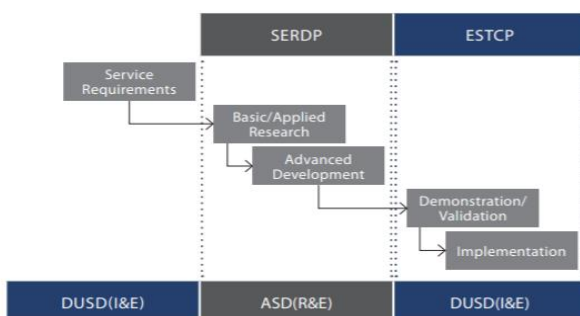


Environmental Research at the Department of Defense

The Department of Defense funds a portfolio of basic, applied and advanced development research on environmental, installation energy and sustainment through the [Strategic Environmental R&D Program](#) (SERDP). DOD also demonstrates promising and cost-effective technologies that address high-priority environmental requirements through the [Environmental Security Technology Certification Program](#) (ESTCP). SERDP and ESTCP are managed jointly by the DOD, Environmental Protection Agency (EPA) and the Department of Energy (DOE) to focus on cross-service requirements and solutions to DOD's environmental challenges. The two programs are integrated in their goals and objectives for environmental research but distinct in their funding outcomes. The main mechanism for funding at SERDP and ESTCP is an [annual solicitation](#). SERDP issues a core [statements of need](#) that drive a call for proposals, SERDP Exploratory Development (SEED) funding, and the open broad agency announcement (BAA). The SERDP statement of need is subject to change each fiscal year according to the joint needs of the services. SERDP specifically seeks hypothesis driven research that demonstrates a foundational understanding of the science being solicited and clearly addresses a specific statement of need. ESTCP seeks technologies that would benefit from demonstration on a DOD installation to assess cost and feasibility, and projects that will utilize demonstration to accelerate commercialization. ESTCP projects will ultimately require a [Demonstration Plan](#) which outlines the technical execution and management of the demonstration.



SERDP and ESTCP are divided into key program areas including weapons systems and platforms, environmental restoration, munition response, and resource conservation & resiliency. ESTCP includes an additional focus area on Installation Energy and Water. Key environmental drivers for research & demonstration projects include sustainability of ranges, facilities and operations, and reduction of current and future liability relating to environmental damages and cleanup from weapons systems and base operations. Research ultimately hopes to prevent and mitigate environmental damage from DOD operations.

In addition to the current statement of needs and priority topics, emerging topics of interest in the SERDP and ESTCP portfolio include synthetic biology for propellants and reducing hazardous solvents, cybersecurity, models of wildland fires to assist with planning and resilience of installations, sea level rise, control sites for detection of unexploded ordinances, and testing microgrid control technologies to reduce time and cost of developing microgrids for installation resilience.

SERDP Areas of Need

Environment Restoration

- Improved Understanding of the Ecotoxicity of Mixtures of Per- and Polyfluoroalkyl Substances
- Improved Understanding of the Ecotoxicity of Per- and Polyfluoroalkyl Substances in the Marine Environment
- Improved Understanding of Ecological Toxicity and Risk of Per- and Polyfluoroalkyl Substances in Avian Species
- Treatment of Per- and Polyfluoroalkyl Substance-Impacted Matrices

Munitions Response

- Detection, Localization, Classification, and Remediation of Military Munitions Underwater

Resource Conversation and Resiliency

- Threatened, Endangered, and At Risk Terrestrial Species' Response to Multiple Stressors
- Saltwater Intrusion Impacts on DOD Installation Infrastructure

Weapons Systems and Platforms

- Advanced Computational Methodologies for Rapid Assessment of Energetic Materials
- Functional Additives and Foam Formation to Enhance PFAS-Free Fire Suppressants for Military Use
- Development of Chromium-Free Treatments and Processes
- Characterizing Products from Thermal Degradation of Polymeric PFAS in Munitions

Last updated: December 8, 2020

Researchers interested in submitting a proposal to any SERDP and ESTCP program are highly encouraged to review the statements of need (SERDP) and call for technologies (ESTCP) before submitting. Program managers strongly recommend against submitting proposals that are a stretch or adjacent to the topic in question. Proposals to SERDP and ESTCP are peer evaluated on technical merit and subjected to ranking by a joint service technical committee that determines DOD feasibility. It is also highly recommended to attend the annual [SERDP and ESTCP Symposium](#), where researchers from across the DOD enterprise present cutting edge environmental technologies and ideas.

Current and Future Opportunities

- [SERDP FY 2022 Call for Proposals](#)
 - Research proposals should align with SERDP statements of need. Pre-proposals are due **January 7, 2021 at 2:00 PM (ET)**. Multiple awards per statement of need are expected. Proposals are evaluated by scientific merit peer review followed by a technical committee review which ranks the proposals for selections.
- [SERDP SEED Solicitation](#)
 - Proposals are due **March 4, 2021 at 2:00 PM (ET)**. Funding is limited to not more than \$250,000 and projects are approximately one year in duration.
- [SERDP and ESTCP Open BAA](#)
 - Will be released in **January/February 2021**. The solicitation funds research and development for environmental research as determined by the individual announcements.
- [ESTCP FY 2022 Call for Proposals](#)
 - Will be released **January 2021**. The solicitation will include topics related to Environmental and Installation Energy and Water Technologies.