2022 SECRETARY OF THE ARMY

ENVIRONMENTAL AWARDS

Fort Stewart/Hunter Army Airfield

Environmental Quality - Team

INTRODUCTION

Fort Stewart/Hunter Army Airfield (FSGA/HAAF) is the largest Army installation east of the Mississippi River (285,000 acres) and serves as home to the 3rd Infantry Division. FSGA/HAAF's mission is to provide a safe, secure, and responsive community that enhances the installation's power projection platform in support of national security objectives.

Overcoming adversity, the FSGA/HAAF Water Quality (WQ) Team was developed and honed to implement process improvement and efficiencies. The FSGA/HAAF Directorate of Public Works' (DPW's) Environmental, and Operations and Maintenance (O&M) Divisions work collaboratively with the U.S. Army Medical Department Activity (MEDDAC) stationed on-post, as well as with Public Health Command (PHC) to provide safe drinking water to the installation's patrons.

While each has a distinct area of responsibility (operations, maintenance, surveillance, and compliance), this WQ Team collaboratively works to fully support and complement the military mission by ensuring resources are optimized and compliance is maintained while FSGA/HAAF keeps improving.

The members of the WQ Team are:

- Tressa Rutland; FSGA/HAAF Prevention & Compliance Branch Chief
- Veronica Frazier, FSGA/HAAF Environmental Engineer
- Stanley Thomas, FSGA/HAAF Drinking Water Program Manager
- Nathaniel Williams, Aerostar Water Compliance Manager
- Mark Groves, FSGA/HAAF O&M Quality Assurance Evaluator
- Brett Cowan, FSGA/HAAF O&M Mechanical Engineer
- CPT Alyssa Mann, FSGA/HAAF Environmental Health Chief
- Jerry Manint, PHC Environmental Engineer; Matthew Waterbury, PHC Hydrologist
- George Keithley, Tsay/Ferguson Williams LLC Water/Wastewater Operator

BACKGROUND

Between the two installations, FSGA/HAAF has two community drinking water systems (one each at FSGA and HAAF with a combined total of 11 groundwater wells) and a total of 12 non-community systems. FSGA/HAAF's groundwater wells are no less than 500 feet deep and supplied by the Floridan Aquifer. Before water is distributed, the water is chlorinated to kill disease-causing organisms and fluoridated to promote dental health. The DPW is responsible for operations of these systems and compliance with environmental standards while the MEDDAC's Environmental Health has an overlapping surveillance responsibility. With a common goal to provide safe drinking water, FSGA/HAAF's DPW and MEDDAC had an established relationship that set the groundwork for development of a highly effective WQ Team.

ACCOMPLISHMENTS

The WQ Team is committed to supporting installation readiness through adherence to high environmental quality standards. Some major accomplishments during the award period include:

1. The WQ Team has a tremendously successful collaborative surveillance strategy. During a FY21 Higher Headquarters Assessment Team inspection, the WQ Team was commended for its open communication between entities. The inspector/assessor noted the Team's close working relationship and the positive impact it has on monitoring FSGA/HAAF's water quality.
2. The WQ Team has established a joint responsibility and accountability sampling protocol. Consequently, the installation has avoided repeat sampling and unnecessary public notifications due to sampling error during the award period. In FY20, the WQ Team trained new inspectors to expand upon the existing lead and copper drinking water sampling of FSGA/HAAF Housing.
3. Garnering efficiencies for the requirement to conduct bacteriological analysis, FSGA/HAAF took the necessary steps to obtain state certification of the MEDDAC surveillance laboratory. This saves resources, allows for quick turnaround to address areas of concern and construction that is unrestricted by commercial hours of operation as needed to support the military mission.

Bacteriological samples are analyzed at the FSGA/HAAF Water Laboratory which is operated by MEDDAC's Environmental Health personnel.

4. By maintaining an efficient flushing program, annual sampling of high risk facilities, annually sampling for lead and copper in its distribution system, and maintaining a database of analytical data, FSGA/HAAF has supported transparency of operations and garnered community confidence that FSGA/HAAF is providing quality water to consumers.
5. FSGA/HAAF has been commended by the Georgia Rural Water Association for its annual Consumer Confidence Reports (CCR). Assessors often note that FSGA/HAAF's CCR is easy-to-read, well organized, and visually appealing - allowing for easy interpretation.
6. Through one of FSGA/HAAF's Sustainability Management System (SMS) Process Action Teams (PATs) specifically focusing on

infrastructure, the WQ Team looks at opportunities for improving the installation's water system. As a result of this PAT, a backflow team was implemented, water tower maintenance was conducted, and an Intergovernmental Service Agreement for water tower inspections went into effect during the award period.

Program Management

The WQ Team continuously monitors the quality of FSGA/HAAF's drinking water to ensure it is safe to drink. For the last 16 years, FSGA/HAAF has partnered with Environmental Health to perform bacteriological sampling of its water distribution system to minimize duplication of efforts. Specifically, Environmental Health had a duty to perform sanitary surveillance of the potable water distribution system, dining facilities, swimming pools and recreational waters, as well as range operations. Likewise, the DPW was completing permit required sampling throughout the potable water distribution system and to validate disinfection of water line installation/repair prior to lines being placed into service.

Nathaniel Williams, Aerostar Water Compliance Manager, samples water for pH prior to collecting a bacteriological sample. MEDDAC, O&M, and the Environmental Division work together to collect samples on Fort Stewart and HAAF.

Garnering efficiencies for the requirement to conduct bacteriological analysis, FSGA/HAAF took the necessary steps to obtain state certification of the MEDDAC surveillance laboratory. This saves resources, allows for quick turnaround for water system surveillance, water line breaks, water complaints, and verification of water line disinfection following construction and prior to building occupancy. The laboratory also provides the benefit of being unrestricted by commercial hours of operation as needed to support the military mission.

Sampling is performed at various locations throughout both installations. In order to maintain compliance with permit requirements and Georgia State regulations, the Team collects and analyzes 40 bacteriological samples (30 at FSGA; 10 at HAAF) each month from the community systems and 12 samples each quarter from the non-community systems.

Environmental Health employs a Georgia licensed Water Lab Analyst who operates the state certified on-post laboratory. The Water Lab Analyst maintains the laboratory's certification, performs sanitary surveys, and eliminates cross connection hazards. The DPW's Class II Water Operator is certified to provide laboratory analysis as well. When the primary Water Lab Analyst is out, this person can perform the analysis needed to maintain water system surveillance and permit compliance.

The well-being of Army Families is paramount. As a result of a number of false positive bacteriological results, the WQ Team expanded its partnership to include implementation of a three-prong approach to reduce sampling errors and enhance emergency response between the installation's Environmental Division, MEDDAC, and O&M Division. This approach is structured so that whomever receives notification of water issues/complaints will in turn notify the other two parties. The three then work together to ensure the issue is resolved thereby creating a

joint responsibility and accountability sampling and emergency response protocol. Consequently, the installation has avoided repeat sampling and unnecessary public notifications due to sampling error during the award period.

Nathaniel Williams, Aerostar Water Compliance Manager, flushing water within the distribution to improve quality. Flushing water in the distribution can also improve taste and odor therefore minimizing water complaints.

The WQ Team, supporting emergency response, assisted in completion of the Risk and Resilience Assessment (RRA) and Water Loss Audit, as well as updating the FSGA/HAAF Emergency Response Plan during the award period. The Team worked closely with PHC to update the RRA. A couple of months after completion, the Team was commended for its open communication between team members during a Higher Headquarters Assessment Team inspection. The inspector/assessor noted the Team's close working relationship and the positive impact it has on monitoring FSGA/HAAF's water quality. The Team also updated and submitted its Emergency Response Plan at the same time as its RRA. This was six months prior to the deadline for the Emergency Response Plan submission.

In support of Lead and Copper surveillance, the WQ Team developed a flushing plan for High Risk Facilities (HRFs) and other buildings on post. Schools and Child Development Centers are considered HRFs. At these facilities, FSGA/HAAF's Environmental Division conducts monthly flushing, while the facilities themselves conduct weekly flushing. In doing so, FSGA/HAAF is able to minimize lead concentration and ensure the best water quality is provided at these facilities. By maintaining an interactive and efficient flushing program, annually sampling HRFs, annually sampling for lead and copper in its distribution system, and maintaining a database of analytical data, FSGA/HAAF supports transparency of operations and garners community confidence that the installation is providing quality water to consumers. Supporting Housing initiatives, in FY20, the WQ Team trained new inspectors to expand upon the existing lead and copper drinking water sampling of FSGA/HAAF Housing.

FSGA/HAAF has also established a cross-functional sustainability team which is broken into four PATs. The SMS PATs target processes/activities with environmental implications. The PATs elevate issues needing a higher level of attention and help disseminate sustainability requirements across the installation through the FSGA/HAAF's strategic planning process. As SMS Infrastructure PAT Team members, the WQ Team provides input on opportunities to improve the installation's water quality, maintain compliance, and optimize resources through monitoring, water system improvements, and water conservation.

Water Conservation/Water Quality System Improvements

Not only does the team work to protect the quality of the water system through testing, but also through reduction of water loss through quick repairs. As a force multiplier, the FSGA/HAAF three-prong emergency response WQ Team continues it communication protocols whenever a

water emergency is identified. Employing the "See Something – Say Something" mentality, the WQ Team does not operate in their respective stove pipes. Rather, they recognize that Water Quality, no matter the situation, is a joint effort. Whenever anyone sees something, they ensure they notify the other two parties to ensure all are aware of situations. This includes water line leaks and breaks that not only have the potential to impact water quality but also drain resources.

The Lower Floridan Aquifer well being drilled at HAAF. Workers shown here during the installation of a pipe which is attached to the submersible pump. This well was drilled to ~1100 feet.

FSGA/HAAF began its water conservation efforts as early as the 1980s when the installation constructed a Central Vehicle Wash Facility (CVWF) on Fort Stewart. This self-contained, closed loop system saves approximately 200 thousand gallons per day of potable water and was one of FSGA/HAAF's first steps toward affecting a culture change related to water conservation and environmental stewardship. Another CVWF, similarly designed, was constructed to support the National Guard Training Center located on Fort Stewart. FSGA/HAAF's Water conservation efforts expanded in 2005 when it established its ISO 14001 conformant Environmental Management System (FSGA/HAAF's SMS) and associated Infrastructure PAT which began aggressively implementing measures that focused on water quality and water resources. In 2009, FSGA/HAAF established water conservation as a significant aspect with a metric to reduce potable water consumption intensity by 2% each year or 36% by 2025 (from a 2007 baseline). FSGA/HAAF exceeded the FY21 target of 28% with a potable water intensity reduction of 51%.

Evaluation of projects through FSGA/HAAF's National Environmental Policy Act (NEPA) review process helps the WQ Team continually meet its water conservation metrics. The installation's NEPA reviews stress water conservation measures such as requiring recirculation and reuse at the Directorate of Family, Morale, Welfare, and Recreation (DFMWR) Spray Park and at AAFES car washes as well as Hunter Army Airfield's Tactical Rinse Facility. The installation also recycles water that has been collected and treated to standards suitable for irrigation and industrial use. Through a partnership with the City of Hinesville, reuse water meeting Georgia Environmental Protection Division standards is provided to the Fort Stewart Central Energy Plant, washracks, golf course irrigation system, and Marne View housing area irrigation system. By using this water, which would otherwise have been discharged to local creeks, Fort Stewart has saved over 526 million gallons of potable water since the partnership began in 2010.

Also as a result of both the WQ Team's efforts and the SMS Infrastructure PAT, a backflow team was implemented, water tower maintenance was conducted, and an Intergovernmental Service Agreement for water tower inspections went into effect during the award period. Overall, the Team's participation in this PAT has resulted in significant improvements and awareness over the last few years. Any corrective actions resulting from inspections are tracked in the PAT, to include Environmental Performance Assessment & Assistance System findings and annual Water

Loss Audits certified by a Qualified Water Loss Auditor through a cooperative arrangement with the City of Hinesville. By tracking actions within the PAT, the Team is able to ensure plans are developed for addressing various water quality issues/needs.

During the award period, the WQ Team began installation of a new storage tank and additional fire suppression system at Fort Stewart's Camp Oliver. A 12,000 gallon tank was in place, but was too large for the facility. Additionally, the tank was old and had deteriorated over time. In order to better service the area, two 5,000 gallon tanks were installed – one for potable water and one for fire suppression. The installation of these new tanks improved water quality at the site and allowed water to be turned over more rapidly. Finally, a fence was installed around the tank as a security measure.

This is a 250,000 gallon storage tank for the Lower Floridan well located in the 2nd Infantry Brigade Combat Team area on Fort Stewart. This is one of several tanks tied to a loop system, meaning the tank can be supplied by any of the wells on Fort Stewart.

Also during the award period, repairs were conducted on the 6030 tank at HAAF. This was also an older tank, but did not require replacement. An air vent was installed to improve water flow, the screen was repaired on the hatch for continued protection against insect/bird entrance, and the catwalk was repaired to ensure safety. Throughout this process, the Team took the opportunity to fix compliance issues such as lowering the overflow pipe, in order to ensure the tank was brought up to current American Water Works Association standards as well as the Minimum Standards for Public Water Systems. The Team also coordinated with FSGA/HAAF's Engineering Division to ensure all state requirements were included in the repair plans. Additionally, installation of an altitude valve is planned in order to allow the tank to fill to capacity, allowing more water to be stored for fire suppression while also conserving energy.

Community Relations

Community outreach is an invaluable way to maintain a positive relationship with local communities and surrounding counties. Therefore, the WQ Team participates in activities, events, tours, and presentations both on and off post whenever possible. The Team also participates in numerous DFMWR events throughout the year to promote awareness and appreciation for the efforts made to ensure FSGA/HAAF's drinking water quality meets Department of the Army, state, and federal standards that are protective of both human health and the environment.

FSGA/HAAF understands that building knowledge instills confidence. When Flint Michigan and others helped raise nationwide awareness, the WQ Team was prepared to participate in Town Hall meetings to provide FSGA/HAAF's customers with up-to-date information regarding procedures, processes, and water quality data. FSGA/HAAF's WQ Team strives to be transparent, always providing its customers with quick feedback to alleviate any potential concerns.

To that end, FSGA/HAAF's analytical results along with information about local water sources

FSGA/HAAF's is often commended by state regulators for its annual Consumer Confidence Report.

and conservation measures is included in the installation's annual Consumer Confidence Report (CCR – also referred to as the Water Quality Report). The CCRs and water conservation tips are published in the installation's newspaper, mailed/hand delivered to Family Housing residents, and posted in motorpools, libraries, hospitals, medical clinics, Child Development Centers, as well as fitness centers for broad dissemination. CCRs are also available electronically on social media and on the FSGA/HAAF website, while hard copies are made available at training events throughout the year and for new Family Housing residents. FSGA/HAAF has received awards from the Georgia Rural Water Association for its CCRs. Assessors often commend the installation's CCR as easy-to-read, well organized, and visually appealing - allowing for easy interpretation. Though HAAF does not meet the population requirement for door-to-door delivery, the WQ team still does so as it is the fastest mode of distributing the information and ensuring customers are kept abreast. This strategy also helps build community confidence in the status of their water quality.

FSGA/HAAF's water quality and conservation achievements are discussed in multiple forums and Command briefings, to include Environmental Quality Control Committee Meetings and local Community Water forums. Water Quality improvement discussions are not limited to PAT meetings and Town Halls. They are also included as discussion topics during training events and feedback sessions such as Environmental Compliance Officer (ECO) Training, ECO Roundtables, and SMS Training.

The WQ Team partners with federal and state agencies, universities, research institutions and non-governmental organizations in addition to the PHC and Army Environmental Command to ensure that its activities are backed by the best science available. Given the scope of its mission and recognizing that environmental quality is akin to sustainability, water quality is extremely important to FSGA/HAAF - and the public knows it!

Conclusion

FSGA/HAAF's WQ Team garners efficiencies associated with previously stove-piped operations and promotes water quality that meets all Army, state and federal drinking water standards. The Team's focus is to protect the installation's community while collaboratively developing creative solutions to ensure sustainability of its military training capabilities and support functions.