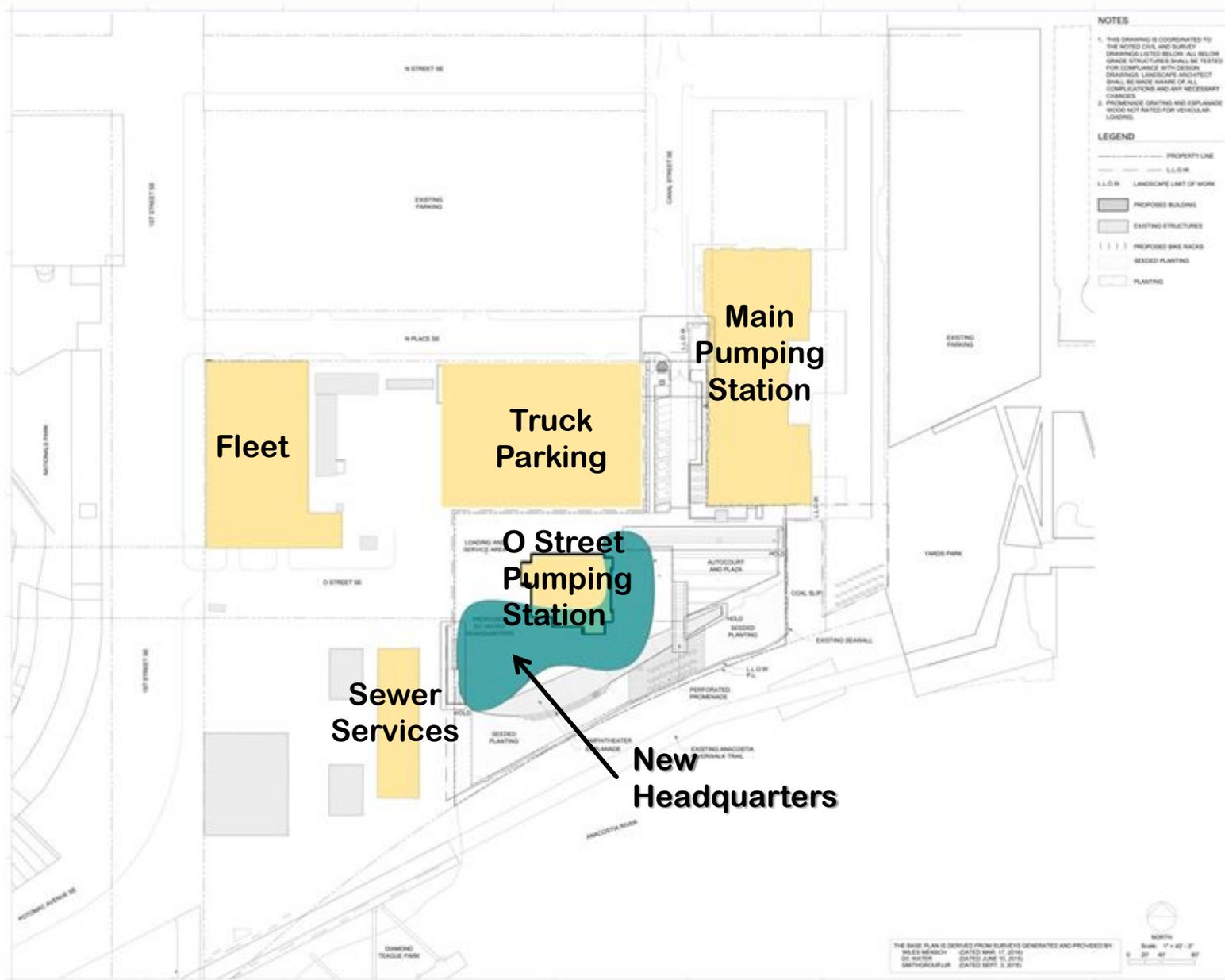
District of Columbia Water and Sewer Authority
George S. Hawkins, General Manager

Main & O Campus Update

HQO DEVELOPMENT



NEW HEADQUARTERS BUILDING



NOTES

- THIS DRAWING IS COORDINATED TO THE NOTED CIVIL AND SURVEY DRAWINGS LISTED BELOW. ALL BELOW GRADE STRUCTURES SHALL BE TESTED FOR COMPLIANCE WITH DESIGN CRITERIA. LANDSCAPE ARCHITECT SHALL BE MADE AWARE OF ALL UTILITIES AND ANY NECESSARY CHANGES.
- PROVIDENCE GRATING AND EXPLANADE WOULD NOT BE RATED FOR VEHICULAR LOADING.

LEGEND

- PROPERTY LINE
- L.L.O.W. LANDSCAPE LIMIT OF WORK
- PROPOSED BUILDING
- EXISTING STRUCTURES
- PROPOSED BIKE RACKS
- BEDED PLANTING
- PLANTING

DC Water Headquarters

SMITHGROUP JJR
1700 NEW YORK AVENUE, NW
WASHINGTON, DC 20005

SKANSKA
1000 K STREET, NW
WASHINGTON, DC 20004

SKANSKA
1000 K STREET, NW
WASHINGTON, DC 20004

GENSLER and **SWEDEN** | **DBI**

WMC



THE BASE PLAN IS DERIVED FROM SURVEYS GENERATED AND PROVIDED BY:
 SALES MARCHON (DATED MARCH 17, 2010)
 DC WATER (DATED JUNE 15, 2010)
 SMITHGROUP JJR (DATED MARCH 3, 2010)

Scale: 1" = 40'-0"
 NORTH

CONTEXT PLAN

1" = 40'-0"

CD L-0101



Current Status of Negotiations with District on Relocation from Main & O Campus

- All legal documents have been drafted and language negotiated
- District introducing a funding resolution and other documents to Council at May 15th meeting
- Once approved and documents fully executed funding will be deposited in Escrow Account
- DC Water plans to introduce a Supplemental Agreement to Non-Process Facilities Master Plan Architect for design of new facilities for approval at July Board Meeting



Relocation Project Negotiated Funding Amount

DCW Relocation Project Budget Items	Allocated Cost
Fleet Services Relocation	
-Design & Preconstruction	\$ 2,500,000.
-Construction of Facilities	\$13,000,000.
Sewer Services Relocation	
-Design & Preconstruction	\$ 1,500,000.
-Phase One	\$ 7,000,000.
-Phase Two	\$ 3,500,000.
Ames Place Acquisition	\$ 8,529,000.**
Ames Place Due Diligence	\$ 171,000.
DCW Staff & Consultant Cost	\$ 160,000.
Floatable Debris Offices & Storage Relocation	\$ 350,000.
Perimeter Fence at the Main Pumping Station	\$ 1,500,000.
Total Budgeted Costs to be Funded	\$38,210,000

****To be paid directly by District to WMATA.**



Relocation Project Milestone Dates

DCW Relocation Project Milestones	Estimated Date	Outside Date
Commence Design of Fleet & Sewer Services	July 15, 2017	August 1, 2017
Vacate F1 (Theatre) Parcel + 1 ½ Street (to west curb of proposed street) adjacent to F1	September 1, 2017	November 1, 2017
Complete Design of Fleet Services Facility	May 1, 2018	October 1, 2018
Complete Design of Sewer Services Phases 1 and 2	May 1, 2018	October 1, 2018
Complete Construction Fleet Services	April 1, 2020	July 1, 2020
Relocate Fleet Services	May 1, 2020	August 1, 2020
Certify Cost of Fleet Services	August 1, 2020	November 1, 2020
Commence Design of Floatable Debris Services	August 1, 2017	October 1, 2017
Complete Design of Floatable Debris Services	August 1, 2018	October 1, 2018
Commence Construction of Floatable Debris Services	July 1, 2018	November 1, 2018
Complete Construction of Floatable Debris Services	November 1, 2019	February 1, 2020
Relocate Floatable Debris Offices/Storage	December 1, 2019	March 1, 2020
Certify Cost of Floatable Debris Offices	March 1, 2020	June 1, 2020
Commence Construction Phase 1 Sewer Services	February 1, 2019	April 1, 2019
Complete Construction Phase 1 Sewer Services	February 1, 2020	July 1, 2020
Relocate Phase 1 of Sewer Services	March 1, 2020	August 1, 2020
Vacate G1 Parcel*	July 1, 2020	September 1, 2020
Commence Construction Phase 2 Sewer Services**	August 1, 2020	October 1, 2020
Complete Construction Phase 2 Sewer Services	June 1, 2021	September 1, 2021
Relocate Phase 2 of Sewer Services	July 1, 2021	October 1, 2021
Vacate G2, G3 (South) Parcels + adjacent streets of 1 ½ Street and Potomac Avenue	September 1, 2021	December 1, 2021
Certify Cost of Sewer Services	January 1, 2022	April 1, 2022
Complete Construction of Security Fence at Main Pumping Station and Certify Cost	January 1, 2022	June 1, 2022



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

Main & O Campus Update

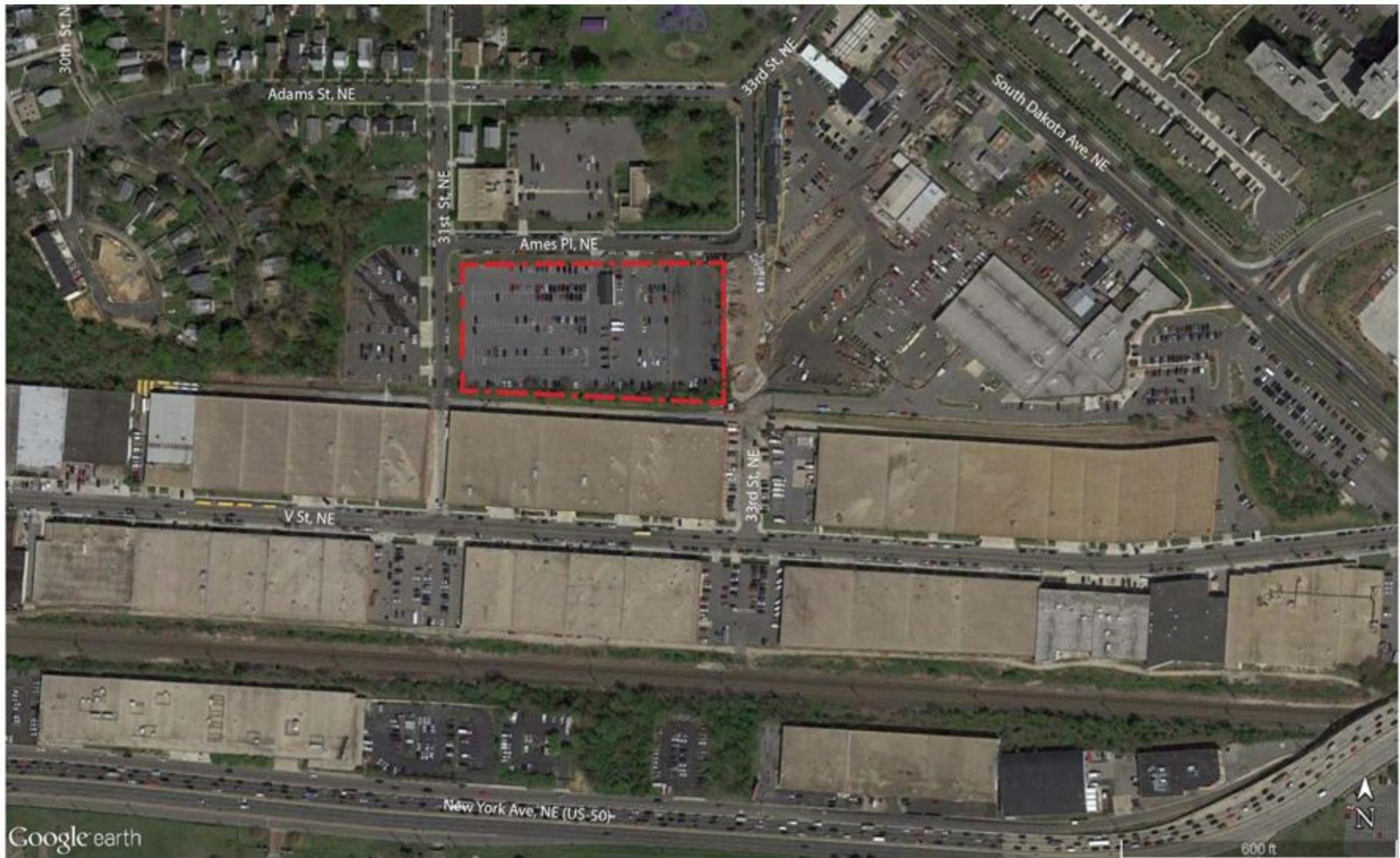
SEWER SERVICES RELOCATION

Sewer Services Relocation Project

Two Phase Development

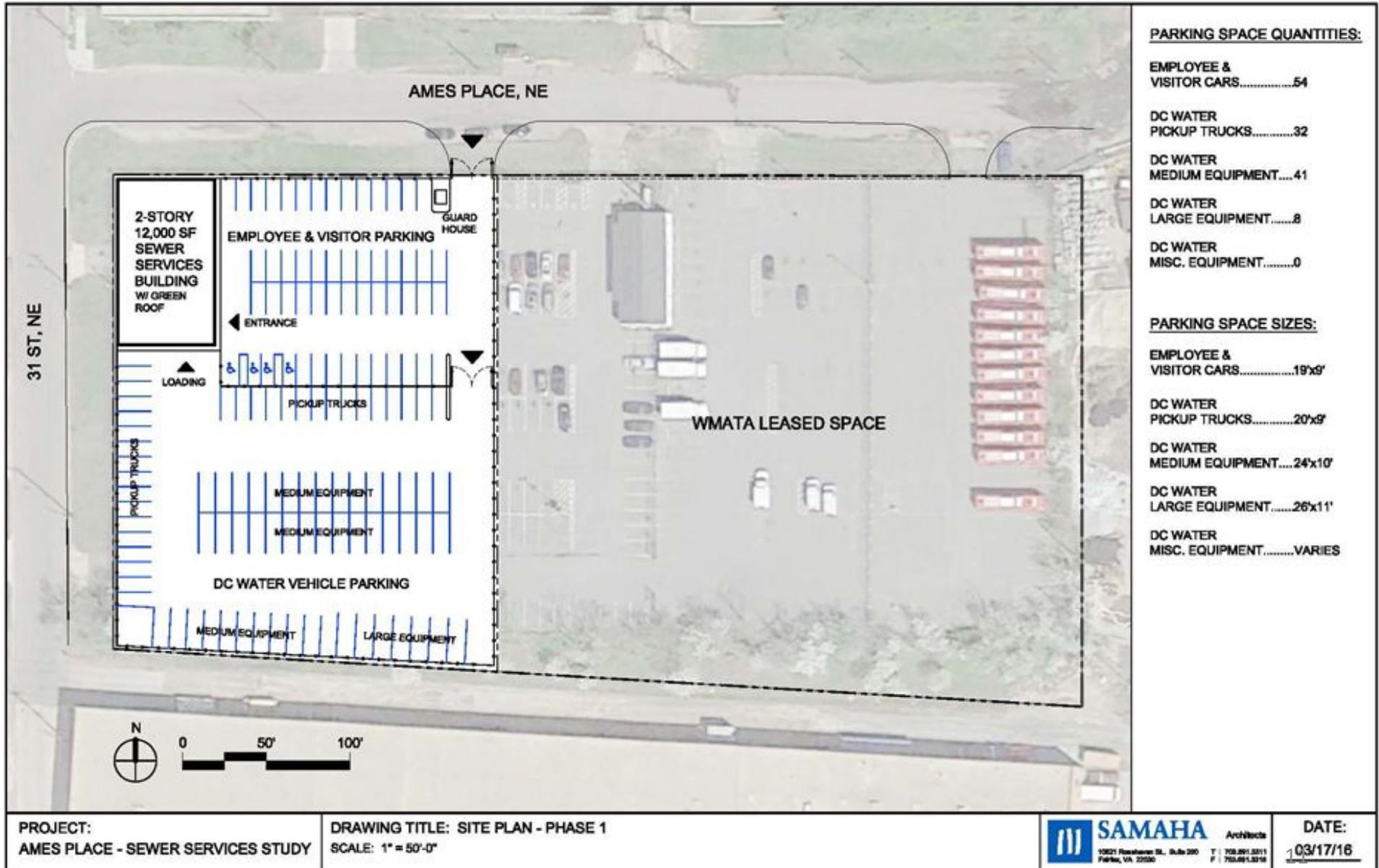
Phase I – One-Third of Site Design Phase to start immediately after Board Approval of Design Agreement

Phase II – Remaining two Thirds of Site – construction to begin once WMATA vacates property, estimated 3 years from date of acquisition by District





SEWER SERVICES RELOCATION



PROJECT:
AMES PLACE - SEWER SERVICES STUDY

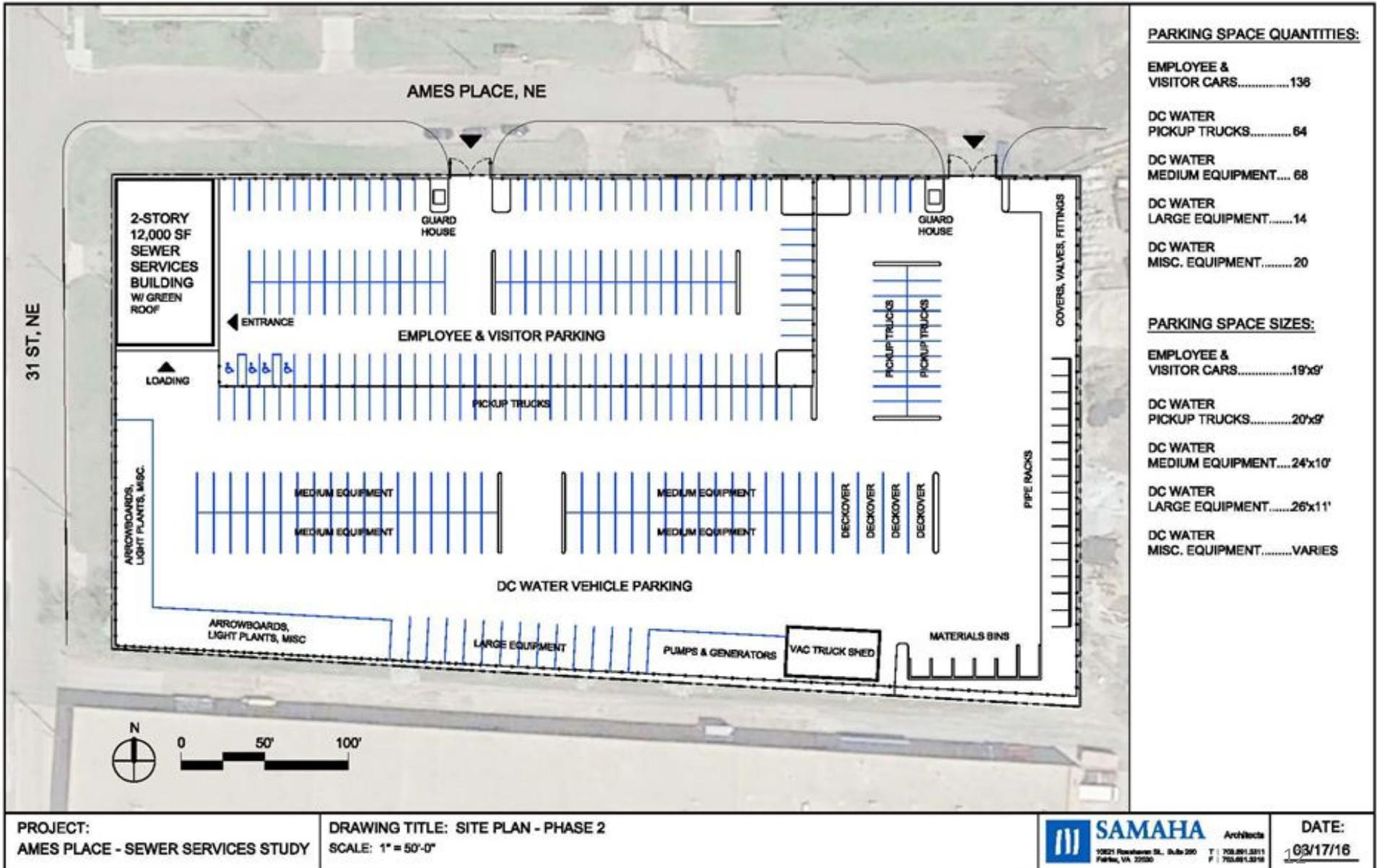
DRAWING TITLE: SITE PLAN - PHASE 1
SCALE: 1" = 50'-0"



DATE:
03/17/16



SEWER SERVICES RELOCATION



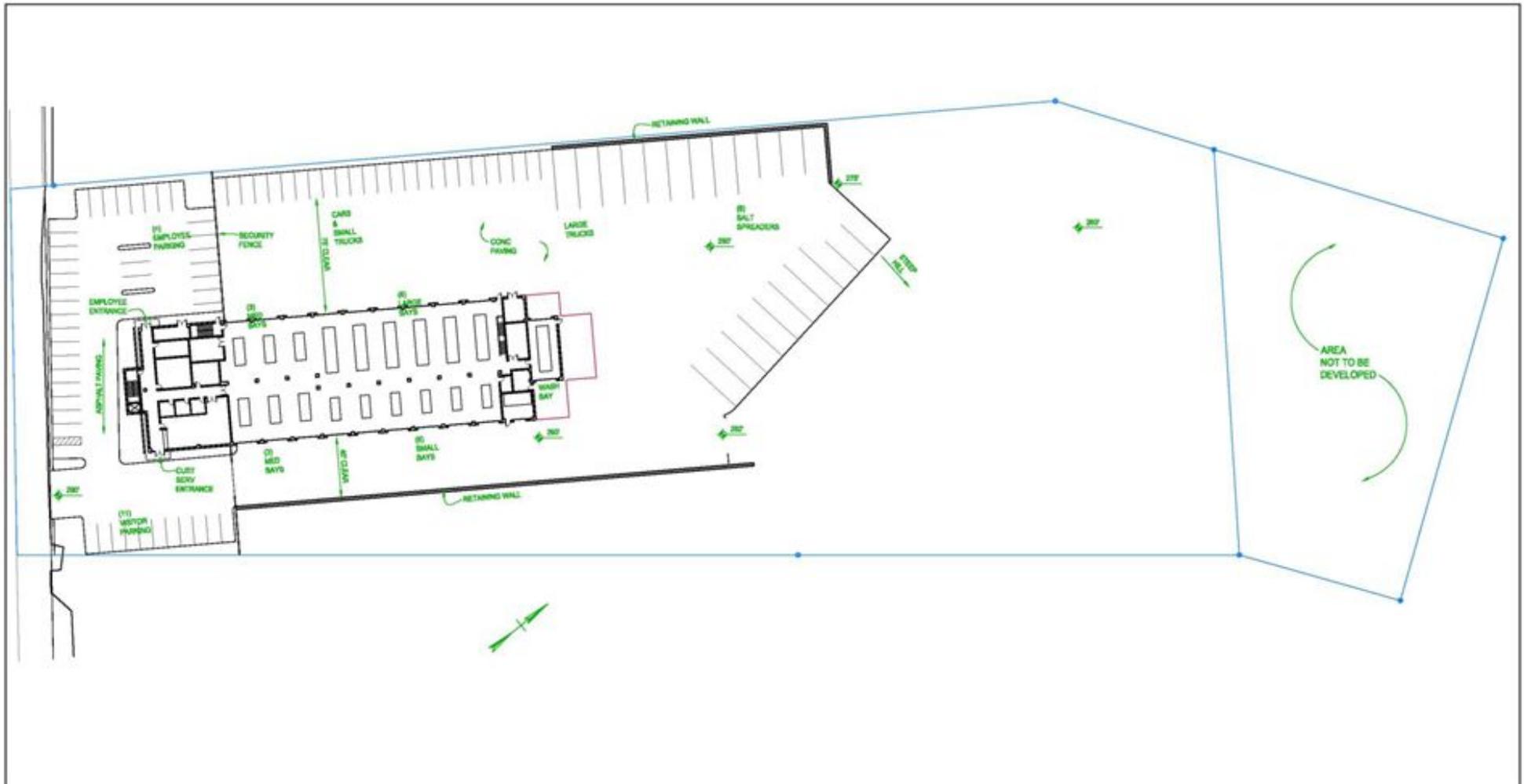


District of Columbia Water and Sewer Authority
George S. Hawkins, General Manager

Main & O Campus Update

FLEET RELOCATION





<p>DRAWING TITLE: SITE PLAN - PHASE I</p> <p>SCALE: 1" = 60'-0"</p>		 <p>10521 Rosehaven Dr., Suite 200 Fairfax, VA 22030 T 703.891.3011 F 703.891.3098</p>	<p>SP-1</p>
<p>PROJECT: Fleet Building</p>			<p>DATE: 2/9/2015</p> <p>15</p>



DRAWING TITLE: **SITE PLAN - PHASE I**

SCALE: 1/32" = 1'-0"

PROJECT:
Fleet Building



A-1

DATE:
9/14/2015

16







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

Main & O Campus Update

FLOATABLE DEBRIS OPERATIONS



FLOATABLE DEBRIS OPERATIONS

Existing CIP Project (NZ) to improve the Docks/Boat Slips, relocating Floatable Debris Operations (offices/storage) to be done in conjunction

Immediately after Board approval of Design Contract:

- Design Phase of Office/Storage space to start
- Engagement with Permitting Authorities, including Corps



FLOATABLE DEBRIS OPERATIONS

