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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 and maintain the Raw Water Supply, Water Treatment Plant and Potable Water Distribution Systems located at Joint Region Marianas on the island of Guam.
1.1	Concept of Operations	The intent of 1606000 Water is to specify the requirements to operate, maintain, monitor and analyze the potable water production and distribution systems, meet the customer demands and the requirements of the well operating permits, the National Pollutant Discharge Elimination System (NPDES) discharge permit, the water quality standards of the Safe Drinking Water Act (SDWA), and applicable laws, regulations, and standards to maximize system availability, reliability and sustainability. Interface, inform and coordinate work with cognizant customer designees, other Contractors and Navy personnel. Interface and coordinate work with regulatory and other Government agencies through Naval Facilities Marianas (NFM), Guam Utilities Department. Collect and provide meter readings to facilitate determination of potable water consumption. Reduce and control potable water systems losses. Plan, prepare and perform emergency operations and measures. Continue to operate and maintain the potable water systems during periods of contingencies and recovery operations. Coordinate operations with specific environmental compliance oversight and reporting and permit renewal requirements. Ensure that the Government is apprised of any situations of non-compliance. The well operating permits listed in J-0200000-04, are issued for production and use of water resources. Permits establish operating conditions, such as allowable pumping rates, infrastructure requirements, long-term monitoring and inspections. Requirements for renewal of the permit and permit related record keeping and reporting are specified in Annex 1601000. Discharge of treated effluent to Namo River is covered under NPDES Permit Number GU0110019. Requirements for renewal of the permit and permit related record keeping and reporting are specified in Annex 1601000. Utility location of services are listed in Navy Facilities Asset Data (from iNFADS) J-0200000-02. This attachment lists all of the facilities, including lengths of lines which collect or distribute the commodities throughout Guam. Utility boundaries for services shall be in accordance with NAVFAC P-603 Utilities Infrastructure Management Manual.

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Spec Item	**Title**	**Description**
2	Management and Administration	
2.1	Definitions and Acronyms	Definitions and Acronyms are listed in J-0200000-01.
2.2	Personnel	Personnel shall have the qualifications, technical knowledge, experience and skills required to safely, correctly, and efficiently manage, operate, maintain, and analyze the water treatment and distribution systems. Primary and alternate points of contact (POCs) shall be available 24/7 (24 hours per day/7 days per week). Personnel who are inspecting, testing, and maintaining the fire hydrants must have certification in accordance with NFPA 291. A minimum of one well driller must be present for any maintenance requiring removal of the well head. Well drillers must have a well drillers license approved by GEPA. Cutting of asbestos pipe/asbestos cement pipe shall be completed by personnel with an asbestos certification. Welding on pressure piping covered by American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code requires specific procedures and welder qualifications. Welders and welding operators shall be properly qualified and certified. The certification shall state the type of welding, positions, code and procedure under which each is qualified and the firm and individual certifying the qualifications tests. All certifications shall be current.
2.2.1	Certification, Training and Licensing	The Contractor shall employ certified water treatment plant operators who are experienced in similar plants and systems to perform the requirements of this functional section. A potable water employee, who is certified by the Administrator of GEPA in a classification corresponding to the classification of the system, currently plant operator Class IV, or facilities to be operated, must be present on-site 24/7 (24 hours per day/7 days per week) in accordance with GEPA Potable water operators shall meet all Federal and local authorities' regulations, certifications, requirements and be knowledgeable of industry standards, such as the American Water Works Association (AWWA). Operators shall be certified by the Administrator of GEPA in a classification corresponding to the classification of the system, currently distribution Class II, or facilities to be operated. Each operator shall possess a current and valid operator's certificate issued or recognized by the Administrator of GEPA. Personnel testing backflow preventers shall meet the requirements listed in Spec Item 2.2.2.3. Personnel testing, servicing, and maintaining Cathodic Protection systems shall be trained in accordance with UFC and 40 CFR 280.

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Spec Item	**Title**	**Description**
		The Contractor shall submit proof of all certification, training and licensing requirements per Annex 2. All required licenses and certifications will be kept current.
2.2.2	Key Personnel	
2.2.2.1	Water Systems Manager	The Contractor shall provide a Water Systems Manager who is a registered professional engineer licensed by a U.S. State or Territory with a minimum of five years' experience in potable water systems management, operations and maintenance; or has a Bachelor of Science degree in Engineering from a U.S. accredited college, university, or institution or an equivalent ABET-accredited college or university program with 10 years' minimum experience in potable water systems management, operations and maintenance; or has a minimum of 15 years' experience in potable water systems management, operations and maintenance. The Water Systems Manager shall have the education and work experience required to obtain a GEPA level 4 operator certification. The Water Systems Manager cannot be the same person as the Water Systems Supervisor. The Water Systems Manager manages the operations of a Water treatment plant and distribution system to ensure compliance with regulatory procedures and reporting practices. Oversees sampling and testing systems, and the functionality of pumps, conveyors, blowers, and other equipment. May typically include worker supervision, enforcing plant procedures and policies, conducting performance reviews, and overseeing training programs.
2.2.2.2	Water Systems Supervisor	The Contractor shall provide a Water Systems Supervisor who possesses a current and valid operator's certificate issued or recognized by the Administrator of GEPA and has a minimum of 5 years' experience as a licensed water systems operator. The water systems shall be at all times under the supervision of a supervisor whose competency is certified by the Administrator of GEPA in a classification corresponding to the classification of the system (currently Class IV) or facilities to be operated. The Water Systems Supervisor oversees all Water treatment plant and distribution systems, assist in the preparation of treatment plant budgets, plan, assign and supervise the work of a crew operating and maintaining wastewater treatment plants, and to perform other duties as required.
2.2.2.3	Backflow Prevention Assembly General Tester and Specialist	The person testing the backflow prevention assembly and the specialist managing the backflow prevention program shall obtain certification from the Training, Research and Education for Environmental Occupation (TREEO) Center at the University of Florida Division of Continuing Education, the Foundation for Cross-Connection Control and Hydraulic Research (FCCHR) at the University of Southern California, or the American Backflow Prevention Association (ABPA).
2.3	Special Requirements	
2.3.1	Work Coordination	The Contractor shall coordinate and perform all work and outages in a manner that minimizes the disruption of water treatment and distribution systems, interference, inconvenience, equipment downtime and interrupted service.
2.3.2	Federal and Local Authority	The Contractor shall conform to all water treatment and distribution systems regulations and requirements imposed by the Federal and local authorities.

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Spec Item	**Title**	**Description**
2.3.3	Cross-Connection Program	The cross-connection program is under Annex 1601000. The maintenance requirements and backflow specialist for the backflow preventers are specified in this annex. Reports should be sent to Annex 1601000 per the cross-connection control program.
2.4	References and Technical Documents	References and Technical Documents are listed in J-0200000-04
2.5	Backflow Preventers	The backflow preventers shall be tested and certified by personnel as specified under Spec Item 2.2.2.3.

2.6	Financial Requirements	The Contractor shall expend, track, and record costs in a manner that supports the NAVFACMAR Water Commodity cost schedule.
		
		Costs shall be broken down by labor and material in the following manner:
		PRODUCTION
		• A/E Services
		• Water Treatment Plant
		• Operations
		• Chemicals
		• Maintenance
		  o Preventive Maintenance (PM)
		  o Sustainment (ST)
		  o Restoration & Modernization (RM)
		
		TRANSMISSION
		• A/E Services
		• Operations
		• Chemicals
		• Maintenance
		  o PM
		  o ST
		  o RM
		
		DISTRIBUTION
		• A/E Services
		• Operations
		• Chemicals
		• Maintenance
		  o PM
		  o ST
		  o RM
		METERING
		• A/E Services
		• Reading
		• Maintenance
		  o Calibration
		  o ST
		  o RM
		
		DEEP WELLS
		• A/E Services
		• Operations

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Spec Item	**Title**	**Description**

		• Chemicals
		• Maintenance
		  ○ PM
		  ○ ST
		  ○ RM
		*Note:
		The Contractor shall submit the monthly public voucher with costs separated in accordance with the above categories and shall include Project Abbreviation, Work Order Number and Job Order Number.

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Spec Item	**Title**	**Performance Objective**	**Related Information**	**Performance Standard**
3	Recurring Work	The Contractor shall operate, maintain, monitor and analyze potable water production and distribution systems to provide continuous, compliant and reliable service to meet user demands. This includes, but is not limited to, total configuration management, engineering, efficiency analyses, and system analyses to maximize reliability, longevity (newly installed equipment only), and efficiency.	The Raw Water Supply, Water Treatment Plant, and Potable Water Distribution Systems Descriptions are provided in J-1606000-01. MAXIMO Utilities Assets are provided in J-1601000-02. The Contractor shall operate, maintain, monitor and analyze the potable water production and distribution systems including, but not limited to, existing and future equipment, components, and appurtenances. The Contractor shall provide continuous potable water service to the Naval Hospital and to the steam power plants located at Cabras and Piti, including during disaster and recovery phases. The Contractor shall provide proactive management and macro-outlook of the potable water production and distribution systems. Analyze unusual conditions, system/component conditions, operations and capabilities, water production, consumption, total volume storage, and system pressure and losses to determine the potable water production and distribution systems' performance while improving system availability and effectiveness. The Contractor shall frequently evaluate the systems configuration and operations and make recommendations for improvements. The Contractor shall frequently monitor and inspect the systems and make appropriate adjustments to associated equipment to ensure proper operation of all equipment and processes.	Drinking water is continuously and safely produced and distributed and meets quality standards and demand requirements.

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Spec Item	**Title**	**Performance Objective**	**Related Information**	**Performance Standard**
			The Contractor shall analyze and measure system efficiency and capacity, based on equipment/process/systems capacity to handle water efficiently. This includes review of maintenance records, water quality analyses, meter readings, schedule of use, discharge pressure at various pumping rates, etc. to develop overall efficiency. The Contractor shall develop and provide a System Performance Status Report and a Water System Status Report per Section F, including, but not limited to, management analyses and recommendations. Water workload quantities are found in J-1606000-05. Informational Note: Components (such as facilities, equipment, pipeline, and appurtenances) are considered critical if they do not have built-in redundancy or if redundancy has been compromised. Service cannot be provided at full capacity if a critical component is broken or compromised.	
3.1	Operation	The Contractor shall operate the Raw Water Supply, Water Treatment Plant and Potable Water Distribution Systems to efficiently and safely produce and distribute quality potable water to meet all potable water requirements, 24 hours per day, seven days per week, throughout the contract period.	The Contractor shall provide "watch-standing" or attendance type work by a sufficient staff of qualified persons during a specified time period to ensure safe, reliable, efficient production and distribution of drinking water. Water plants and distribution systems shall be efficiently and safely operated per NAVFAC MO 210, NAVFAC MO 117, consumptive use permits, Local regulations, Manufacturer's Operation and Maintenance Manuals, NAVMED P-5010, American Water Works	The Contractor shall produce potable water to meet the daily demand up to the plant capacity. Potable water meets the minimum water quality standards of the SDWA, NPDWR 40 CFR Part 141 and 142, and NAVMED P-5010. In the event of a discharge,

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Spec Item	**Title**	**Performance Objective**	**Related Information**	**Performance Standard**
			Association (AWWA) M14 and M20, UFC and 40 CFR Section 141. Operation of raw water supply, water treatment plant and distribution systems include equipment and system components, such as, reservoirs, wells, water storage tanks, pumps, filters, chemical treatment, backflow preventers, valves and automatic controls, and include 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. The Contractor shall develop, update, and post in clear view Standard Operating Procedures (SOPs) in accordance with NAVFAC MO 210, NAVFAC MO 117, consumptive use permits, local regulations, Manufacturer's Operation and Maintenance Manuals, NAVMED P-5010, American Water Works Association (AWWA) M14 and M20, UFC 3-440-02N and 40 CFR Section 141 and manufacturer's recommendations. SOPs shall be submitted as requested. Safe operation shall ensure that all water treatment plant equipment requiring operator-attendance is staffed by trained, qualified personnel at all times of operation. The KO or KO's designated representative shall be notified immediately if unsafe conditions are discovered. The Contractor shall maintain combined reservoir total volume storage (TVS) levels in system at or above 15 MG for any given	operators are responsible for notifying the lab and/or collecting samples as required by the NPDES discharge permit. The COR should be notified and operators should document the cause, time and duration. Operating conditions meet the requirements of the Well Operating Permit and all Federal and local authorities, regulations, certifications, and requirements. Reservoir TVS levels in system at or above 15 MG for any given day maintained. Minimum fire reservoir levels maintained. 90-calendar day reserve of water treatment chemicals maintained at all times. ZERO occurrences of chemical non-availability. Sludge meets the disposal criteria of the Navy's Sanitary Landfill, and all federal and local authority's regulations,

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Spec Item	**Title**	**Performance Objective**	**Related Information**	**Performance Standard**
			day. TVS shall be read a minimum of 2 times daily or every 8 hours or as requested by the COR should TVS levels falls below 15 MG on any given day. The Contractor shall maintain minimum fire reservoir levels, as indicated in J-1606000-04. The Contractor shall maintain a 90-calendar day (shelf-life permitting) supply of chemicals based on worst case scenario in inventory (on Guam) to sustain continuous process production of potable water, including through disasters. Chemicals shall be turned over to the Government upon completion or termination of the contract. The Contractor shall ensure that the water treatment sludge complies with specifications required by the Navy's Sanitary Landfill prior to disposal. The Contractor shall provide setting of valves and correctly balancing the system flow to maintain the desired pressure in all parts of the system. The Contractor shall monitor and operate pressure relief valves to throttle flow and maintain the desired pressure in the lower distribution zone. Coordinate with NFM, Guam to replace valves where required. The Contractor shall support waterfront potable water requirements as scheduled by Annex 6, Port Operations. The Contractor shall provide the following documentation per Section F: a) Fena Water Treatment Plant Potable Water Operations Record	certifications and requirements. The Contractor shall provide minimum system pressure of 40 pounds per square inch. No instances of unmetered waterfront potable water service, such as fire hydrants. Reports, data, records and documentation are provided on time, complete, accurate and legible. Production meets demand and meets the minimum water quality standards of the SDWA. Systems are operated in accordance with industry standards. Equipment are operated and maintained to the manufacturer, industry, or Government standards. The Contractor shall ensure maximum operational efficiency of fixed plant critical assets to minimize system/plant down time to no more than 48 hours at any given time

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Spec Item	**Title**	**Performance Objective**	**Related Information**	**Performance Standard**
			b) Water Chemical Count c) Fena Water System Total Water Production Report d) Water Treatment Plant and Distribution System Daily Log e) Water Line Break Report f) Equipment Breakdown Report g) Emergency Repair Status Report Records shall be readily accessible to COR/PARs and available to other personnel within one business day of request. The Contractor shall track the location of every water break in GIS. Records shall be kept and be protected from damage for the duration of the contract and turned over to the Government at the completion or termination of this contract. Operating records shall be provided for unit processes such as, but not limited to, chlorination, filtration, fluoridation, and sedimentation. Informational Notes: 1) Treatment consists of adding and/or removing substances from water so as to bring about a desired change in quality. In general, treatment is provided to protect public health or to improve the acceptability (aesthetic quality) of the finished product. 2) Treatment is not performed solely at the treatment plant; also occurs at the wells.	under normal, non-disaster conditions Reports, data, records and documentation are provided on time, complete, accurate and legible.

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Spec Item	**Title**	**Performance Objective**	**Related Information**	**Performance Standard**
			3) For historical chemical usage information see J-1606000-02.	
3.1.1	Water Quality	The Contractor shall produce and distribute drinking water to ensure the specified water quality standards are met and in compliance with the regulatory operating permit.	Water quality shall meet all Federal, state and local authority regulations, certifications and requirements, such as: NPDWR 40 CFR Part 141 and 142, 40 CFR Part 143 (NSDWR), Department of Health, and AWWA, as applicable. The Contractor shall perform routine operational sampling per SOPs to maintain drinking water quality within specified standards. Minimum quantities and frequencies of on-site sampling and laboratory analyses of drinking water shall be performed per, operating permit, approved operating and maintenance manual and OMSI. Minimum quantities and frequencies of off-site analyses shall be performed by a certified laboratory which shall meet all laboratory certification requirements per USEPA for Safe Drinking Water Act and local regulations. If water chemistry is confirmed, through laboratory analyses, not to be in compliance with quality standards, immediately notify the KO or KO's designated representative, and UEM Branch Head and adjust the water chemistry within two days to meet all regulatory requirements. All laboratory results of water analysis shall be reported to the Government per Annex 1601000.	Drinking water quality complies with the regulatory operating permit.
3.1.1.1	Sampling and Analysis	The Contractor shall collect and analyze samples to evaluate system	The Contractor shall provide sampling and analysis to include, but not be limited to, monitoring surface water treatment	100% Environmental Compliance in accordance with

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Spec Item	**Title**	**Performance Objective**	**Related Information**	**Performance Standard**
		performance and to meet regulatory requirements.	techniques, source water testing and monitoring, and distribution system testing and monitoring. Report monitoring and analysis results to the Government in accordance with Annex 1601000. Maintain all results of monitoring and analysis, and ensure they are available for Government review. The Contractor shall perform sampling and analysis in accordance with Annex 1601000 to meet requirements of the well operating permits listed in J-0200000-04. The Contractor shall provide the results of sampling and analysis in accordance with Annex 1601000 to meet requirements of the NPDES Permit Number GU0110019 for discharges to Outfall Number 002 (Namo River). The Contractor shall ensure that the Fena Water Treatment Plant waste sludge meets acceptance criteria of the Navy's Sanitary Landfill. A paint filter test is required for each load of sludge to ensure that it may be disposed at the landfill. The Contractor shall record sampling results in the paint filter test log maintained at the treatment plant. The Contractor shall provide the results of sampling and analysis in accordance with Annex 1601000 as necessary to assure the treatment and distribution system is operating effectively and to validate that regulatory requirements are being met. The Contractor shall utilize results of sampling and analysis for operational management and decision-making.	legal and regulatory requirements. Samples are collected and analyzed in accordance with the SDWA requirements, local regulations and Navy policy. Samples are collected and analyzed as specified in the Well Operating Permit. Samples are collected and analyzed, as specified in the NPDES permit. Results of analysis are provided within the following turnaround times: microbiological tests - 24 hours, all others - 14 calendar days. Laboratory results are accurate and representative of the media sample. Results of paint filter test recorded meet the paint filter test log requirements. No readings outside of the allowable range for the parameter being monitored or internal operational control limit.

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Spec Item	**Title**	**Performance Objective**	**Related Information**	**Performance Standard**
			The Contractor shall continuously coordinate with Annex 1601000 to determine the analytical frequencies and laboratory report submission time frames required to meet environmental compliance deadlines for submission to the Government and to make operational and distributions system management decisions in a timely manner. The Contractor shall include the requirements of the National Secondary Drinking Water Regulations in operational management and decision-making to maintain water quality in the Navy's distribution system.	
3.1.1.2	Sample Collection and Analytical Services	The Contractor shall provide sample collection and analytical services for compliance and operating functions to support the potable water production and distribution system.	The laboratory to be used for the analytical services shall be operated in accordance with an approved Laboratory Quality Assurance Plan and other applicable guidance and laboratory and sampling staff shall have required training, as specified in OPNAVINST 5090.1 and relevant references in J-0200000-04. The laboratory shall be certified for testing required for SDWA compliance, as specified in OPNAVINST 5090.1 and relevant references in J-0200000-04. The laboratory shall be accredited for testing required for SDWA compliance and NPDES compliance, as specified in OPNAVINST 5090.1 and relevant references in J-0200000-04. For SDWA analysis the laboratory shall demonstrate acceptable proficiency testing and analytical capability for each	100% Environmental Compliance in accordance with legal and regulatory requirements. Sample collection and analytical services performed in accordance with 40 CFR 141, 142, 143 and 40 CFR 136, EPA Publication SW-846, and all applicable Federal and Guam safety and environmental regulations, and Navy policy. Accurate sample collection and analysis meet schedule requirements. All samples are analyzed within

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Spec Item	**Title**	**Performance Objective**	**Related Information**	**Performance Standard**
			required analyte tested every year, as required by U.S. Environmental Protection Agency (EPA) and certification authority. For NPDES and performance monitoring the laboratory shall demonstrate acceptable testing capability for each required analyte tested every year, in accordance with programs and protocol established by EPA. Laboratory data reports shall support the data, format, and schedule requirements for SDWA compliance reporting and NPDES permit monitoring reports specified in Annex 1601000. Laboratory data reports shall include brief summaries of QA/QC parameters (including, but not limited to, condition of sample upon receipt by the laboratory, spike recovery and instrument calibration). The Contractor shall maintain raw data that could be used to re-create the laboratory results (including instrument printouts, and calibration curves).	required holding times. Results of analysis are provided within the following turnaround times: microbiological tests - 24 hours, all others - 14 calendar days. The Contractor shall report the results of sampling and analysis to meet the compliance deadlines.
3.1.2	Minimum Operator Attendance	The Contractor shall provide a sufficient number of water treatment plant operators and support personnel per shift to ensure efficient and safe operations of equipment 24 hours per day, seven days per week.	The Contractor shall provide personnel per regulatory operating permit, approved Operations and Maintenance Manual or other technical reference that specifies minimum or recommended staffing levels. All water treatment plant operators, support personnel, and supervisory operators in direct responsible charge shall meet training and certification requirements as specified.	Minimum numbers and types of water treatment plant operators and support personnel are provided as specified. All personnel operating the plant meet the training and certification standards.
3.1.3	Operating Records, Logs, Reports and Procedures	The Contractor shall prepare, submit and maintain operating	The Contractor shall record and provide the following daily operating records and logs for unit processes such as, but not	All required operating records, logs, reports and procedures are

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Spec Item	**Title**	**Performance Objective**	**Related Information**	**Performance Standard**
		records, logs and reports for in-process tracking of plant output characteristics. The Contractor shall prepare and update operating procedures to reflect current operating processes and Plant and Systems configuration.	limited to, primary treatment, secondary treatment, chemical content, pressure readings, chemical dosages, sludge processing, and odor control, flow rates, and other laboratory records, maintenance records, corrosion tests, personnel records, emergency condition records, and operating costs. The Contractor shall prepare, update, and post in clear view for operators, written Standard Operating Procedures within 30 days from start of full performance and five days after making changes to any Plant operating procedure, equipment and components.	maintained current and complete and applicable copies provided to the KO or KO's designated representative within the specified times.
3.1.4	Supervisory Control and Data Acquisition (SCADA)	The Contractor shall operate, maintain, and monitor equipment and chemical processes for water production, treatment, and distribution, via SCADA system interfaces.	The Contractor shall comply with NAVFAC Marianas FRCS Cyber Security Requirements and perform Functional Administration requirements per Annex 2. Control, program and configure settings for programmable logic controller (PLC) devices and software. Provide maintenance on PLCs, remote terminal units (RTU), and field sensors associated with SCADA equipment.	All SCADA and Functional Administration requirements are continually met.
3.2	Planned Maintenance (PM) Program	The Contractor shall develop and implement a PM Program that ensures all Components of the production and distribution systems are at optimum equipment performance, availability, and reliability.	The Contractor shall develop and submit a Planned Maintenance (PM) Plan per Section F. The Contractor shall accomplish the maintenance in a manner that does not impede on meeting the other objectives and requirements specified under this annex. The Contractor shall not use breakdown maintenance as part of the PM program. The PM program shall provide an economical approach using	The Contractor shall respond to potable water system failures within 30 minutes. Planned Maintenance (PM) is completed as required by manufacturer's recommendations, generally accepted industry practices, or a locally agreed upon PM schedule.

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Spec Item	**Title**	**Performance Objective**	**Related Information**	**Performance Standard**
			manufacturers' recommended procedures, OEM standards, and maintenance required to satisfy equipment warranties and keep the Raw Water Supply, Water Treatment Plant, and Potable Water Distribution Systems in normal working condition. If the KO or KO's designated representative determines that the objective and standards are not met, the Contractor shall adjust or modify the Contractor's PM program. The Raw Water Supply, Water Treatment Plant, and Potable Water Distribution Systems Descriptions are provided in J-1606000-01. MAXIMO Utilities Assets is provided in J-1601000-02. The Contractor shall incorporate early detection methods to prevent equipment malfunction. The Contractor shall ensure continuous water service simultaneously with effective maintenance via use of temporary workarounds, such as, providing bottled water, water tankers, portable toilets, etc. Not more than four (4) wells at Finegayan shall be inoperable at any given time. Utilities connection/outage request shall be in accordance with Annex 1601000. The Contractor shall submit a maintenance schedule per Section F. The Contractor shall submit, per Section F, a Monthly Utility Unscheduled Outage Report for Navy and NSAA.	The Contractor shall maintain existing redundancy and recommend other redundancies needed to potable water systems. Scheduled outages coordinated with affected customers before outage; follow-on coordination conducted with customers affected by scheduled and unscheduled outages. Reports, data, records and documentation are provided on time, complete, accurate and legible. Operation and maintenance procedures provided on time.

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Spec Item	**Title**	**Performance Objective**	**Related Information**	**Performance Standard**
			The Contractor shall submit, per Section F, technical information and manuals for newly installed equipment. The Contractor shall document and maintain records for maintenance and repair history per Section F.	
3.3	Other Recurring Services	The Contractor shall perform other recurring services to the components of the Raw Water Supply, Water Treatment Plant, and Potable Water Distribution Systems.	The Contractor shall maintain and inspect all reservoirs to provide a continuous water supply and control contamination. The Contractor shall inspect the area around the spring to detect contamination and develop preventive measures for contamination control. Alternate use of pumps and equipment to ensure equal usage at each multiple pump station and stages in treatment plant where alternation of pumps and equipment is appropriate. The Contractor shall identify and flush fire hydrants that must be flushed weekly, such as, fire hydrants on dead-end pipes. The Contractor shall calibrate instruments, gauges and pressure switches annually. If possible, calibrate equipment in place using the piping, wiring, and fluids of the processes and calibrate a whole subsystem at once. The Contractor shall test and calibrate potable water meters. Meter calibration priorities will be identified by the Government. The Contractor shall test, certify, and maintain backflow preventers as required under Annex 1601000 for the potable water, wastewater, and steam/hot	All equipment, including gauges, controls, and meters are calibrated in accordance with industry standards and manufacturer's recommendations, to ensure accurate readings. Water meters shall be calibrated per industry standard or manufacture specifications in accordance with the meter calibration priorities identified by the Government. Fire hydrants shall be flushed, maintained and refurbished, to fully functional condition and leakage is eliminated. Reports, data, records and documentation are provided on time, complete, accurate and legible.

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Spec Item	**Title**	**Performance Objective**	**Related Information**	**Performance Standard**
			water/demineralized water systems. The Contractor shall flush and disinfect dead-end pipes annually and as needed where residuals are consistently low. The Contractor shall provide the following documentation per Section F: a) Hydrant Flushing Report b) Meter Calibration/Repair Report c) Gauge Calibration/Repair Report The Contractor shall attach identification tags or labels to all assets per NAVFAC P-603 Utilities Infrastructure Management Manual.	
3.3.1	Warranty/ Guarantee Certificate	The Contractor shall create and manage a program that ensures all warranties/ guarantees in effect for existing or newly acquired equipment are reviewed periodically and utilized until their expiration.	The Contractor shall provide Warranty and Guarantee Certificate Status Report as required per Section F, on all major equipment under warranty. Informational Note: Major equipment includes, but is not limited to, pumps, motors, motor control centers, flow recorders, totalizers, turbidity meters, air compressors, chlorinators, telemetry, etc. Warranty and guarantee certificates apply to equipment installed by the BOS Contractor or other entities.	All equipment under warranty are properly operated, tracked and maintained in accordance with manufacturer's recommendations. Maintenance records reflect that warranty requirements are met.
3.3.2	Leak Detection	The Contractor shall develop, manage and implement a leak detection program.	The Contractor shall utilize the leak detection program to read the integrity of the piping network, maintain control over water loss, respond more effectively to main breaks and protect against contamination in finished water.	Reduce or maintain the water loss below 11% of production.
3.3.3	Drought Management	The Contractor shall track the level of Fena Reservoir, recommend changes in water	Upon direction by the Government, the Contractor shall notify military housing tenants of water rationing by	All required meetings are attended or documented.

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Spec Item	**Title**	**Performance Objective**	**Related Information**	**Performance Standard**
		conservation level per NAVBASEGUAM INST11330.1, and monitor water usage rates and implement mandatory water rationing.	approved methods (e.g. telephone, e-mail, flyer, etc.) The Contractor shall set-up, attend and document meetings with GWA in regards to notification of violation limits, U.S. Geological Survey predictions and consumption levels. The Contractor shall track the water level of Fena Reservoir, monitor the U.S. Geological Survey predictions, the El Nino/Southern Oscillation (ENSO) Diagnostic Advisory and Public ENSO Update. Upon direction by the Government, the Contractor shall reduce water supply to GWA. The Contractor shall monitor goals weekly and limit service.	Notification of mandatory water rationing provided on time and accurate. Water level of Fena Reservoir is tracked and U.S. Geological Survey predictions, ENSO Diagnostic Advisory, and Public ENSO Update are monitored. Monitor water usage and adjust service as necessary.