Environmental Security Technology Certification Program

ESTCP Funding Opportunities

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Department of Defense's Environmental Technology Programs

SERDP (DoD, EPA, DOE)

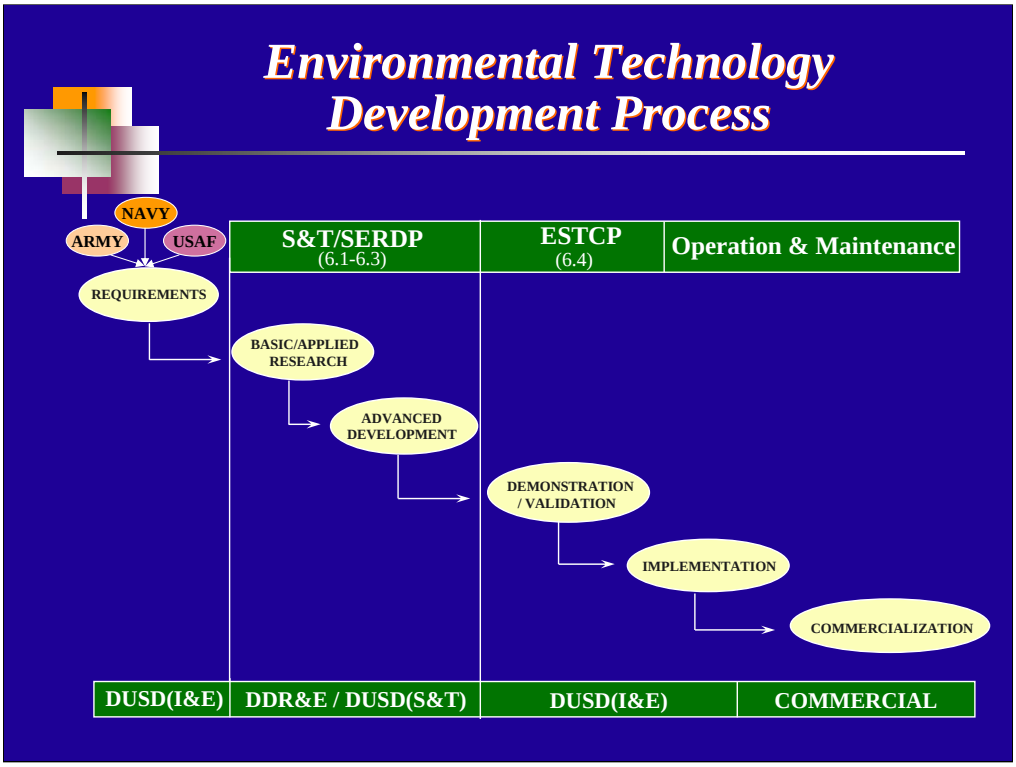
ESTCP

- **Basic and Applied Research**
- **Demonstration/Validation**

ESTCP Program Goals

- **Demonstrate Innovative Cost-Effective Environmental Technologies**
  - Capitalize on past investments
  - Transition technology out of the lab
- **Promote Implementation**
  - Direct technology insertion
  - Gain regulatory acceptance

⇨ ***Priority: needs of the DoD user community***


Environmental Technology Development Process
NAVY
ARMY
USAF
REQUIREMENTS
S&T/SERDP
(6.1-6.3)
ESTCP
(6,4)
Operation & Maintenance
BASIC/APPLIED RESEARCH
ADVANCED DEVELOPMENT
DEMONSTRATION / VALIDATION
IMPLEMENTATION
COMMERCIALIZATION
DUSD(I&E)
DDR&E / DUSD(S&T)
DUSD(I&E)
COMMERCIAL

Environmental Drivers

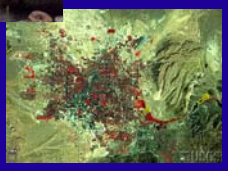
Sustainability of Ranges and Range Operations

Maritime Sustainability
Threatened and Endangered Species

Toxic Air Emissions and Dust

Unexploded Ordnance

Noise



Urban Growth & Encroachment

Environmental Drivers

Reduction of Current and Future Liabilities

Contamination from Past Practices

- Chlorinated Solvents Remain Intractable
- Large Potential UXO Liability
- New Contaminants Emerging (Perchlorate)

Pollution Prevention to Control Life Cycle Costs

- Elimination of Hazardous Materials Reduces Cost of Operation, Repair & Demil
- Goal is to achieve Compliance Through Pollution Prevention

Environmental Quality Taxonomy

Munitions Management

Weapons Systems & Platforms

Environmental Restoration

Sustainable Infrastructure

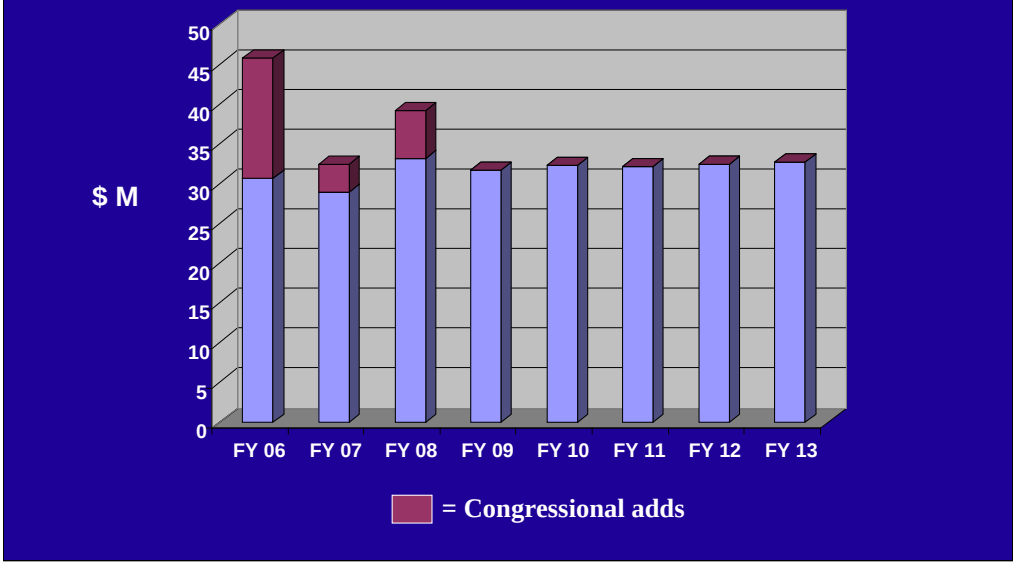
ESTCP Methodology

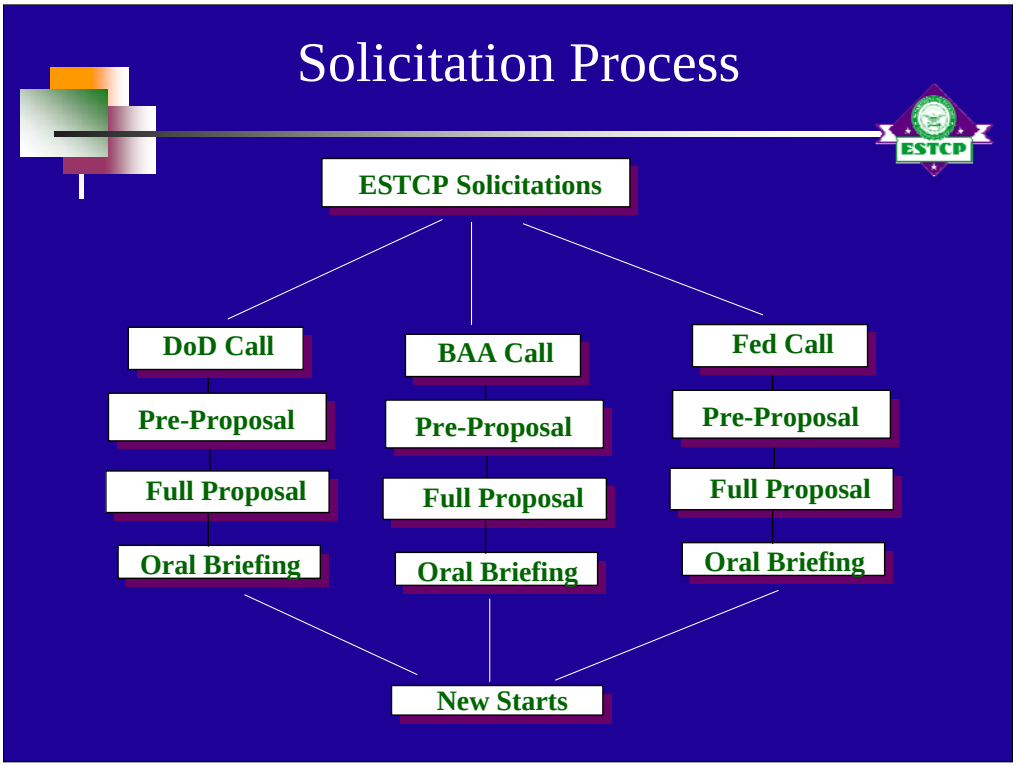
- **Partner With Stakeholders and Test at DoD Facilities**
  - Developer, regulators, end-user
  - Direct transition
- **Validate Operational Cost and Performance**
  - Independent test and evaluation
  - Satisfy regulatory and user communities
- **Identify DoD Market Opportunities**
  - Technology transfer across federal and private sector

Project Requirements

- **Formal Demonstration Plans**
  - **Independent review**
- **Execution of Technology Demonstration**
  - **Collect cost and performance data**
- **Written Reports on Cost and Performance**
  - **Technical report**
  - **Cost and Performance Summary Report**
- **Support for Transition**
  - **Regulatory and end-user acceptance**
  - **Guidance and training**

ESTCP FY 2008 Funding




Solicitation Process
ESTCP
ESTCP Solicitations
DoD Call
Pre-Proposal
Full Proposal
Oral Briefing
BAA Call
Pre-Proposal
Full Proposal
Oral Briefing
Fed Call
Pre-Proposal
Full Proposal
Oral Briefing
New Starts

DoD Call

- **Broad Call for Dem/Val Projects**
  - **Address DoD environmental requirements**
  - **DoD lead required**
- **Pre-Proposal: Technology Selection**
  - **Short written pre-proposal**
    - **Competitive process**
  - **Full Proposal Requested**
    - **Modifications recommended**
- **Selection**
  - **Full proposal**
  - **Oral presentations**

BAA/ Fed (non-DoD)
Creating Partnerships

- **Call for Technologies**
  - **Selected topic areas**
- **Pre-proposals: Technology selection**
  - **Short written pre-proposal**
    - **Competitive process**
- **Identify DoD Partners**
  - **Develop Dem/Val project**
- **Selection**
  - **Full proposal**
  - **Oral presentation**

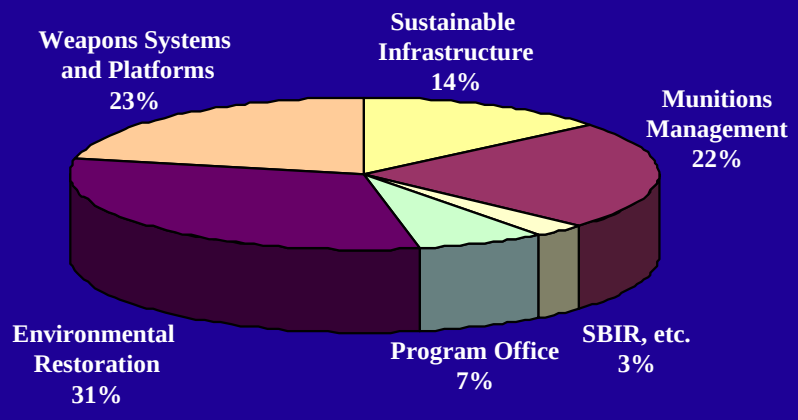
FY 2008 Solicitation

ESTCP FY 2008 Solicitation

- **BAA/Non-DoD Fed**
  - 158 pre-proposals
    - 29 full proposals
      - 17 selected
- **DoD Call**
  - 130 pre-proposals
    - 35 full proposals
      - 18 selected

Focus Area	Selected
Environmental Restoration	12
Munitions Management	7
Sustainable Infrastructure	11
Weapons Systems & Platforms	5
	35

ESTCP FY 2008 Core Funding



$33.199 million
112 Projects

FY 2009 Solicitation

DoD Topics

- Environmental Restoration
  - Soils, Sediments, Water
- Military Munitions
  - MMRP, Active Range Clearance
- Weapons Systems and Platforms
  - Manufacturing, Maintenance, Emissions
- Sustainable Infrastructure
  - Facilities and Energy, Natural and Cultural Resources

BAA/Fed Topics

- Remediation of Contaminated Groundwater
- In-Situ Remediation of Contaminated Sediments
- Characterization, Control and Treatment of Range Contamination
- Military Munitions Detection, Discrimination and Remediation
- Control of Non-Native Invasive Species on DoD Lands and Water
- Energy Efficiency and Renewable Energy for DoD Installations

Remediation of Contaminated Groundwater

- In situ remediation technologies are sought that specifically address the cleanup or management of groundwater contaminated with chlorinated solvents, metals, energetic compounds, emerging contaminants of interest to DoD, or mixtures of these contaminants.
- Characterization, optimization, assessment, and/or long-term monitoring tools related to remediation of contaminated groundwater also will be considered.
- In particular, management tools or technologies to address:
  - DNAPL source zones that cause persistent groundwater plumes are of interest
  - costs associated with long-term monitoring.
- Both passive treatment approaches (e.g., treatment barriers or walls) and active treatment approaches will be considered.
- Ex situ treatment technologies designed for the remediation of groundwater contaminated with emerging contaminants of concern to the DoD (i.e., perchlorate or other contaminants) will be considered.

In-Situ Remediation of Contaminated Sediments

- In situ remediation technologies are sought that specifically address the remediation or management of sediments contaminated with polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), heavy metals, or mixtures containing these contaminants.
- Contaminated marine, estuarine, brackish, and fresh water sediments are of interest.

Characterization, Control and Treatment of Range Contamination

- Management tools and technologies are sought to cost effectively and more accurately delineate munitions constituent source zones and contaminant loading on test and training ranges.
- Treatment and control technologies are sought that specifically address the remediation or containment of range-related contaminants and residue such as metals, energetics (RDX, HMX, TNT, DNT, picric acid), propellants such as perchlorate, or mixtures containing these contaminants in soils.
- ESTCP hosted a workshop on DoD Operational Range Assessment and Management. Proposers are encouraged to review the summary report for additional details on the critical demonstration needs
  - www.estcp.org/Technology/upload/RAWorkshopRDTENeedsRpt.pdf

Military Munitions Detection, Discrimination and Remdiation

- Detection and Discrimination: Technologies are needed that can detect and discriminate munitions ranging from 20 mm projectiles to 2000 lb. bombs from other items in the sub-surface. A single technology need not be applicable to all possible ordnance types, nor all possible site conditions.
  - Integrated systems (hand held, man-portable, vehicle towed, or airborne)
  - Systems that are cued by other survey technologies which can cost effectively, non-invasively interrogate the suspected item
  - Signal processing technologies
  - Supporting technologies including but not limited to geolocation, reacquisition of anomalies and quality assurance/quality control tools
  - Technologies applicable to detection and discrimination of munitions in underwater environments, particularly in water depths from 15 to 100 feet.

- Remediation: Technologies are needed that can cost-effectively remediate single munitions items whose location and depth have been identified; clear heavily contaminated areas where identification of individual isolated items is not feasible or cost effective; or treat scrap material, to make it safe for disposal.

Control of Non-Native Invasive Species on DoD Lands and Water

- Control is defined broadly to include eradication and other management approaches that contain, reduce, or eliminate NIS populations.
- DoD waters include freshwater and marine ecosystems managed by DoD, but ship-based ballast water exchange and control technologies are outside the scope of this solicitation.
- The method of control can include any viable biological, chemical, mechanical, cultural, or integrated approach that is ready for implementation-scale demonstration.
- ESTCP in particular seeks technologies and methodologies that avoid or minimize non-target impacts and are consistent with ecosystem-based approaches to natural resources management.

Energy Efficiency and Renewable Energy for DoD Installations

- Innovative technologies and methods are sought to improve energy efficiency and increase the use of renewable energy on DoD installations.
- Technologies of interest include but are not restricted to:
  - 1) innovative energy efficient lighting, heating, and air conditioning, and other technologies to support sustainable building design and operations to reduce energy demand for all types of DoD buildings, including historic properties
  - 2) renewable energy sources at various power levels
  - 3) supporting technologies such as energy storage and control technologies to manage these resources

FY 2009 Solicitation
-Dates-

- **ESTCP Solicitation Released January 10, 2008**
- **Pre-proposal Due: March 13, 2008 4 PM EST**
  - Pre-proposals received after this time will not be reviewed
  - Pre-proposals sent via fax or electronic mail will be rejected
- **Full Proposal Requested June 2008**
  - **Full Proposal Due: August 7, 2008 4 PM EST**
- **Oral Briefing in Arlington, VA September 2008**
  - **Selection October 2008**
  - **Project Initiation March 2009**
- **Visit the ESTCP Web Site for Solicitation Details**

www.estcp.org/opportunities

Selection Criteria

Relevance (Pass / Fail)
Appropriate for Demonstration (Pass/Fail)

- **Technical Merit**
- **Cost/Benefit**
- **Technology Transfer**
- **Cost**

Hallmarks of a Competitive Proposal

- Clearly address a DoD Environmental Need
- Well defined demonstration/validation questions
- Provide significant benefit
  - reduced costs
  - improved performance
- Technically sound
  - Detailed technology description
  - Detailed technical approach

Internet Resources

www.estcp.org

Thank You

After viewing the links to additional resources, please complete our online feedback form.

Links to Additional Resources

Feedback Form

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