OC water is life

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, September 21, 2017 9:30 a.m.

	I.	Call to Order	Howard Gibbs Vice Chairperson
9:30 a.m.	П.	AWTP Status Updates	
		1. BPAWTP Performance	Akille Teslaye
9:40 a.m.	III.	CIP Quarterly Update	Paul Guttridge
9:50 a.m.	IV.	Combined Heat and Power (CHP) Update	Aklile Tesfaye
10:15 a.m.	۷.	Action Items	John Bosley/Len Benson
	J	oint Use	
		 15-PR-DWT-21 - Supply and Delivery of So Corp. 	dium Hypochlorite, Kuehne

- 17-PR-DIT-24 IT Software App Dev Services (6 Firms) Critigen, LLC, EBA Engineering, Inc., Johnson, Mirmiran & Thompson, Inc. dba JMT Technology Group, Stellar Services, Inc., VTech Solutions, Inc., Wipro Limited
- **3.** 15-PR-DWT-02 Industrial Cleaning Service, Charmay, Inc. dba ServiceMaster of Alexandria
- 4. WAS-13-042-AA-RA Knoll Furniture and Furnishings, MOI, Inc.
- 5. WAS-12-033-AA-RE Fleet Management Services, Centerra
- 6. WAS-12-035-AA-RE Parts Supply for Fleet Management Services, Centerra
- 7. 14-PR-DIT-04 IT Professional Services, Mega Tech
- **8.** 16-PR-WWT-81 Monitoring of Biosolids Disposal Site, Maryland Environmental Services
- WAS-10-023-AA-RE Security Systems Integration and Management Services, Enterprise Security Solutions
- 10. 16-PR-PRO-45 Work Uniforms and Accessories, Cintas Corporation
- **11.** GS11T08BJD6001 Telecommunication Services, Verizon
- **12.** Contract No. 140230 Miscellaneous Facilities Upgrade Phase 4, Ulliman Schutte Construction, LLC

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13. DCFA #450-WSA – Tunnel Dewatering Station and Enhanced Clarification Facility – CM, Arcadis District of Columbia, PC

	N	on Joint Use	
		 Contract No. 150180 – Small Diameter Water Ma Sagres Construction Corp. 	in Replacement 12b,
10:35 a.m.	VI.	Hauled Waste Fee Structure/Industrial High Stren Discharge Regulations	gth Rates & Dental Elaine Wilson
10:50 a.m.	VII.	Other Business/Emerging Issues	
10:55 a.m.	VIII.	Executive Session*	
11:00 a.m.	IX.	Adjournment	Howard Gibbs Vice 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)(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:

 Chief Procurement Officer, DC Water: Share internal audit findings and results regarding DC Water's compliance with EPA's Fair Share Objective for Minority/Women Small Business Enterprises (MBE/WBE) utilization goals with the Committee. [Shared by email to BOD Secretary, September 7, 2017]

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BLUE PLAINS ADVANCED WASTEWATER TREATMENT PLANT PERFORMANCE REPORT – AUGUST 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 288 MGD. There was 22 MG of Excess Flow during this reporting period. The following Figures compare the plant performance with the corresponding NPDES permit limits.

Plant Influent Flow (mgd)



Influent Flow — Average Design Capacity

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



TSS (mg/l)

measure of the amount of solid material that remains suspended after treatment. The effluent TSS concentration for the month averaged 0.58 mg/L, which is below the 7.0 mg/L permit limit.







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

Total Phosphorus Annual Average (mg/l)



CBOD (mg/l)

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

Daily and Instantaneous Min DO 11.00 10.00 9.00 0.000000 8.00 7.00 6.00 5.00 4.00 3.00 8/13,201> + 8,21,301>+ 8/5/201> -&17,2012+ 8,35,201>+ 8292077-+ 8/1/201>+ 8/9/201> -MIN Daily Average Instant MIN DO

MIN Daily Average 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 8.5 mg/L. The minimum instantaneous DO reading is 7.3 mg/L. The minimum permit limits are 5.0 mg/L and 4.0 mg/L respectively.

-

Instant MIN Limit

Min and Max Instantaneous pH



MAX pH I 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 7.0 standard units, respectively. The pH was within the permit limits of 6.0 and 8.5 for minimum and maximum 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 1.4 /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 August 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 August 2017. During the month, the TN average concentration and total load in the effluent were 2.96 mg/L and 263,400 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 August 2017, the average energy consumed at Blue Plains was 634 megawatt hours per day (MWH/day) or 2.2 MWH of electricity per million gallon of wastewater processed through treatment. The Combined Heat and Power (CHP) facility generated an average of 84 MWH/day, making up for 13% of total energy consumed at Blue Plains. The remaining 55 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. The graph below shows the monthly value of the net electricity produced by CHP.



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Combined Heat and Power (CHP) Performance

In August the capacity of the CHP waste heat boilers or Heat Recovery Steam Genrators (HRSG) to supply adequate high pressure steam was limited. This was both as a result of the damage to the duct burners in the HRSGs as well as reduced heating capacity of the HRSGs due to scaling on their interior walls. As a result, significant amounts of digester gas, typically used to operate the Combustion Turbines (CT), was diverted to continuously operate an auxiliary boiler and supply adequate steam required to process solids through thermal hydrolysis and digestion. In addition, the air permit stipulates that only one pair of CT/HRSG can remain in operation when the auxiliary boiler is in use. DC Water has requested a change in this provision of the permit. Accompanying this request, DOEE was provided calculations documenting lower emmisions if multiple CT/HRSG units are in use, with reduced gas flow through the auxiliary boiler. The request is presently under consideration. As a result, CHP generated a net average of 84 MWH of electricity per day or 13% of the energy use at Blue Plains.

Pepco Energy Services, the contract operator of CHP facility, is finalizing a repair contract with the original equipment manufacturer (OEM) of the HRSGs and duct burners to restore full steam generating capacity and cease continuous operation of the auxiliary boilers. IN addition, PES continues to add chemical to remove scaling from the interior walls of an online HRSG. Based on current schedule provided by PES, the HRSG and duct burner manufacturers (two separate manufacturers) will have repair technicians on site during the last week of September to effect repairs to one HRSG, including its duct burner. These repairs will then be tested for few months before they are applied on the other units.

RESOURCE RECOVERY

In August, biosolids hauling averaged 449 wet tons per day (wtpd). The average percent solids for the Class A material was 32.9%. 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 August 2017. In August, diesel prices averaged \$2.75/gallon, and with the contractual fuel surcharge, the weighted average biosolids reuse cost (taking into account the marketed material) was \$41.34 per wet ton.



The average quanities of Class A biosolids transported and applied on farms by the two major contracts (WSSC's Recyc and DC Water's Nutriblend) and the quantites marketed as Bloom are shown on the graph bleow. In August, 2,051 wet tons of Bloom were distributed to 10 different customers.



Product Quality

All biosolids produced during the month of July 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 as of September 1st totaled 6,689 tons for the calendar year. This represents 74% of the goal, 67% of the way through the 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. Activities during July included continued work by our research team in the carbon removal/redirection, nitrogen removal, and solids treatment focus areas. In addition, members of the R&D team were involved with the activities below.

IWA SludgeTech 2017 – London, United Kingdom – July 9 through 13, 2017

The SludgeTech conference is an International Water Association (IWA) specialty conference on sludge management. Through this conference, IWA aims to bridge the gap between academia and industry. They bring together leading experts to share knowledge and insight into the challenges and opportunities surrounding sewage sludge. The latest research and innovation from across the world is showcased in discussions that link fundamentals to practical application. The research at DCW was strongly represented in this conference with two oral presentations associated with our work in thermal hydrolysis and anaerobic digestion as follows:

- Impact Of Recuperative Thickening On Anaerobic Digestion Of Thermally Hydrolyzed Sludge – Presenter: Adrian Romero-Flores, George Washington University
- The Role Of Viscosity In Mesophilic Anaerobic Digestion Presenter: Elizabeth Manning, The George Washington University

The conference covered a number of topics that are relevant to Blue Plains operation and DC Water's solids research including design and optimum anaerobic digestion conditions; effect of sludge characteristics on sludge dewatering performance; effect of different dewatering technologies or equipment on dewatering performance; anaerobic digestion and pre-treatment; optimization of anaerobic digestion; resource recovery; digester sludge rheology; impact of sludge liquors on mainstream wastewater treatment; and co-digestion.

Advancing Research and Technology (ART)

As part of the ART program, DC Water was hired by HKF Technology to evaluate a novel technology for nitrogen and phosphorous removal from wastewater streams using zero valent iron (ZVI). Two initiation meetings were held to develop a testing plan to meet the goals of HKF. The bio-ZVI evaluation study includes conducting 6 months pilot testing and providing assistance to develop design criteria for design and implementation at full scale.

Blue Plains Main Laboratory

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

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

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

This month the laboratory staff also attended the Chesapeake Tri- Association Conference in Ocean City, Maryland.

Blue Plains Pretreatment Program

The Blue Plains Pretreatment Program manages the Industrial Pretreatment Program, including temporary dewatering dischargers from construction and other activities, as well as the Hauled Waste Program. Additional responsibilities include providing specialized sampling and program management support for the Blue Plains NPDES permit and facilitating the quarterly Blue Plains Storm Water Committee meetings and other SWPPP compliance activities. Staff is also currently working on updating regulations to incorporate EPA's new Dental Amalgam Rule, as well as a new proposed hauled waste fee structure (volume-based instead of annual flat fee), and fees for industrial high strength waste.

Industrial Pretreatment Program

DC Water currently manages twelve (12) Significant Industrial User (SIU) permits and eighteen (18) Non-Significant Industrial User (NSIU) wastewater discharge permits. An inspection and compliance monitoring was conducted at one SIU this month: Bureau of Engraving and Printing. Compliance monitoring was also conducted at WMATA Shepherd Parkway Bus Division this month to complete grab sampling requirements. DC Water received monthly self-compliance monitoring reports for six (6) SIUs and one

NSIU. All SIUs and NSIUs are in compliance with discharge standards for the current month.

DC Water currently manages 90 Temporary Discharge Authorization (TDA) permits, primarily for construction site discharges of groundwater and/or surface runoff in the combined sewer area. Four 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 31 permitted haulers authorized to discharge domestic septage, portable toilet waste, grease trap waste, groundwater or surface runoff, and other types of waste, if approved in advance and have been characterized and meet pretreatment standards. Staff renewed three hauled waste permits this month.

DC Water received 880 hauled waste loads (2,131,133 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 dry weather 24-hour composite sample and two wet weather 24-hour composite samples for low level PCB analysis at outfall 002 and two grab samples for low level PCB analysis at outfall 001. Staff also collected the bimonthly metals, including low level mercury, for outfall 002.

District of Columbia Water and Sewer Authority

Capital Improvement Program Report



FY-2017 3rd Quarter April 1st through June 30th, 2017

Board of Directors Environmental Quality and Operations Committee

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

> > September 2017



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 \$486,947,000 through the end of September 2017, which is \$45.8M (10%) above the baseline disbursement projection of \$441,154,000.

Current disbursement projections within the service areas are as follows:

Non Process Facilities

Baseline Disbursements\$34,150,000Projected Disbursements\$27,856,000 (\$6.3M below baseline projection)Significant project variances are listed below:

- Facility Land Use (\$5.9M below)
 - The disbursements for project DS New HQ Building are projected to be slightly lower than anticipated due to initial permitting issues for the piers in January causing delay in

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completing the auger piles, pile caps and thus delaying the start of steel framing. Project Completion is still expected to be on time and within budget.

Wastewater Treatment Service Area

Baseline Disbursements\$123,789,000Projected Disbursements\$139,930,000 (\$16.0M above baseline projection)Significant project variances are listed below:

- Solids Processing Projects (\$9.0M above baseline)
 - The disbursements for project XA New Digestion Facilities are projected to be \$7.7M above the baseline largely due to the execution of Change Orders and retention releases for Combined Heat and Power and Final Dewatering Facility.
- Nitrogen Removal Facilities (\$7.0M above baseline)
 - The projected disbursements for project E8 Enhanced Clarification Facilities are \$9.2M 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 \$6.0M 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\$184,387,000Projected Disbursements\$228,723,000 (\$44.3M above baseline projection)Significant project variances are listed below:

- *DC Clean Rivers (\$43.2M above baseline)*
 - The projected disbursements for project CY Anacostia Long Term Control Plan are \$44.8M 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 when all Anacostia controls south of RFK stadium will be placed in operation. 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\$1,706,000Projected Disbursements\$1,435,000 (\$0.3M below baseline projection)There are no significant project variances for this service area.



Sanitary Sewer Service Area

Baseline Disbursements\$38,302,000Projected Disbursements\$33,933,000 (\$4.4M 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 \$4.4M below baseline disbursements for the Service Area.

Water Service Area

Baseline Disbursements\$58,819,000Projected Disbursements\$55,069,000 (\$3.8M below baseline projection)There are no significant project variances for this service area this period.



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

All priority 1 projects are on schedule and within budget.

Significant Contract Actions Anticipated - 6 Month Look-Ahead

Project	Name	Contract Type	Joint Use?	Cost Range	Committee	BOD
DE	Small Diameter	Construction	No	\$1M - \$5M	EQ&Ops Sep	Oct
	Watermain Rehab 12b					
F1	Small Diameter	Construction	No	\$5M - \$10M	EQ&Ops Jan	Feb
	Watermain Rehab 13a					
F1	Small Diameter	Construction	No	\$5M - \$10M	EQ&Ops Oct	Nov
	Watermain Rehab 13d					



Schedule - Key Performance Indicators, Capital Improvement Program



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FY2017 -	· KPI	Report
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DS	Design St	art	Planned			On time		
CS	Construc	Construction Start		1 Quarter Late				
CSC	Construc	tion Substantial Completion			> 1 Qu	arter Late		
CO/PC	Consent	Oder/Permit Compliance						1
					QUA	RTER		
Qtr.	Project	Job Name	KPI Name	1	2	3	4	To Date
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	0302	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



FY2017 - KPI Report								
DS	Design St	art	Planned			On time		
CS	Construct	tion Start	Early		1 Qu	arter Late		
CSC	Construct	tion Substantial Completion			> 1 Qu	arter Late		
CO/PC	Consent	Oder/Permit Compliance		r	-			1
					QUA	RTER		
Qtr.	Project	Job Name	KPI Name	1	2	3	4	To Date
2	GA01	Small Local Sewer Rehab 4	CSC					Greater than 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



FY201	.7 - KPI R	eport						
DS	Design Start					On time		
CS	Construct	tion Start	Early		1 Qu	arter Late		
CSC	Construct	tion Substantial Completion			> 1 Qu	arter Late		I
CO/PC	Consent	Oder/Permit Compliance			-			
					QUA	RTER		
Qtr.	Project	Job Name	KPI Name	1	2	3	4	To Date
3	BI01	Enhanced Nitrogen Removal (ENR) North	CSC					1 Qtr Late
3	G601	Sanitary Sewer Rehab and Repair Phase 2 (SUB)	CSC					Early
3	0301	Small Dia Watermain Repl 11a	CSC					On time
3	Q302	Pope Branch Stream Restoration and Sewer Replacement	CSC					Early
3	1802	Large Valve Replacements 12	CSC					Early
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					1 Qtr Late



FY2017 - KPI Report								
DS	Design Start Planned					On time		
CS	Construct	tion Start	Early		1 Qu	arter Late		
CSC	Construct	tion Substantial Completion			> 1 Qu	arter Late		
CO/PC	Consent	Oder/Permit Compliance				-		
					QUA	RTER		
Qtr.	Project	Job Name	KPI Name	1	2	3	4	To Date
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

Combined Heat and Power (CHP) EQ & Operations Committee Update

Agenda

- Systems Overview
- Service Contract Overview
- Performance Guarantees



dcó Systems Overview - Objective

- Anaerobic Digestion (AD) produces digester gas; CHP produces electricity and steam from digester gas
- Objective: Primary objective is to meet steam needs for Thermal Hydrolysis Process (THP); Secondary objective is to maximize power production
- The continuous supply of high pressure steam is critical to sustain production of Class A biosolids, and therefore takes precedence in the operation of the CHP facility

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Operating Scenario Example - Electric Production is

Maximized (*Note -THP: Thermal Hydrolysis Process; AD: Anaerobic Digester; CT: Combustion Turbine; HRSG: Heat Recovery Steam Generator)

3



Operating Scenario Example - Electric Production is not Maximized

(*Note - THP: Thermal Hydrolysis Process; AD: Anaerobic Digester; CT: Combustion Turbine; HRSG:

Heat Recovery Steam Generator; AB: Auxiliary Boiler)

dcd Service Contract - Overview

- Contract Type: Design Build Operate (DBO) <u>performance-based</u>; relieved only for Uncontrollable Circumstances
- ✓ **Vendor:** Pepco Energy Services (PES)
- Objective: Operate, maintain, and manage the CHP Facility in accordance with <u>Contract Standards and Performance</u> <u>Guarantees</u>
- Design Capacity: Process up to 320,000 ft³/hr. of digester gas, deliver up to 47,500 lbs./hr. of steam, produce up to 11.5 MW <u>+</u> net of electricity

✓ **Contract Duration:** 15 years with one 5-year extension

dco Service Contact - General Standards

- PES: Produce steam and electricity on a 24-hour per day, 7-day per week basis, in accordance with all Standards and Performance Guarantees;
- ✓ PES: Provide full time staff licensed, trained, experienced;
- PES: Perform all required maintenance, including capital maintenance
- PES: Comply with air permit requirements and all other applicable law
- PES: Comply with PEPCO's Inter-connection agreement standards covering parallel operation of DC Water owned power generation (power produced on site to be utilized with no "backflow" into the Pepco system)

dco Service Contact - General Standards

- DCWATER: Assign a COTR*; establish and communicate daily operations objectives; review O&M, equipment repair, and replacement records; enforce contract standards & guarantees; provide for the availability of utilities
- ✓ DCWATER: Set and pay annual O&M fee
 - Annual O&M fee is based on reasonable estimate of the average annual MMBTU*/hour of digester gas expected to be provided to CHP

(*Note - COTR: Contracting Officer Technical Representative; MMBTU: Million BTU)

Service Contract Performance Guarantees

- ✓ Major Performance Guarantees:
 - ✓ Digester Gas Flow & Pressure Guarantee
 - ✓ Steam Production and Quality Guarantee
 - ✓ Digester Gas Electrical Production Guarantee
 - ✓ Air Emissions Guarantee
- ✓ Non-compliance

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 Remedies: include cost reimbursements and liquidated damages

dc

Service Contract Performance Guarantee/Example

- Minimum monthly electrical output established using a Heat Balance Software Program
- Electrical output accounts for ambient temperature, quantity/quality of digester gas delivered to CHP, and THP steam demand
- Example: At 60°F, 100 MMBTU/hr digester gas delivered to CHP, and THP steam demand at less than 31,000 lbs/hr minimum - output is 6,200 MWH
- Guaranteed Annual Electrical Power Production is the sum of each minimum monthly output

dc

Service Contract – Performance Guarantee/Example

- The Software program compares the Guaranteed
 Power Production to the Actual Power Production
- PES has make-up rights for a monthly shortfall, but obligated to fix problem and resume compliance
- Failure to comply on annual basis: PES shall reimburse DCWATER excess cost, fix the problem, and resume compliance.
- Example: Excess cost = (KWH Guaranteed Annual Electrical Production – KWH Actual Annual electrical Production) x average cost of electricity per KWH actually paid by DCWATER

Risks & Mitigation Measures

✓ Steam Production Loss - Risks

- Consequence: Interruption in Class A biosolids production and increased O&M cost
- ✓ Mitigation:

dc

- Design capacity allows one/two units (out of three) to meet peak steam requirements
- Stand-by availability of Auxiliary Boiler when necessary
- ✓ PES has a contingency plan to provide temporary equipment with capacity to deliver required quantity and quality of steam
- ✓ Continue to improve reliability of critical assets 11

dcd Risks & Mitigation Measures

Electric Production Loss - Risks

✓ Consequence: Increased O&M cost

✓ Mitigation:

✓ Continue to improve reliability of critical assets
ACTION REQUESTED

GOODS AND SERVICES CONTRACT OPTION YEAR

Supply and Delivery of Sodium Hypochlorite

(Joint Use)

Approval to exercise option year 2 for the sodium hypochlorite supply and delivery contract in the amount of \$3,300,000.00.

CONTRACTOR/SOB/VENDOR INFORMATION			
PRIME: Kuehne Chemical Co. Inc. 86 N. Hackensack Ave. S. Kearny, NJ 07032	SUBS: N/A	PARTICIPATION: N/A	
	DESCRIPTION AND PURPOSE		
Original Contract Value:	\$3,696,900.00		
Original Contract Dates:	10-16-2015 - 10-15-2016		
No. of Option Years in Contract:	4		
Option Year 1 Value:	\$3,804,300.00		
Option Year 1 Dates:	10-16-2016 — 10-15-2017		
Option Year 2 Value:	\$3,300,000.00		
Option Year 2 Dates:	10-16-2017 - 10-15-2018		

Purpose of the Contract:

To purchase and have delivered sodium hypochlorite.

Contract Scope:

DC Water has an on-going need for sodium hypochlorite. It has several applications at the Blue Plains Advanced Wastewater Treatment Facility. It is primarily used for outfall disinfection, but also to control biological growth control on multimedia filters, and for odor control in the scrubbers. Sodium hypochlorite is also used to disinfect water managed by the Department of Distribution and Conveyance Systems. Exercising option year 2 will provide uninterrupted service by the supplier.

The use of sodium hypochlorite solution in DC Water's wastewater treatment processes is required to ensure we continuously comply with the National Pollution Discharge Elimination System (NPDES) permit requirements as well as the Clean Water Act (CWA).

Spending Previous Year:

Cumulative Contract Value:	10-16-2015 to 10-15-2017: \$7,501,200.00
Cumulative Contract Spending:	10-16-2015 to 08-23-2017: \$6,200,365.00

Contractor's Past Performance:

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

No LSB/LSBE participation

Contract Type:	Fixed Price	Award Based On:	Lowest Bid
Commodity:	Services	Contract Number:	15-PR-DWT-21
Contractor Market:	Open Market with Preference Points for LBE and LSBE Participation		

BUDGET INFORMATION

Funding:	Operating	Department:	Wastewater Treatment	
Project Area:	Blue Plains AWTP	Department Head:	Salil Kharkar	_

ESTIMATED USER SHARE INFORMATION

User - Operating	Share %	Dollar Amount
District of Columbia	41.92%	\$1,383,360.00
Washington Suburban Sanitary Commission	43.33%	\$1,429,890.00
Fairfax County	9.81%	\$323,730.00
Loudoun Water	4.29%	\$141,570.00
Other (PI)	0.65%	\$21,450.00
TOTAL ESTIMATED DOLLAR AMOUNT	100.00%	\$3,300,000,00

9/11/17 Aklile Tesfaye Date

Assistant General Manager, **Blue Plains**

Dan Bae Director of Procurement

9/13/17 Date

9/15/17 Gun en Date

Matthew T. Brown **Chief Financial Officer**

George S. Hawkins General Manager

Date

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38

ACTION REQUESTED

GOODS AND SERVICES CONTRACT AWARD IT SOFTWARE APPLICATION DEVELOPMENT SERVICES

(Joint Use)

Approval of \$3,000,000.00 budget for various IT software application development service projects with six (6) selected firms during FY2017 through FY 2020.

CONTRACTOR/SUB/VENDOR INFORMATION

DDIAG	1	
Criticon LLC	SUBS:	PARTICIPATION:
Chugen, LLC	N/A	N/A
7604 Technology Way, Suite 300		
Denver, CO 80237		÷
EBA Engineering, Inc. 6100 Chevy Chase Drive, Suite 200 Laurel, MD 20707-2917	N/A	N/A
Johnson, Mirmiran & Thompson, Inc. dba JMT Technology Group 601 New Jersey Avenue, NW, Suite 210 Washington, DC 20001	N/A	N/A
Stellar Services, Inc. 70 West 36 th Street, Suite 702 New York, NY 10018	N/A	N/A
vTech Solution, Inc.* 1100 H Street, NW, Suite 450 Washington, DC 20005	N/A	100%
Wipro Limited 2 Tower Center Boulevard, Suite 2200 East Brunswick, NJ 08816	N/A	N/A

*LBE/LSBE

DESCRIPTION AND PURPOSE

Base Period Contract Value:	\$3,000,000.00
Base Contract Period:	3 Years
No. of Option Years:	0
Anticipated Contract Start Date:	11-01-2017
Anticipated Base Period Completion Date:	10-31-2020
Proposal Closing Date:	05-23-2017
Proposals Received:	18
Proposal Price Range:	\$760,707.00 - \$2,079,300.00

Firm receiving 10 Preference Points:

vTech Solution, Inc.

Purpose of the Contract:

The six firms, Critigen, EBA, JMT, Stellar, vTech and Wipro were selected based upon the overall ratings to provide Software Application Services for various projects during the contract period. The RFP contained 18 disciplines upon which each firm was evaluated. An Indefinite Delivery Indefinite Quantity Contract will be executed with each of the selected firms. There is no guaranteed spend with any of the selected vendors and DC Water reserves the right to seek proposals on individual projects independently. Therefore, for each specific project, the Department of Information Technology will select a firm(s) based on the capability, cost and availability and execute a task order to define the scope of work and total service fee. The 18 areas evaluated were as follows:

Maximo	HTML 5	
GIS	Extensible Markup Language (XML)	
Open Text	Biztalk	
Oracle	Web-services in a Service Oriented-Architect (SOA)	
Primavera	SQL experience 2008 or later	
Primavera Contract Management	Operating in a VM environment (VMware)	
IBM – Maximo Anywhere	Remote access technology (Netmotion etc.)	
Microsoft – Silverlight and .Net	Microsoft SharePoint 2010 and 2013 (both on premise and on Office 365)	
Java and Javascript	SAP Business Objects	

Contract Scope:

The Department of Information Technology has an on-going need for software application development services.

Evaluated Companies and Any Preference Points:

Aquintas Solutions (Ampcus Inc.)*	Total Resource Management (TRM)
Chantilly, VA 20151	Alexandria, Virginia 22314
Blue Raster LLC*	JMT Technology Group
Arlington, VA 22201	Washington, DC 20001
Critigen, LLC	Pro-West & Associates
Denver, CO 80237	Walker, MN 56484
EBA Engineering, Inc.	Segue Technologies, Inc.
Laurel, MD 20707-2917	Arlington, VA 22201-5426
Elegant Enterprise-Wide Solutions, Inc.*	Strategic Maintenance Solutions, Inc. (SMS)
Chantilly, Virginia 20152	Gorham, ME 04038
EMA Services, PC	Socrata
St. Paul, MN 55113	Seattle, WA 98104
GeoDecisons	vTech Solution, Inc.*
Camp Hill, PA 17011	Washington DC 20005
Stellar Services, Inc.	WebMap Solutions
New York, NY 10018	Salt Lake City, UT 84121
Taoti Enterprises, Inc. (aka Taoti Creative)	Wipro LLC
Washington, DC 20003	East Brunswick, NJ 08816

*Firms received preference points based upon their LBE/LSBE status. Firms are listed alphabetically as each discipline was individually scored and only proposed on disciplines for which they were capable.

PROCUREMENT INFORMATION

Contract Type:	Fixed Hourly Rate	Award Based On:	Highest Ratings	
Commodity:	Professional Services	Contract Number:	17-PR-DIT-24	-
Contractor Market:	Open Market with Preference Points for LBE and LSBE Participation			

BUDGET INFORMATION

Funding:	Capital Equipment	Department:	Department of Information Technology
Service Area:	DC Water Wide	Department Head:	Thomas Kuczynski
Project:	EQP2115		

ESTIMATED USER SHARE INFORMATION

User	Share %	Dollar Amount
District of Columbia	68.91%	\$2,067,300,00
Washington Suburban Sanitary Commission	24.14%	\$724,200.00
Fairfax County	4.51%	\$135,300.00
Loudoun Water	2.01%	\$60,300.00
Other (PI)	0.43%	\$12,900.00
TOTAL ESTIMATED DOLLAR AMOUNT	100.00%	\$3,000,000.00

Date

Thomas Kuczynski Chief Information Officer

2pDan Bae Date **Director of Procurement**

11511 Date

George S. Hawkins General Manager

Matthew T. Brown

Chief Financial Officer

Date

41

ACTION REQUESTED

GOODS AND SERVICES CONTRACT OPTION YEAR

Industrial Cleaning Service

(Joint Use)

Approval to execute option year 2 for Industrial Cleaning Service contract in the amount of \$600,000.00.

CONTRACTOR/SUB/VENDOR INFORMATION

PRIME: Charmay, Inc. dba ServiceMaster of Alexandria 7551 Fordson Road Alexandria, VA 22306 LSBE	SUBS: N/A	PARTICIPATION: 100%		
DESCRIPTION AND PURPOSE				

Base Period Contract Value:	\$520,690.34	
Original Contract Dates:	10-19-2015 - 10-18-2016	
No. of Option Years in Contract:	4	
Modification Value:	\$74,349.04	
Modification Dates:	02-15-2016 - 10-18-2016	
Option Year 1 Value:	\$612,915.87	
Option Year 1 Dates:	10-19-2016 - 10-18-2017	
Option Year 2 Value:	\$600,000.00	
Option Year 2 Dates:	10-19-2017 - 10-18-2018	

Purpose of the Contract:

To provide a team of professional industrial cleaning crew to do thorough routine cleaning of our wastewater treatment field areas, which house our processing equipment and systems.

Contract Scope:

The areas of Industrial Cleaning Service are above and below ground. It covers many different areas of process stations, galleries, labeled piping systems, pumps and associated equipment, conveyance systems and stairwells throughout Blue Plains Wastewater Treatment. If these areas are not serviced, the performance of the process units at Blue Plains will be impacted significantly and results in equipment damage and disruption of the wastewater treatment process.

Spending Previous Year:

Cumulative Contract Value:	10-19-2015 to 10-18-2017: \$1,207,955.25
Cumulative Contract Spending:	10-19-2015 to 08-07-2017: \$993.045.00

Contractor's Past Performance:

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

Contract Type:	Fixed Price	Award Based On:	Highest-Ranking Score
Commodity:	Services	Contract Number:	15-PR-DWT-02
Contractor Market:	Open Market with Preference Points for LBE and LSBE Participation		

BUDGET INFORMATION			
Funding:	Operating	Department:	Wastewater Treatment
Project Area:	Blue Plains AWTP	Department Head:	Salil Kharkar

ESTIMATED USER SHARE INFORMATION

User - Operating	Share %	Dollar Amount
District of Columbia	41.92%	\$251,520.00
Washington Suburban Sanitary Commission	43.33%	\$259,980.00
Fairfax County	9.81%	\$58,860.00
Loudoun Water	4.29%	\$25,740.00
Potomac Interceptor	0.65%	\$3,900.00
TOTAL ESTIMATED DOLLAR AMOUNT	100.00%	\$600,000.00

<u>9[" | 1</u> Date Aklile Tesfaye

Assistant General Manager, **Blue Plains**

9/13/17 Dan Bae Date

Director of Procurement

ier 7/15/1 Date

Matthew T. Brown **Chief Financial Officer**

George S. Hawkins	
General Manager	

Date

2 of 2

ACTION REQUESTED

GOODS AND SERVICES INDEFINITE DELIVERY/INDEFINITE QUANTITY (IDIQ)

CONTRACT MODIFICATION

Knoll Furniture and Furnishings

(Joint Use)

Approval to add funding to option year four (4) of the contract in the amount of \$784,186.96.

CONTRACTOR/SUB/VENDOR INFORMATION

PRIME: MOI, Inc. 2923 Lord Baltimore Drive Baltimore, MD 21244	SUBS: N/A	PARTICIPATION:
	DESCRIPTION AND PURPOSE	
Original Contract Value:	\$0.00	
Original Contract Dates:	05-02-2013-05-01-2014	
No. of Option Years in Contract:	4	
Contract Modification Value:	\$1,507,487.90	
Contract Modification Dates:	05-02-2013—09-30-2017	
This Contract Modification Value:	\$784,186.96	
This Contract Modification Dates:	10-01-2017 - 05-01-2018	

Purpose of the Contract:

To contract for Knoll Furniture and Furnishings for various DC Water Departments on an indefinite delivery, indefinite quantity basis to satisfy future furniture requirements.

Contract Scope:

The contract provides furniture and furnishings needs identified by each department. Individual task orders are issued for each project. The rates are consistent with the rates provided to the General Services Administration (GSA). The General Manager approved a Determination and Findings that established the Knoll brand as the standard brand of furniture at DC Water.

Reason for Change:

This task provides new furniture for offices and cubicles for projects which includes: Bryant Street Pumping Station 2nd Floor Renovation, COF Mail Room Renovation, Headquarters Sample Furniture, Risk Management & Payroll Office Renovation and CMF Maintenance Office Renovation.

Spending Previous Year:

Cumulative Contract Value:	05-02-2013 to 09-30-2017: \$1,507,487.90
Cumulative Contract Spending:	05-02-2013 to 08-31-2017: \$1,302,066.96

Contractor's Past Performance:

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

Contract Type:	Indefinite Delivery Indefinite Quantity	Award Based On:	Rider Contract (GS-27F- 0029W)
Commodity:	Services	Contract Number:	WAS-13-042-AA-RA
Contractor Market:	General Services Administration (GSA)		

BUDGET INFORMATION

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

ESTIMATED USER SHARE INFORMATION

User - Operating	Share %	Dollar Amount
District of Columbia	83.65%	\$8,365.00
Washington Suburban Sanitary Commission	12.07%	\$1,207.00
Fairfax County	2.84%	\$284.00
Loudoun Water	1.25%	\$125.00
Other (PI)	0.19%	\$19.00
TOTAL ESTIMATED DOLLAR AMOUNT	100.00%	\$10,000.00

BUDGET INFORMATION

Funding:	Capital Equipment	Department:	Facilities	
Project Area:	DC Water Wide	Department Head:	Johnnie Walker	
Project:	EQP3410			-

User – Capital Equipment	Share %	Dollar Amount
District of Columbia	68.91%	\$533.492.23
Washington Suburban Sanitary Commission	24.14%	\$186,888,73
Fairfax County	4.51%	\$34,915.83
Loudoun Water	2.01%	\$15,561,16
Other (PI)	0.43%	\$3.329.01
TOTAL ESTIMATED DOLLAR AMOUNT	100.00%	\$774,186.96

 \sim Date

Rosalind R. Inge Assistant General Manager, Support Services

Dan Bae Date

Director of Procurement

tet ren Date

Matthew T. Brown Chief Financial Officer

George S. Hawkins CEO/General Manager

Date

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DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

BOARD OF DIRECTORS CONTRACTOR FACT SHEET

ACTION REQUESTED

GOODS AND SERVICES MODIFICATION/CONTRACT EXTENSION

FLEET MANAGEMENT SERVICES

(Joint-Use)

Approval to extend the existing contract for 12 months for fleet vehicle maintenance services contract in the amount of \$1,626,000.00.

CONTRACTOR/SOB/VENDOR INFORMATION				
PRIME: Centerra Integrated Services, LLC 4800 Overton Plaza Suite 380 Ft. Worth, TX 76109	SUBS: N/A	PARTICIPATION: N/A		
	DESCRIPTION AND PURPOSE			
Original Contract Value:	\$1,368,819.54			
Original Contract Dates:	11-01-2012—10-31-2013			
No. of Option Years in Contract:	4			
Option Year 1 Value:	\$1,625,000.00			
Option Year 1 Dates:	11-01-2013—10-31-2014			
Modification 1 Value:	\$0.00			
Modification 1 Dates:	11-01-2014-11-15-2014			
Option Year 2 Value:	\$1,948,285.75	~		
Option Year 2 Dates:	11-16-2014—11-15-2015			
Option Year 3 Value:	\$1,816,900.00			
Option Year 3 Dates:	11-16-2015—11-15-2016			
Option Year 4 Value:	\$1,816,900.00			
Option Year 4 Dates:	11-16-2016 —11-15-2017			
Contract Extension Value:	\$1,626,000.00			
Contract Extension Dates 11-16-2017 — 11-15-2018				
urnose of the Contract				

Purpose of the Contract:

This contract is to manage the preventive/predictive maintenance, repair, towing, emergency services and other fleet operations as required by the Department of Fleet Management.

Contract Scope:

The contract provides for all the necessary supervision, labor, shop supplies that are needed to satisfy a wide range of services required by DC Water. The contractor also manages the fleet in an optimal state-of-repair and maintains services that are consistent with the Original Equipment Manufacturer (OEM).

Reason for the Extension:

This extension is to allow sufficient time to conduct a feasibility study to bring this service in-house.

Spending Previous Year:

Cumulative Contract Value:	11-01-2012 to 11-15-2017: \$8,575,905.29
Cumulative Contract Spending:	11-01-2012 to 09-30-2017: \$7,122,126.75

Contractor's Past Performance:

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

No LBE/LSBE participation.

Contract Type:	Fixed Price	Award Based On:	Highest Ranked Offeror
Commodity:	Services	Contract Numbers:	WAS-12-033-AA-RE
Contractor Market:	Open Market with Preference Points for LBE and LSBE Participation		

BUDGET INFORMATION

Funding:	Operating	Department:	Fleet Management
Service Area:	125 O Street, NE WDC	Department Head:	Timothy Fitzgerald

ESTIMATED USER SHARE INFORMATION

User	Share %	Dollar Amount
District of Columbia	83.65%	\$1,360,149.00
Washington Suburban Sanitary Commission	12.07%	\$196,258.20
Fairfax County	2.84%	\$46,178.40
Loudoun Water	1.25%	\$20,325.00
Other (PI)	0.19%	\$3,089.40
FOTAL ESTIMATED DOLLAR AMOUNT	100.00%	\$1,626,000.00

<u>9/14/1</u>7 Rosalind R. Inge Date

Assistant General Manager Support Services

9/ 14 Date an Bae

Director of Procurement

1811 ur Matthew T. Brown Date

Chief Financial Officer

George S. Hawkins General Manager

ACTION REQUESTED

GOODS AND SERVICES MODIFICATION/CONTRACT EXTENSION

PARTS SUPPLY FOR FLEET MANAGEMENT SERVICES

(Joint-Use)

Approval to extend the existing contract for 6 months for Parts Supply for Fleet Management contract in the amount of \$450,000.00.

PRIME: Centerra Integrated Services, LLC 4800 Overton Plaza Suite 380 Ft. Worth, TX 76109	SUBS: N/A	PARTICIPATION: N/A		
	DESCRIPTION AND PURPOSE			
Original Contract Value: Original Contract Dates:	\$660,000.00 11-01-2012-10-31-2013			
No. of Option Years in Contract:	4			
Option Year 1 Value:	\$775,000.00			
Option Year 1 Dates:	11-01-2013—10-31-2014			
Option Year 2 Value:	\$752,500.00			
Option Year 2 Dates:	11-16-2014-11-15-2015			
Option Year 3 Value:	\$850,000.00			
Option Year 3 Dates:	11-16-2015—11-15-2016			
Option Year 4 Value:	\$850,000.00			
Option Year 4 Dates:	11-16-2016			
Modification Value:	\$1,322,154.00			
Modification Dates	06-01-2014 — 11-15-2015			
Contract Extension Value:	\$450,000.00			
Contract Extension Dates	11-16-2017 — 05-15-2018			

Purpose of the Contract:

This contract is to manage the automotive parts supply functions as required by the Department of Fleet Management.

Contract Scope:

The automotive parts provided by Centerra, prevent excessive downtimes, and prevent the utilization of unsafe vehicles and equipment by vehicle users. The contractor is responsible for satisfying the basic requirement of ensuring that stock and non-stock parts and supplies meet and/or exceed the Original Equipment Manufacturer (OEM) specifications.

Reason for the Extension:

This extension is to allow sufficient time to issue a new solicitation which will include local suppliers.

Spending Previous Year:

Cumulative Contract Value:	11-01-2
Cumulative Contract Spending:	11-01-2

1-01-2012 to 11-15-2017: \$5,209,654.00 1-01-2012 to 09-30-2017: \$4,404,791.32

Contractor's Past Performance:

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

No LBE/LSBE participation.

Contract Type:	Fixed Price	Award Based On:	Highest Ranked Offeror	
Commodity:	Services	Contract Numbers:	WAS-12-035-AA-RE	
Contractor Market:	Open Market with Preference Points for LBE and LSBE Participation			

BUDGET INFORMATION

Funding:	Operating	Department:	Fleet Management
Service Area:	125 O Street, NE WDC	Department Head:	Timothy Fitzgerald

ESTIMATED USER SHARE INFORMATION

User	Share %	Dollar Amount
District of Columbia	83.65%	\$376,425.00
Washington Suburban Sanitary Commission	12.07%	\$54,315.00
Fairfax County	2.84%	\$12,780.00
Loudoun Water	1.25%	\$5,625.00
Other (PI)	0.19%	\$855.00
TOTAL ESTIMATED DOLLAR AMOUNT	100.00%	\$450.000.00

9 Rosalind R. Inge

Date

Assistant General Manager

19 Support Services 5/14/17 Dan Bae Date

Director of Procurement

al Matthew T. Brown Date

Chief Financial Officer

George S. Hawkins **General Manager**

Date

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ACTION REQUESTED

GOODS AND SERVICES CONTRACT MODIFICATION

Information Technology Professional Services

(Joint–Use)

Approval to execute contract modification to extend the contract period and add funding to the information technology professional services contract in the amount of \$280,000.

CONTRACTOR/SUB/VENDOR INFORMATION

PRIME:	SUBS:	PARTICIPATION:
Mega-Tech		100%
701 West Broad Street, Suite 411 Falls Church, Virginia 22046		
LSBE		

DESCRIPTION AND PURPOSE

Original Contract Value:	\$480,000.00
Original Contract Dates:	02-01-2014—01-31-2015
No. of Option Years in Contract:	2
Option Year 1 Value:	\$450,000.00
Option Year 1 Dates:	02-01-2015-01-31-2016
Option Year 2 Value:	\$650,000.00
Option Year 2 Dates:	02-01-2016—01-31-2017
Modification 1 Value:	\$149,000.00
Modification 1 Dates:	10-01-2015—01-31-2017
Contract Extension Value:	\$270,662.08
Contract Extension Dates:	02-01-2017—10-31-2017
This Modification Value:	\$280,000.00
This Modification Dates:	07-01-2017—06-30-2018

Purpose of the Contract:

To contract for information technology professional services for the District of Columbia Water and Sewer Authority (DC Water) Department of Information Technology.

Original Contract Scope:

Mega Tech is providing Help Desk support and Maximo Enterprise Application professional services.

Reason for the Change:

This modification is to add funding needed to complete the Customer Information Systems project. The contract will expire June 30, 2018.

Spending Previous Year:

Cumulative Contract Value: Cumulative Contract Spending:

02-01-2014 to 10-31-2017: \$1,999,662.08 02-01-2014 to 08-31-2017: \$1,929,575.50

Contractor's Past Performance:

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

Contract Type:	Firm Fixed Price	Award Based On:	Highest Ranking Score
Commodity:	Services	Contract Number:	14-PR-DIT-04
Contractor Market:	Open Market with Preference Points for LBE and LSBE 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	83.65%	\$234,220.00
Washington Suburban Sanitary Commission	12.07%	\$33,796.00
Fairfax County	2.84%	\$7.952.00
Loudoun County	1.25%	\$3,500.00
Other (PI)	0.19%	\$532.00
TOTAL ESTIMATED DOLLAR AMOUNT	100.00%	\$280,000.00

lactine Thomas Kuczynski Chief Information Officer Date

Date

Dan Bae Director of Procurement

9/18/17 9 Matthew T. Brown Date

Chief Financial Officer

George S. Hawkins General Manager

Date

51

ACTION REQUESTED

GOODS AND SERVICES CONTRACT OPTION YEAR

Monitoring of Biosolids Disposal Site

(Joint Use)

Approval to execute option year 1 and to approve funding for all option years (OY 1-4) in the amount of \$2,724,959.60. Actual spending will be based on four annual purchase orders, each for ¼ of the requested amount.

CONTRACTOR/SUB/VENDOR INFORMATION PRIME: SUBS: PARTICIPATION: Maryland Environmental Services N/A N/A 259 Najoles Road Millersville, Maryland 21108 **DESCRIPTION AND PURPOSE** Base Period Contract Value: \$632,368.00 **Original Contract Dates:** 10-13-2016 - 10-12-2017 No. of Option Years in Contract: 4 **Total Option Year 1-4 Value:** \$2,724,959.60 **Option Year 1 Dates:** 10-13-2017 - 10-12-2018 **Option Year 2-4 Dates:** 10-13-2018 - 10-12-2021

Purpose of the Contract:

DC Water's Department of Wastewater Treatment (DWT) needs a contract to provide monitoring and inspection services for the land application and storage of biosolids, and to monitor grit and sludge loading and transportation from the Blue Plains Advanced Wastewater Treatment Plant to approved disposal sites.

Contract Scope:

Oversight of biosolids reuse sites to ensure discharge permit requirements are met; groundwater monitoring and reporting at biosolids reuse sites; monitor and report on the operations and conditions at biosolids reuse and storage sites; monitor and report on contractor loading and hauling of grit and sludge from Blue Plains facilities; attend relevant Farm Bureau and public information meetings.

This is a sole-source contract as approved by the DC Water Procurement Regulation 5332.4(d): MES is "another public agency, entity, or authority". The requested funding approval therefore covers all four option years, the cost of each of which is specified in the contract and totals to the requested amount.

This contract action exercises option year 1. Future option years will be exercised individually with a zero-cost extension along with a new purchase order specific to the respective option year.

Spending Previous Year:

Cumulative Contract Value:	10-13-2016 to 10-12-2017: \$632,368.00
Cumulative Contract Spending:	10-13-2016 to 07-07-2017: \$421,946.00

Contractor's Past Performance:

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

No LBE/LSBE participation.

Contract Type:	Fixed Price	Award Based On:	Sole-Source	
Commodity:	Services	Contract Number:	16-PR-WWT-81	
Contractor Market:	Sole-Source			

BUDGET INFORMATION					
Funding:	Operating	Department:	Resource Recovery		
Project Area:	Blue Plains AWTP	Department Head:	Chris Peot		

ESTIMATED USER SHARE INFORMATION

User - Operating	Share %	Dollar Amount
District of Columbia	41.92%	\$267,815.14
Washington Suburban Sanitary Commission	43.33%	\$276,828.24
Fairfax County	9.81%	\$62,673.34
Loudoun Water	4.29%	\$27,407.61
Potomac Interceptor	0.65%	\$4,152.37
TOTAL ESTIMATED DOLLAR AMOUNT	100.00%	\$638,872.00

9/13/17 Date

Aklile Tesfaye Assistant General Manager, **Blue Plains** 1

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Dan Bae	

Director of Procurement

9/13/17 Date Matthew Brown Date

Chief Financial Officer

George S. Hawkins General Manager

Date

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ACTION REQUESTED **GOODS AND SERVICES CONTRACT MODIFICATION** SECURITY SYSTEMS INTEGRATION AND MANAGEMENT SERVICES

(Joint Use)

Approval to execute a contract modification to add Fiscal Year 2018 funding in the amount of \$1,100,000,00 for previously undefined security projects at DC Water facilities.

CONTRACTOR/SUB/VENDOR INFORMATION

PRIME: Enterprise Security Solutions (ESS) 40 East Henrietta Street Smithburg, MD 21783	SUBS: Telecommunications Development Co. (LSBE) 1919 13 th Street, NW Washington, DC 20009	PARTICIPATION: 30%
	DESCRIPTION AND PURPOSE	
Original Contract Value:	\$5,943,868.00	
Original Contract Dates:	10-01-2016—06	-08-2018
No. of Option Years in Contract:	3	
This Modification Value:	\$1.100.000.00	

This Modification Dates:

Purpose of the Contract Modification:

The Department of Security has an on-going need for security systems integration and management services in support of DC Water's designation by the Department of Homeland Security as a critical infrastructure national asset in the IAW DHS National Infrastructure Protection Plan - 2013, DHS Water and Wastewater Sector Specific Plan - 2015, and in accordance with Presidential Policy Directive/PPD-21, "Critical Infrastructure Security and Resilience" - 2013.

10-10-2017-06-08-2018

This contract modification shall provide ongoing and new security related project installations, integration and management services for electronic security systems and devices located throughout all DC Water properties and facilities. This work is directly associated with physical security means and methods involving access control, perimeter monitoring, and monitoring of remote, isolated, and/or unmanned facilities via security technology for project not identified when the original contract was awarded such as the new headquarters facility, the MacArthur boulevard facility and the new MPT buildings that recently came on line.

- Capital Equipment (CE) services include: infrastructure connectivity, cameras, card readers, door/window/hatch sensors, fence-line detection systems, automated entry/exit data capture and other elements plus all software support.
- Operating services include: routine maintenance and repairs of all pre-existing security systems. •

Original Contract Scope:

To provide security systems integration and management services at DC Water facilities.

Reason for the Change:

This change authorizes 2018 fiscal year funding for projects not originally included in the original list.

Spending Previous Year:

Cumulative Contract Value: 10-01-2016 to 09-30-2018: \$5,943,868.00 Cumulative Contract Spending:

10-01-2016 to 08-31-2017: \$1,968,116.30

Contractor's Past Performance:

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

Contract Type:	Fixed Hourly Rate	Award Based On:	Highest Ratings	
Commodity:	Goods and Services	Contract Number:	WAS-10-023-AA-RE	
Contractor Market:	Open Market with Preference Points for LBE and LSBE Participation			

BUDGET INFORMATION				
Funding: Capital Equipment Department: Security				
Service Area:	DC Water wide	Department Head:	Steve Caldwell	
Project:	EQP3610			

ESTIMATED USER SHARE INFORMATION			
User	Share %	Dollar Amount	
District of Columbia	68.91%	\$387,963.00	
Washington Suburban Sanitary Commission	24.14%	\$135,908.00	
Fairfax County	4.51%	\$25,391.00	
Loudoun County	2.01%	\$11,317.00	
Other (PI)	0.43%	\$2,421.00	
TOTAL ESTIMATED DOLLAR AMOUNT	100.00%	\$563,000.00	

BUDGET INFORMATION			
Funding: Operating Department: Security			
Service Area:	DC Water wide	Department Head:	Steve Caldwell

ESTIMATED USER SHARE INFORMATION			
User	Share %	Dollar Amount	
District of Columbia	83.65%	\$449,200.00	
Washington Suburban Sanitary Commission	12.07%	\$64,816.00	
Fairfax County	2.84%	\$15,251.00	
Loudoun County	1.25%	\$6,713.00	
Other (PI)	0.19%	\$1,020.00	
TOTAL ESTIMATED DOLLAR AMOUNT	100.00%	\$537,000.00	

ESTIMATED USER SHARE INFORMATION			
User	Share %	Dollar Amount	
District of Columbia	76.11%	\$837,163.00	
Washington Suburban Sanitary Commission	18.25%	\$200,724.00	
Fairfax County	3.69%	\$40,642.00	
Loudoun County	1.64%	\$18,030.00	
Other (PI)	0.31%	\$3,441.00	
TOTAL ESTIMATED DOLLAR AMOUNT	100.00%	\$1,100,000.00	

(С m Rosalind R. Inge

Assistant General Manager Support Services

<u>1111</u> Date <u>9/18</u>/17 Date Dan Bae

Director of Procurement

7/18/17 on Date

Matthew T. Brown **Chief Financial Officer**

George S. Hawkins General Manager

Date

2 of 2

ACTION REQUESTED

GOODS AND SERVICES CONTRACT AWARD

Work Uniforms and Accessories

(Joint Use)

Approval to fund \$3,000,000.00 for the work uniforms and accessories contract. The contract will be awarded annually, \$1,000,000.00 in the base year and in each two 1-year option years.

CONTRACTOR/SUB/VENDOR INFORMATION

PRIME: Cintas Corporation LOC. 041 P.O. Box 630803 Cincinnati, OH 45263	SUBS: N/A	PARTICIPATION: N/A
Local Address: 1769 Brightseat Rd. Landover, MD 20785		

DESCRIPTION AND PURPOSE

Base Period Contract Value:	\$1,000,000.00
Base Contract Period:	1 Year
No. of Option Years:	2
Anticipated Contract Start Date:	10-15-2017
Anticipated Base Period Completion Date:	10-14-2018
Proposal Closing Date:	05-25-2016
Proposals Received:	4
Proposal Price Range:	\$2,610,602.31 - \$4,203,645.67

Purpose of the Contract:

This contract is to provide work uniforms and accessories to DC Water employees. The winning proposer (Cintas) met all requirements including an online ordering portal, and lease and rental options. Under this contract, fire retardant uniforms will be rented (Cintas washes, inspects, repairs, and replaces) and most of the regular uniforms will be leased (same as Rental except DC Water employee will wash and inspect). Due to the safety reason, fire retardant uniforms will be washed and inspected by Cintas professionals. Cintas will assume all liabilities in case of any accident.

Contract Scope:

DC Water requires the services of a competent and qualified vendor to provide work uniforms and accessories to DC Water employees. The vendor shall provide work uniforms that meet and/or exceed all current local, state, and federal regulations related to personal protective clothing, including but not limited to those regulations issued by the Occupational Safety and Health Administration (OSHA) and the National Fire Protection Association (NFPA).

Evaluated Companies and Any Preference Points:

There were four (4) respondents to the solicitation. Each firm provided an oral presentation and product demonstration. The responding firms are shown below:

Alpine Trading Company, Inc. 400 Overpeck Ave. Englewood, NJ 07631	Cintas Corporation PO Box 630803 Cincinnati, OH 45263	Hanover Uniform Company 3501 Marmenco Court Baltimore, MD 21203	Morgan's Inc., dba Jimmie Muscatellos 900 Rhode Island Ave, NE Washington, DC 20018 (LBE/LSBE)
--------------------------------------------------------------------------	-------------------------------------------------------------	-----------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------

Morgan's Inc., T/A Jimmie Muscatellos is an LBE/LSBE firm and received 5 preference points but did not meet all requirements.

Cost Savings:

With the Cintas lease and rental programs, DC Water will save \$440,000 per year or \$1,320,000 during the entire 3 years of contract period compared to the price proposed by the current vendor

PROCUREMENT INFORMATION

Contract Type:	Fixed Unit Price Requirements Contract	Award Based On:	Best Value	
Commodity:	Goods and Services	Contract Number:	16-PR-PRO-45	
Contractor Market:	Open Market with Preference Points for LBE and LSBE Participation			

BUDGET INFORMATION

Funding:	Operating	Department:	Procurement
Service Area:	Authority-Wide	Department Head:	Dan Bae

ESTIMATED USER SHARE INFORMATION

User	Share %	Dollar Amount
District of Columbia	83.65%	\$836,500.00
Washington Suburban Sanitary Commission	12.07%	\$120,700.00
Fairfax County	2.84%	\$28,400.00
Loudoun Water	1.25%	\$12,500.00
Other (PI)	0.19%	\$1,900.00
TOTAL ESTIMATED DOLLAR AMOUNT	100.00%	\$1,000,000,00

Dan Bae Director ocurement hn Bosley chief Procurement Officer letter tren Matthew T. Brown Chief Financial Officer Date

Date

George S. Hawkins CEO/General Manager

ACTION REQUESTED

GOODS AND SERVICES CONTRACT MODIFICATION

TELECOMMUNICATION SERVICES

(Joint-Use)

Approval to execute a modification to add funding to the contract for telecommunication services in the amount of \$1,271,591.00.

CONTRACTOR/SUB/VENDOR INFORMATION				
PRIME: Verizon 22001 Loudoun County Parkway Ashburn, Virginia 20147	SUBS: N/A	PARTICIPATION: N/A		
	DESCRIPTION AND PURPOSE			
Original Contract Value:	\$376,446,00			
Original Contract Dates:	11-08-2007 — 11-07-2008			
Contract Modification (#1- #5) Value:	\$6,397,812.82			
Contract Modification Dates:	11-08-2008 — 11-07-2013			
Contract Modification (#6 -#8) Value:	\$2,445,696.00			
Contract Modification Dates:	11-08-2013 — 11-07-2015			
Contract Modification (#9 -#11) Value:	\$2,513,119.00			
Contract Modification Dates:	11-08-2015 — 11-07-2017	6		
Contract Modification (#12) Value:	Contract Modification (#12) Value: \$1,271,591.00			
Contract Modification Date:	11-08-2017 — 11-07-2018			

Purpose of the Contract:

To provide telecommunication services for the Supervisory Control and Data Acquisition (SCADA), Multiprotocol Label Switching (MPLS) Network, Data Network Circuits/Transport Layer Security (TLS), Analog Lines, and Local Telephone Service throughout the Authority.

DC Water is riding the General Services Administration (GSA) Schedule contract #GS11T088BJD6001.

Reason for Change:

The modification will allow DC Water to continue using the GSA Schedule to fulfill the telecommunication service requirements.

The increase in the annual service is due to the addition of six new buildings, upgrade of four sites and security system upgrades at six sites.

Spending Previous Year:

Cumulative Contract Value: Cumulative Contract Spending: 11-08-2007 to 11-07-2017: \$11,733,073.82 11-08-2007 to 08-31-2017: \$10,480,115.65

Contractor's Past Performance:

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

No LBE/LSBE participation.

Contract Type:	Firm Fixed Price	Award Based On:	Not Applicable	
Commodity:	Services	Contract Number:	GS11T08BJD6001	
Contractor Market:	General Services Admir	nistration (GSA) Schedule		_

BUDGET INFORMATION

Funding:	Operating	Department:	Information Technology
Project Area:	DC Water Wide	Department Head:	Thomas Kuczynski

ESTIMATED USER SHARE INFORMATION

User - Operating	Share %	Dollar Amount
District of Columbia	83.65%	\$1,063,685,87
Washington Suburban Sanitary Commission	12.07%	\$153,481.03
Fairfax County	2.84%	\$36,113.18
Loudoun Water	1.25%	\$15,894.89
Other (PI)	0.19%	\$2,416.02
TOTAL ESTIMATED DOLLAR AMOUNT	100.00%	\$1,271,591.00

9/1 Date

Thomas Kuczynski Chief Information Officer

9/14/117 Date Dan Bae

Director of Procurement

12

Matthew T. Brown **Chief Financial Officer**

Date

George S. Hawkins General Manager Date

ACTION REQUESTED

CONSTRUCTION CONTRACT CHANGE ORDER:

Miscellaneous Facilities Upgrade – Phase 4 (Joint Use)

Approval to execute Change Order No.01 for \$8,800,000.00. The modification exceeds the General Manager's approval authority.

CONTRACTORS/SUB/VENDOR INFORMATION

PRIME: Ulliman Schutte Construction, LLC	SUBS:	PARTICIPATION:
7615 Standish Place Rockville, MD 20855	No MBE contractors	0.0%
<u>Headquarters</u> Miamisburg, OH 45342	No WBE contractors	0.0%

DESCRIPTION AND PURPOSE

Original Contract Value:	\$ 21,310,000	
Value of this Change Order:	\$ 8,800,000	
Cumulative CO Value, including this CO:	\$ 8,800,000	
Current Contract Value, including this CO:	\$ 30,110,000	
Original Contract Time:	1600 Days	(4 Years, 1 Month)
Time extension, this CO:	0 Days	
Total CO contract time extension:	0 Days	
Contract Start Date (NTP):	09-21-2015	
Contract Completion Date:	02-06-2020	
Cumulative CO % of Original Contract:	41.3%	
Contract completion %:	34.0%	

Purpose of the Contract:

Make repairs to assure continuous and effective treatment operations at the Blue Plains Advanced Wastewater Treatment Plant. Some work will correct situations and may avoid potential violations of its NPDES permit. Other work will facilitate or complement efforts included in current and future major construction projects.

Original Contract Scope:

- Modify Odor Control equipment at the 3rd and Constitution Ave Pumping Station
- Replacement of failing and outdated butterfly valves on return sludge piping at the Nitrification Facility
- Construct new access platforms for piping valves at the Multimedia Filtration Facility
- Specialized Services as per Task Scope.
- Time and Material work on emergency and non-emergency Task Work Orders.

Current Change Order Scope:

- Remove all damaged tubing for cooling heat exchangers (CHEX) and tuning heat exchangers (THEX) that provide cooling for the Biosolids Main Process Train digesters.
- Fabricate and purchase new cooling heat exchanger tubes (CHEX) and tuning heat exchanger tubes (THEX) made with Zeron 100, a high alloy stainless steel, which is highly resistant to pitting from microbial induced corrosion (MIC).

Contract Type:	Fixed Price	Award Based On:	Lowest responsive, responsible bidder
Commodity:	Construction	Contract Number:	140230
Contractor Market:	Open Market		

BUDGET INFORMATION

Funding:	Capital	Department:	Wastewa	ater Engineering	
Service Area:	Wastewater	Department H	ead:	Diala Dandach	
Project:	PF. XA			•	

ESTIMATED USER SHARE INFORMATION

User	Share %	Dollar Amount
District of Columbia	41.22%	\$ 3,627,360.00
Federal Funds	0.00%	\$ 0.00
Washington Suburban Sanitary Commission	45.84%	\$ 4,033,920.00
Fairfax County	8.38%	\$ 737,440.00
Loudoun County & Potomac Interceptor	4.56%	\$ 401,280.00
Total Estimated Dollar Amount	100.00%	\$ 8,800,000.00

<u>14</u>(17 Date Matthew T. Brown

Chief Financial Office

9/14/17 Dan Bae Date

Director of Procurement

<u>9-</u>14-17 _{Date}

Leonard R. Benson Chief Engineer

George S. Hawkins

General Manager

_/____ Date

140230 FACT SHEET MFU CO1-08-26-17.v2

Prepared August 28, 2017

ACTION REQUESTED

ENGINEERING SERVICES SUPPLEMENTAL AGREEMENT:

Tunnel Dewatering Station and Enhanced Clarification Facility - CM (Joint Use)

Approval to execute Supplemental Agreement No. 1 for \$5,524,383. The modification exceeds the General Manager's approval authority.

CONTRAC	TOR/SUB/VENDOR INFORMATI	ON	
PRIME:	SUBS:		PARTICIPATION:
Arcadis District of Columbia, PC 7550 Teague Road	Delon Hampton & Associates Washington, DC	MBE	14.1%
Hanover, MD 21076	HAKS Engineers, Inc. New York, NY	MBE	4.9%
	Smoot Construction Washington, DC	MBE	4.0%
<u>Headquarters</u> Highlands Ranch, CO 80129	Environ-Civil Engineering Columbia, MD	MBE	2.8%
	Cube Root Corporation Washington, DC	MBE	2.3%
	SZPM Consultants Oakton, VA	WBE	3.7%
	GeoConcepts Engineering, Inc. Washington, DC	WBE	0.4%
	URS (AECOM) Washington, DC		10.7%
	CWD Consulting, LLC Westminster, MD		3.2%
	Chester Engineers, Inc. Moon Township, PA		2.0%
DES	SCRIPTION AND PURPOSE		

Original Contract Value:	\$20,698,656.00)
Value of this Supplemental Agreement:	\$ 5,524,383.00)
Cumulative SA Value, including this SA:	\$ 5,524,383.00)
Current Contract Value, Including this SA:	\$26,223,039.00)
Original Contract Time:	1,890 Days	(5 Years, 2 Months)
Time extension, this SA:	0 Days	
Total SA contract time extension:	0 Days	(0 Years, 0 Months)
Contract Start Date:	08-28-2013	
Contract Completion Date:	10-31-2018	

Purpose of the Contract:

To provide onsite Construction Management Services for the Tunnel Dewatering Pump Station and Enhanced Clarification Facility (TDPS-ECF)

This work is required by Consent Decree.

Original Contract Scope:

 To provide construction management and related engineering services for the construction of a Tunnel Dewatering Pump Station and Enhanced Clarification Facility at the District of Columbia's Advanced Water Treatment Plant at Blue Plains.

Current Supplemental Agreement Scope:

The scope remains the same as the original agreement; to provide construction management and related engineering services for the construction of a Tunnel Dewatering Pump Station and Enhanced Clarification Facility. At the time of the Agreement, the available budget could only support the required level of services through Fiscal Year 2017 and not the fully anticipated services required through the completion of the project.

Future Supplemental Agreement Scope:

No future supplemental agreement is anticipated.

PROCUREMENT INFORMATION

Contract Type:	Cost Plus Fixed Fee	Award Based On:	Highest Ranking Score
Commodity:	Engineering Services	Contract Number:	DCFA #450-WSA
Contractor Market:	Open Market	•	

BUDGET INFORMATION

Funding:	Capital	Department:	Wastewater Engineering		
Service Area:	Wastewater	Department H	ead:	Diala Dandach	
Project:	E8, FR, CY				

ESTIMATED USER SHARE INFORMATION

User	Share %	Dollar Amount		
District of Columbia	92.90%	\$1,551,962.71		
Federal Funds	0.00%	\$		
Washington Suburban Sanitary Commission	5.54%	\$ 92,549.77		
Fairfax County	1.01%	\$ 16,872.79		
Loudoun County & Potomac Interceptor	0.55%	\$ 9,188.15		
Total Estimated Dollar Amount	100.00%	\$1,670,573.42		
E8. FR – Wastewater Treatment Allocation				

User	Share %	Dollar Amount	
District of Columbia	41.22%	\$1,588,540.31	
Federal Funds	0.00%	\$	
Washington Suburban Sanitary Commission	45.84%	\$1,766,586.31	
Fairfax County	8.38%	\$ 322,949.24	
Loudoun County & Potomac Interceptor	4.56%	\$ 175,733.72	
Total Estimated Dollar Amount	100.00%	\$3,853,809.58	
0	1 4 11 47		

User	Share %	Dollar Amount		
District of Columbia	56.85%	\$3,140,503.02		
Federal Funds	0.00%	\$		
Washington Suburban Sanitary Commission	33.65%	\$1,858,136.08		
Fairfax County	6.15%	\$ 339,822.03		
Loudoun County & Potomac Interceptor	3.35%	\$ 184,921.87		
Total Estimated Dollar Amount	100.00%	\$5,524,383.00		

Matthew T. Brown

Chief Financial Officer

14/2017 Date

Date Dan Bae

Director of Procurement

Leonard R. Benson

Date

Chief Engineer

George S. Hawkins General Manager

Date

DCFA 450 FACT SHEET Tunnel Dewatering Pump Station ECF SA1.v1-

Prepared August, 2017

ACTION REQUESTED

CONSTRUCTION CONTRACT:

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

Approval to execute a construction contract for \$3,676,741

CONTRACTOR/SUB/VENDOR INFORMATION

PRIME:	SUBS:		PARTICIPATION:
Sagres Construction Corp. 8350 Terminal Rd. Suite A	Acorn Supply and Distributing White Marsh, Maryland	MBE	11.8%
Lorton, VA 22709	Crown Construction Services Inc Prince George, MD	MBE	11.3%
	RCE Construction LLC Springfield, VA	MBE	6.7%
(MBE)	Kim Engineering Inc Beltsville, MD	MBE	1.6%
	Jaxson Point Inc King George, VA	MBE	0.6%
	Genesis Const. Management LLC Capitol Heights, MD	WBE	6.3%

DESCRIPTION AND PURPOSE

Contract Value, Not-To-Exceed:	\$ 3,676,741.50
Contract Time:	448 Days (1 Years, 3 Months)
Anticipated Contract Start Date (NTP):	12-14-2017
Anticipated Contract Completion Date:	03-27-2019
Bid Opening Date:	07-12-2017
Bids Received:	
Other Bids Received	
Fort Myer Construction Co	\$ 3,883.989.00
Capital Paving of D.C., Inc	\$ 3,913,369.00
Anchor Construction Corporation	\$ 4,881,992.00
Civil Construction LLC.	\$ 5,175,614.00
J. Fletcher Creamer & Son, Inc.	\$ 5,429,673.00

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:

- Replacement of water mains and associated valves and appurtenances. Replace approximately 540 LF of 4", 146 LF of 6", 3,525 LF of 9", 360 LF of 12" and 10 LF of 24" water main.
- Replacement of 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.
- Provide permanent pavement and surface restoration.

Federal Grant Status:

Construction contract is funded in part by Federal grant.

Contract Type:	Unit Price	Award Based On:	Lowest responsive, responsible bidder
Commodity:	Construction	Contract Number:	150180
Contractor Market:	Open Market		

BUDGET INFORMATION

Funding:	Capital	Department:	Engineer	ring and Technical Services
Service Area:	Water	Department H	ead:	Craig Fricke
Project:	DE			

ESTIMATED USER SHARE INFORMATION

User	Share %	Dollar Amount
District of Columbia	40.00%	\$ 1,470,696.60
Federal Funds (EPA)	60.00%	\$ 2,206,044.90
Washington Suburban Sanitary Commission	0.00%	\$
Fairfax County	0.00%	\$
Loudoun County & Potomac Interceptor	0.00%	\$
Total Estimated Dollar Amount	100.00%	\$ 3,676,741.50

<u>9/14</u>/1フ Date

Matthew T. Brown Chief Financial Officer

Dan Bae

Director of Procurement

Leonard R. Benson

Chief Engineer

George S. Hawkins

General Manager

Date

9

Date

117

<u>9-14-17</u> Date

Prepared August, 2017



Proposed Waste Hauler Fee Industrial High Strength Waste Fee & Dental Discharge Regulations

Presented to:

Environmental Quality and Operations Committee September 21, 2017



- DC Water charges:
 - Waste Hauler Fees allow for unlimited disposal of waste sources within the Blue Plains service area at the Blue Plains Septage Receiving Facility
 - Fees have not been adjusted since 2012 and are not keeping up with costs
 - Industrial High Strength Waste Fees are proposed for Industrial Users discharging high strength waste
 - Are authorized, but have never been charged
- In June 2017, DC Water hired Raftelis Financial Consultants, Inc. (RFC) to evaluate these fees, and to make recommendations
- EPA published the Final Dental Amalgam Rule on June 14, 2017 and the Rule became effective on July 14, 2017. DC Water is proposing new Dental Discharge Regulations to comply with this Rule.

Environmental Quality and Operations Committee - 10:35 a.m.VI. Hauled Waste Fee Structure/Industrial High Strength Rates & Dental Discharge Regulations - Elaine Wilson



Waste Hauler Fees



Why Restructure Waste Hauler Fees

- High Strength: Loads of pollutants received are very high compared to regular strength influent
- High Treatment Cost: Cost is not fully recovered
 - DC Water estimated 2016 projected revenue of \$993,000, based on RFC 2017 Waste Hauler Fee Study, and recovered about \$473,000
- High Cost Differential: Haulers with fewer loads paying a higher cost for service than haulers with many loads (in some cases may be paying more than actual cost)
- A revised structure based on volume would allow DC Water to fully recover cost of service without overcharging haulers with fewer loads



 Below are general waste categories accepted by DC Water (results in mg/liter) as compared with plant influent

Waste Type	# Samples	Chemical Oxygen Demand (COD)	Total Phosphorus (TP)	Total Kjeldahl Nitrogen (TN)	Total Suspended Solids (TSS)	Volatile Suspended Solids (VSS)
Grease	21	30,700	59	560	21,600	16,000
Toilets	8	13,500	258	3,340	8,460	5,270
Septage	4	3,830	43	80	1,220	1,030
GW/SW*	1	58	<1	1.3	81	27
Comparison with most typical influent sample result:						
Influent	1	474	4.6	44.6	288	262

*GW/SW – Ground Water/Storm Water



Proposed Waste Hauler Fees

- High Strength Waste \$69.71/kgal (per thousand gallons) round to \$70/kgal or \$0.07/gallon
 - High strength waste to include grease traps and interceptors, septic tank, sewage ejectors, portable toilets, and other concentrated wastes
- Normal/Low Strength Waste base fee rate of \$3.08/kgal (per thousand gallons) round to \$3/kgal or \$0.003/gallon
 - Normal/low strength waste to include unconcentrated domestic, groundwater, and surface runoff
- Custom Fees
 - May be used for commercial/industrial sources and other special waste hauler categories (e.g., landfill leachate, food waste, etc.)
 - Calculated based on actual loadings using unit costs added to the base fee



Comparison of Hauler Fees

- Currently DC Water charges an annual permit fee per vehicle based on truck capacity (\$160-\$14,640)
- Under the proposal, fees would be charged based on strength and volume
- Below are comparisons for three vendors based on the current and proposed fees

Waste Hauler	2016 Volume Disposed	Current Fee	Proposed Fee
Customer 1	49 gallons domestic/low strength	\$160	\$30.15
Customer 2	172,400 gallons high strength and 5,000 gallons low strength	\$14,600	\$12,113
Customer 3	3,189,434 gallons high strength and 72,600 gallons low strength	\$65,355	\$223,687
Environmental Quality and Operations Committee - 10:35 a.m.VI. Hauled Waste Fee Structure/Industrial High Strength Rates & Dental Discharge Regulations - Elaine Wilson



Waste Hauler Fee Utilities Comparison



* applies utility unit costs to DC Water strength assumptions





- New Revenue
 - Revenue would be \$993,000 based on 2016 volumes, an increase of about \$500,000
- Operational Considerations
 - Impact on current operations is minimal
 - Sources and volumes are currently tracked manually by entering volumes and waste types from the manifest on a spreadsheet
 - There will be no change to the current process
 - Pretreatment staff will determine monthly charges for each customer and provide a list to Customer Service/Permit Operations for billing

Environmental Quality and Operations Committee - 10:35 a.m.VI. Hauled Waste Fee Structure/Industrial High Strength Rates & Dental Discharge Regulations - Elaine Wilson



Industrial User (IU) High Strength Waste Fees



IU High Strength Waste Fee

- Industries discharging high strength waste to the collection system are paying the same base rate as industries with domestic strength waste
- Existing regulations established in 2012 for a high strength waste fee for permitted industrial users, but unit costs were never developed
- Unit costs developed for Waste Hauler fees could be used to charge industries with high strength waste

Units of Service	Flow	cBOD	TN	ТР	Solids
Annual Loading	102,930,000	156,346,239	34,064,344 lbs/yr	3,469,537	234,330,000
Totals	kgals/yr	lbs/yr		lbs/yr	lbs/yr
Annual Total Costs (w OH)	\$168,267,672	\$21,029,567	\$50,097,071	\$15,694,900	\$61,675,410
Unit Cost	\$1.635	\$0.135	\$1.471	\$4.524	\$0.263
(w OH)	Per kgal	Per lb	Per lb	Per lb	Per lb

Fee proposed for Significant Industrial Users only to capture high volume dischargers





- Revenue
 - Industrial High Strength Waste Fee annual projected revenue \$145,000 to \$205,000
 - Three affected customers:
 - Bureau of Engraving and Printing \$40,000 to \$100,000, though currently installing a new recovery and treatment system
 - Dulles airport \$100,000
 - Amtrak \$5,000
 - No other major high strength waste streams identified

Operational Considerations

- Permittees with high strength waste will be required to self-monitor for high strength waste parameters monthly or as the permit requires. Flow data will also be required
- DC Water already monitors at least once a year to ensure data aligns with industry sampling
- Billing will be manually calculated by Pretreatment staff quarterly, or other frequency established by DC Water, using permittee and DC Water data

Environmental Quality and Operations Committee - 10:35 a.m.VI. Hauled Waste Fee Structure/Industrial High Strength Rates & Dental Discharge Regulations - Elaine Wilson



High Strength Waste Fee Utilities Comparison



DC Water (proposed) HRSD, VA Chesterfield Co, VA Greenville, NC Onondaga Co, NY Philadelphia, PA Henrico Co, VA Danville, VA Lancaster, PA

Environmental Quality and Operations Committee - 10:35 a.m.VI. Hauled Waste Fee Structure/Industrial High Strength Rates & Dental Discharge Regulations - Elaine Wilson



Proposed Action

dCó water is life

Proposed Regulations

- Regulatory updates to 21 DCMR Water and Sanitation
 - §112.6 Waste Hauling Annual Fee per Vehicle
 - replace tiered cost based on vehicle capacity to a single fee
 - \$30/vehicle proposed based on comparison with region, cost covered in general operating budget
 - §112.6 include volume-based fees for haulers and unit costs for industrial high strength waste fee
 - §1510 significant updates to Hauled Wastewater Section
 - §1510.12(b) clarify that non-domestic loads must comply with discharge standards in 1501, unless exempted (i.e., an alternate limit is authorized)
 - §1510.12(d) DC Water may require a waste analysis of any load prior to discharge
 - §1510.14 additional conditions that could result in suspension or termination of a permit

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Proposed Regulations

- Regulatory updates to 21 DCMR Water and Sanitation
 - §1510 significant updates to Hauled Wastewater Section
 - §1510.16 authority to charge custom fees for waste generated outside Blue Plains service area and commercial/industrial hauled waste
 - §1510.17 authority to revise custom fees at any time
 - §1511 updates to High-Strength Waste Fee Section
 - §1511 Revise to apply section to Significant Industrial User's only
 - §1511.2(a) Revise Chemical Oxygen Demand (COD) domestic concentration to 600 mg/L, consistent with assumption in the 2017 Waste Hauler Fee Study that Biochemical Oxygen Demand (BOD) is half the COD (BOD domestic concentration is 300 mg/L)
 - §1511.11 to §1511.12 clarify procedure for determination of the average daily concentration (revised existing sections §1511.11 to §1511.14

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Schedule for Implementation

Hauled Waste Fee Restructure	Industrial High Strength Surcharge Fee
September 21, 2017 – present Proposed	September 21, 2017 – present Proposed
Rulemaking to EQ&OPS Committee	Rulemaking to EQ&OPS Committee
September 26, 2017 – present Proposed	September 26, 2017 – present Proposed
Rulemaking to Retail Water and Sewer Rates	Rulemaking to Retail Water and Sewer Rates
Committee	Committee
October 5, 2017 – present Proposed	October 5, 2017 – present Proposed Rulemaking
Rulemaking to Board	to Board
October 20, 2017 – publish Proposed	October 20, 2017 – publish Proposed Rulemaking
Rulemaking in DC Register	in DC Register
November 20, 2017 – address public comments	November 20, 2017 – address public comments
December 19, 2017 – present Final Rulemaking	December 19, 2017 – present Final Rulemaking to
to Retail Water and Sewer Rates committee	Retail Water and Sewer Rates committee
December 21, 2017 – present Final Rulemaking	December 21, 2017 – present Final Rulemaking to
to EQ&OPS Committee	EQ&OPS Committee
January 4, 2018 – present Final Rulemaking to	January 4, 2018 – present Final Rulemaking to
Board	Board
January 19, 2018 – publish Final Rulemaking in	January 19, 2018 – publish Final Rulemaking in
DC Register	DC Register
February 1, 2018, phase in new hauled waste	February 1, 2018 – begin revising Significant
fee structure over 12 months as hauler permits	Industrial User wastewater discharge permits to
are renewed	require payment for high strength waste discharges
February 2019 – new hauled waste fee structure	April 1, 2018 - begin charging high strength waste
completely phased in	fees

Environmental Quality and Operations Committee - 10:35 a.m.VI. Hauled Waste Fee Structure/Industrial High Strength Rates & Dental Discharge Regulations - Elaine Wilson



Dental Discharge Regulations



Impact on DC Water

- Regulations must be updated immediately since new source dental dischargers are already required to comply with the regulations
 - Existing sources requires compliance by July 14, 2020, and submittal of a onetime compliance report by October 12, 2020
 - New sources discharging after July 14, 2017, requires compliance upon initial discharge with a reporting requirement within 90 days
- DC Water must survey existing dental dischargers and maintain a database of dental facilities to ensure compliance with the Rule – estimated number of dental facilities is 700
- Will coordinate with DCRA to ensure new dental dischargers are identified and surveyed for compliance
- Certifications and one-time compliance reports must be submitted and maintained for all non-exempt dental facilities
- Phone surveys and inspections will be needed to verify compliance
- Enforcement actions may be needed to bring some facilities into compliance

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Proposed Regulations

- Existing regulations under 21 DCMR §1501.10 include required best management practices (BMPs) for dental practitioners, but is not sufficient to comply with new EPA Dental Amalgam Rule
- Revised §1501.10 will replace existing language with a reference to comply with the EPA Dental Office Point Source Category
- New Section 21 DCMR §1520 Dental Amalgam Pretreatment Standards will provide compliance requirements in detail comparable to federal regulations with the following exceptions:
 - DC Water is requiring submittal of a wastewater discharge questionnaire by July 14, 2018, to assist in identifying and tracking those facilities that will need to comply with the regulation
 - DC Water is requiring an amended One-Time Compliance report when a dental facility replaces their amalgam separator
 - DC Water is requiring additional BMPs, such as training, that are in the current District regulations

Environmental Quality and Operations Committee - 10:35 a.m.VI. Hauled Waste Fee Structure/Industrial High Strength Rates & Dental Discharge Regulations -Elaine Wilson



EPA Regulatory Requirement	DC Water Implementation
July 14, 2017 – Dental Amalgam Rule becomes effective	July 2017 - draft proposed regulations and send to EPA for review
	August 2017 – EPA conducts review
	September 21, 2017 – present Proposed Rulemaking to EQ&OPS Committee
October 12, 2017 – First date that new dental sources may be required to submit a One-time Compliance Report	October 5, 2017 – present Proposed Rulemaking to Board
	October 20, 2017 – publish Proposed Rulemaking in DC Register
	November 20, 2017 – address public comments
	December 21, 2017 – present Final Rulemaking to EQ&OPS Committee
	January 4, 2018 – present Final Rulemaking to Board
	January 19, 2018 – publish Final Rulemaking in DC Register





- Management Recommendation to Amend the Waste Hauling Permit Fee (Annual Fee per Vehicle) and Adopt the Waste Hauling Disposal Fee for High Strength (grease trap and septage), Domestic strength, and Low Strength Volume Based Fees and Proposed Regulations
- Management Recommendation to Adopt the High Strength Waste Fee (Unit Costs) and Proposed Regulations
- Management Recommendation to Adopt the Proposed Dental Discharge Regulations

DC WATER DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY



2017 WASTE HAULER FEE STUDY FINAL REPORT / June 22, 2017





onmental Quality and Operations Committee - 10:35 a.m.VI. Hauled Waste Fee Structure/Industrial High Strength Rates & Dental Discharge Regulations - Elaine W

2017 WASTE HAULER FEE STUDY

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Section 1: **INTRODUCTION**

1.1. Background

DC Water is committed to protecting public health and the environment by treating highstrength wastewater at its Blue Plains facility. To ensure consistency with its regional peers, and to demonstrate that DC Water is currently recovering the full costs of providing this service, the utility conducted a cost of service assessment for its waste haulers fee. DC Water has engaged Raftelis Financial Consultants, Inc. (RFC) to review and comment on the data inputs and cost of service analysis (Study), in order to assure full cost recovery in the future.

DC Water received approximately 20 million gallons of hauled waste in 2016 from 33 permitted waste haulers. The utility recovered approximately \$475,000 in 2016, with cost recovery ranging from \$0.01 per gallon to \$0.34 per gallon. Currently, waste haulers are charged an annual fee, which ranges from \$160-\$14,640, based on vehicle capacity. The following table provides waste hauler information for three peer utilities: Washington Suburban Sanitary Commission (WSSC), Fairfax County, and Loudoun Water.

Utility	Volume Received in 2016	Waste Hauler Fees
WSSC	~10M gallons	Annual, based on vehicle capacity
		(\$250-\$24,655)
Fairfax County	3.12M gallons	No charge
Loudoun Water	30,600 gallons	Volume based fee (\$40/kgal),
		increments of \$40 to max of \$160/load

Hauled waste source characterization analysis conducted by DC Water in 2015 and 2016, revealed average concentrations of chemical oxygen demand (COD), total phosphorus (TP), total Kjeldahl Nitrogen (TKN), and total suspended solids (TSS) for the following general hauled waste types received at Blue Plains:

Туре	Number of	COD	ТР	TKN	TSS
	Samples	(mg/L)	(mg/L)	(mg/L)	(mg/L)
Grease	21	30,700	59	560	21,600
Toilets	8	13,500	258	3,340	8,460
Septage	4	1,323	43	80	1,220
GW/SW*	1	58	<1	1.3	81

*GW/SW ~ Ground Water/Storm Water

Strength	BOD (mg/l)	TKN (mg/l)	TP (mg/l)	TSS (mg/l)
Domestic	300	45	6	300

This Study of cost of service-based fee development is important because currently, the pollutant loads received from waste haulers are very high in relation to the average strength

of domestic wastewater received at Blue Plains and DC Water anticipates that both the volume and number of sources will increase.

1.2. Task Order Scope of Services

Based on the needs expressed by DC Water, RFC developed the following work approach, which built on the data pulled together by DC Water staff to conduct a cost of servicebased assessment of the hauled waste fees. This work approach included the following major components:

- Review of DC Water Data Inputs. DC Water staff prepared several cost models to illustrate how operating and capital costs for the wastewater system are compiled. RFC reviewed budget inputs and assumptions provided by DC Water staff to make recommendations, as needed, to align with industry-accepted standards, as well as regional and national fee structures. Inputs include capital and operating costs, pollutant loadings, and removal rates.
- Review and Comment on Cost of Service Analysis. DC Water prepared models that looked at both marginal and actual cost methods of calculating pollutants removal costs. In addition, models looked at direct cost fee calculations as well as fully loaded cost calculations. RFC reviewed the calculations and methodologies to ensure consistency with approaches described in *MOP 27-Finances and Charges for Wastewater Systems*, published by the Water Environment Federation.
- Report Preparation. RFC prepared a letter report to describe the methodology employed in developing waste hauler fees along with actual fee recommendations. DC Water comments were incorporated into a final report that will serve as a project deliverable.
- > As-Needed Support with Presentation of Results. RFC will assist DC Water staff, as needed, in preparation of presentations to the Board and committees. RFC assumes review and comment on staff-prepared presentations of results, and attendance at two meetings to assist in presentation and to answer questions regarding industry approaches to cost of service.

1.3. Deliverables

Three major deliverables will be prepared for this Study:

- 1. RFC will review a comprehensive cost of service-based Waste Hauler Fee model;
- 2. RFC will prepare a report to document our study processes, results, and recommendations; and
- 3. RFC will assist in preparation and presentation of results as needed.

Deliverables will be presented in draft form to Staff for review and comment. Comments will be incorporated into the finalization of the task order deliverables.

Section 2: COST ALLOCATION

This section discusses the methodology employed to compile and allocate costs to Hauled Waste fees. Conceptually, the fees should capture a proportionate share of treatment costs incurred for hauled waste processing at Blue Plains. The fees would consist of a base component calculated to recover the cost of processing domestic strength wastewater plus a pollutant component calculated to recover the costs of mitigating pollutant loadings above domestic strength.

2.1. Test Year Selection

In developing the proposed structure for the hauled waste fees, FY 2016 was selected as the test year, as FY 2016 represents the most recent audited financial reporting and hauled waste data. DC Water is seeking to develop a system-wide approach to fees, so this analysis includes system-wide costs shared by both retail and wholesale customers of Blue Plains.

2.2. Cost of Service

Once the test year was identified, the next step was to identify and allocate costs in a manner consistent with industry standards and practices. The purpose of this step is to determine the actual cost of serving waste haulers, based on the extent to which their contributed pollutant loading drives system operating and capital costs. The cost of service allocation then represents DC Water's revenue requirements associated with the operating costs and capital costs necessary for the utility to accept and treat hauled waste.

An overhead rate was developed by Finance to include indirect cost categories, such as those associated with the Legal, Finance, Board, Customer Service, and Human Resources departments. The overhead rate is added to operating cost allocations to ensure that costs associated with these departments are covered by the Waste Hauler fees. An overhead rate of 48% has been recommended.

2.3. Allocation of Operating Costs

DC Water analyzed all wastewater operating costs to determine the share of those costs to be allocated to treating hauled waste. An overhead rate of 48% was included to capture fixed costs associated with customer service and administrative activities related to accepting hauled waste. The following table details the operating cost allocation by pollutant components and a flow-related component. The flow-related component includes all costs at Blue Plains that are not allocated to pollutant removal.

	cBOD	TN	ТР	TSS	Flow
Operating Cost	\$6,826,863	\$12,729,458	\$4,383,498	\$12,917,168	\$64,813,821
Operating Cost (w OH)	\$10,103,757	\$18,839,598	\$6,487,578	\$19,117,408	\$95,924,454

2.4. Allocation of Capital Costs

DC Water analyzed all Blue Plains capital projects completed since 2000 to determine the share of debt service to be allocated to treating hauled waste. Original project costs were first allocated to treatment of flows and each pollutant. Next, test year audited financial information was reviewed to determine the blended effective interest rate incurred by DC Water. Finally, allocated project costs were converted to an annual cash need equivalent using 30-year levelized debt service. The following table details the debt service allocation by pollutant.

	cBOD	TN	ТР	TSS	Flow
Original BP	\$230	\$655	\$195	\$890	\$1,514
Project Costs	million	million	million	million	million
Annualized	\$10,925,810	\$31,257,473	\$9,207,322	\$42,558,002	\$72.434.217
Debt Service					

The sum of costs shown in Section 2.3 and 2.4 constitute total treatment costs incurred at Blue Plains. In FY 2016, operating costs (including overhead) were approximately \$150 million and capital costs were approximately \$166 million. Total treatment costs were approximately \$317 million.

Section 3: FEE STRUCTURE AND RECOMMENDATIONS

This section of the report discusses fee calculations based on operating and capital cost allocations in the previous section.

3.1. Unit Cost Development

The fees for hauled waste were developed by calculating the annual costs to treat wastewater received at Blue Plains, and dividing those costs by the annual flow or loading totals, to arrive at a per unit cost. Based on this information, a hauled waste fee structure and schedule were developed to appropriately recover the cost of providing hauled waste services. The proposed fee structure allows for additional components, including customized fees for unusual waste or waste from outside the service area.

3.1.1. Units of Service

The units of service were sourced from daily loadings at Blue Plains and converted to annual loadings. The annual totals for the test year are shown in the following table.

Units of					
Service	Flow	cBOD	TN	TP	Solids
Flow/Loading	282 mgd	428,346	93,327 lb/d	9,506 lb/d	321 dtpd
Daily Totals		lb/d			
Flow/Loading	102,930,000	156,346,239	34,064,344	3,469,537	234,330,000
Annual Totals	kgals/yr	lb/yr	lb/yr	lbs/yr	lb/yr

3.1.2. Unit Cost Results

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The unit costs were derived by dividing the annual allocated costs by the annual loadings (measured in pounds) for each pollutant. Unit costs are necessary to determine the costs associated with treating a pound of pollutant in wastewater. The following table highlights the unit costs and unit costs with overhead associated with treating the following pollutants.

Units of					
Service	Flow	cBOD	TN	TP	Solids
Annual	102,930,000	156,346,239	34,064,344	3,469,537	234,330,000
Loading Totals	kgals/yr	lbs/yr	lbs/yr	lbs/yr	lbs/yr
Annual Total Costs (w OH)	\$168,267,672	\$21,029,567	\$50,097,071	\$15,694,900	\$61,675,410
Unit Cost (w OH)	\$1.635 Per kgal	\$0.135 Per lb	\$1.471 Per lb	\$4.524 Per lb	\$0.263 Per lb

3.1.3. Base Cost Component

The base cost component, as defined in Section 2, captures the costs of processing domestic strength wastewater at Blue Plains. It is calculated by summing the costs for flow and

pollutants of about \$317 million from the table above and dividing that by the total annual flow of about 103 million kgals. The resulting base unit cost component for processing 1,000 gallons of domestic strength wastewater at Blue Plains is \$3.08 and is added to the pollutant component calculated below.

3.1.4. Hauled Waste Categorization

DC Water has elected to develop one blended average cost for its high strength hauled waste streams including grease trap waste and septage. In 2016, hauled waste delivered to Blue Plains was comprised of about 75% grease trap waste and 25% septage. Testing on grease trap waste showed that strengths within that waste stream were fairly consistent. Tests on septage waste were fewer in number and showed inconsistent results. Therefore, DC Water has substituted EPA averages for septage strength assumptions in characterizing its blended high strength waste stream. Assumptions for the contributed strength of this high strength waste stream are shown in the table below. Domestic wastewater is shown as a comparison point.

Strength	BOD* (mg/l)	TN (mg/l)	TP (mg/l)	TSS (mg/l)
High Strength	12,766	590	107	19,509
Domestic	300	45	6	300

3.2. Proposed Fee Structure

After determining the costs per unit of service, fees were developed for high strength hauled waste, with the units being cost per thousand gallons (kgal). The table below shows the fee structure for the high strength hauled waste.

	Strength	Domestic	Net	lbs per	Unit Cost	Cost per
			Strength	kgal	(\$/lb)	kgal
BOD *(mg/l)	12,766	300	12,466	103.96	\$0.135	\$13.98
TN (mg/l)	590	45	545	4.55	\$1.471	\$6.68
TP (mg/l)	107	6	101	0.84	\$4.524	\$3.80
TSS (mg/l)	19,509	300	19,209	160.20	\$0.263	\$42.16
Base Component						\$3.08
					Total	\$69.71

*Assumes BOD is equal to cBOD and is equal to one half of COD

The pollutant component is derived from treating high strength wastewater, defined as anything in excess of domestic strength. This must be added to the base component discussed in Section 3.1.3 of \$3.08/kgal, which accounts for treatment of domestic strength wastewater. The result is the total cost of service for treatment of the high strength waste stream equals \$69.71 per kgal.

To the extent that hauled waste is accepted from domestic strength sources, for example holding tanks, it would also be billed at this base component rate. The same rate would be assessed to low strength waste streams such as groundwater.

3.3. Fee Recommendations

Based on the calculations conducted in the previous sections, the recommended fees for high and domestic/low strength hauled waste are shown below. To facilitate efficient customer billing, calculated fees have been rounded to the nearest dollar.

Strength	Fee (per kgal)		
High Strength	\$70.00		
Domestic/Low	3.00		

3.4. Additional Fee Components

3.4.1. Permit Fees

Currently, DC Water charges permit fees for the privilege of being able to discharge hauled wastes. Permit fees are assessed on a "per truck" basis based on the size of the truck. DC Water may choose to keep this permit fee intact and adjust it to recoup costs associated with administering the Hauled Waste Program. The current regulation 21 DCMR 1510.4(b) specifies that "DC Water shall issue an invoice for the applicable Waste Hauler Discharge Permit fees as provided in Chapter 1...and upon payment, shall issue a permit." It is anticipated that the permit fee will be evaluated in the 2018 Cost of Service evaluation and a nominal permit fee of \$30 per vehicle will be established in the interim based on a comparable permit fee utilized by the Upper Occoquan Service Authority.

3.4.2. Customized Fees

Fee development under this methodology allows for DC Water to customize fees in the future based on strength of new waste streams. When an unusual user or waste stream is to be served, a preliminary study of the cost of treatment will be conducted and, assuming that DC Water believes that the materials are acceptable for introduction to the sewer system, used as a basis for determining a customized fee.

3.4.3. Out-Of-Service-Area Charges

DC Water reserves the right to assess Out-Of-Service-Area surcharges for hauled wastes from outside of its Blue Plains retail/wholesale service area. This surcharge would quantify the risk-based and capacity costs for accepting new waste streams.

Section 4: **REVENUE PROJECTIONS**

In FY 2016, DC Water recovered \$472,510 in permit fee revenue from waste haulers. Based on this cost of service analysis and assuming receipt of about 14.0 million gallons of high strength hauled waste and about 5.6 million gallons of low strength hauled waste, the actual cost of providing that service was approximately \$1 million, an under-recovery of over \$500,000 annually. Currently, under-recovery from waste haulers results in additional costs being borne by retail customers. Implementing fee recommendations from this report will allow DC Water to recover the full cost of providing service to waste haulers.

Full, Annual Cost of Service	\$993,223
Actual 2016 Revenue	<u>\$472,510</u>
Over/(Under) Recovery	(\$520,713)
Revenue Under Recommended Fees	<u>\$993,223</u>
Over/(Under) Recovery	\$0

APPENDICES

The following table shows the fees per thousand gallons to treat hauled waste both in the DC Metro area and for utilities in the Mid-Atlantic region.



* applies utility unit costs to DC Water strength assumptions

Final

Chapter 1, WATER SUPPLY, of Title 21, WATER AND SANITATION, of the DCMR is amended as follows:

Section 112, FEES, Subsection 112.6 is amended to read as follows:

112 FEES

112.6 Pretreatment fees shall be as follows:

Waste Hauling - Annual Fee per Vehicle	\$30.00
Waste Hauling Disposal Fee	
High strength grease trap waste	\$0.07 per gallon
High strength septage waste	\$0.07 per gallon
Domestic strength waste	\$0.003 per gallon
Low strength waste	\$0.003 per gallon
Industrial User Permitting Fee	
Permit Initial Fee	\$2,000.00
Permit Renewal Fee	\$600.00
Industrial User Annual Compliance Fee	
Significant or Non-Significant Categorical Industrial User	
1 Outfall	\$2,500.00
2 or more Outfalls	\$3,500.00
Significant Non-Categorical Industrial User	
1 Outfall	\$2,500.00
2 or more Outfalls	\$3,500.00
Non-Significant Non-Categorical User	
1 Outfall	\$550.00
2 or more Outfalls	\$700.00
High Strength Waste Fee (Effective April 1, 2018)	
Biochemical Oxygen Demand (BOD)	\$0.135 per pound
Total Suspended Solids (TSS)	\$0.263 per pound
Total Kjeldahl Nitrogen (TKN) or Total Nitrogen (TN)	\$1.471 per pound
Total Phosphorus (TP)	\$4.524 per pound

Section 199, DEFINITIONS is amended by adding the following terms and definitions to read as follows:

199 DEFINITIONS

High Strength Grease Trap Waste – wastewater from grease traps or interceptors, excluding oil-water interceptors.

High Strength Septage Waste – concentrated domestic wastewater from sources, including but not limited to, portable toilets, septic tanks, and sewage ejector pumps or pits.

Domestic Strength Waste – domestic wastewater that does not exceed the domestic strength wastewater concentrations provided in 21 DCMR § 1511.2.

Low Strength Waste – non-domestic wastewater, including but not limited to, groundwater and stormwater, that does not exceed the domestic strength wastewater concentrations provided in 21 DCMR § 1511.2.

Chapter 15, DISCHARGE TO WASTEWATER SYSTEM, of Title 21, WATER AND SANITATION, of the DCMR, is amended as follows:

Section 1510, HAULED WSTEWATER, is amended in its entirety to read as follows:

1510 HAULED WASTEWATER

- 1510.1 Unless authorized by DC Water, it shall be unlawful for any User to dispose of any hauled wastewater, comprising liquid or solid and liquid wastes, removed from septic tanks, grease abatement systems, portable toilets, or wastes from any other source, anywhere in the District of Columbia except at the Septage Receiving Facility located at the wastewater treatment facility at 5000 Overlook Ave., S.W.
- 1510.2 Any User intending to discharge hauled wastewater in the District of Columbia, shall apply for and obtain a Waste Hauler Discharge Permit.
- 1510.3 The application for issuance of a Waste Hauler Discharge Permit shall be submitted to DC Water at least thirty (30) days prior to discharge for a new permit or the expiration of a current permit and shall include the following information:
 - (a) Name, address, and contact information;
 - (b) Vehicle information for each vehicle used to discharge waste at the DC Water Septage Receiving Facility, including:
 - (1) Make, model and year of the vehicle;
 - (2) Tag number;
 - (3) State of registration;
 - (4) Serial number;
 - (5) Tank capacity;
 - (6) Garage address; and
 - (7) Insurance coverage;
 - (c) Estimated number of loads per week;
 - (d) Services provided (type of waste and service area);

- (e) List of commercial and industrial customers (if applicable) and type of waste or waste source;
- (f) Waste characterization data, if requested by DC Water;
- (g) Operating permits (if applicable); and
- (h) Certification statements (included on the application), signed by an authorized representative in accordance with § 1508.11.
- 1510.4 After evaluation of the information submitted, DC Water may:
 - (a) Deny any application for a Waste Hauler Discharge Permit; or
 - (b) Issue an invoice for the applicable Waste Hauler Discharge Permit fees as provided in chapter 1 of this title, and upon payment, shall issue a Waste Hauler Discharge Permit subject to terms and conditions provided in the Waste Hauler Discharge Permit.
- 1510.5 Upon receiving a Waste Hauler Discharge Permit, the Waste Hauler shall comply with all permit conditions. Discharge of wastewater without a permit shall be prohibited, unless authorized in writing by DC Water.
- 1510.6 Waste Hauler Discharge Permits shall be effective for a period of one (1) year and may contain any or all of the following conditions:
 - (a) Statement of duration;
 - (b) Statement of non-transferability;
 - (c) Load restrictions;
 - (d) Manifest requirements;
 - (e) Right of refusal;
 - (f) Hours of operation, and procedures for discharging outside of the normal hours of operation; and
 - (g) Additional requirements as DC Water may determine.
- 1510.7 Waste Hauler Discharge Permits are not transferable, unless DC Water specifically authorizes in writing.
- 1510.8 The permittee shall notify DC Water immediately if their license plate or registration has changed on any of their permitted vehicles.

- 1510.9 Upon receiving notification from the permittee pursuant to 21 DCMR § 1510.8, DC Water shall issue a revised Waste Hauler Discharge Permit.
- 1510.10 The following waste may not be discharged to the Septage Receiving Facility:
 - (a) Wastes that are not compatible with the District's wastewater treatment process, including, but not limited to, wastewater or additives containing petroleum products, solvents, formaldehyde, or 1,4-dichlorobenzene shall not be discharged at the Septage Receiving Facility.
 - (b) Hazardous wastes or waste from trucks or tanks that previously contained hazardous wastes.
 - (c) Wastes from water or wastewater treatment plants or other nondomestic sources shall not be discharged at the Septage Receiving Facility unless DC Water specifically authorizes in writing. DC Water may require characterization of the discharge prior to authorization to discharge.
 - (d) Waste from water or wastewater treatment plants or other nondomestic sources, except grease trap waste, shall not be mixed with waste from domestic sources.
- 1510.11 The waste hauler shall submit a manifest form to DC Water prior to entering the Blue Plains facility which shall contain the following information on each load:
 - (a) Company name and Waste Hauler Discharge Permit number;
 - (b) Vehicle make, model, and license number;
 - (c) For each source, the customer's name, address and volume of hauled waste;
 - (d) Type of waste(s) (for example grease trap, and septic tank);
 - (e) Total volume of the load; and
 - (f) Driver certification statement.
- 1510.12 Disposal into the Septage Receiving Facility shall be in accordance with the following provisions:

- (a) No waste hauler may discharge without prior written authorization by DC Water.
- (b) Unless exempted by DC Water in writing, all loads shall comply with the District's pretreatment standards as provided in 21 DCMR § 1501;
- (c) DC Water reserves the right to refuse acceptance of any load;
- (d) A waste hauler may be required to provide a waste analysis of any load prior to discharge;
- (e) A waste hauler may be required to cease unloading operations at any time;
- (f) In the case of composite loads, any part of the load that is restricted or prohibited shall make the entire load unacceptable for discharge;
- (g) Upon request, any Waste Hauler shall provide DC Water personnel with access to the wastewater contained in the vehicle for collecting samples or taking instrument readings;
- (h) All haulers shall clean up all spills resulting from their discharge activity at the Septage Receiving Facility;
- (i) Additional expenses may be charged to the hauler if DC Water has to clean up any spills or deposits, unclog the septage discharge lines, or repair damage occurring as the result of the hauler's discharge activity; and
- (j) Additional requirements as specified by DC Water in writing.
- 1510.13 Except as authorized by DC Water, the discharge of truck-hauled wastewater without a permit or in violation of a permit shall be punishable as provided in § 15 of the Act and as provided in 21 DCMR §§ 1513, 1516, and 1517.
- 1510.14 A Waste Hauler Discharge Permit may be suspended, terminated, or denied for good cause including, but not limited to, the following:
 - (a) Information indicating that the permitted discharge poses a threat to the treatment system or DC Water personnel;
 - (b) Violation of any terms or conditions of the Waste Hauler Discharge Permit;

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- (c) Obtaining a Waste Hauler Discharge Permit by misrepresentation or failure to disclose fully, all relevant facts;
- (d) The unauthorized discharge of wastewater from non-domestic sources;
- (e) Denying DC Water personnel access to a vehicle or its contents for purposes of collecting a sample and/or obtaining instrument readings;
- (f) Failure to obtain or maintain appropriate current hauling licenses or permits from Federal, State, or local agencies;
- (g) Failure to pay fees, including late fees, or administrative penalties or fines;
- (h) Falsification of, failure to complete, or failure to fully disclose all relevant facts in any report, manifest form, or record required by the permit or requested by DC Water;
- (i) Failure to comply with an enforcement action issued by DC Water; and
- (j) Failure to clean up a spill or report a blockage.
- 1510.15 Waste Hauling Disposal Fees shall be assessed monthly in accordance with the fee schedule provided in 21 DCMR § 112.6 for each load of hauled wastewater received at the Septage Receiving Facility, based on the volume and type or strength of wastewater discharged.
- 1510.16 DC Water may establish custom waste hauling disposal fees for:
 - (a) Waste generated outside the Blue Plains Service Area.
 - (b) Commercial (other than grease traps or interceptors) and industrial hauled waste based on the waste characteristics and other factors including, but not limited to, potential risk and wastestream variability.
- 1510.17 Custom waste hauler disposal fees may be revised by DC Water, at any time, based on new waste characteristic data and information.
- 1510.18 Additional fees may be assessed for hauled wastewater discharged outside of normal hours of operation, as determined by DC Water.

- 1510.19 DC Water shall determine the volume of wastewater discharged for billing based on either:
 - (a) The actual volume of sewage discharged as determined by a method acceptable to DC Water; or
 - (b) The carrying capacity or a percentage of the carrying capacity of the waste hauler's vehicle, if the actual volume of sewage discharged cannot be determined by a method acceptable to DC Water.
- 1510.20 Users may petition the General Manager to reconsider the issuance, suspension, termination or denial of a Waste Hauler Discharge Permit or the terms or conditions of a Waste Hauler Discharge Permit within fifteen (15) calendar days of the effective date of the Waste Hauler Discharge Permit by submission of a Permit Appeal form. The submission of a Permit Appeal for reconsideration shall not stay compliance with Waste Hauler Discharge Permit conditions.
- 1510.21 Failure to submit a timely Permit Appeal for review shall be deemed to be a waiver of administrative appeal unless DC Water grants a time extension.
- 1510.22 In the Permit Appeal, the User shall indicate the discharge permit provisions objected to, the reasons for the objection, and the alternative condition, if any, it seeks to place in the Waste Hauler Discharge Permit.
- 1510.23 The General Manager will review and make a final decision on the Permit Appeal. The General Manager will send the User the final decision.
- 1510.24 If the Permit Appeal is denied by the General Manager or the User is not satisfied with the General Manager's final decision, the User may appeal the Permit Appeal decision as set forth in 21 DCMR § 1519 by filing a petition for an administrative hearing within fifteen (15) calendar days of the date of the General Manager's decision. The petition for an administrative hearing shall be filed in accordance with the requirements set forth in 21 DCMR § 412.

Section 1511, HIGH-STRENGTH WASTE FEE, is amended to read as follows:

1511 HIGH-STRENGTH WASTE FEE

- 1511.1 Permitted Significant Industrial Users discharging high strength wastewater into the District's wastewater system shall be assessed a highstrength waste fee, in addition to the normal sewer charges, which are based on the volume of wastewater discharged and average daily concentration for the high strength waste constituent.
- 1511.2 The high-strength waste fee shall be applied to those permitted discharges whose average daily concentration exceeds one (1) or more of the following domestic strength wastewater concentrations:
 - (a) Biochemical Oxygen Demand (BOD) of three hundred milligrams per liter (300 mg/L) or Chemical Oxygen Demand (COD) of six hundred milligrams per liter (600 mg/L);
 - (b) Total Suspended Solids (TSS) of three hundred milligrams per liter (300 mg/L);
 - (c) Total Kjeldahl Nitrogen (TKN) or Total Nitrogen (TN) of fortyfive milligrams per liter (45 mg/L); and
 - (d) Total Phosphorus (TP) of six milligrams per liter (6 mg/L).
- 1511.3 High-strength waste fees may be applied to additional constituents for other high strength wastewater based on criteria determined by DC Water, which shall be computed in a similar manner provided in 21 DCMR § 1511.4.
- 1511.4 The high-strength waste fee shall be computed using the following formula for those constituents exceeding the values specified in 21 DCMR § 1511.2:

High-strength waste fee = V x 8.34 x [FB (AB-300 or $\frac{1}{2}(AC-600))$ + FS (AS-300) + FN (AN-45) + FP (AP-6)]

Where:

- V = volume of sewage in millions of gallons discharged by the Significant Industrial User during the billing period.
- FB = the cost for treating BOD or COD expressed in dollars/pound.

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- AB = the average daily concentration of BOD in the sewage discharged expressed in mg/L.
- AC = the average daily concentration of COD in the sewage discharged expressed in mg/L.

Use the higher value of AB-300 or $\frac{1}{2}$ (AC-600).

FS = the cost for treating TSS expressed in dollars/pound.

AS = the average daily concentration of TSS in the sewage discharged expressed in mg/L.

FN = the cost for treating TKN or TN expressed in dollars/pound.

AN = the average daily concentration of TKN or TN in the sewage discharged expressed in mg/L.

FP = the cost for treating TP expressed in dollars/pound.

AP = the average daily concentration of TP in the sewage discharged expressed in mg/L.

- 1511.5 The cost for treating each high-strength waste constituent shall be determined by DC Water as provided in 21 DCMR § 112.6.
- 1511.6 The volume of sewage from the Significant Industrial User shall be determined based upon either:
 - (a) Metered or estimated water consumption for the billing period; or
 - (b) Metered or estimated wastewater discharge entering the sewer system.
- 1511.7 If estimated flows are used, the procedure for determining the flows shall be submitted by the Significant Industrial User and approved by DC Water.
- 1511.8 If metered wastewater discharge to the sewer system is used, the Significant Industrial User shall provide and maintain at their own expense, metering facilities as required to indicate accurately, to the satisfaction of DC Water, the volume of discharge to the sewer system.
- 1511.9 Flow data shall be submitted to DC Water in a format and content acceptable to DC Water monthly or at a frequency specified by DC Water.
- 1511.10 If wastewater flow data provided by the Significant Industrial User is not submitted to DC Water by the specified date, DC Water may calculate the high-strength waste fee using the metered water consumption.

- 1511.11 The average daily concentration of each constituent shall be in a format and content specified by DC Water and submitted monthly or at a frequency specified by DC Water.
- 1511.12 The average daily concentration shall be based on one or more of the following:
 - (a) All sampling and analysis results from sampling conducted by DC Water during the assessment period.
 - (b) All sampling and analysis results from sampling conducted by the Significant Industrial User during the assessment period, or as specified by DC Water, that DC Water determines is characteristic of the overall nature of such discharge.
 - (c) Historical records for the Significant Industrial User or other Significant Industrial Users having similar discharge characteristics.
- 1511.13 A Significant Industrial User may challenge the high-strength waste fee assessment or appeal the General Managers final decision in accordance with the procedures set for in chapter 4 of this title.

Chapter 15, DISCHARGE TO WASTEWATER SYSTEM, of Title 21, WATER AND SANITATION, of the DCMR is amended as follows:

Subsection 1501.10 is amended to read as follows:

1501.10 An Industrial User facility that practices dentistry shall comply with the regulations in 40 C.F.R. Part 441, the Dental Office Point Source Category, and the requirements set forth in section 1520 of this chapter, as applicable.

Chapter 15 is amended by adding a new section 1520, DENTAL AMALGAM PRETREATMENT STANDARDS, to read as follows:

1520 Dental Amalgam Pretreatment Standards

- 1520.1 Except as provided in subsections 1520.2 and .3, the requirements of this section shall not apply to the following exempt Dental Dischargers that:
 - (a) Exclusively practice one or more of the following dental specialties: Oral pathology, oral and maxillofacial radiology, oral and maxillofacial surgery, orthodontics, periodontics, or prosthodontics;
 - (b) Discharge wastewater from a mobile unit operated by a dental practitioner; or
 - (c) Do not discharge any amalgam process wastewater to the District's wastewater system, such as dental dischargers that collect all dental amalgam process wastewater for transfer to a Centralized Waste Treatment facility as defined in 40 C.F.R Part 437.
- 1520.2 All active facilities that practiced dentistry in the District of Columbia on or before July 14, 2017, shall submit a Dental Discharge Questionnaire to DC Water by July 14, 2018.
 - (a) The Dental Discharge Questionnaire, as provided by DC Water, shall include: the facility name, physical address, mailing address, contact information, name of all dental practitioners and owners, type of dental facility, current dental amalgam placement and removal information, discharge information, and signature.
 - (b) The Dental Discharge Questionnaire and all other records and documents shall be submitted to:

District of Columbia Water and Sewer Authority Wastewater Treatment/Pretreatment Program Manager 5000 Overlook Avenue, S.W. Washington, D.C. 20032

- 1520.3 Dental Dischargers that do not place dental amalgam, and do not remove amalgam except in limited emergency or unplanned, unanticipated circumstances, and submit the required One-Time Compliance Report to DC Water as required in 21 DCMR § 1520.6(c)(1) are exempt from any further requirements of this section.
- 1520.4 Any Existing Dental Discharger subject to the requirements of this section shall achieve the following pretreatment standards by July 14, 2020, except as provided in 21 DCMR §§ 1520.4(a)(1) (iii) and (v), and (2)(vi):
 - (a) Removal of dental amalgam solids from all amalgam process wastewater by one of the following methods:
 - (1) Installation, operation, and maintenance of one or more amalgam separators that meet the following requirements:
 - (i) Compliant with either the American National Standards Institute (ANSI) American National Standard/American Dental Association (ADA) Specification 108 for Amalgam Separators (2009) with Technical Addendum (2011) or the International Organization for Standardization (ISO) 11143 Standard (2008) or subsequent versions so long as that version requires amalgam separators to achieve at least a 95% removal efficiency. Compliance must be assessed by an accredited testing laboratory under ANSI's accreditation program for product certification or a testing laboratory that is a signatory to the International Laboratory Accreditation Cooperation's Mutual Recognition Arrangement. The testing laboratory's scope of accreditation must include ANSI/ADA 108–2009 or ISO 11143.
 - (ii) The amalgam separator(s) must be sized to accommodate the maximum discharge rate of amalgam process wastewater.
 - (iii) A Dental Discharger that operates an amalgam separator part that was installed at a dental facility prior to June 14, 2017, satisfies the requirements of paragraphs 1520.4(a)(1)(i) and (ii) of this section until the existing separator is replaced as described in paragraph 1520.4(a)(1)(v) of this section or until June 14, 2027, whichever is sooner.
 - (iv) The amalgam separator(s) must be inspected in accordance with the manufacturer's operating manual to ensure proper operation and maintenance of the separator(s) and to confirm that all amalgam process wastewater is flowing through the amalgam retaining portion of the amalgam separator(s).

- (v) In the event that an amalgam separator is not functioning properly, the amalgam separator must be repaired consistent with manufacturer instructions or replaced with a unit that meets the requirements of paragraphs 1520.4(a)(1)(i) and (ii) of this section as soon as possible, but no later than 10 business days after the malfunction is discovered by the Dental Discharger, or an agent or representative of the dental discharger.
- (vi) The amalgam retaining units must be replaced in accordance with the manufacturer's schedule as specified in the manufacturer's operating manual or when the amalgam retaining unit has reached the maximum level, as specified by the manufacturer in the operating manual, at which the amalgam separator can perform to the specified efficiency, whichever comes first.
- (2) Installation, operation, and maintenance of one or more amalgam removal device(s) other than an amalgam separator. The amalgam removal device must meet the following requirements:
 - Removal efficiency of at least 95 percent of the mass of solids from all amalgam process wastewater. The removal efficiency must be calculated in grams recorded to three decimal places, on a dry weight basis. The removal efficiency must be demonstrated at the maximum water flow rate through the device as established by the device manufacturer's instructions for use;
 - (ii) The removal efficiency must be determined using the average performance of three (3) samples. The removal efficiency must be demonstrated using a test sample of dental amalgam that meets the following particle size distribution specifications: 60 percent by mass of particles that pass through a 3150 μ m sieve but which do not pass through a 500 μ m sieve, 10 percent by mass of particles that pass through a 500 μ m sieve but which do not pass through a 100 μ m sieve, and 30 percent by mass of particles that pass through a 100 μ m sieve. Each of these three specified particle size distributions must contain a representative distribution of particle sizes;
 - (iii) The device(s) must be sized to accommodate the maximum discharge rate of amalgam process wastewater;

- (iv) The devices(s) must be accompanied by the manufacturer's manual providing instructions for use including the frequency for inspection and collecting container replacement such that the unit is replaced once it has reached the maximum filling level at which the device can perform to the specified efficiency;
- (v) The device(s) must be inspected in accordance with the manufacturer's operation manual to ensure proper operation and maintenance, including confirmation that amalgam process wastewater is flowing through the amalgam separating portion of the device(s);
- (vi) In the event that a device is not functioning properly, it must be repaired consistent with manufacturer instructions or replaced with a unit that meets the requirements of paragraphs 1520.4(a)(2)(i) through (iii) of this section as soon as possible, but no later than 10 business days after the malfunction is discovered by the dental discharger, or an agent or representative of the dental discharger;
- (vii) The amalgam retaining unit(s) of the device(s) must be replaced as specified in the manufacturer's operating manual, or when the collecting container has reached the maximum filling level, as specified by the manufacturer in the operating manual, at which the amalgam separator can perform to the specified efficiency, whichever comes first; and.
- (viii) The demonstration of the device(s) under paragraphs 1520.4(a)(2)(i) through (iii) of this section must be documented in the One-Time Compliance Report.
- (b) Implementation of the following best management practices (BMPs):
 - (1) Waste amalgam including, but not limited to, dental amalgam from chairside traps, screens, vacuum pump filters, dental tools, cuspidors, or collection devices, must not be discharged to the District's wastewater system;
 - (2) Dental unit water lines, chair-side traps, and vacuum lines that discharge amalgam process wastewater to the District's wastewater system must not be cleaned with oxidizing or acidic cleaners, including but not limited to bleach, chlorine, iodine and peroxide that have a pH lower than 6 or greater than 8;

- (3) Dental chairside traps, vacuum screens, and amalgam separator equipment must not be rinsed in a sink, toilet or into any other sanitary discharge connection;
- (4) Dental Discharge facility staff must be trained in the handling and disposal of mercury amalgam materials and waste. Training shall be completed within one year for new hires and all staff shall be retrained once every three (3) years; and
- (5) The storage, handling and disposal/recycling of all amalgam waste must be in accordance with District of Columbia, state and federal requirements.
- 1520.5 Effective July 14, 2017, any New Dental Discharger subject to the requirements of this section must comply with the requirements of 21 DCMR §§ 1520.4(a) and (b) and the reporting and recordkeeping requirements of 21 DCMR §§ 1520.6 and .7.
- 1520.6 Dental Dischargers subject to the requirements of this section must comply with the following reporting requirements:
 - (a) One-Time Compliance Report deadlines:
 - (1) For an Existing Dental Discharger, a One-Time Compliance Report must be submitted to DC Water no later than October 12, 2020, or 90 calendar days after a transfer of ownership.
 - (2) For a New Dental Discharger, a One-Time Compliance Report must be submitted to DC Water no later than 90 calendar days following the first introduction/discharge of wastewater into the District's wastewater system.
 - (b) Signature and Certification. The One-Time Compliance Report must be signed and certified by a responsible corporate officer, a general partner or proprietor if the dental discharger is a partnership or sole proprietorship, or a duly authorized representative as defined in 21 DCMR § 1599.
 - (c) The contents of the One-Time Compliance Report shall be as follows:
 - (1) The One-Time Compliance Report, as provided by DC Water, for Dental Dischargers subject to the requirements of this section that do not place or remove dental amalgam as described at 21 DCMR § 1520.3 must include the: facility name, physical address, mailing address, contact information, name of the operator(s) (dental practitioners) and owner(s); and a certification statement that the dental discharger does not place dental amalgam and does not remove amalgam except in limited circumstances.

- (2) The One-Time Compliance Report, as provided by DC Water, for Dental Dischargers subject to the requirements of this section must include:
 - (A) The facility name, physical address, mailing address, and contact information;
 - (B) Name(s) of the operator(s) (Dental practitioners) and owner(s);
 - (C) A description of the operation at the dental facility including: The total number of chairs, the total number of chairs at which dental amalgam may be present in the resulting wastewater, and a description of any existing amalgam separator(s) or equivalent device(s) currently operated to include, at a minimum, the make, model, year of installation;
 - (D) Certification that the amalgam separator(s) or equivalent device is designed and will be operated and maintained to meet the requirements specified in 21 DCMR § 1520.4(a);
 - (E) Certification that the Dental Discharger is implementing BMPs specified in 21 DCMR § 1520.4(b) and will continue to do so;
 - (F) The name of the third-party service provider that maintains the amalgam separator(s) or equivalent device(s) operated at the dental office, if applicable. Otherwise, a brief description of the practices employed by the facility to ensure proper operation and maintenance in accordance with 21 DCMR § 1520.4(a).
- (d) Replacement of amalgam separator or equivalent device. Existing and New Dental Dischargers shall submit an amended One-Time Compliance Report to DC Water no later than 90 days after replacement, if the amalgam separator or equivalent device is replaced after the submittal of the One-Time Compliance Report.
- (e) Transfer of ownership notification. If a Dental Discharger transfers ownership of the facility, the new owner must submit a new One-Time Compliance Report to DC Water no later than 90 days after the transfer.
- 1520.7 Dental Dischargers subject to the requirements of this section must comply with the following document retention requirements:

- (a) As long as a Dental Discharger subject to this section is in operation, or until ownership is transferred, the Dental Discharger or an agent or representative of the Dental Discharger must maintain the One-Time Compliance Report required in subsection 1520.6 of this section and make it available for inspection in either physical or electronic form.
- (b) Dental Discharger or an agent or representative of the Dental Discharger must maintain and make the following documents available for inspection in either physical or electronic form, for a minimum of three years or until updated, whichever is longer:
 - (1) Documentation of the date, person(s) conducting the inspection, and results of each inspection of the amalgam separator(s) or equivalent device(s), and a summary of follow-up actions, if needed.
 - (2) Documentation of amalgam retaining container or equivalent container replacement (including the date, as applicable).
 - (3) Documentation of all dates that collected dental amalgam is picked up or shipped for proper disposal in accordance with 40 C.F.R § 261.5(g)(3) (Special requirements for hazardous waste generated by conditionally exempt small quantity generator) and 20 DCMR § 4261.7, and the name of the permitted or licensed treatment, storage or disposal facility receiving the amalgam retaining containers.
 - (4) Documentation of any repair or replacement of an amalgam separator or equivalent device, including the date, person(s) making the repair or replacement, and a description of the repair or replacement (including make and model).
 - (5) The manufacturers operating manual for the current device.
 - (6) Documentation of staff training and retraining, including the name of the staff person and date of training.

Section 1599, DEFINITIONS, is amended by deleting the term WASA and adding the following terms and definitions to read as follows:

1599 **DEFINITIONS**

Amalgam Process Wastewater - any wastewater generated and discharged by a Dental Discharger through the practice of dentistry that may contain dental amalgam.

Amalgam Separator - a collection device designed to capture and remove dental amalgam from the amalgam process wastewater of a dental facility.

DC Water or WASA – the District of Columbia Water and Sewer Authority.

Dental Amalgam - an alloy of elemental mercury and other metal(s) that is used in the practice of dentistry.

Dental Discharger - a facility where the practice of dentistry is performed, including, but not limited to, institutions, permanent or temporary offices, clinics, home offices, and facilities owned and operated by Federal, state or local governments, that discharges wastewater to a publicly owned treatment works (POTW).

Duly Authorized Representative – the individual designated by the responsible corporate officer or a general partner or proprietor if the Industrial User submitting the reports section is a partnership, or sole proprietorship respectively, if:

- (a) The authorization is made in writing by the responsible corporate officer or a general partner or proprietor;
- (b) The authorization specifies either an individual or a position having responsibility for the overall operation of the facility from which the Industrial Discharge originates, such as the position of facility of plant manager, or a position of equivalent responsibility, or having overall responsibility for environmental matters for the company; and
- (c) The written authorization is submitted to the DC Water.

Existing Dental Discharger - a dental discharger that is not a new source that discharged to the District's wastewater system on or before July 14, 2017.

Mobile Unit - a specialized mobile self-contained van, trailer, or equipment used in providing dentistry services at multiple locations.

New Dental Discharger - a dental discharger whose first discharge to the District's wastewater system occurs after July 14, 2017.