

1604000 - Wastewater	
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Spec Item	Title	Description
1	General Information	The Contractor shall provide all labor, management, supervision, tools, material, and equipment to continuously operate, maintain, and repair the Wastewater Collection System located at Naval Research Laboratory, Washington DC.
1.1	Concept of Operations	The intent of 1604000 Wastewater is to specify the requirements to provide Wastewater utilities. Included are services such as operating, maintaining and repairing the Wastewater Collection system. The following services are not included in this Technical Specification: • The point of demarcation is where the wastewater exits the building. All components prior to this point of demarcation are considered part of the facility and are included in 1502000, Facilities Investment. • Repairs to the facilities (building structures) and trouble call response for Wastewater are included in 1502000 Facilities Investment. • Service order responses for Wastewater Systems is included in 1601000 Utility Management. • Utility locates and escort services are included in 1601000 Utility Management.

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Spec Item	Title	Description
2	Management and Administration	
2.1	Definitions and Acronyms	Definitions and Acronyms are listed in J-1604000-01.
2.2	Personnel	The Contractor shall provide personnel with the qualifications, technical knowledge, experience and skills required to efficiently operate, maintain and repair the Wastewater Collection System.
2.2.1	Certification, Training and Licensing	The Contractor shall employ certified wastewater operators who are experienced in similar systems to perform the requirements of this functional section. All personnel operating wastewater collection systems must have class level 2 issued by the Wastewater Works Operators Certification Board of Examiners from Washington DC or from reciprocity from applicable states. All personnel entering manholes and other confined spaces are required to receive applicable training to ensure their safety and compliance with OSHA regulations for confined space entry. The chemist and the laboratory analyst shall complete yearly training in order to keep the personnel updated with the latest local and Federal environmental regulations, public health concerns, laboratory procedures, and safety requirements.
2.3	Special Requirements	
2.3.1	Fees, Fines, and Penalties	The Contractor shall be responsible for all fees, fines, and penalties assessed by the State if discharge permits are violated in the course of operations or maintenance.
2.4	References and Technical Documents	References and Technical Documents are listed in J-1604000-02.

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Spec Item	Title	Performance Objective	Related Information	Performance Standard
3	Recurring Work	The Contractor shall efficiently operate and maintain the wastewater collection system to safely collect, treat and dispose of wastewater to ensure all sewage requirements are continually met.	The current Wastewater System Description and Inventory is provided in J-1604000-03. The Contractor shall shut-down, restart, and perform operational checks on all equipment affected by both scheduled and unscheduled utility outages at no additional cost to the Government. The Contractor shall be responsible for managing and controlling traffic issues resultant from sewage system work in a safe manner at all times. The Contractor shall submit a Road Closure Request five working day prior to service commencing, and work in accordance with the Government road closure schedules. Daily traffic should not be disrupted for more than two hours. The Contractor shall develop and submit a Critical Spare Parts Inventory per Section F and shall maintain on hand the critical spare parts required to keep the entire system in continuous service.	Sewage is continuously and safely collected, treated and disposed. Effluent complies with the regulatory discharge permit. No spills are the result of Contractor negligence.
3.1	Operation	The Contractor shall operate the wastewater collection system to efficiently and safely collect, treat and dispose of wastewater such that the effluent complies with the regulatory discharge permit 24 hours per day, seven days per week, throughout the contract period.	After hours operational oversight will be conducted through an on-call system. A sufficient roster of qualified personnel must be available and able to respond within one hour to perform all necessary duties. Their responsibility is to ensure the continuous, safe, reliable, and efficient collection and disposal of all wastewater and associated effluent. Operation of the wastewater collection system includes equipment and system components, such as, sewage holding tanks, lift stations, pumps, screens, oil/water separators, filters, chemical and biological treatment, valves and automatic controls, and tasks, such as, monitoring and regulation of equipment controls, maintaining operating records, logs, and reports, and examination, lubrication and minor adjustment of equipment and system components.	Personnel on-call responds within one hour of receipt of call. Equipment and components are efficiently, safely and continuously operated per specified operating criteria to collect, treat and dispose of wastewater and effluent complies with the regulatory discharge permit. Unscheduled interruptions are minimized such that collection demand and effluent quality requirements are met, 99.9 percent of the time annually.

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			The Contractor shall ensure system configuration drawings or diagrams are created and kept current. Systems components shall be efficiently and safely operated per ANSI and AWWA Standards, OMSI and other specific operating manuals, procedures, and instructions; however, avoid specifying processes. Safe operation shall ensure that all wastewater equipment requiring operator attendance is staffed by qualified personnel at all times of operation. The KO and COR shall be notified immediately if unsafe conditions are discovered. Standard Operating Procedures shall be submitted in accordance with Section F. One hard copy of the current Standard Operating Procedures, operating records, logs, reports, and procedures shall be available on site at all times. The average volume of wastewater processed is four million gallons per day.	
3.1.1	Operating Records, Logs, and Reports	The Contractor shall prepare, submit and maintain operating records, logs and reports for in-process tracking of output characteristics to ensure records, logs, and reports are current and complete. The Contractor shall develop and update operating procedures to ensure operating processes and systems configuration are current.	Per approved operating permit, NDPES permit and local installation instruction, a monthly Operating Records Report shall be submitted to the KO within three days following the end of the month during which work is performed and shall include copies of daily operating logs, chemical content, pressure readings, chemical dosages, filter backwash frequencies, flow rates, and other laboratory records, maintenance records, corrosion tests, personnel records, emergency condition records, and operating costs. The Contractor shall provide an electronic update daily (7 days per week) by 0700 hours to the COR concerning the operating status of all key equipment.	All required operating records, logs, and reports are maintained current and complete and applicable copies provided to the KO per Section F. All required procedures are maintained current and complete.
3.2	Preventive Maintenance (PM) Program	The Contractor shall develop and implement a PM program for the wastewater collection systems to ensure proper operation, to minimize breakdowns, to maximize useful life	The Contractor shall develop and submit a PM program per Section F. The Contractor is fully responsible for and shall perform any repairs, including replacement, discovered during scheduled maintenance work	Maintenance is accomplished in accordance with the Contractor's maintenance program plan and work schedule.

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		and meet all applicable discharge permit requirements.	up to a total of \$250 per occurrence in direct material and labor cost under FFP portion of the contract. Incidental repairs work performed under maintenance are not considered a trouble call. Notification of repair work exceeding the incidental repairs limit shall be submitted to the KO within two hours of identification. Trouble calls or non-recurring work may be issued for repairs exceeding the incidental repairs limit. The Contractor shall not use breakdown maintenance as part of the PM program. The PM program for wastewater systems shall provide economical approach manufacturer's recommended procedures, OEM standards, NASSCO standards, WEF standards, ASME standards, and maintenance required to satisfy equipment warranties and keep wastewater systems in normal working condition and in compliance with the discharge permit requirements. Excessive or repeated system or equipment breakdowns or deficiencies may indicate the need to adjust or modify the Contractor's PM program. These changes will be made at no additional cost to the Government. If the KO determines that the objective and standards are not met, the Contractor shall adjust or modify the Contractor's PM program at no additional cost to the Government. The PM program inventories are listed in the Wastewater System Description and Inventory as provided in J-1604000-03. The Contractor shall submit a Monthly PM Work Schedule per Section F.	PM is performed in accordance with manufacturers' recommended procedures, OEM standards, ASME, WEF, and NASSCO. Unscheduled interruptions are minimized such that collection demand are met, 99.9 percent of the time annually. NPDES discharge permit requirements are met.
3.2.1	Sewage Pipelines	The Contractor shall slip-line pipelines to ensure system integrity and operation is properly maintained.	The Contractor shall slip line sewage collection pipelines with CIPP either by an inversion and curing of resin-impregnated tube system or with a UV cured system.	All work is performed in accordance with the Contractor's maintenance program plan and work schedule.

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			The Contractor shall perform in accordance with all ASME and NASSCO workmanship standards. The Contractor shall slip line only after full inspection of the pipe and inspect again after work completion. Inspection shall include the entire length of liner installed or photograph the spot repair per Spec Item 3.4.1. The Contractor shall submit Pre-repair and Post-repair CCTV Reports, Manufacturer's Information for Selected Method of CIPP, and Warranty Information in accordance with NASSCO standards per Section F. The Contractor must be an approved and trained applicator of the system being installed. Spot repairs made shall be to the standards of the system and as specified by the manufacturer.	Rehabilitation of pipelines shall meet the latest ASME and NASSCO standards.
3.2.2	Manholes	The Contractor shall maintain manholes to ensure system integrity and extend the operational life of the manhole.	The Contractor shall repair all concrete spalling, perform channel repair, and install a complete epoxy coating of the manhole. The Contractor shall submit Pre-repair and Post-repair Reports on Manholes in accordance with NASSCO standards per Section F. Manholes may be up to six feet in diameter.	All work is performed in accordance with the Contractor's maintenance program plan and work schedule. The manhole shall be fully restored and repaired to meet the latest ASME and NASSCO standards.
3.2.3	Wet Wells	The Contractor shall maintain wet wells to ensure system integrity and extend the operational life of the wet well.	The Contractor shall repair all concrete spalling, perform repair, and install a complete epoxy coating of the wet well. The Contractor shall submit Pre-repair and Post-repair Reports on Wet Wells in accordance with NASSCO standards per Section F.	All work is performed in accordance with the Contractor's maintenance program plan and work schedule. The wet well shall be fully restored and repaired to meet the latest ASME and NASSCO standards.
3.2.4	Wastewater Instrumentation Systems	The Contractor shall maintain wastewater instrumentation systems to ensure proper operation, to minimize breakdowns, and to maximize useful life.	The Contractor shall be responsible for ensuring all equipment and components of the instrumentation system are maintained; all sensors operate correctly, all controller elements receive signals properly, and the PLC is in optimum working order. The Contractor is responsible for maintaining the RTU when it is an integrated component of the PLC	All work is performed in accordance with the Contractor's maintenance program plan and work schedule. Wastewater instrumentation system maintenance program meets the latest ASME,

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			All repairs and replacements shall be performed per AWWA, ANSI, and NFPA Standards, OMSI, equipment manufacturer's recommendations.	NASSCO standards, manufacturer's recommended procedures and OEM standards.
3.2.5	Sewage Sump Pumps	The Contractor shall maintain sewage sump pumps to ensure proper operation, to minimize breakdowns, and to maximize useful life.	The Contractor personnel working on sump pumps must possess applicable state and local licensing/certification requirements. Sump pump operator maintenance shall be performed in accordance with applicable federal, state and local statutes and regulations, and with DoD policies, instructions and guidance.	All work is performed in accordance with the Contractor's maintenance program plan and work schedule. Sump pump operator maintenance program meets manufacturer's recommended procedures and OEM standards.
3.4	Inspection Program	The Contractor shall develop and implement an inspection program for sewer systems to ensure a complete assessment of condition in a timely manner.	The Contractor shall develop an inspection program for sewer systems. The Contractor shall submit the Inspection Program and Schedule per Section F. Inspection Reports and CCTV Footage shall be submitted per Section F. The Contract shall submit two copies of reports on CD and two copies as paper reports including image photographs, cross section; and plan view report with a diagram of lateral connections, channel and influent/effluent dimensions as appropriate. When used, all CCTV videos shall be NMCI compatible software (i.e., Windows Media Player, Quicktime, etc.)	Inspection is performed in accordance with ASME, WEF, NASSCO, and OEM standards. Inspections are performed per the Contractor's inspection program and work schedule. All photographs and video footage shall be of a quality capable of showing all damage and defects clearly.
3.4.1	Sewage Collection and Storm Water Collection Pipelines and Inlets	The Contractor shall inspect sewage collection and storm water collection pipelines to ensure a complete assessment of condition in a timely manner.	Contractor shall provide camera and test the television inspection equipment immediately prior to performing work to verify the picture quality. Recorded footage shall be of good image quality such that all damage and defects to pipeline can be properly assessed. Contractor shall take video frame snapshots of all defects, damage, and obstructions. Contractor shall record video clips of continuous structural defects, such as longitudinal cracks, with a grade rating to show the magnitude of the defect, or of surface defects, such as infiltration, to show the degree of the defects.	Inspections are performed, recorded, and reported in a manner that complies with PACP and the latest NASSCO standards and guidance.

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			Contractor shall submit Storm Water Collection and Inlets Photographs and Reports per Section F providing recommendations for correction of any observed issues. The inspected pipelines will be between 4 to 24 inches in diameter.	
3.4.2	Manholes	The Contractor shall inspect manholes to ensure a complete assessment of condition in a timely manner.	The Contractor shall document, report, and photograph all defects, and damage while performing manhole inspections. Contractor shall submit Manhole Photographs and Reports per Section F providing recommendations for correction of any observed issues.	Inspection performed, recorded, and reported in compliance with the latest MACP standards and ASME guidance.
3.4.3	Wet Wells	The Contractor shall inspect wet wells to ensure a complete assessment of condition in a timely manner.	The Contractor shall document, report, and photograph all defects, and damage while performing wet well inspections. Contractor shall submit Wet Well Photographs and Reports per Section F providing recommendations for correction of any observed issues.	Inspection performed, recorded, and reported in compliance with the latest NASSCO standards and ASME guidance.
3.5	Other Recurring Services	The Contractor shall perform other recurring services for sewer systems and equipment to ensure they are fully functional and operational.	The Other Recurring Services Program Inventories are listed in the Wastewater System Description and Inventory as provided in J-1604000-03.	Systems and equipment are in an operable condition and function properly in accordance with specified standards. Other recurring services are completed in a timely manner.
3.5.1	Cleaning of Sewer and Storm Water Pipeline	The Contractor shall perform cleaning of sewer and storm water pipelines in accordance with the NPDES standards to ensure proper operation, removal of all obstructions, and proper drainage.	Cleaning shall be performed to facilitate inspection and maintenance. The Contractor shall schedule cleaning to immediately precede inspection and maintenance activities whenever possible. The Contractor shall submit a Pipeline Cleaning Schedule per Section F. Cleaning shall ensure that wastewater flow rates and system retention capacities are maintained. The Contractor shall furnish high velocity hydro-jetting and vacuum removal equipment as necessary to thoroughly clean system of sludge,	Cleaning is accomplished in accordance with the NPDES permit and work schedule. All pipelines are cleaned and free of obstruction. All debris and solids are captured, removed, sampled, and properly disposed.

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			dirt, soil, sand, rocks, roots, and other solid or semi-solid materials. The Contractor shall contact the KO before using rodding on a sewage collection pipelines. Debris and solids shall be captured at the downstream manhole and removed for dewatering and disposal. The Contractor shall be solely responsible for the disposal of semisolids and liquids at an approved offsite facility. No Onsite disposal is permitted. Work includes sampling of debris and solids for proper disposal as required. The Contractor shall sample for the following: 1. Percentage Moisture 2. Heavy Metals 3. Reactive Sulphide 4. PH 5. TPRH (Oil and Grease) 6. TPH Diesel The Contractor shall submit Sampling Records per Section F.	
3.5.2	Wet Well Services	The Contractor shall clean and pump wet wells to ensure proper operations and prepare wet wells for inspection and maintenance.	The Contractor shall submit a Schedule of Wet Well Services per Section F. The Contractor shall spray down wet well surfaces with a mixture of water and detergent under high pressure prior to any personnel entering the wet well. The Contractor shall prevent spillage during operations. Any spillage due to Contractor operations shall be cleaned and treated at the Contractor's expense. Any spillage of waste materials shall be recorded and reported to the KO within one hour and reported immediately to the Utilities Duty Desk. Spills on or off base shall be handled in accordance with the Spill Containment Plan in J-1604000-04.	Services are completed per the Contractor's schedule. No spills as the result of Contractor operations. Wet wells are in normal working condition.

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3.5.2.1	Wet Well Pumping	The Contractor shall pump wet wells to ensure liquids, waste, and debris is removed.	The Contractor shall perform wet well pumping in accordance with federal, state, and local regulations. The Contractor shall use the appropriate equipment to completely pump the wet wells in a timely and efficient manner with little to no disruption to base operations. The Contractor shall provide a Wet Well Volume Report of sanitary sewage pumped from wet wells per Section F.	Wet wells are completely pumped and free of all liquids, waste, and debris.
3.5.2.2	Wet Well Cleaning	The Contractor shall clean wet wells to ensure all waste and debris is fully removed from wet well surface and equipment.	The Contractor shall check with the KO or designated Government representative before cleaning equipment in a wet well with a power washer. The Contractor shall remove all run-off liquid from the cleaning of the wet well. The Contractor shall prepare and submit a Wet Well Cleaning Report per Section F.	All surfaces and equipment are free of waste and debris.

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4	Non-Recurring Work	Non- recurring work may be ordered utilizing DoD FedMall in accordance with Section H or on a task order in accordance with the PROCEDURES FOR ISSUING ORDERS clause in Section G. The order will specify the exact locations and types of work to be accomplished. The period of performance will be specified in each order.	Refer to non-recurring ELINs for task listings, descriptions and related requirements. All periods of performance are measured from issue date of order to acceptance of the work. Performance Standards for non-recurring work will be the same as those in Spec Item 3 where applicable.	