IMPROVED WATER RESILIENCE ON DOD INSTALLATIONS

OBJECTIVE
Solutions are sought to cost-effectively implement water metering solutions to improve the assessment and management of water resources on DoD installations. Current water metering practices typically focus on large water-using facilities/operations where utility savings can cover the cost of installing and maintaining the meters. However, this approach does not provide sufficient data to create an installation-wide understanding of how water is being used or to determine the water requirements to sustain installation operations and specific mission sets. As water resources are becoming increasingly stressed in parts of the US and around the world, understanding water requirements and improving water management is critical for mitigating water-related risk to installation operations and improving water resilience.

ESTCP seeks proposals for demonstrations of technologies or analytical approaches that include some or all the following capabilities:

- Identify water quantity, quality and availability required to support installation and mission needs.
- Approach for cost-effective and efficient metering to improved water management and inform infrastructure and resource investments and risk analyses.
- Efficient integration of data sources to inform water resilience planning over various time-horizons.

Solutions should consider complexities associated with control systems cybersecurity and handling of controlled unclassified information (CUI).

BENEFITS
Water metering solutions enable DoD to better understand the water use and needs of its various installations spanning across different climates and topographies in US. Each of the installations have unique water requirements to meet the different facilities, buildings and operations needs to support missions. Water meters will provide installations with the necessary information to improve water resilience and mission assurance, increase reliability, and optimize resource use.

BACKGROUND
DoD has installations in various climates and geographical areas with different topographies. Many of these locations face increasing water stress due to increased frequency of droughts, wildfires, and other extreme climate events. These increased water threats lead to competition for water resources across different needs and missions. Also, DoD’s aging water infrastructure poses an additional threat to ensuring reliable water supply. The Fiscal Year 2021 National Defense Authorization Act (NDAA) Section 2827 “Water Management and Security on Military Installations” requested DoD installations develop a joint methodology to evaluate water risk
associated with water sources, aging infrastructure, drought impacts, and evaluation of existing water metering and consumption at the military installations. To increase understanding of installation energy and water use, the Office of Secretary of Defense (OSD) issued an updated utilities meter policy in January 2021, promoting maximum use of advanced metering technologies, prioritizing all mission-critical and water-intensive facilities.

DoD Services have emphasized the growing importance of water in their efficiency and resilience policies and planning activities. The Army Directive 2017-07 requires Army installations to prioritize energy and water security requirements and ensure supply of energy and water to critical missions for a minimum of 14 days during a disruption. Services have deemed planning for water as important as energy if not more as part of their Installation Energy Plans (IEP). IEP is a holistic planning roadmap of installation guidance, strategic plans, and policies to achieve energy and water efficiency and resilience. As part of the IEP process, installations need to determine existing water resources, infrastructure, uses, deficiencies, and needs to establish baseline condition. The baseline data and critical mission requirements are then used to develop water needs requirements for critical mission sustainment. However, insufficient metering makes it hard to accurately develop baseline data and effectively plan for mission needs.

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For pre-proposal submission due dates, instructions, and additional solicitation information, visit the [ESTCP website](#).