

SPRING 2019 EDITION

DoD's Environmental Research Programs

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REGISTER NOW FOR THE 2019 SERDP AND ESTCP SYMPOSIUM!

The 2019 SERDP and ESTCP Symposium will be held December 3-5, 2019, at the Washington Marriott Wardman Park in Washington, D.C. Planning for the 2019 Symposium has begun and this year's meeting is shaping up to be an excellent event. The Symposium will open with a Plenary Session featuring keynote speakers The Honorable Al Shaffer, Deputy Under Secretary of Defense for Acquisition and Sustainment; The Honorable Sherri Goodman, Senior Fellow at the Wilson Center's Environmental Change and Security Program and Polar Institute; and Dr. Susan Hockfield, President Emerita, Professor of Neuroscience, and author.

As in years' past, the 2019 Symposium will be centered on technical sessions that span the wide spectrum of SERDP and ESTCP investments. The technical sessions will be complemented by two poster sessions that highlight SERDP- and ESTCP-funded efforts along with the relevant work of others in the community. A number of short courses will provide attendees the opportunity to dive deeper into different topics and earn continuing education credits.

In addition, this year celebrates ESTCP's 25th year of funding innovative technology demonstrations. The 2019 Symposium will be a chance to reflect on 25 years of ESTCP's accomplishments as well as meeting the Department of Defense's (DoD's) future environmental and installation energy challenges. Updates are being made to the Symposium website as the technical program is developed. For more information or to register, visit the [Symposium website](#).

SERDP & ESTCP SPONSORED WORK MOVES FROM R&D TO ACCEPTANCE AS A REMEDY UNDER CERCLA

SERDP and ESTCP investments in contaminated sediment management research achieved a major milestone with the specification of activated carbon placement as part of the remedy in the Records of Decision for Joint Base Pearl Harbor-Hickam in Hawaii, and for the Hunters Point Naval Shipyard (HPNS) in California.

Sediment contamination is a significant liability for the DoD, with overall liabilities estimated to approach \$2 billion. SERDP and ESTCP identified in situ remedial alternatives for sediments as a critical priority research need in a [2004 Workshop Report](#). SERDP first invested in 2004 with Stanford University on the use of activated carbon to sequester organic contaminants. With that initial seminal research, the Programs went on to fund demonstration projects at the Army's Aberdeen Proving Ground (ESTCP Projects [ER-200835](#) and [ER-200825](#)), HPNS (SERDP Project [ER-1207](#)), Naval Air Station Dallas (SERDP Project [ER-1493](#)), and the Puget Sound Naval Shipyard (ESTCP Project [ER-201131](#)) (see [Activated Carbon Amendments for In Situ Stabilization of Contaminated Sediments Move from the Bench to the Field](#)). [MORE](#)



MILITARY ENERGY RESILIENCE CATALYST (MERC) INNOVATION CHALLENGE

ESTCP has constantly strived to ensure successful transition of technologies through various technology transfer approaches including collaborations with end-users and regulators. To continue to strengthen the technology transition efforts, the Installation Energy and Water (EW) program issued a solicitation topic in FY18 on technology transfer, with the goal to identify innovative approaches to promote greater adoption of demonstrated technologies.

As part of this solicitation, ESTCP funded a project titled [Military Energy Resilience Catalyst \(MERC\)](#) led by Mr. Michael Wu of Converge Strategies, LLC. MERC is an accelerator program for energy resilience within the DoD, managed jointly by Converge Strategies, LLC and Idaho National Laboratory. The objectives of this project are to streamline DoD project development by identifying and disseminating scalable practices, provide direct facilitation and technical assistance to projects, create a peer-to-peer network to support ongoing innovation, and establish a permanent and user-friendly knowledge management system. [MORE](#)



CLOUD COMPUTING: THE SOLUTION TO UXO CLASSIFICATION

Classification of Unexploded Ordnance (UXO) using advanced electromagnetic (EM) sensors has been successfully realized by multiple firms and at a variety of sites with a wide range of UXO/clutter distributions. The primary software toolset in use for UXO classification from advanced EM sensor data is called UX-Analyze and has been developed with ESTCP Munitions Response (MR) program funding over the last several years. Although the current technical approach to data processing and analysis of geophysical survey data for UXO problems is maturing and becoming increasingly robust, the processes and technologies needed to succeed in production settings and conditions are lacking due to the limitations of desktop computers.

To further the benefits of the UX-Analyze software and address current computing limitations, ESTCP is funding a project led by Dr. Dean Keiswetter titled "[Efficient and Secure Cloud Computing for UXO Classification and Project Management](#)." This project is in the process of creating an operative, efficient, and secure cloud computing technology for classifying UXO based on the analysis of multi-coil electromagnetic induction (EMI) data. According to Dr. Keiswetter, the benefits of moving the geophysical management and data analysis tools to the cloud include improved efficiencies, greater business agility, increased data availability, greater collaboration, faster processing speed, and cost savings. In addition, this software could be used on all DoD sites that require underwater or terrestrial geophysical project work for UXO detection and classification. [MORE](#)



SERDP BAT RESEARCH FEATURED IN THE NEW YORK TIMES!

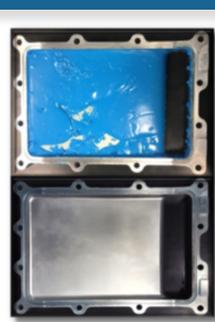
[The New York Times](#) recently highlighted the work being conducted by Dr. Sarah Olson and her team to assess white-nose syndrome (WNS) and non-stationary changes on bat populations. WNS is caused by the fungal pathogen *Pseudogymnoascus destructans* and is the most devastating disease currently impacting North American wild mammals. White-nose syndrome alters the physiology and bioenergetics of bat hibernation leading to increased arousal frequency and depletion of fat stores. Since the pathogen emerged in 2006, it has caused widespread mortality and threatened several species with extinction. As bat populations decline and the species become listed, military activities face potential repercussions for use. As a result, the DoD sees bat recovery as important for the management of DoD lands. [MORE](#)



ENVIRONMENTALLY CONSCIOUS PRODUCTION OF COMPOSITE PROPELLANTS AND EXPLOSIVES

Resodyn Corporation - Weapons Division in the effort to develop technologies that will assist DoD in limiting waste streams associated with manufacture of energetic materials under a [SERDP-funded effort](#).

Specifically, the effort will develop a manufacturing process using the new Continuous Acoustic Mixer-Clean in Place (CAM-CIP) in the production of various explosives, rocket propellants, and pyrotechnic formulations for military use. The proposed technology will reduce overall waste streams and improve worker safety associated with energetic supply-chains and manufacture of millions of pounds (annually) of energetic material.



Ultimately, this effort will quantify the extent to which the implementation will improve safety and occupational health and reduce environmental impacts. It is anticipated that use of the technology will significantly reduce downstream waste on a production scale commensurate with current production operations. [MORE](#)

ANNOUNCEMENTS

SERDP and ESTCP Continue Webinar Series - [View Schedule](#)

RELATED EVENTS

- [May 20-22](#)
American Industrial Hygiene Conference and Exposition (AIHce EXP), Minneapolis, MN
- [July 8-10](#)
ARPA-E Energy Innovation Summit, Denver, CO
- [August 5-9](#)
National Environmental Monitoring Conference (NEMC), Jacksonville, FL
- [August 11-16](#)
2019 Annual Meeting for Ecological Society of America (ESA), Louisville, KY
- [August 20-22](#)
2019 Energy Exchange, Denver, CO
- [December 9-13](#)
American Geophysical Union (AGU) Annual Meeting, San Francisco, CA