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SUMMER 2016

DoD's Environmental Research Programs

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

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Report Released! Use of Climate Information for Decision-Making and Impacts Research: State of Our Understanding - [View Report](#)

ASETSDefense 2016 Scheduled for December 6-8 (Orlando, FL) - [More Information](#)

CALENDAR

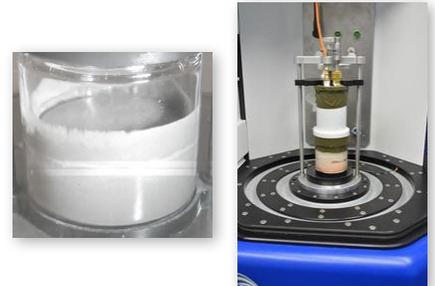
June 30: SERDP and ESTCP Webinar - Geophysics 101: Realistic Expectations for Geophysics When Used for Site Characterization and Remediation Monitoring - Part 1

2015 SERDP AND ESTCP PROJECTS OF THE YEAR

SERDP and ESTCP are pleased to announce the 2015 Projects of the Year. These awards recognize scientific advances and technological solutions to some of the Department of Defense's (DoD) most significant environmental challenges. The findings, approaches, tools, technologies, and guidance developed by these projects will help DoD enhance its mission capabilities, improve its environmental and energy performance, and reduce costs. Please visit the [SERDP and ESTCP website](#) to read more about each of these award-winning projects.

ENVIRONMENTALLY SUSTAINABLE MANUFACTURING FOR ENERGETIC FORMULATIONS

In November of 2014, SERDP issued a Statement of Need (SON) on environmentally sustainable manufacturing for energetic formulations. Several SERDP projects were selected to explore resonant acoustic mixing (RAM) technologies as applied to mixing propellants, explosives, or pyrotechnic materials. This is an exciting technology area that can help DoD reduce hazardous waste and improve worker safety, while continuing to meet mission performance requirements. [MORE](#)



ADVANCES IN PERFLUOROALKYL CHEMICALS (PFCS) CHARACTERIZATION AND REMEDIATION

Aqueous film-forming foam (AFFF) has been used to extinguish flammable liquid fuel fires in military and civilian operations since the mid-1960s. However, AFFF contains potentially harmful polyfluoroalkyl substances (PFASs) and studies suggest that perfluoroalkyl chemicals (PFCS) are resistant to biodegradation. On May 19, 2016, the Environmental Protection Agency (EPA) issued Health Advisories for perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS) that limit combined concentration of



July 14: SERDP and ESTCP Webinar - Remote Methods for Water Conservation

July 15: SERDP and ESTCP Quarterly Progress Reports Due

July 28: Geophysics 101 - Realistic Expectations for Geophysics When Used for Site Characterization and Remediation Monitoring - Part 2

August 11: SERDP and ESTCP Webinar - An Environmentally Acceptable Alternative for Fast Cook-off Testing, Demonstration, Validation and Implementation Efforts

RELATED EVENTS

August 7-12: ESA Annual Meeting 2016 (Ft. Lauderdale, FL)

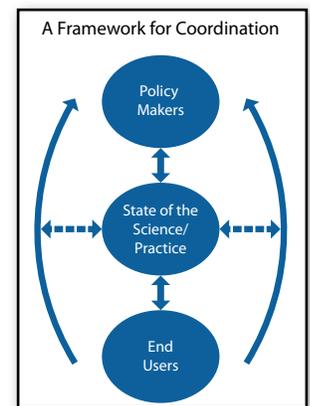
August 9-11: Energy Exchange (Providence, RI)

December 12-16: AGU Fall Meeting (San Francisco, CA)

the two chemicals to 70 parts per trillion in drinking water. Since FY 2011, SERDP and ESTCP have sponsored a number of projects seeking to develop a better understanding of occurrence, fate and transport, potential remedial treatment, and toxicological effects of PFCs. [MORE](#)

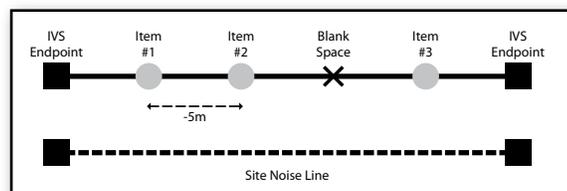
CLIMATE-SENSITIVE DECISION-MAKING IN THE DEPARTMENT OF DEFENSE: SYNTHESIS AND RECOMMENDATIONS

The DoD expects climate change to play an increasingly significant role in the Department's ability to fulfill its mission in the future. As a result, DoD has adopted a proactive and flexible approach to vulnerability assessment and adaptation planning for potential impacts from a changing climate. SERDP has funded research efforts to improve frameworks for integrating climate change into decision-making, as well as methods to identify and characterize vulnerabilities to climate change. In 2015, SERDP developed a report entitled "Climate-Sensitive Decision-Making in the DoD: Synthesis of Ongoing Research and Current Recommendations". This report provides a support tool for the Office of the Secretary of Defense (OSD) and the Military Services in planning and conducting climate change-related assessments to inform decision-making. This report is an important step in amplifying the dialogue between scientists, decision-makers, and practitioners. [MORE](#)



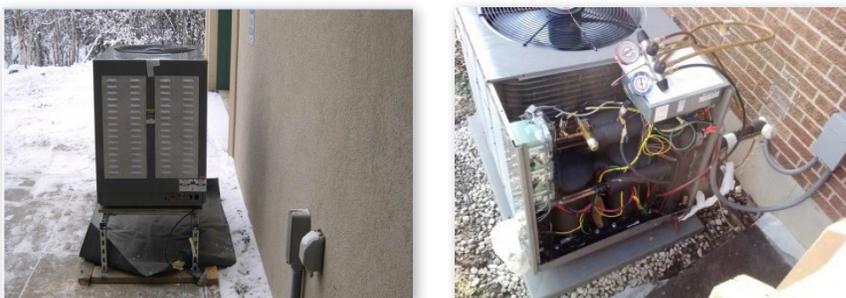
GEOPHYSICAL SYSTEM VERIFICATION REPORT UPDATED

Magnetometry and electromagnetic (EM) induction technologies have long been used to survey former military sites for buried munitions as part of evaluation and cleanup efforts. In 2009, ESTCP, with input from representatives of the services, state and federal regulators, and the National Association of Ordnance Contractors (NAOC), formalized a [Geophysical System Verification \(GSV\)](#) process by which these geophysical technologies are rigorously evaluated for performance. The GSV process replaces the traditional Geophysical Prove-Out (GPO) process by streamlining and enhancing physics-based evaluations. [MORE](#)



ENERGY-EFFICIENT HEAT PUMP FOR COLDER REGIONS

Air-source heat pumps (ASHP) are used in milder climates to heat buildings efficiently and cost effectively. Traditional ASHP technology is not as effective in colder climates, where temperatures typically drop below 25°F, because a supplemental electric resistance heat must be used to maintain indoor temperatures. Heating in these regions is therefore typically performed with heating oil, propane or electricity, all of which lead to increased cost and greenhouse gas emissions. [ESTCP-funded work through Purdue University](#) investigated a new ASHP technology optimized for colder climates. The cold climate heat pump (CCHP) utilizes two fixed speed compressors connected in parallel along with a variable speed compressor and an economizer. The CCHP efficiently generates sufficient heat in low outside temperatures without relying on supplemental electric resistance heating. The technology demonstrated in this effort was subsequently evaluated in a U.S. Department of Energy (DOE) project where it proved to exceed DOE's 2020 goals for cost effectiveness and efficiency. [MORE](#)



SERDP AND ESTCP PROGRAM UPDATE

SERDP released the FY 2017 Core Solicitation on October 29, 2015. By the January 7th submittal deadline, the Program Office received 309 preproposals responding to ten SONs. SERDP staff reviewed these preproposals and in early February extended requests for full proposals, which were due March 8th. All full proposals are now undergoing peer review and those that receive favorable reviews will be evaluated by the SERDP Technical Committees (STCs), who will make recommendations for funding later this summer.

SERDP also released the FY 2017 SERDP Exploratory Development (SEED) Solicitation on October 29, 2015. By the March 8th deadline, the Program Office received 79 full proposals responding to one SON for Resource Conservation and Climate Change and two SONs for Weapons Systems and Platforms. The STCs will evaluate these proposals and make recommendations for funding later this summer.

ESTCP released the FY 2017 Environmental Technologies and Installation Energy and Water Solicitations on February 9, 2016, and in response, received a total of 228 preproposals by the April 5th deadline. The ESTCP Technical Committees (ETCs) will review preproposals from both solicitations and then make recommendations for full proposal requests to the ESTCP Director. ESTCP will disseminate full proposal requests by late June. Final selections will be made in the October 2016 time frame.

CHANGE IN STAFF AT SERDP AND ESTCP

SERDP and ESTCP bid farewell to Dr. Anne Andrews, the Director of SERDP and ESTCP and Dr. John Hall, SERDP and ESTCP Resource Conservation and Climate Change Program Manager. Anne joined SERDP and ESTCP in 2001 as the Program Manager for the Munitions Response (formerly Unexploded Ordnance) Program Area. She later assumed the role of Deputy Director of SERDP and ESTCP and finally the Director of the Programs. John had served as Program Manager for Resource Conservation and Climate Change (formerly Sustainable Infrastructure) since 2006. During this time John was the driving force behind the growth of the SERDP and ESTCP climate change initiative. Both of these individuals made significant contributions to the success of SERDP and ESTCP during their tenure and we offer both our sincere thanks.

In December 2015, ESTCP was pleased to welcome Mr. Timothy Tetreault as the new ESTCP Energy and Water Program Manager. Tim came to the Program from the National Renewable Energy Laboratory where he specialized in renewable energy and energy efficiency project technical and financial analysis, energy strategy development, and energy project financing mechanisms. Tim takes over for Dr. Jim Galvin, who left the Program in May 2015 to join the Office of Small Business Programs for the DoD as the Deputy Director for Policy and Procurement.

STRATEGIC ENVIRONMENTAL RESEARCH AND DEVELOPMENT PROGRAM (SERDP) ENVIRONMENTAL SECURITY TECHNOLOGY CERTIFICATION PROGRAM (ESTCP)

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