



# SERDP and ESTCP

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**Executive Director, SERDP**  
**16 April 2007**



# DoD's Corporate Environmental Technology Programs



- **Basic and Applied Research**

- **Demonstration / Validation**

# What is DoD?

**DoD is a Major Industrial Organization**



**8000+ Tanks**



**300 Ships**



**15,000+ Aircraft**



**320,000+ Buildings on  
5,543 Facilities**



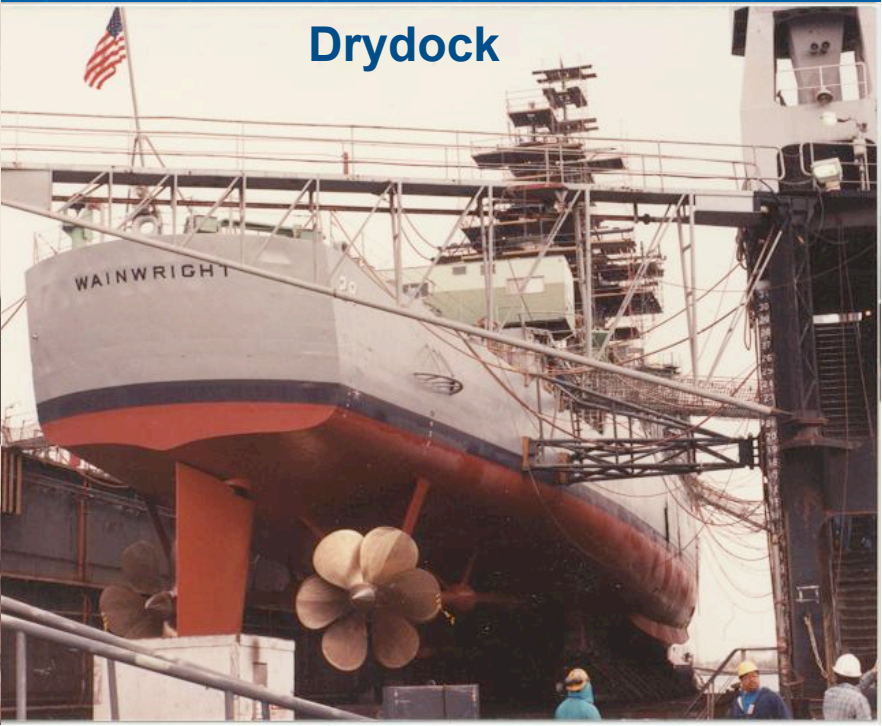
**Aircraft  
Paint Stripping**



**Chrome Plating Baths**



**Painting Bradley  
Fighting Vehicle**



**Drydock**



**2.2 Million Men and Women in Uniform  
+ 600K Civilians**

# What is DoD?

**DoD is a Major Industrial Organization**

**DoD is the Nation's Fifth  
Largest Landholder**



# DoD Lands

29 Million Acres



**Broad Diversity  
Of Ecosystems**





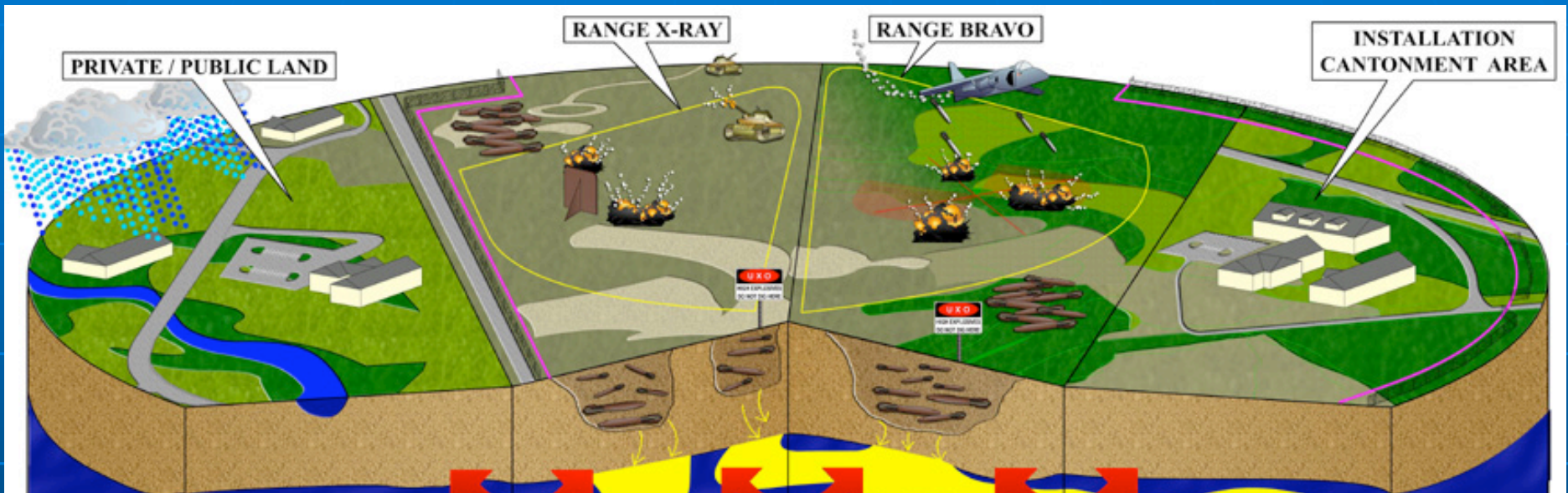
# What is DoD?

**DoD is a Major Industrial Organization**

**DoD is the Nation's Fifth  
Largest Landholder**

**DoD is Operational**

# DoD Installations and Ranges



Operational Ranges

Surrounding Communities

Cantonment

## Sustainability of Ranges and Range Operations



**Maritime Sustainability  
Threatened and Endangered Species**

**Toxic Air Emissions and Dust**

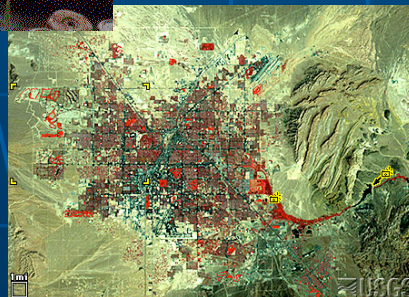


**Unexploded  
Ordnance**



**Urban Growth &  
Encroachment**

**Noise**



# Ecosystem Management



**FT. Benning, GA**  
**Terrestrial**



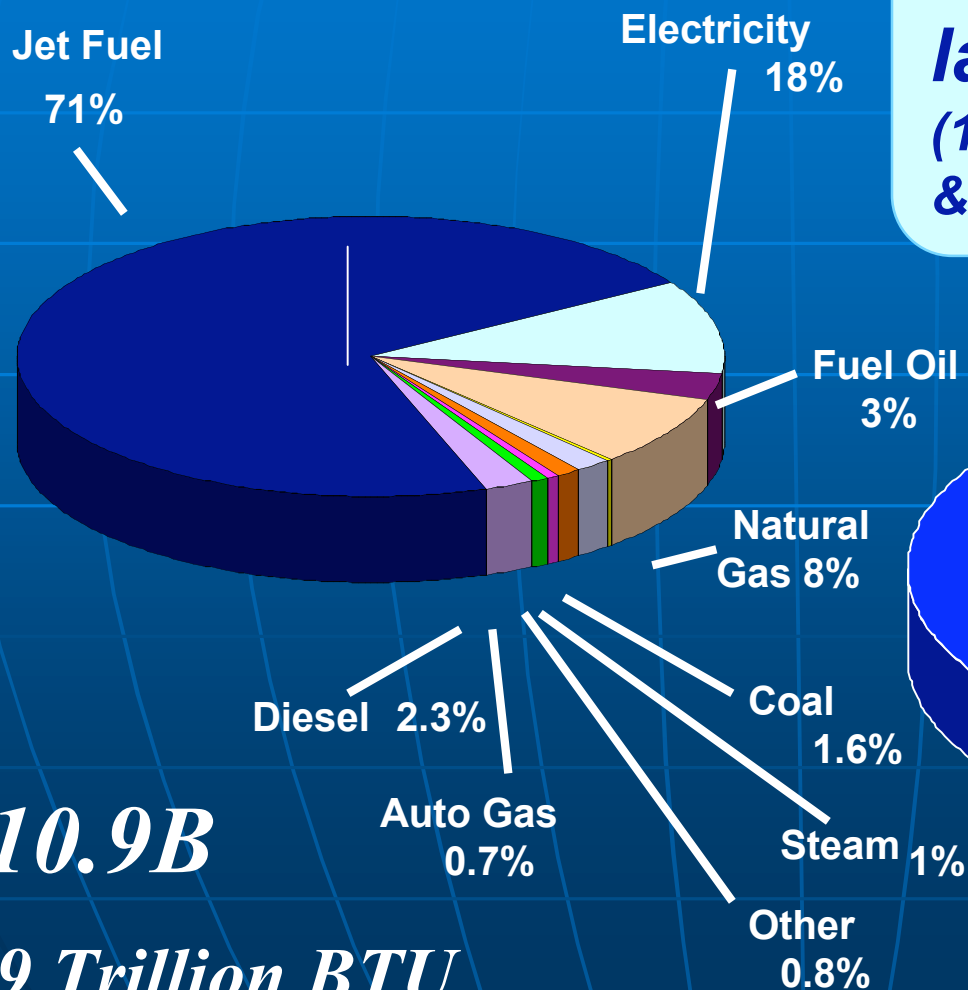
**Camp Lejeune, NC**  
**Estuarine**

# DoD Energy Use



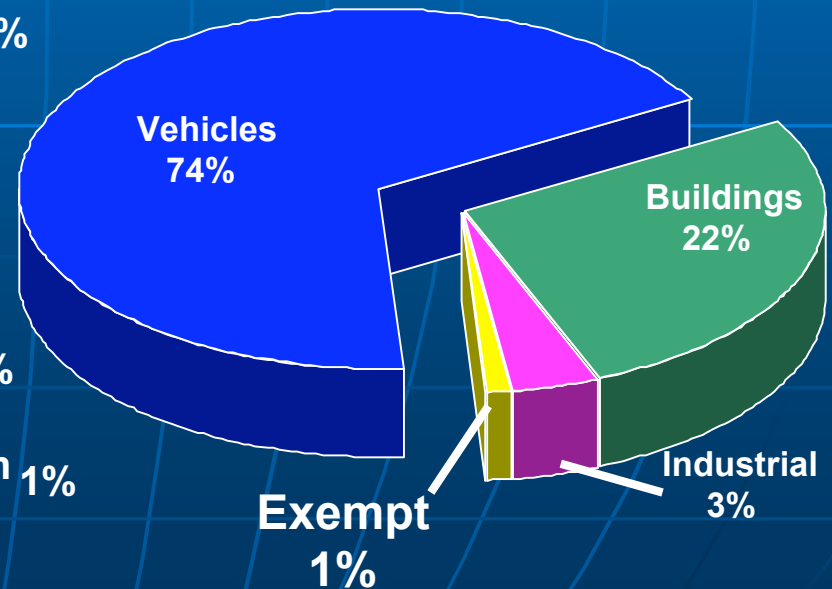
## Total Site-delivered Energy (BTU)

### Commodity



**Nation's single largest energy user**  
(1% of total U.S. energy use & 78% of Federal energy use)

### Application



**\$10.9B**

**919 Trillion BTU**

## Reduction of Current and Future Liabilities

### Contamination from Past Practices



### Pollution Prevention to Control Life Cycle Costs



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

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

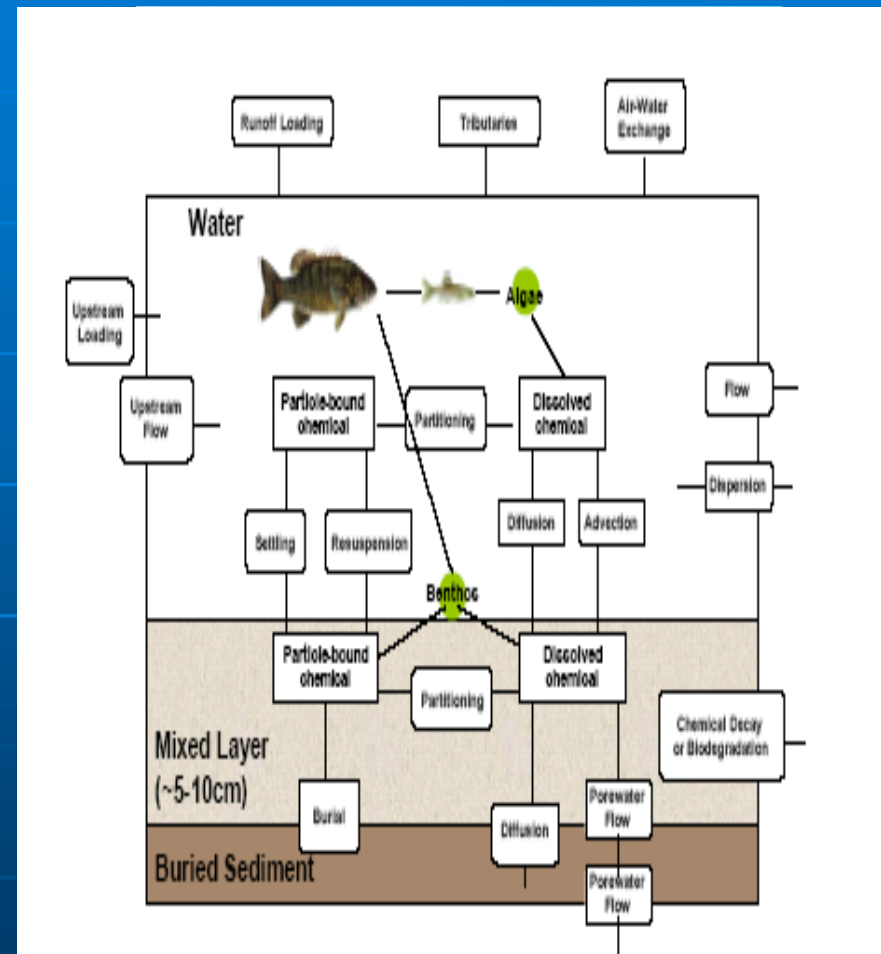
# Unexploded Ordnance (UXO)

- UXO Contamination of land and water
  - >20 million acres
  - > 3300 sites
  - >\$20B liability
- R&D Objectives
  - Wide Area Assessment
  - Detection & Discrimination
  - Land and Water
  - Recovery and Disposal
  - Planning and Support
- Critical technical decisions
  - Impact in the \$billions



- Remediation
  - Groundwater & soils
    - Solvents, metals, energetics
    - emerging contaminants
  - Sediments
    - PAH, PCB, metals
- Science based engineering decisions
- Science based risk management
- Technology transfer
  - Regulatory acceptance
  - Protocol development
  - Training

**In Partnership with  
Regulators**





- **Manufacturing and Maintenance**

- Green materials and processes
- Control and monitoring
  - Depots, Field, Shipyards & OEM

- **Green Energetics**

- New Materials
- Alternative Manufacturing

- **Air Emissions & Hazardous Waste**

- Diesels and Gas Turbines
- Weapons and Munitions
- Ship and Industrial

**Partner with Acquisition  
and  
Maintenance Community**



# Environmental Quality Taxonomy



**Munitions  
Management**



**Environmental  
Restoration**

**Weapons Systems  
& Platforms**



**Sustainable Infrastructure**



# Strategic Environmental Research and Development Program

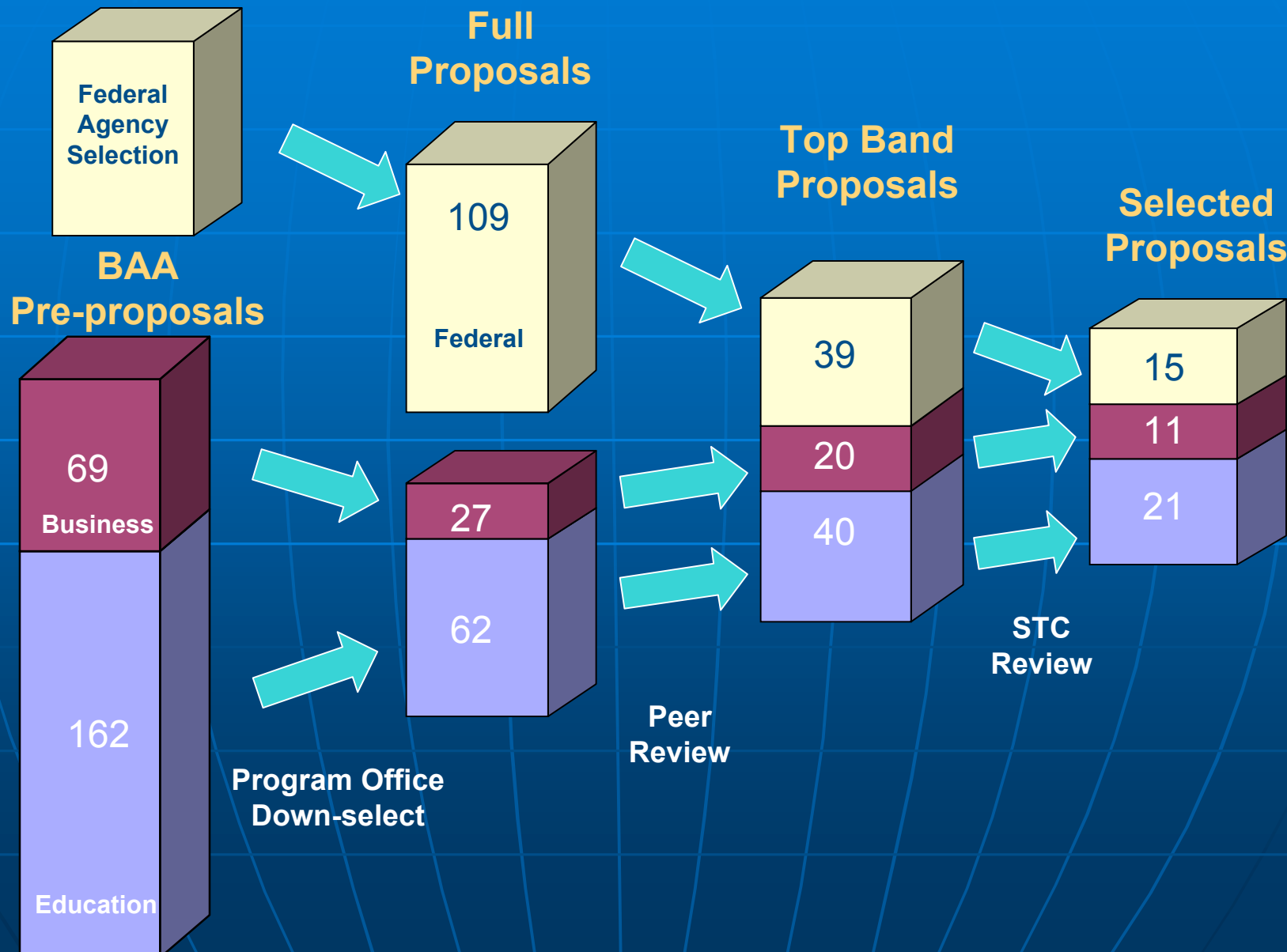


- **Established by FY 1991 Defense Authorization Act**
  - **DoD, DOE and U.S. EPA partnership**
- **Purposes**
  - **Address DoD and DOE environmental concerns through R&D**
  - **Share data collection and analysis capabilities**
  - **Identify and share DoD research technology**
  - **Identify private sector technologies useful to DoD**

# Solicitation Process



# FY 2007 SERDP Solicitation



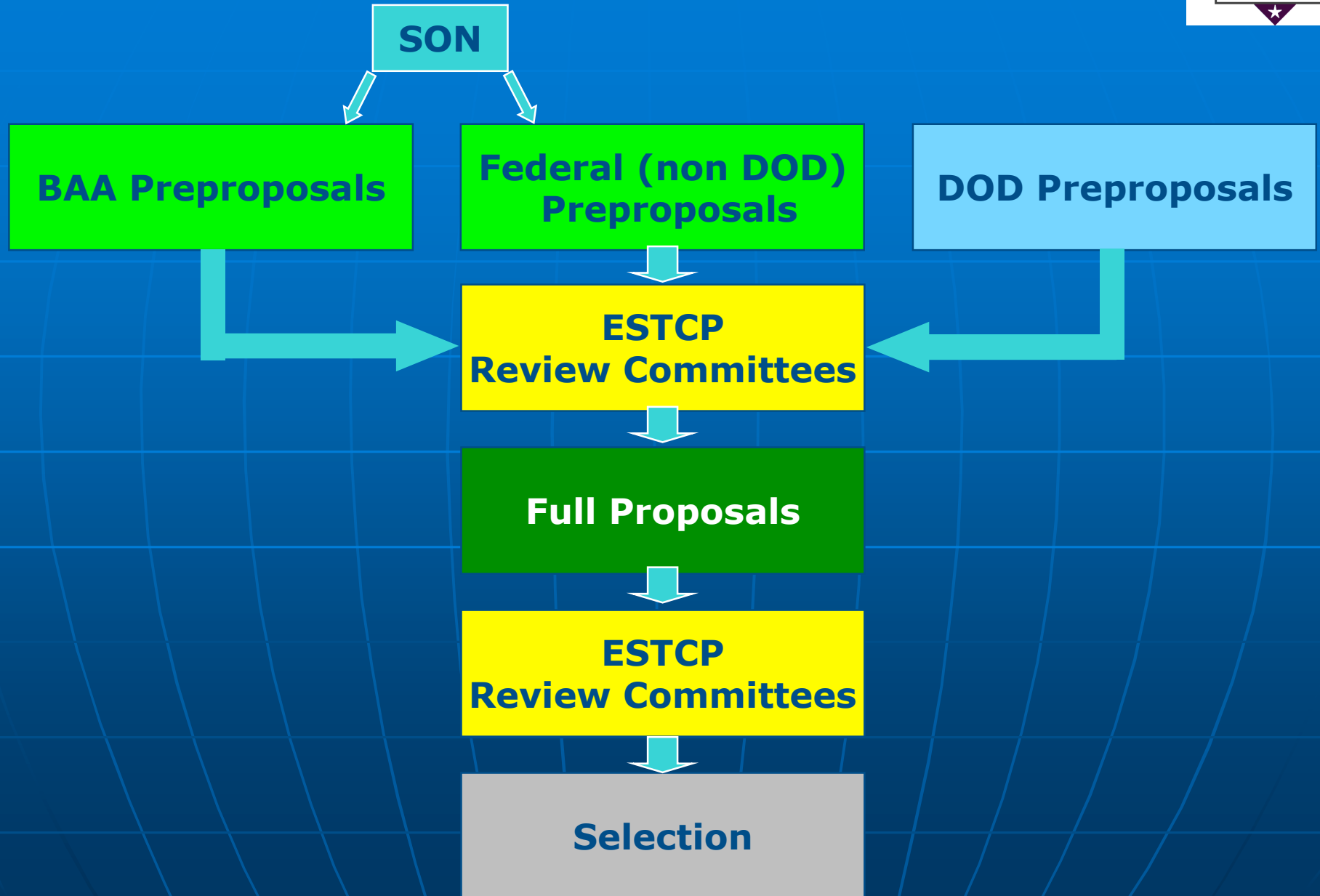
## PROGRAM GOALS

- **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***

- **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**

# ESTCP Process





## ◆ BAA: Non-DoD

- 93 pre-proposals
- 20 full proposals
- 11 selected

## ◆ DoD Call

- 101 pre-proposals
- 35 full proposals
- 21 selected

### Thrust

**Environmental Restoration**

**Munitions Management**

**Sustainable Infrastructure**

**Weapons Systems & Platforms**

### Selected

**13**

**10**

**4**

**5**

## SERDP

- **Annual Solicitation - November**
- **“SEED” Solicitation - November**
- **Selection in July**
- **SAB Reviews in August/September**

## ESTCP

- **Annual Solicitation - January**
- **Selection in September**



Sponsored by  
SERDP and ESTCP



# *Partners in Environmental Technology*

## Technical Symposium and Workshop

December 4-6, 2007

Marriott Wardman Park Hotel  
Washington, D.C.



# Home Pages

**SERDP**

**STRATEGIC ENVIRONMENTAL RESEARCH  
& DEVELOPMENT PROGRAM**

<http://www.serdp.org>



<http://www.estcp.org>