

**HIGH PRESSURE / HIGH VACUUM CLEANING**  
**ATTACHMENT A1 - SCOPE OF WORK**  
**20-PR-WWT-45**

**1. BACKGROUND**

DC Water is an independent multi-jurisdictional regional utility that provides drinking water, wastewater collection and treatment to more than 672,000 residential, commercial and governmental customers in the District of Columbia, and collects and treats wastewater for an additional 1.6 million customers in Montgomery and Prince Georges counties in Maryland and Fairfax and Loudoun counties in Northern Virginia.

DC Water is seeking an experienced vendor (Contractor) to provide High Pressure and High Vacuum Cleaning Services to structures and equipment located at DC Water’s Blue Plains Advanced Waste Water Treatment Plant (BPAWWTP) facilities. The Contractor shall be required to provide specific equipment, personnel, management and safety controls while performing High Pressure and High Vacuum Cleaning Services at DC Water facilities.

**2. CONTRACTOR MINIMUM QUALIFICATIONS**

The Contractor **must** possess and **demonstrate** the following minimum qualifications:

- The Contractor must demonstrate that they regularly engaged in the type of work required and possess a minimum of three (5) years’ experience providing similar services.
- The Contractor’s Site Supervisor(s) must each have a minimum of 3 years of relevant experience and shall be Confined Space Certified, as well as certified in First Aid and CPR.

**3. GENERAL PROVISIONS AND MINIMUM REQUIREMENTS:**

- 3.1. All work shall be performed under the direction of DC Water’s Contracting Officer’s Technical Representative (COTR).
- 3.2. The specifications provided herein shall be used as Minimum Guidelines to provide the required services. The Contractor shall provide services such as high pressure cleaning and high vacuum cleaning/removal. The Contractor may also be assigned to clean an area of the facility that is in need of immediate attention, e.g. due to a spill, line breakage, etc. The quality of cleaning must be maintained so that only the original surface of the structure or equipment remains after cleaning. Cleaning may include, but not be limited to the complete removal of all debris, dirt, scum, grease, solids, trash, or any other material identified for removal.
- 3.3. The Contractor shall assign a designated Project Manager, or designee, who must be available 24 hours a day, 7 days a week to receive notification from DC Water. A Department of Wastewater Treatment (DWT) representative shall provide notification of need with a work order at least 24 hours prior to the need, when possible.
- 3.4. Occasionally, the Contractor shall be contacted to provide emergency services after regular business hours, weekends, nights and holidays. The equipment shall be available at special requests for services at all times within four (4) hours of receiving notification from DC Water of emergency services needed. The Contractor shall work a four (4) hour minimum each time services are requested under these terms.

- 3.5. The commercial water blast equipment and High Vacuum truck and equipment shall be available at the BPAWWTP from 7:00 A.M. to 4:00 P.M., Monday through Friday, within 24 hours' notice, for regular non-emergency work.
- 3.6. DC Water will direct the Contractor by work order for services required. All work shall only be conducted based on a daily signed work order request from the Department of Wastewater Treatment Manager, General Foreman or COTR.
- 3.7. If an operational issue arises with the Contractor's equipment while work is being performed, the Contractor shall have twenty-four (24) hours to replace the equipment with new equipment and continue operation. Any downtime will not be charged to DC Water.
- 3.8. The scope of work as defined below are based as conditions warrant. DC Water reserves the right to revise the scope and negotiate a new price schedule as needed.

**4. EQUIPMENT REQUIREMENTS:**

- 4.1. The Contractor shall provide and maintain all necessary equipment for the completion of all required tasks. Prior to commencing each cleaning project, the contractor shall provide a list of equipment to be used for the project for review by DC Water.
- 4.2. The Contractor shall provide a vehicle for mobilizing hoses, light equipment and accessories for each job. Hoses, equipment and accessories cannot be stored inside DC Water buildings or outside on the grounds of the plant. They must be stored in an onsite truck/trailer or offsite and delivered for use before 7:00 A.M. each work day. If available, DC Water may provide an approved designated area that the Contractor's may use for storage while performing work that is considered longterm. The Contractor shall properly secure supplies and equipment to prevent theft. Responsibility for use and/or replacement of supplies and equipment is solely on the Contractor.
- 4.3. The Contractor shall properly secure hoses when not in use. The Contractor may use DC Water's hoses, if the hoses are already in the area where they are needed (i.e. the Contractor may not move DC Water's hoses to other areas); otherwise the Contractor is responsible for providing all hoses.
- 4.4. The Contractor shall properly store all chemicals supplied or chemicals brought onto the job site. Segregation of incompatible materials is required. The Contractor shall provide Safety Data Sheet (SDS) and a chemical storage and handling plan for each chemical to be stored on site for purposes of performing work.
- 4.5. The Contractor shall provide all appropriate Personal Protective Equipment (PPE) to its employees. Suitable eye, ear, hand, foot, respiratory and other protection shall be provided while performing work, by DC Water policy, or by laws or regulations when it is indicated by prudent work safety practice. The Contractor shall also provide Hydrogen Sulfide (H<sub>2</sub>S) detectors to all employees performing work in areas of where known H<sub>2</sub>S containments exist. For the duration of the coronavirus pandemic, the Contractor shall practice social distancing as appropriate.
- 4.6. The Contractor shall use either the roll can station area 'pit' or the septage receiving station for disposal of the material they vacuum from our site. For each vacuumed load of material that will be dumped into the roll can station, the following must occur:

- A. All material that is inorganic (grit, rags, screenings, etc.) shall be decanted at the septic station and then dumped into the pit area.
- B. The Contractor is responsible for cleaning up any spill residuals at the dump area.
- C. All sludge/scum (organic only) material shall be liquefied and then dumped into the septage receiving station.

**5. COMMERCIAL MULTI-PRESSURE WATER BLAST EQUIPMENT UNIT DRIVER /OPERATOR AND PERSONNEL:**

- 5.1. The Contractor shall provide on request, one (1) driver/operator (must possess a valid Commercial Driver's License (CDL)), one (1) personnel and one (1) commercial multi-pressure water blast equipment- providing a range of pressures and flows from a minimum of 5000 per square inch (psi) and to a maximum of 25,000 psi and cleaning nozzles designed for the specific cleaning task.
- 5.2. The Contractor's personal and equipment must arrive at the designated job site on the dates/times requested by the COTR starting as early as at 7:00 A.M. until 4:00 P.M. Monday through Friday, with a 24 hour notice.
- 5.3. The Contractor shall bring the high multi pressure water blasting equipment to the job site and position the equipment as close to the project as possible. The Contractor shall provide the length of hose as needed for each cleaning project.
- 5.4. High-pressure water blast equipment and a vacuum truck may be needed simultaneously. The Contractor shall provide the high velocity water blasting when requested for removing accretions in the designated work area. This equipment can also be used in combination with high-powered vacuum equipment to clear pipes in diameters of 2" to 54", clogged or blocked with debris. DC Water may also request the cleaning of channels, wet wells, pumping stations, sewer lines, tanks, hoppers and surfaces of various sizes and shapes. The high pressure water shall break up the debris, while the vacuum truck sucks up the material into the large holding tank, leaving a clean product without washing the debris further down the line. Therefore, both types of equipment shall be available when requested within a 24 hour notice, allowing both the high pressure and vacuum truck to be used simultaneously.
- 5.5. The Contractor shall provide all equipment accessories needed for efficient and effective cleaning. Accessories shall include adequate jet nozzles, adapters, wands, etc., in the proper shape, material and size for the job.
- 5.6. All Contractor personnel operating high pressure equipment shall be thoroughly trained by the Contractor on safe work practices and exercise safe working conditions while operating the equipment at BPAWWTP at all times.
- 5.7. Occasionally, emergency services may be required on weekends, and holidays. The operators and personnel shall be available by special requests for cleaning at all times within the four (4) hour notification the COTR, or designee. The Contractor shall work a four (4) hour minimum each time service are requested on an emergency basis.

**6. COMMERCIAL HIGH VACUUM WET/DRY TRUCK AND DRIVER/OPERATOR AND PERSONNEL:**

- 6.1. The Contractor shall provide one (1) licensed driver/operator (must possess a valid Commercial Driver's License (CDL)), one (1) personnel and one (1) commercial high vacuum wet/dry truck with ground

clearance so that the unit can dump directly into a twenty (20) or thirty (30) cubic foot dumpster/container located in the pit/ roll can station area by East Grit Screens Loading Station.

- 6.2. The Contractor's personnel and equipment must arrive at the designated job sit on the dates/times requested by the COTR starting as early as at 7:00 A.M. until 4:00 P.M. Monday through Friday, with a 24 hour notice.
- 6.3. The Contractor shall bring the high vacuum equipment to the job site and position the equipment as close to the project as possible. The Contractor shall provide the length of hose as needed for each cleaning project. All equipment must be removed at the end of the task.
- 6.4. The Contractor shall provide all equipment accessories needed for efficient and effective cleaning. Accessories shall include adequate hose, couplings, hand tools, etc... in the proper shape, material and size for the job. DC Water may also request the cleaning of channels, wet wells, pumping stations, sewer lines, tanks, hoppers and surfaces of various sizes and shapes.
- 6.5. All contractor personnel operating high vacuum equipment shall be thoroughly trained by the Contractor on safe work practices and exercise safe working conditions while operating the equipment at BPAWWTP at all times.
- 6.6. The Contractor shall provide additional personnel only when requested and pre-approved by DC WATER. A total of up to three (3) additional personnel may be required when DC Water has special vacuum cleaning projects requiring additional personnel and equipment. There must be at all times at a minimum, one (1) driver/operator per vacuum truck possessing a valid CDL.
- 6.7. Occasionally, emergency services shall be required after normal business hours on weekdays, on weekends and holidays. An operator and personnel shall be available by special request for cleaning at all times with a four (4) hour notification from their Project Manager. The Contractor shall work a four (4) hour minimum.
- 6.8. The Contractor shall ensure that each vacuumed load of material is decanted at the septic receiving station or designated location on the BPAWWTP facility, as specified on the work order.
- 6.9. If the contractor dumps material into the pit/ roll can station with free water, the contractor is required to vacuum and remove all material from the pit, decant this material and then dump it back into the pit again at no cost to DC Water.

**7. VACUUM TRUCK AND PERSONNEL TO REMOVE GRIT FROM SEDIMENTATION TANK:**

- 7.1. The Contractor shall provide one (1) licensed driver/operator (must possess a valid Commercial Driver's License (CDL)), one (1) personnel and one (1) commercial high vacuum wet/dry truck to remove all grit from the bottom of grit sedimentation tanks. This service shall consist of the cleaning of one (1) of 16 grit sedimentation chambers/tanks at a time as requested by work order. There may be several grit chambers that need to be cleaned at one time, particularly after a storm event, therefore continuing the work until all need tanks are cleaned of grit. The chambers are part of DC Water's preliminary processes and are located in both East and West grit chamber buildings.
- 7.2. The cleaning of each grit tank shall be directed only by a work order. All work shall be conducted based on a signed work order request from DC Water.

- 7.3. The following provides additional details for working within grit chamber tanks:
- A. The Contractor shall access the tank as a permit confined space and adhere to OSHA regulations for working in permit required confined spaces. The contractor shall provide all needed training for entry in to grit chambers. Each entrant shall be equipped retrieval equipment such as a body harness with a retrieval line.
  - B. Before entry into the grit chamber, the Supervisor or attendant shall monitor and test the air inside the tank prior to entry. All necessary and reasonable personal protection equipment shall be worn.
  - C. Additional safety equipment required:
    - i. Retrieval tripod and line for rescuing personnel.
    - ii. Air blower(s) with lengths of hose needed to provide fresh air from outside to the inside of the grit chamber.
    - iii. Air monitoring device with a backup meter shall be on hand. All monitors shall be properly calibrated and maintained.
    - iv. Contractor must provide explosion proof fixture /extension cord plug(s) pigtail with twist lock for use in the grit chamber area.
    - v. Respirators with cartridges rated for hydrogen sulfide may be required if exposure limits fluctuate during the cleaning process or if DWT Operations staff are unable to further reduce exposure.
  - D. The Contractor shall remove all sediment and debris from the tank and channel with a vacuum truck. The sediment shall be vacuumed without additional water added. Contractor will also bag up and remove any large debris that cannot be vacuumed.
  - E. DC Water shall inspect and verify cleaning.

**8. VACCU TRUCK/ HIGH PRESSURE EQUIPMENT TO CLEAN CAMBI SYSTEM:**

- 8.1 The Contractor shall provide one (1) licensed driver/operator (must possess a valid Commercial Driver's License (CDL)), one (1) personnel, (1) commercial high vacuum wet/dry truck and one (1) high pressure equipment to sludge from bottom and sides of Cambi reactor tanks, flash tank and pulper. This service shall consist of the cleaning of one (1) pulper, six (6) Cambi reactors and one (1) flash tank, and associated steam lines as requested by a scheduled work order. There may be two pieces of equipment running at the same time during this cleaning.
- 8.2 The following provides additional details for working within the Cambi system:
- A. The Contractor shall access the inside of each vessel as a non-permitted confined space and adhere to OSHA regulations.
  - B. The Contractors equipment for High Pressure cleaning will be suspended down from the top opening of the Cambi reactors and attachments shall spin to scour the interior of the tank walls.

- C. For scouring inside of the tanks, the High-Pressure equipment must be able to produce a minimum of 10 psi, ideal and preferred conditions are 12-15psi.
- D. The High-Pressure equipment will also be used manually with a handheld adapter for cleaning the interior walls of the flash tank and pulper as well as the steam lines on the exterior of the tanks. This preferred psi is between 5-8.
- E. The Contractor shall adhere to all safety protocols for use when working with High-Pressure equipment including personal protective equipment and signage.
- F. Debris will be vacuumed from the bottom of each tank. The contractor will also bag up and remove any large debris that cannot be vacuumed.
- G. DC Water shall inspect and verify cleaning.

**9. SUPERVISION:**

- 9.1. The Contractor shall designate a staff person who will function as the coordinator and on-site Supervisor of on-site staff. During scheduled and unscheduled absences of the primary Supervisor, the Contractor shall provide a back-up on-site Supervisor.
- 9.2. The Supervisor shall be available during all hours of operation.
- 9.3. The Supervisor shall have the oral and written skills to effectively and professionally communicate with DC Water staff and other Contractors as well as and the Contractor's on-site staff.
- 9.4. The Supervisor shall be able to utilize a computer with general Microsoft office applications and email phone messaging services for reporting and communication with the COTR and other DC Water personnel.
- 9.5. The Supervisor will be expected to track all time for the Contractor's employees. Any delays or necessary prolonged worktime must be brought to the attention of and approved by the COTR. These times will be noted and adjusted in the daily work order activity for the crew and will be reflected on the monthly invoice.
- 9.6. For safety purposes, each of the Contractor's employees must be in contact with the on-site Supervisor at all times via radio or cell phone.
- 9.7. The Contractor's Supervisor will at times be required to participate in equipment lockout along with DC Water.

**10. CONTRACTOR PERSONNEL:**

- 10.1. Contractor personnel assigned to perform the required industrial cleaning tasks must be physically fit, able to lift 50lbs; and must be able to work safely in the vicinity of machinery that can start automatically, as well as around 120+ volt electrical panels and equipment.

- 10.2. The Contractor shall utilize skilled and productive personnel to satisfactorily provide the required level of service specified herein. Failure on the part of the Contractor to utilize skilled and productive manpower may produce unsatisfactory results which may cause DC Water to make adjustments to the Contractor's performance evaluation for unsatisfactory or omitted work.
- 10.3. Personnel are required to be at the work site at the designated work time. Contract personnel should arrive 15 minutes early to gear up, check equipment, etc. Extended delays in start time or early stop times will be communicated to the Program Manager and will be reflected in the contract performance evaluation.
- 10.4. Within ten (10) calendar days after contract award the Contractor must submit a listing of all persons employed under this contract. The Contractor must obtain written approval from the COTR prior to effecting any changes in the workforce.
- 10.5. Personnel employed by the Contractor who will be working at BPAWWTP shall be required to obtain a security clearance (ID badge) through DC Water's Department of Security.
- 10.6. The Contractor shall obtain for each employee a DC Water ID badge and parking sticker as needed, which shall be prominently displayed at all times while they are on the work site.
- 10.7. The Contractor shall instruct and ensure that all persons employed under this contract will only engage in activities related to the performance of their duties as described in these specifications.
- 10.8. The Contractor's personnel shall be supervised at all times while performing work under this contract. The Contractor's personnel shall be instructed to not take unscheduled / unauthorized breaks, sit in DC Water office spaces or other DC Water personnel areas. Contractors shall not use DC WATER telephones for personal / nonemergency uses, watch television, drink alcohol, sleep, smoke (unless in a designated area) or gamble while on duty.
- 10.9. DC Water reserves the right to remove any Contractor personnel from any of its facilities, whose conduct DC Water determines to be unacceptable.
- 10.10. DC Water Security personnel are authorized to inspect the contents of pocketbooks, handbags, vehicles or other containers of Contractor's employees when they are entering and exiting DC Water facilities. The Contractor shall be required to make full restitution to DC Water for acts of thefts or vandalism when sufficient evidence indicates that employee(s) of the Contractor committed such acts.

**11. CONFINED SPACE:**

- 11.1. The Contractor shall provide the needed equipment and trained personnel to safely and effectively work in confined spaces. These spaces may contain hydrogen sulfide and other hazardous gases as a result of raw sewage aeration. Confined spaces may be permitted and or non permitted.
- 11.2. The Contractor shall furnish to all employees, assigned to work with the vacuum truck or water blast equipment or enter/operate in confined workspace the following:
  - A. All necessary Personal Protection Equipment (PPE), i.e. masks, gas filtering cartridges, personal monitoring device, gloves, Tyvek suits, hard hat, eye protection, hearing protection and boots as listed in Contractor's safety plan.

- B. An instrument which continuously measures the amount of hydrogen sulfide gases in the air and displays the measurements and gives visible and audible alarms of an unsafe concentration.
- C. An instrument which continuously measures the amount of ammonia gases in the air and displays the measurement and gives visible and audible alarms of an unsafe concentration.
- D. The same instrument or a combination of instruments furnished by the Contractor must also be able to measure and display the concentration of oxygen and combustible gasses.
- E. The area employees will be entering a confined work space shall so be equipped with a blower and hose that delivers at least 3,000 cubic feet per minute of fresh air from outside the building while working in the confined space.
- F. Retrieval system as needed for rescue operations.
- G. Confined space work areas can be permitted and non-permitted. The contractor must be able to comply with all safety regulatory requirements for these environments.
- H. Site personnel must be Confined Space trained and certified annually. Proof of this training must be provided to DC WATER in the contractor's safety plan and then to the COTR annually thereafter.

**12. RECORDKEEPING AND RECORDING:**

- 12.1. The Contractor shall be required to submit a safety plan for approval of DC Water Department of Occupational Safety and Health before the start of work on a contract. The COTR will also review the approved safety plan.
- 12.2. Prior to any work being performed the Contractor may be required to prepare and submit a Work Plan to the COTR for approval. The Work Plan shall address the following items: specifically identify the work area and equipment, start date and estimated finish date, additional resources needed from DC Water such as Lockout-Tagout (LOTO), removing equipment or parts from the area, shutdowns, etc. The Work Plan shall also detail the equipment, chemicals (including safety data sheets), personnel, and cleaning methods to be utilized.
- 12.3. A work order form will be provided to the Contractor by the COTR for each work assignment and signed at the completion and inspection of work.
- 12.4. The COTR will provide the Contractor with a 'two week look ahead' of scheduled/planned work. In the event of unscheduled work, the COTR will communicate the need with the Contractor's Project Manager and collectively determine when the work can be completed. This does not apply to emergency work.
- 12.5. The Contractor shall maintain daily records of personnel and their work assignments. Daily work activity will be assigned by a work order provided to the Contractor by the COTR. These records shall be submitted monthly with invoicing.
- 12.6. The work order forms will be used for billing time and equipment for each work assignment. An electronic copy of the work order will be provided to the Contractor.



- 12.7. Invoices shall be provided to the COTR via email and a copy sent to Accounts Payable at [accountspayable@dcwater.com](mailto:accountspayable@dcwater.com) and shall include: a spreadsheet of all job tasks which will breakdown the time and equipment against the work orders and a PDF of the total invoice sheet which will provide a breakdown of the billing line items. Invoices shall also include the contract number, PO number, dates of service.
- 12.8. The Contractor shall maintain all safety related inspections and training records.

**13. SAFETY AND EMERGENCY RESPONSE REQUIREMENTS:**

In order to mitigate the risk of accidents, the Contractor is required to follow the safety and emergency response guidelines listed below when performing cleaning functions:

- A. The Contractor shall submit a Safety Plan and an Emergency Response Plan to the COTR for the approval of DC Water Department of Occupational Safety and Health before the start of work on this contract.
- B. The Contractor shall sign up key personnel to the DC Water Everbridge system so that the Contractor can receive emergency alerts.
- C. The Contractor shall provide the Personal Protective Equipment (PPE) needed to safety and effectively perform work. PPE may include: dust masks, respirators with appropriate cartridges, Tyvek suits, slip resistant boots, hard hats, gloves, goggles and safety glasses, high visibility vest and others as identified in the Contractor's approved safety plan.
- D. The Contractor shall provide DC Water with information on the methods and tools used to provide safety training to their employees.
- E. The Contractor may be required to provide DC Water with their safety records regarding accidents / employee hours.
- F. The Contractor shall comply with all relevant policies, procedures, rules, and regulations of DC Water Department of Occupational Safety and Health, Department of Emergency Management, Department of Security and OSHA, and local, state, and federal government.

**14. CONTRACTORS PERFORMANCE:**

- 14.1. The COTR will regularly evaluate the Contractor's performance. If the quality of services performed is assessed at a marginal or unacceptable level, the department shall:
- A. Issue a Letter of Warning to the Contractor, identifying the deficiencies.
  - B. If after having received a Letter of Warning, the Contractor fails to substantially improve the quality of Industrial Cleaning services; a "Cure Letter" will be issued to the Contractor, requiring the Contractor to correct all deficiencies within ten (10) calendar days or be determined to be in default, and the contract terminated.
  - C. Failure to improve the quality of services may also be subject to payment deductions or termination of the contract.

D. Deductions are determined by the Contractor's failure to provide services, wherein DC Water reserves the right to determine the costs associated with the deficiency.

**15. DIMENSIONS/DEPTHS/SPECIFICATIONS:**

Aerated Grit Chambers Dimensions:

West Grit Chambers (4) 70' x 20' x 15' (water depth)

East Grit Chambers (4) 75' x 20.5' x 9.6' (water depth)

Figure 13345-1 — Pulpers (THP Streams 1,2,3,4)

Equipment Name: Pulpers (Streams 1 and 3)			
Medium: Biosolids, 0-18% dry solids, pH 5.5 to 7.0			
Volume between tan lines:	1391	CFT	Body Material: Type 316L Stainless Steel
Inner diameter:	130	Inches	Skirt Material: Type 304 Stainless Steel
Height (tan to tan):	181	Inches	Nozzles Material: Type 316L Stainless Steel
Height (low tan-bottom):	65	Inches	Insulation: 4 in****
Design temperature:	318	°F	Heating: None

Figure 13345-3 — Reactors (THP Streams 1,2,3,4)

Equipment Name: Reactors (Streams 1 and 3)			
Medium: Biosolids, 0-16% dry solids, pH 5.0 to 5.5			
Volume between tan lines:	443	CFT	Body Material: Type 316L Stainless Steel
Inner diameter:	67	inches	Skirt Material: Type 304 Stainless Steel
Height (tan to tan):	217	inches	Nozzles Material: Type 316L Stainless Steel
Height (low tan-bottom):	53	inches	Insulation: 4 in****
Design temperature:	379	°F	Heating: None

Figure 13345-5 — Flashtanks (THP Streams 1,2,3,4)

Equipment Name: Flashtanks (Streams 1 and 3)			
Medium: Biosolids, 0-16% dry solids, pH 5.0 to 5.5			
Volume between tan lines:	1391	CFT	Body Material: Type 316L Stainless Steel
Inner diameter:	130	inches	Skirt Material: Type 304 Stainless Steel
Height (tan to tan):	181	inches	Nozzles Material: Type 316L Stainless Steel
Height (low tan-bottom):	65	inches	Insulation: 4 in****
Design temperature:	318	°F	Heating: None