

SUSTAINMENT AND RESILIENCY DIVISION



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FORT BUCHANAN

Wins 2020 Federal Energy and Water Management Award

We closed out 2020 on a high note as Fort Buchanan, Puerto Rico, was recognized as a winner of the 2020 Federal Energy and Water Management Award under the program category. The awards recognize individuals, groups, and agencies for their outstanding contributions in the areas of energy and water efficiency, resilience, and technology achievements; distributed energy; cyber security; and fleet management at federal facilities. Representing the U.S. Army Reserve (USAR), Fort Buchanan was recognized for their significant reductions in water use and planned energy security projects in FY19.

Fort Buchanan achieved significant reductions in water use and developed plans for ambitious energy security projects. The USAR-funded Installation developed a framework for guiding these efforts by participating in the Integrated Strategic and Sustainability Planning

(ISSP) process to develop a long-term holistic strategic plan. The Fort Buchanan Strategic Plan (the Plan) guides the Installation toward achieving sustainability within its workforce, infrastructure, training, and community partnerships.

The Plan identifies projects for reductions in energy and water use and alternative systems to offset utility-supplied resources that have realized impressive results. From FYs 07-19, Fort Buchanan reduced its water consumption by 42 percent (from 181 MGal to 105 MGal). The Installation was making progress with its energy reduction and renewable energy efforts until impacted by Hurricane Maria. From FYs 15-17, Fort Buchanan reduced its energy use by 7 percent, but use has increased 21 percent from FY17 to FY19. As defined by the Plan, the Installation is implementing aggressive energy resiliency measures to address these increases.

Fort Buchanan has also developed an Installation Energy and Water Plan (IEWP) that maps out energy and water efficiency and conservation measures with a microgrid, battery storage, and other integrated renewable plans to achieve at or near Net Zero Energy and Water

status. Additional projects include repairing renewable energy systems damaged during Hurricane Maria (which 90 percent of the repairs have been completed). Renewable power will enable Fort Buchanan to reduce utility energy usage by meeting daytime demands with solar photovoltaic panels.

In 2018, a new innovative rainwater harvesting (RWH) system, designed to treat collected rainwater to drinking standards, was installed at the Fort Buchanan Welcome Center. In 2020, seven additional systems were installed (and six more went under design) at mission-critical buildings such as the United States Army Garrison Headquarters, 1st Mission Support Command, Clinic, Police Station, and Armed Forces Reserve Center. To help push rainwater through the system's advanced filtration and power the system's automation and telemetry, the system is equipped with solar panels enabling it to operate despite disruptions to the electrical grid.

Additional water savings were achieved by repairing the water distribution network. Only one year after the repairs, Fort Buchanan experienced a 53 percent decrease in water utility costs (from FY18

SRD SNAPSHOT

to FY19), saving more than \$1 million. Additionally, Fort Buchanan acquired Las Casas lake and is studying the feasibility of extracting water to act as primary or back up water supply to meet most, if not all, of its potable water needs. This could significantly improve the Installation's utility resiliency in the case of natural disasters and other threats to mission accomplishment.

"We're very proud of Fort Buchanan's energy and water accomplishments

through their strategic planning efforts," shared Paul Wirt, chief of the Sustainment and Resiliency Division (SRD). "Compared to last year, the Installation decreased its potable water use by 17 percent in FY20 and over 49 percent compared to FY18. We know that their planned resilience projects will continue to strengthen the Installation and prepare them for whatever challenges they face in the future. They are truly Army strong."

Congratulations, Fort Buchanan!



USAR Submits Annual Energy Management and Resilience Report (AEMRR)

Highlighting continued excellence in energy and water efficiency and resilience, the Army Reserve Installation Management Directorate (ARIMD) has submitted the FY20 AEMRR to the Deputy Chief of Staff (DCS), G-9 (Installations). The report showcased the USAR's 7.9 percent reduction in energy consumption and 13.2 percent reduction in water consumption compared to FY19. While much of this year's reductions can be attributed to the reduced OPTEMPO during the COVID-19 pandemic, an increase in renewable energy production

and addressing water leaks caused by aging infrastructure (amongst other measures) greatly contributed. The USAR also completed comprehensive IEWPs at Fort McCoy, Fort Buchanan, and Fort Hunter Liggett/Parks Reserve Forces Training Area – providing each Installation a holistic energy and water path into the future.

Results of this report were shared during the Annual Command Energy, Water, and Sustainability Briefing with the Assistant Secretary of the Army (Installations,

Energy and Environment), the Honorable Alex Beehler, on 14 December 2020.

ARIMD will remain focused on achieving increased energy and water resilience at critical mission locations as these efforts are outlined in the newly drafted USAR Energy and Water Resilience Strategy that is currently under the approval process.

For questions about the FY20 AEMRR, please contact [Frank \(Trey\) Lewis](#), energy & water program coordinator.

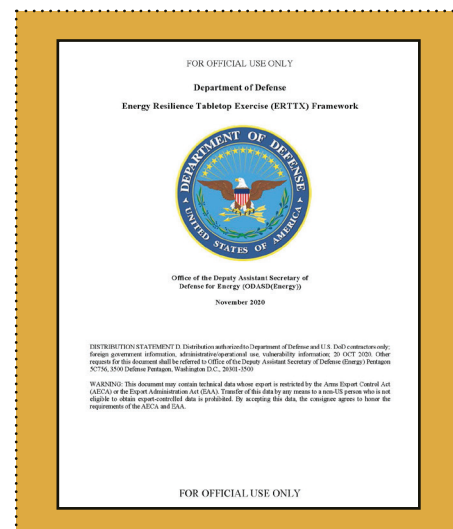
Army Framework for Energy Resilience Tabletop Exercises (ERTTX)

It is a requirement under DoDI 4170.11 for the Army to conduct semi-annual routine and annual full-scale tests to ensure energy resilience and readiness. While the requirement is for full-scale testing, ERTTX can help integrate long-duration power disruption scenarios into regular assessment and exercise programs and help installations prepare for more comprehensive Black Start exercises.

The Department of Defense developed the framework to provide those interested with the necessary understanding of the process, objectives, planning materials, practical guidance, and limitations. ERTTX

can be used as a planning step or precursor to assist installations in preparing for those required semi-annual routine and annual full-scale tests, or for a more thorough Black Start exercise. It can help identify infrastructure misconceptions, vulnerabilities/risks to critical missions, and critical interdependencies among missions, communications, energy systems, and off-base support.

To learn more about ERTTX, please contact [Eric Connelly](#), energy program coordinator.



Upcoming Program Teleconferences

Environmental Leadership Forum
14 January
1500 - 1630 EST

Solid Waste Program Teleconference
20 January
1430 - 1600 EST

**Energy and Water Managers
Teleconference**
28 January
1430 - 1600 EST

SRD SNAPSHOT

Virtual Solid Waste Implementation Strategy (SWIS) Workshop Scheduled for January 2021

In September 2020, the USAR Solid Waste Team, with the support of the Strategic Readiness Team (SRT), began meeting weekly in preparation for a workshop to update their program's strategic plan, known as the Solid Waste Implementation Strategy (SWIS). The workshop will take place from 12-14 January 2021 to leverage subject matter expertise across the USAR in the plan's development. Participants will include team members from ARIMD, various USAR department of public works personnel, the DCS, G-9 (Installations) Municipal Services program manager, and other Army component subject matter expertise guests.

Nested under the USAR Infrastructure Strategy, the new SWIS will determine the program's major and supporting objectives and action plans through 2028. In preparation of the SWIS workshop, the USAR Solid Waste Team and the SRT has conducted a series of exercises and background work to include: Lines of effort (LOE) development, Solid Waste Program activities identification and alignment with LOEs, vision/mission statements development, and a strengths, weaknesses, opportunities, and threats analysis.

"We're really excited to bring everyone

together virtually for the workshop," explained Lt. Col. Danny Jennejohn, manager of the USAR Solid Waste Program. "Now more than ever, it's the perfect time to update our strategy and reconfirm our link to the USAR Infrastructure Strategy. Having three dedicated days, with an extremely-focused agenda, we'll be able to establish an updated strategic plan that will help ensure the continued success of our program and our personnel across the enterprise for many years to come."



SRD Participates in Effective Facilitator Training

With the unique operating environment that comes from a global pandemic, keeping Soldiers and Civilian employees safe from COVID-19 took absolute precedence in 2020. Looking to sharpen our division's skills in the virtual environment, the Strategic Readiness Team (SRT) developed internal and external training opportunities that would not only enhance the way we work together at headquarters, but enhance the way we collaborate across the USAR enterprise. SRD partnered with one of the industry's leading experts in facilitation and training, Leadership Strategies, to provide our team members with training designed to support our continued success in collaborating, facilitating, and managing our day-to-day operations in the virtual environment.

Select SRD team members participated in

a series of sessions that make up an accredited course by The International Institute of Facilitation. The training helped participants identify tools and techniques to: create a vision that motivates people to action, engage groups in developing solutions, and generate ownership that leads to results. Participants also learned a comprehensive approach top facilitators use to prepare for success, get a session started, focus the group, understand the power of the pen, gather information, manage dysfunction, build consensus, maintain high energy, close the session, and construct customized agendas.

"This training was absolutely essential to our personnel," explained Paul Wirt, SRD chief. "Working at a headquarters level of a worldwide organization, we want to always make sure we're bringing our best

game when it comes to supporting USAR commands, our Soldiers, and the Civilian employees who help keep things running. This year we've faced travel restrictions which has inspired us to make sure we're still bringing topnotch support that the field depends on but in a virtual way that is still engaging, productive, and supporting the needs of the mission."

Looking ahead, the SRD looks forward to implementing their newly learned skills in the hopes that their new facilitation techniques can enhance meetings, training events, and inspire the skills of others. "It's been our goal to keep the installation management workforce empowered during these critical times," added Wirt. "With our newly fine-tuned facilitation skills, we'll continue to improve our practices and ultimately, our successes."



*Happy
new
Year*



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