



THREATENED, ENDANGERED, AND AT-RISK SPECIES INTERAGENCY RESEARCH COORDINATION MANUAL

NOVEMBER, 2010



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Table of Contents

Acronyms and Abbreviations	5
Executive Summary	7
Acknowledgements.....	9
Introduction.....	11
General Findings.....	17
USDA Forest Service.....	19
U.S. Air Force	25
U.S. Army	29
U.S. Navy and U.S. Marine Corps.....	33
Defense Logistics Agency	37
Strategic Environmental Research and Development Program.....	41
Bureau of Land Management.....	47
U.S. Fish and Wildlife Service	51
U.S. Geological Survey.....	55
Federal Highway Administration.....	63
Findings.....	67

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Acronyms and Abbreviations

AASHTO	American Association of State Highway and Transportation Officials
AEC	Army Environmental Command
AERTA	Army Environmental Requirements and Technology Assessments
AFCEE	Air Force Center for Engineering and Environment
ANG	Air National Guard
ASA	Assistant Secretary of the Army
ASA (I&E)	Assistant Secretary of the Army, Installations and Environment
ASN	Assistant Secretary of the Navy
ASN (I&E)	Assistant Secretary of the Navy, Installations and Environment
BAA	Broad Agency Announcement
BLM	Bureau of Land Management
BRD	Biological Resources Discipline
CNIC	Chief of Naval Installations Command
CNO	Chief of Naval Operations
CNO N45	Chief of Naval Operations Environmental Readiness Division
CRU	Cooperative Research Unit
CSA	Chief of Staff of the Army
DES	DLA Enterprise Support
DES-E	DLA Enterprise Support, Environment, Safety, and Occupational Health
DFSP	Defense Fuel Support Point
DLA	Defense Logistics Agency
DoD	Department of Defense
DOE	Department of Energy
DOI	Department of the Interior
DOT	Department of Transportation
EPA	Environmental Protection Agency
ERDC	Engineer Research and Development Center
ESA	Endangered Species Act
ESFO	Ecological Services Field Office
ESOH	Environment, Safety, and Occupational Health
ESTCP	Environmental Security Technology Certification Program
EWG	Executive Working Group
FHWA	Federal Highway Administration
GIS	Geographic Information System
GAO	Government Accountability Office
HQ	Headquarters
IMCOM	Installation Management Command
INRMP	Integrated Natural Resources Management Plan
LANT/PAC	Atlantic/Pacific
LCC	Landscape Conservation Cooperative
NAVFAC	Naval Facilities Engineering Command
NCCWSC	National Climate Change and Wildlife Science Center (USGS)
NEPA	National Environmental Policy Act

NESDI	Navy Environmental Sustainability Development to Integration
NFESC	Navy Facilities Engineering Service Center
NGO	Non-governmental Organization
NOAA	National Oceanic and Atmospheric Administration
NOAA Fisheries	NOAA's National Marine Fisheries Service
NPS	National Park Service
NRC	Naval Research Center
NSF	National Science Foundation
NWRS	National Wildlife Refuge System
POM	Program Objective Memorandum
QRP	Quick Response Program
RC	Resource Conservation and Climate Change
REO	Regional Environmental Office
RFP	Request for Proposals
SAB	SERDP Scientific Advisory Board
SCOE	Standing Committee on Environment
SECARMY	Secretary of the Army
SECAF	The Office of the Secretary of the Air Force
SECNAV	Secretary of the Navy
SEED	SERDP Exploratory Development
SERDP	Strategic Environmental Research and Development Program
SON	Statement of Need
SSP	Science Support Partnership Program (USGS/FWS)
STC	SERDP Technical Committee
STEP	Surface Transportation Environment and Planning Cooperative Research Program
TAC	SERDP Technical Advisory Committee
T&E	Threatened and Endangered
TERI	Transportation and Environment Research Ideas database
TER-S	Threatened, Endangered, and At-risk Species
TES	Threatened and Endangered Species
USACE	U.S. Army Corps of Engineers
USAF	U.S. Air Force
USDA	U.S. Department of Agriculture
USFS	USDA Forest Service
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
USMC	U.S. Marine Corps

EXECUTIVE SUMMARY

The *TER-S Interagency Research Coordination Manual* is a reference guide on threatened, endangered, and at-risk species (TER-S) research programs for ten federal research and land management agencies. The Manual contains the basic information to direct the user to the appropriate organizational unit and points of contact within these ten agencies that have responsibility for TER-S stewardship.

In 2003, Department of Defense (DoD) officials stated that threatened and endangered species (TES) protection may result in land-use restrictions that reduce the amount of land available for military training. Congress directed the U.S. Government Accountability Office (GAO) to conduct an investigation on the extent to which DoD and other nearby federal land managers in the region are managing cooperatively for endangered species affecting military training ranges, and factors that can limit cooperative management for endangered species on military training ranges. The result was GAO-03-976, *Military Training- Implementation Strategy Needed to Increase Interagency Management for Endangered Species Affecting Training Ranges*. This study highlighted the recommendation for DoD, the U.S. Department of the Interior (DOI), and the U.S. Department of Agriculture (USDA) to better coordinate their natural resources science and information sharing initiatives. To support these efforts, the DoD Natural Resources Conservation Program initiated a project to collect and consolidate information on all of the partner agency's processes and procedures involved in planning and carrying out TER-S-related research.

Ten agencies participated in this effort. Section 1.0 lists these agencies and details the methodology by which the agencies submitted their data. The project team conducted interviews with each agency's technical points of contact, focusing on program organization and the research program planning process. Section 2.0 presents general findings of the data collection effort, and Table 1-1 provides a summary breakout of all relevant agency information concerning TER-S-related research programs.

Section 3.0 provides descriptions of each agency's TER-S-related structure, processes and key contact information. The interviewees in each agency indicated that there is no "best time" to contact them concerning their research planning. They stated that the best approach to foster collaboration is to make contact as soon as possible with the appropriate points of contact, as identified in Section 3.0.

Section 4.0 lists a summary of the findings resulting from the interviews and information provided in Section 3.0. It also provides recommendations for how the Manual can be used as a starting point for future TER-S research coordination among government agencies and organizations.

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1.0 Introduction

The *TER-S Interagency Research Coordination Manual* (Manual) is a reference guide on threatened, endangered, and at-risk species (TER-S) research programs for ten federal research and land management agencies. The Manual contains the basic information to direct the user to the appropriate organizational unit and points of contact within these ten agencies that have responsibility for TER-S stewardship. It also contains brief descriptions of the basic processes by which TER-S research programs and projects are identified and implemented so that the user may gain a fundamental understanding of the best way to interact with the appropriate agencies. This information should be considered a starting point for users who seek to establish relationships or find specific agency information.

1.1 Background

In 2003, Department of Defense (DoD) officials stated that protection of threatened and endangered species (TES) may result in land-use restrictions that reduce the military's flexibility to use land for training. Consequently, Congress directed the U.S. Government Accountability Office (GAO) to conduct an investigation on the extent to which DoD and other nearby federal land managers in the region are managing cooperatively for endangered species affecting military training ranges, and factors that can limit cooperative management for endangered species on military training ranges. The result was GAO-03-976, *Military Training-Implementation Strategy Needed to Increase Interagency Management for Endangered Species Affecting Training Ranges*.

This study highlighted the recommendation for DoD, DOI, and USDA to better coordinate their natural resources science efforts and information sharing. To support this initiative, the DoD Natural Resources Conservation Program initiated a project to collect and consolidate information on all of the partner agency's processes and procedures involved in planning and carrying out TER-S research and management, and consolidate this information into the *TER-S Interagency Research Coordination Manual*.

This Manual originated from discussions by members of the TER-S Roundtable regarding the 2003 GAO Report. The TER-S Roundtable is made up of representatives from DoD, the U.S. Fish and Wildlife Service (USFWS), the U.S. Geological Survey (USGS), the USDA Forest Service (USFS), Bureau of Land Management (BLM), and all of the Military Services. The Roundtable meets regularly to share information and insights on TER-S management and programs across the participating agencies.

To support these efforts, the DoD Legacy Program initiated a project to collect and consolidate information from all of the partner agencies on their processes and procedures used when planning and carrying out TER-S research. The project objective, in line with the GAO report and Action Plan, is to foster more cooperative TER-S management among all Federal agencies, and help them avoid gaps, overlaps, and duplications on high-priority research efforts.

1.2 Objectives

The *TER-S Interagency Research Coordination Manual* has two objectives. First, it is intended to assist Roundtable members, program managers, and other interested parties with understanding participating agency research processes. Second, the Manual will allow these parties to identify windows of opportunity for providing input into TER-S research program planning developed by partner agencies. Table 1-1: Federal Agency TER-S Related Research Programs provides a summary breakout of relevant agency information concerning TER-S-related research programs.

1.3 Methodology

To initiate the research process, the project team surveyed participating Federal agency points of contact to collect a consistent set of data on respective decision-making processes and procedures. The project team gathered data by considering technical criteria, funding and budget considerations, and programmatic priorities. Staff performed data collection using the following methodology:

1. Identification (via Roundtable members) of, and communication with, the appropriate designated points of contact within each partner agency.
2. Formulation of a set of survey questions based on input from, coordination with, and notification to a committee of Roundtable representatives, senior agency officials, and designated agency contacts. The survey packages also contained preliminary administrative and technical program information that could be collected from agency websites prior to the interviews.
3. Distribution of the survey/questionnaire to senior agency officials followed by scheduled interviews with each agency's designated technical point of contact(s) to discuss and document the following:
 - I. Program organization
 - A. General agency/division/program information
 - B. Name of division(s)/program(s) responsible for TER-S research
 - C. Division/program representative contact information
 - II. Research program planning process
 - A. Key events and processes in identifying research priorities
 - B. Process for implementing research agenda and priorities, approval authority
 - C. Level of input from/coordination with other agencies
 - D. Funding sources
 - III. Program logistics
 - A. Competitive process
 - B. Solicitation process, timeframes, and procedures
 - C. Funding mechanisms (contracts, grants, direct funding, other/in-kind sources)
 - D. Communication with the general public (outreach)

4. Compilation and submittal of survey results to agency points of contact for feedback, and if necessary, modification/clarification.
5. A comparative analysis of agency processes (including programmatic, budgetary, and technical/scientific criteria by which priorities were established) based on the survey results. The analysis led to recommendations listed in this report.

1.4 Participating Agencies

The project encompassed TER-S research programs from ten Federal agencies from four Federal departments:

- USDA
 - USFS
- DoD
 - Air Force (USAF)
 - Army
 - Navy [including the Marine Corps (USMC)]
 - Defense Logistics Agency (DLA)
 - Office of the Secretary of Defense – Strategic Environmental Research and Development Program (SERDP)
- DOI
 - BLM
 - USFWS
 - USGS
- Department of Transportation (DOT)
 - Federal Highway Administration (FHWA)

Key headquarters and field officials from each of these agencies received surveys via email prior to participating in phone interviews.

Table 1-1: Federal Agency TER-S Related Research Programs

DEPARTMENT	AGENCY	KEY CONTACTS <i>Recommendation: Contact the closest Key Contact at any time during the year for information.</i>			PERTINENT INFORMATION
		Headquarters	Regional	Technical Centers	
AGRICULTURE	USFS	National Program Coordinator Fish and Aquatic/Wildlife Ecology Office of Research & Development Rosslyn, VA National Program Coordinator TES Washington, DC	National Forest System Program Manager, Threatened, and Endangered Species 9 Regional Offices	Station Director or Program Manager, Threatened, Endangered and Sensitive Species 5 Research Stations, an Institute for Tropical Forestry, and a Forest Products Lab	No regular internal or external RFP or solicitation process exists. Study Plans are developed at Stations, reviewed at Regional level during annual budget cycle. USFS researchers actively seek other funding opportunities from available Federal, state, and private organizations.
DEFENSE	DLA	TES Lead DLA Enterprise Support, DES-E Fort Belvoir, VA	For DLA Host Sites (DLA run, Army or Navy owned) - DLA host site's DES Environmental Office. DLA Tenant Sites - lessor (Army, Navy, etc.) is the responsible agency - Natural Resources Specialist for the managing service	None. DLA is supported by the Technical Centers of the services (ERDC, NAVFAC, etc.)	No formal conservation/TER-S solicitation process. Research needs are identified at the installation level and addressed on a case-by-case basis.
	USAF – Headquarters HQ, AFCEE, Air National Guard	Natural Resources Lead Office of the Deputy Assistant Secretary of the Air Force (Installations), ESOH Arlington, VA	Regional Environmental Coordinator, Three AFCEE Regional Offices: Eastern Region - Atlanta, GA Central Region - Dallas, TX Western Region - San Francisco	Natural Resources Specialist AFCEE Brooks City-Base, TX	No formal conservation/TER-S solicitation process. Research needs are identified at the installation level and addressed on a case-by-case basis.
	U.S. Army - Corps of Engineers/ERDC, AEC, HQ IMCOM	Natural Resources Lead Office of the ASA (I&E) - ESOH Arlington, VA	Not Applicable	Technical Director ERDC Construction Engineering Research Laboratory Champaign, IL Wildlife Biologist AEC Aberdeen Proving Ground, MD	ERDC develops research plans in response to official Army Requirements (AERTA). ERDC issues Broad Agency Announcements (BAA) for research proposals that are accepted year-round. Additional research needs can be identified at the Army installation level and addressed on a case-by-case basis.
	U.S. Navy - HQ CNO N45, NAVFAC HQ, NRL, Marines	Navy Natural Resources Specialist Environmental Readiness Division (N45) Arlington, VA Marines Natural Resources Specialist USMC Arlington, VA	Natural Resources/Conservation Program Manager: NAVFAC Atlantic 6 Regions NAVFAC Pacific 2 Regions	Natural Resources Specialist NAVFAC Washington, DC	No formal conservation/TER-S solicitation process. Research needs are identified at the installation level and addressed on a case-by-case basis.
INTERIOR	BLM	TES Lead, Fish, Wildlife, and Plant Conservation Renewable Resources and Planning Division Washington, DC	TES Program Lead, 12 BLM State Offices	National Operations Center, Division of Resource Services	Internal Call for Proposals (through quarterly, semi-formal coordination with the USGS). Independent contracts. Cooperative agreements with educational institutions or other government agencies. Open-competition projects are infrequent, occurring on an as-needed basis (example: Desert Tortoise RFP). Interagency partnership pending with USGS.
	USFWS	Deputy Science Advisor to the Director, National Wildlife Refuge System and Endangered Species Programs Arlington, VA	Regional Office Chief, Endangered Species Program, 8 Regional Offices	Not Applicable	USGS provides research funding and resources through SSP and QRP partnership programs. USFWS conducts internal call for proposals. Research identified and funded through an interagency selection process.

Table 1-1

DEPARTMENT	AGENCY	KEY CONTACTS <i>Recommendation: Contact the closest Key Contact at any time during the year for information.</i>			PERTINENT INFORMATION
		Headquarters	Regional	Technical Centers	
TRANSPORTATION	FHWA	Senior Ecologist, Office of Planning, Environment, and Realty Washington, DC and STEP Program Outreach Manager Office of Planning, Environment, and Realty Washington, DC	Not Applicable	Not Applicable	FHWA main tool for project development is the STEP Cooperative Research Program Database. Research ideas are solicited from the public; projects are selected and implemented via internal contracting mechanisms. Collaborations exist with numerous entities such as the Transportation Research Board, AASHTO, USACE, approx. 100 standing technical committees, and others; also fostered through NEPA process.
Research Only - No Land Management					
DEFENSE	SERDP/ESTCP	Program Manager, Resource Conservation and Climate Change SERDP & ESTCP Program Office Arlington, VA	Not Applicable	Not Applicable	SERDP Releases a formal proposal solicitation with SONs in the November-December timeframe. The SON development process occurs through the summer and fall preceding the solicitation. SERDP receives inputs from numerous sources, including: <ul style="list-style-type: none"> - Military Services User Requirements - SERDP STCs - SERDP sponsored workshops and special studies - DoD Environmental Committees and Work Groups - SERDP SAB - SERDP TACs <p>The Solicitation is open to government, industry, and academia.</p>
INTERIOR	USGS	Imperiled Species Coordinator (currently vacant) BRD Reston, VA or Fisheries or Wildlife Program Coordinator BRD Reston, VA	Area Directors at: Western Area Offices: Seattle, WA Anchorage, AK Sacramento, CA Central Area Offices: Denver, CO Columbia, MO Lakewood, CO Eastern Area Offices: Reston, VA Norcross, GA Ann Arbor, MI	Science Center or Research Center Director at: Nine Science Centers Seven Research Centers One National Wildlife Health Center 44 BRD CRUs in 40 States	USGS researchers formulate research plans in accordance with five-year plans and in response to annual internal RFPs. The five-year planning process at USGS is in cooperation with other federal partners. USGS manages research partnerships to accommodate the needs of USFWS, NPS, and BLM (see USFWS and BLM Section for more details).

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2.0 General Findings

Numerous interviewees stated that the following are or will be important components of the overall natural resources management landscape.

2.0.1 Cooperative Research Units (USGS)

Cooperative Research Units (CRUs) are partnerships among the Biological Resources Division (BRD) of the USGS, a state natural resources agency, a host university, and the Wildlife Management Institute. Staffed by federal personnel, CRUs conduct research on renewable natural resources questions; participate in the education of graduate students destined to become natural resources managers and scientists; provide technical assistance and consultation to parties who have legitimate interests in natural resources issues; and provide continuing education for natural resources professionals.

The USFWS is the principal federal client of the CRUs Program. CRUs work closely with the USFWS to identify and address information needs required to effectively manage the nation's fish and wildlife resources. Today, there are 39 CRUs in 37 states. They conduct research on virtually every type of North American ecological community. The CRU Program is staffed by more than 110 Ph.D. scientists who advise as many as 600 graduate student researchers per year.

Visit <http://www.coopunits.org/Headquarters/> or http://biology.usgs.gov/pub_aff/coop.html for more information.

2.0.2 Landscape Conservation Cooperatives (USFWS)

Landscape Conservation Cooperatives (LCCs) are shared management-science partnerships between the USFWS, USGS, state agencies, Federal resource management agencies, tribes, Non-governmental Organizations (NGOs), universities, and other entities within a designated geographical area. The LCCs create “eco-regions” to address large-scale conservation challenges like climate change and other stressors to wildlife species and habitats across landscapes. As of October 2010, there are nine active LCCs in North America, with another twelve still in development. A newly appointed LCC Coordinator will serve in a leadership role, facilitating linkages between science and management, coordinating activities, and providing day-to-day leadership and direction for LCC staff. The LCC staff will include individuals with science expertise and skills in Geographic Information Systems (GIS), spatial data application, population modeling, statistics, and landscape ecology.

See <http://www.fws.gov/science/shc/lcc.html> for more information.

2.0.3 TER-S Symposium and Workshops (DoD)

To benefit both mission and conservation objectives, DoD held a national symposium in 2005 on issues related to TER-S on DoD lands. A major outcome of this event was the determination that regional workshops are needed to develop research and management agendas. By 2010, the DoD SERDP and Legacy programs sponsored four regional workshops aimed at enhancing species

conservation and improving the understanding of TER-S, their habitats, and relationships to military training activities.

Visit <http://www.serdp.org/tes> for more information.

2.0.4 USFWS Endangered Species Program

The USFWS Endangered Species Program, located in each of the regional offices, issues permits to conduct authorized activities related to native TES, including research. The National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries) also issues permits involving certain aquatic species. Permitted activities are designed to be consistent with the conservation of the species. However, the activities that each permit authorizes differ depending on whether the species is listed as endangered or threatened. An endangered species is in danger of extinction throughout all or a significant portion of its range. A threatened species is likely to become endangered in the foreseeable future. For endangered species, NOAA Fisheries may issue permits for scientific research, enhancement of propagation or survival, and taking that is incidental to an otherwise lawful activity. For threatened species, they may also issue permits for zoological, horticultural, or botanical exhibition; educational use; and special purposes consistent with the Endangered Species Act (ESA).

Go to <http://www.fws.gov/endangered/esa-library/pdf/permits.pdf> for a fact sheet on the permitting process and contact information.

2.0.5 National Science Foundation Research Coordination Networks Program

The National Science Foundation (NSF) provides support for groups of investigators to communicate and coordinate their efforts across disciplinary, organizational, institutional, geographical and/or international boundaries via Research Coordination Networks (RCN). The objectives are to facilitate open communication and exchange of information and resources; to integrate research and/or education activities of scientists and engineers working independently on topics of common interest; to nurture a sense of community among young scientists and engineers; and to minimize isolation and maximize cooperation so as to eliminate unnecessary duplication of efforts.

See <http://www.nsf.gov/pubs/2010/nsf10566/nsf10566.pdf> for more information.

2.1 Summary

The TER-S research landscape is large and complex, encompassing numerous international, federal, state, non-profit, and private organizations. Until a coordinated, interagency information system is in place, interested parties will need to foster collaboration and information sharing by establishing and maintaining communications with the key points of contacts within the appropriate agencies, as identified in this Manual.

3.0 Agency Descriptions

3.1 USDA Forest Service

3.1.1 General Agency Description

The USFS' mission is to sustain the health, diversity, and productivity of the nation's forests and grasslands to meet the needs of present and future generations. The USFS also conducts and aids scientific research and supports the needs of state and public lands, as well as international forestry.

3.1.2 TER-S-Related Organizational Structure

The USFS headquarters is located in Washington, DC. The two main organizational components involved with TER-S interests at the USFS are Research and Development and the National Forest System. Research and Development supports the management of six Research Stations and one forest products laboratory across the continental U.S. and Puerto Rico. There are about 2,300 employees in USFS Research and Development, including approximately 80 scientists who focus on wildlife and fish research. The National Forest System supports the management of nine Regional Offices that, in turn, manage 192 million acres of national forests and grasslands. Figure 3.1 presents a breakout of these two USFS organizations.

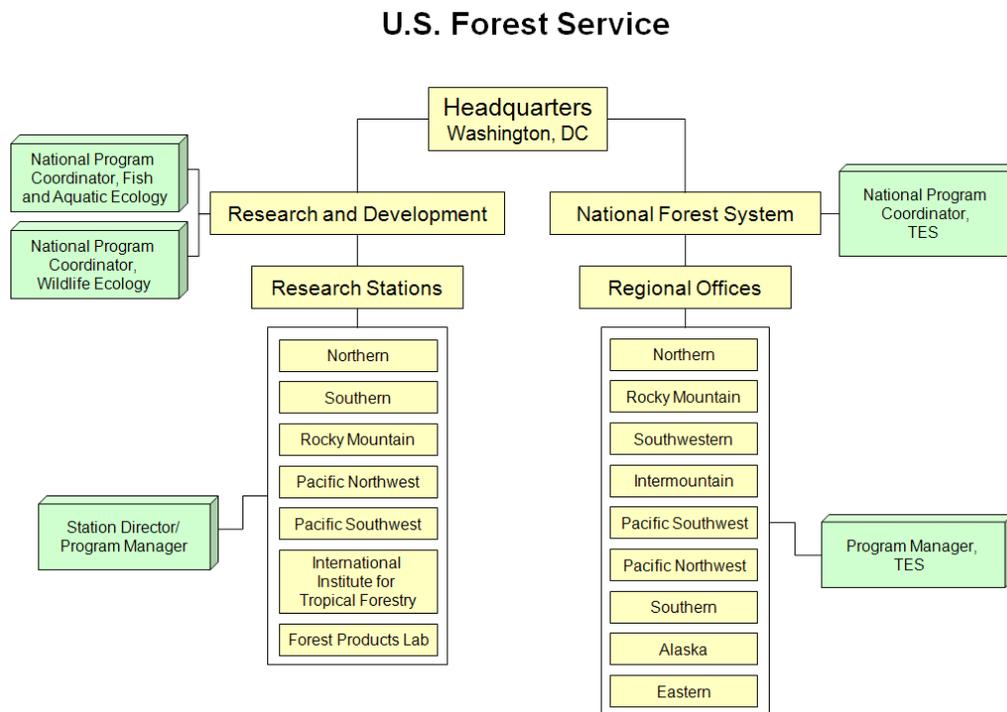


Figure 3.1. TER-S-Related Organization Structure of the USFS

Research on endangered wildlife and fish species is conducted by USFS researchers throughout the country. These researchers are managed at the Research Station level, with coordination

between the national level and research stations occurring through the Wildlife and Fish Strategic Program Area.

The Wildlife and Fish Strategic Program Area is a matrix organization that includes individuals from each station (usually the program managers), R&D national leadership, at least one station director, and a program area leader from the national office. The USFS does not manage threatened and endangered wildlife research separately from other wildlife and fish research efforts.

3.1.3 Research Program Processes

Station scientists typically propose study plans based upon the needs they identify within their region. They generally create plans for more than a year-to-year cycle, and usually follow a three to five year cycle. However, station scientists may adjust plan timeframes when they learn USFS base funding numbers. Thus, planning is for longer periods of time, but the actual allocation of base funding changes annually. Project leaders only have the authority to approve projects within their budgets. If additional needs are identified at the headquarters level, the national program leader has the authority to approve the project.

USFS research is often conducted in collaboration with many partners, including other Federal agencies, state agencies, universities, and non-profits, with each organization contributing some funding for research activities. Researchers also apply to annual solicitations for federal and interagency funding (e.g., Joint Fire Science Program, Neotropical Migratory Bird Conservation Act, and SERDP). This results in widely-varying timeframes for the development and initiation of these types of research programs.

3.1.3.1 Timeframes

The USFS does not have regularly occurring project development or solicitation timeframes. For USFS funded research, yearly project planning occurs within the general, annual budget process. For co-funded or other collaborative efforts, the planning timeframes can occur on an as-needed basis, or within the schedule of the particular funding program. Therefore, interested parties are encouraged to contact the appropriate USFS point of contact at any time during the year.

3.1.4 TER-S Points of Contact

3.1.4.1 Headquarters, Research and Development

National Wildlife Ecology Lead/
National Aquatic Ecology & Fish Lead
U.S. Forest Service Research and Development
1601 North Kent Street, 400 RPC
Arlington, VA 22209
703-605-4880

3.1.4.2 Headquarters, National Forest System

National Threatened and Endangered Species Lead
Watershed, Fish, Wildlife, Air & Rare Plants
USDA Forest Service
1400 Independence Avenue SW
Washington, DC 20250-0003
202-205-1220

3.1.4.3 Research Stations, Research & Development

At the Research Station level, the lead person on TES is either the Station Director or the Program Manager.

Northern Research Station
(10 field locations and 3 programs)
11 Campus Boulevard
Suite 200
Newtown Square, PA 19073
610-557-4017
<http://www.nrs.fs.fed.us/>

Pacific Southwest Research Station
(6 research labs and 2 institutes)
800 Buchanan Street
West Annex Building
Albany, CA 94710-0011
510-559-6300
<http://www.fs.fed.us/psw/>

Southern Research Station
(21 field locations)
200 W.T. Weaver Boulevard
Asheville, NC
28804-3454
828-259-0503
<http://www.srs.fs.usda.gov/>

International Institute of Tropical Forestry
Jardín Botánico Sur
1201 Calle Ceiba
San Juan, PR 00926-1119
787-766-5335
www.tropicalforestry.net

Rocky Mountain Research Station
(14 research labs)
240 West Prospect
Fort Collins, CO 80526
970-498-1100
<http://www.fs.fed.us/rmrs/>

Forest Products Lab
One Gifford Pinchot Drive
Madison, WI 53726
608-231-9200
<http://www.fpl.fs.fed.us/>

Pacific Northwest Research Station
(10 research labs)
333 SW First Avenue
Portland, OR 97204
503-808-2592
<http://www.fs.fed.us/pnw/>

3.1.4.4 Regional Offices, National Forest System

At the Regional Office level, the lead person on TES is the Program Manager, Threatened and Endangered Species.

Northern Region
200 East Broadway
P.O. Box 7669
Missoula, MT 59807
406-329-3511
<http://www.fs.fed.us/r1/>

Rocky Mountain Region
740 Simms Street
Golden, CO 80401-4720
303-275-5350
<http://www.fs.fed.us/r2/>

Southwestern Region
333 Broadway SE
Albuquerque, NM 87102
505-842-3292
<http://www.fs.fed.us/r3/>

Intermountain Region
324 25th Street
Ogden, UT 84401
801-625-5306
<http://www.fs.fed.us/r4/>

Pacific Southwest Region
1323 Club Drive
Vallejo, CA 94592
707-562-8737
<http://www.fs.fed.us/r5/>

Pacific Northwest Region
333 SW 1st Avenue
PO Box 3623
Portland, OR 97208-3623
503-808.2468
<http://www.fs.fed.us/r6/>

Southern Region
1720 Peachtree Road NW
Atlanta, GA 30309
<http://www.fs.fed.us/r8/>

Eastern Region
626 East Wisconsin Avenue
Milwaukee, WI 53202
414-297-3600
<http://www.fs.fed.us/r9/>

Alaska Region
PO Box 21628
Juneau, AK 99802-1628
907-586-8806
<http://www.fs.fed.us/r10/>

3.1.5 Additional Information

Research Station Directors have quarterly meetings with the national office, usually for internal business only.

The National Forest System conducts annual meetings for the wildlife ecology and fish programs, both of which include endangered species issues.

Fish and wildlife researchers meet nationally on a periodic, ad-hoc basis. Individual research stations also have periodic all-scientist meetings. Individual scientists who work on fish or wildlife issues tend to meet on an as needed basis if they are collaborating on research.

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3.2 U.S. Air Force

3.2.1 General Agency Description

The mission of the USAF is to fly, fight and win...in air, space and cyberspace.

As a reserve component of the USAF, the Air National Guard's (ANG) federal mission is to maintain well-trained, well-equipped units available for prompt mobilization during war and provide assistance during national emergencies (such as natural disasters or civil disturbances). Under state law, the ANG provides protection of life and property, and preserves peace, order and public safety.

3.2.2 TER-S-Related Organizational Structure

The USAF is headquartered at the Pentagon in Arlington, Virginia. The Office of the Secretary of the Air Force (SECAF) is the civilian head of the United States Department of the Air Force and is responsible for overseeing the management of the installations around the world through the Office of the Deputy Assistant Secretary for Installations and Environment. Natural Resources Management is under the purview of this Office. Figure 3.2 represents those USAF organizations pertinent to TER-S management issues.

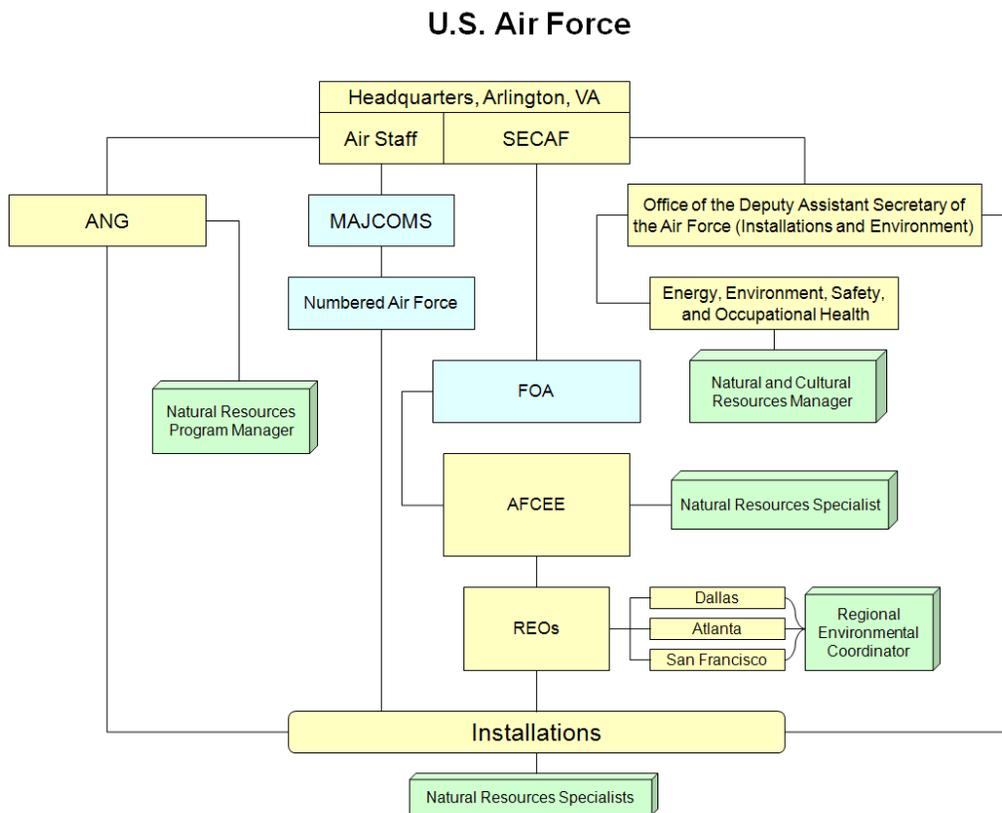


Figure 3.2. TER-S-Related Organization Structure of the U.S. Air Force

A Field Operating Agency (FOA) under the SECAF is the Air Force Center for Engineering and the Environment (AFCEE). AFCEE's natural resources staff is responsible for overseeing and managing the USAF's natural resources management program in addition to providing consulting and contracting services to the Major Commands and installations. Functional area experts in the fields of forestry, botany, and TES are available for consultation and assistance.

3.2.3 Research Program Processes

Research needs are usually initiated at the installation level. TER-S research gaps are identified through the regular management activities, which can include:

- Regular compliance and management procedures at the installation or base;
- Major federal actions with potential impacts, as identified through NEPA (National Environmental Policy Act) assessments;
- Development and updates to Integrated Natural Resources Management Plans (INRMPs); and
- Other cooperative management activities with local and regional stakeholders.

New or revised TES listings, as published by the USFWS, are also a primary stimulus for TER-S research needs.

In most cases, managers at installations will identify research needs as they arise. The project proposals are then developed by managers or scientists, and are submitted to upper management for review and approval within the USAF's normal planning and budget process, or Program Objectives Memorandum (POM). Annual plans and budgets are generally approved at the headquarters level, but AFCEE will review, validate, and prioritize projects in the POM. Top priorities are recommended to Air Staff that has final funding authority. However, the project level decision-making is done at the local level, including identifying and accessing appropriate internal and external technical resources.

In other cases, research priorities are identified at the national or headquarters level. National program leaders are generally responsible for coordinating the implementation of the research and directing it to the appropriate resources. This includes communicating with other Federal agencies and bringing the project to the attention of pertinent regional and local offices.

The USAF can also submit research proposals to SERDP whenever possible as a funding source and technical resource for issues with applicability across the Military Services. See Section 3.6 for a description of SERDP.

3.2.4 TER-S Points of Contact

3.2.4.1 Headquarters

Natural and Cultural Resources Manager
U.S. Air Force - HQ
1235 S. Clark Street, Suite 1000
Arlington, VA 22202-4367
703-604-5291

Natural Resources Program Manager
Air National Guard
301-836-8427

3.2.4.2 Technical Support Center - AFCEE

Natural Resources Specialist
AFCEE
3300 Sidney Brooks
Brooks City-Base, TX 78235
210-536-3823

3.2.4.3 Regional Contacts

Contact the Regional Environmental Coordinator at one of three REOs: Atlanta, Dallas, and San Francisco. See <http://www.afcee.af.mil/reoffices/> for more information.

USAF REO, Eastern Region
60 Forsyth Street SW, Ste. 8M80
Atlanta, GA 30303-3416
888-610-7419
<http://www.afcee.af.mil/reoffices/atlanta/index.asp>

USAF REO, Central Region
525 S. Griffin Street, Ste. 505
Dallas, TX 75202-5023
888-610-7418
<http://www.afcee.af.mil/reoffices/dallas/index.asp>

USAF REO, Western Region
50 Fremont Street, Suite 2450
San Francisco CA 94105-2230
888-324-9254
<http://www.afcee.af.mil/reoffices/sanfrancisco/index.asp>

3.2.4.4 Installations

Contact the Natural Resources Management Office or Natural Resources Specialist(s) assigned to the specific installation's TER-S program.

3.3 U.S. Army

3.3.1 General Agency Description

The Army's mission is to fight and win our nation's wars by providing prompt, sustained land dominance across the full range of military operations and spectrum of conflict in support of combatant commanders.

3.3.2 TER-S-Related Organizational Structure

In the U.S. Army, the main organizational components involved with TER-S research are the Office of the Assistant Secretary of the Army, Installations and Environment (ASA I&E), which reports to the Assistant Secretary of the Army (ASA); ERDC, a division of the U.S. Army Corps of Engineers; and the Environmental Division of the Installation Services Directorate and the U.S. Army Environmental Command (USAEC), which report to the Assistant Chief of Staff for Installation Management (ACSIM). Figure 3.3 represents those Army organizations pertinent to TER-S management issues.

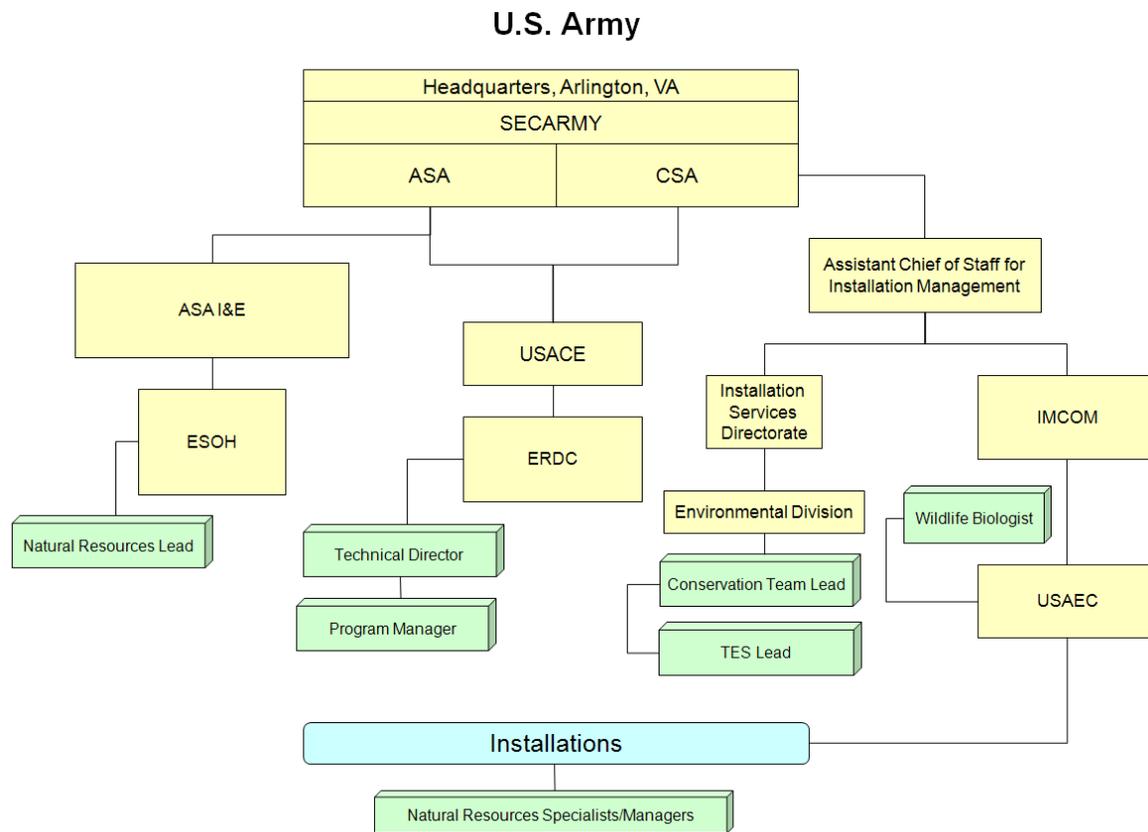


Figure 3.3. TER-S-Related Organization Structure of the U.S. Army

3.3.3 Research Program Processes

There are two primary drivers for the establishment of research needs within the Army:

1. Within the U.S. Army Corps of Engineers (USACE), ERDC formulates research plans that are responsive to Army Environmental User Requirements and Technology Assessments (AERTA) for environmental quality and conservation. ERDC develops research work packages that address AERTA requirements in accordance with POMs from the headquarters level. ERDC may also receive funding from installations as performers on selected research projects. In addition, ERDC maintains a Broad Agency Announcement (BAA) to accept and review research proposals from all qualified parties, including industry and academia. The BAA is open all year.
2. The installation level research needs are addressed as they are identified, usually based on INRMP or NEPA requirements. These can involve inventory, monitoring, or compliance requirements that may contain research components. In addition, installation level research may be initiated by recurring or non-recurring processes based on a biological opinion, a biological evaluation, or new or revised TES listings, as published by the USFWS. Many installations also participate in cooperative management activities with local and regional stakeholders.

The Army can also submit research proposals to SERDP whenever possible as a funding source and technical resource for challenges with applicability across the Military Services. See Section 3.6 for a description of SERDP.

3.3.4 TER-S-Related Points of Contact

3.3.4.1 Headquarters

Office of the Deputy Assistant Secretary of the Army
Environment, Safety, and Occupational Health
110 Army Pentagon, Room 3D453
Washington, DC 20310-1001
703-693-5206

3.3.4.2 Technical Support Activities

Technical Director
U.S. Army Corps of Engineers
2902 Newmark Drive
Champaign, IL 61824
217-373-7233

Program Manager
U.S. Army Corps of Engineers
2902 Newmark Drive
Champaign, IL 61822-1076
217-373-5859

Wildlife Biologist
U.S. Army Environmental Command
5179 Hoadley Road
Aberdeen Proving Ground, MD 21010-5401
410-436-6458

3.3.4.3 Installations

Contact the individual Natural Resources Management Office or Natural Resources Specialist(s) assigned to the specific installation's TER-S program.

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3.4 U.S. Navy and U.S. Marine Corps

3.4.1 General Agency Description

The mission of the Navy is to maintain, train, and equip combat-ready naval forces capable of winning wars, deterring aggression, and maintaining freedom of the seas.

The USMC is a branch of the U.S. military responsible for providing power projection from the sea, utilizing the mobility of the U.S. Navy to rapidly deliver combined-arms task forces to global crises.

3.4.2 TER-S-Related Organizational Structure

In the U.S. Navy, the main organizational components involved with TER-S research are the Assistant Secretary of the Navy, Installations and Environment (ASN I&E), the Chief of Naval Operations, Environmental Readiness Division (CNO N45), the Chief of Naval Installations Command (CNIC), and Naval Facilities Engineering Command (NAVFAC) headquarters, regional field offices and installations. There are also Navy research laboratories and support offices within the Office of Naval Research, Naval Research Laboratory, Space and Naval Warfare Systems Command, and the Naval Facilities Engineering Service Center (NFESC). Figure 3.4 represents those Navy organizations pertinent to TER-S management issues.

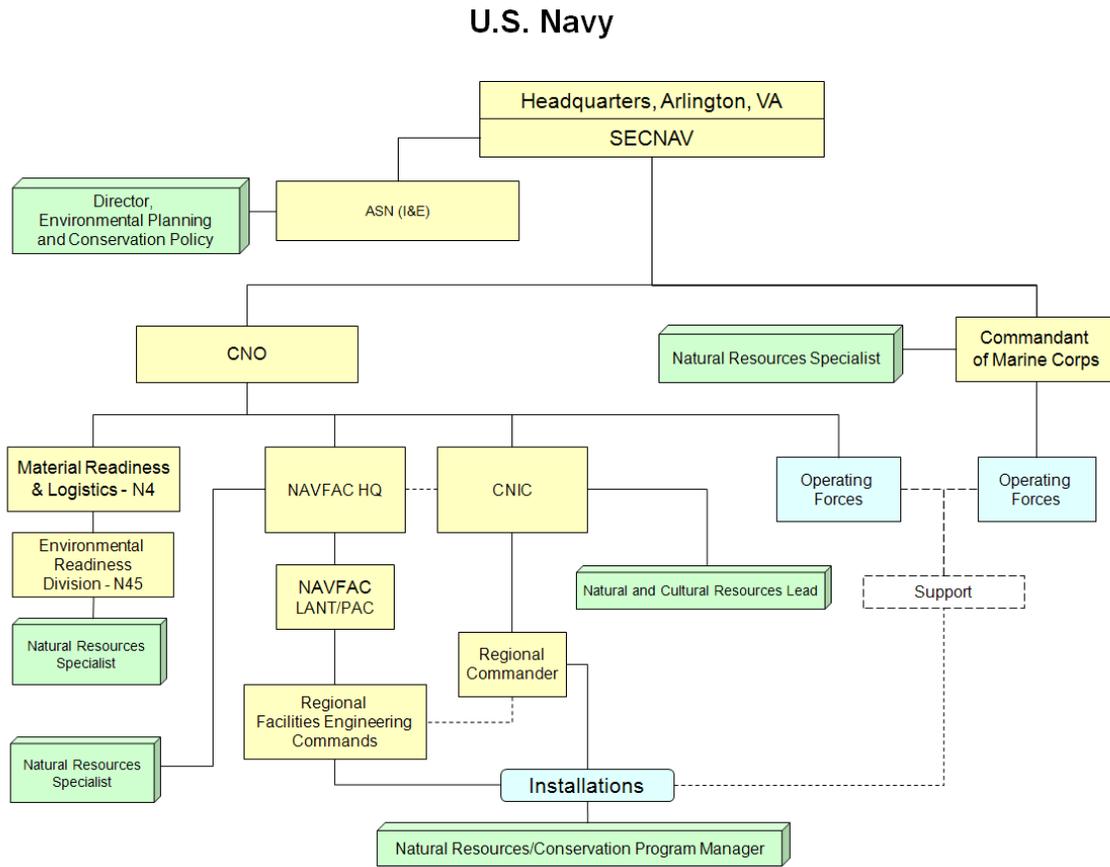


Figure 3.4. TER-S-Related Organization Structure of the U.S. Navy/USMC

ASN (I&E) is a civilian office in the United States Navy. The ASN (I&E) reports to the Under Secretary of the Navy and is charged with the acquisition and disposal of the Navy's real property; construction and maintenance on all U.S. naval installations; oversight of occupational health issues for all Navy personnel; oversight of the Navy's environmental protection, planning, and restoration efforts; and oversight of the Navy's cultural and natural resources conservation efforts.

CNO N45 is an environmental policy division of the naval headquarters staff. It provides the Navy with environmental readiness leadership by monitoring, evaluating, and shaping domestic legislation, regulations, international requirements, and developing issues.

CNIC is the authority responsible for shore installation management for the Navy, and it reports to the CNO. CNIC has overall shore installation management authority as the Budget Submitting Office for all installation support and is the lead within the Navy for oversight of installation policy and program execution.

NAVFAC manages the planning, design, construction, contingency, engineering, real estate, environmental, and public works support for U.S. Navy shore facilities worldwide. A NAVFAC component organization, NFESC, provides engineering services, technology testing, specialized facilities, and technical expertise. NFESC primarily provides these services to the Navy and the USMC, but it also conducts business with a variety of other government and private organizations.

3.4.3 Research Program Processes

The Navy has no formal TES research program. It primarily works with SERDP/Environmental Security Technology Certification Program (ESTCP) and the Navy Environmental Sustainability Development to Integration (NESDI) program. NESDI is the Navy's environmental shore side technology demonstration/validation program sponsored by CNO N45 and managed by NAVFAC.

TER-S research needs that do arise at the Navy usually begin at the installation level and are initiated by one or more of the following:

- Regular compliance and management procedures at the installation or base;
- Major federal actions with potential impacts, as identified through NEPA assessments;
- Development and updating of INRMPS; and/or
- Other cooperative management activities with local and regional stakeholders.

New or revised TES listings, as published by the USFWS, are also a primary stimulus for TER-S research needs.

In most cases, managers at installations will identify research needs as they arise. The project proposals are then developed by managers or scientists, and submitted to upper command for review and approval within the Navy's normal planning and budget process, or POM. Projects are usually submitted, reviewed, validated, and prioritized through appropriate offices, and then

sent to CNO (N45) for approval. However, the project level decision-making is done at the local installation level, including identifying and accessing appropriate internal and external technical resources.

In other cases, research priorities are identified at the national or headquarters level. National program leaders are generally responsible for coordinating the implementation of the research and directing it to the appropriate resources. This includes communicating with other Federal agencies and also bringing the project to the attention of pertinent regional and local offices.

The Navy can also submit research proposals to SERDP as a funding source and technical resource for difficulties with applicability across the Military Services. See Section 3.6 for a description of SERDP.

3.4.4 TER-S-Related Points of Contact

3.4.4.1 Headquarters

Director, Environmental Planning and Conservation Policy
Assistant Secretary of the Navy, Installations and the Environment

Natural Resources Specialist
U.S. Marine Corps LFL
703-695-8240

Natural Resources Specialist
U.S. Navy CNO N45
703-604-5420

Natural Resources Specialist
NAVFAC HQ
202-685-9332

Natural and Cultural Resources Lead
CNIC
202-433-4986 / 202-433-4482

3.4.4.2 NAVFAC Regional Offices (Echelon III)

NAVFAC Atlantic
6506 Hampton Boulevard
Norfolk, VA 23508-1278
757-322-4800

NAVFAC Pacific
258 Makalapa Drive, Suite 100
Pearl Harbor, Hawaii 96860-3134
808-472-1378

3.4.4.3 Installations

Contact the individual Natural Resources Management Office or Natural Resources Specialist(s) assigned to the installation's TER-S program.

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3.5 Defense Logistics Agency

3.5.1 General Agency Description

DLA is a combat support agency that supplies the nation's Military Services with the critical resources they need to accomplish their worldwide missions. DLA not only provides wide-ranging logistical support for peacetime and wartime operations, but emergency preparedness and humanitarian missions as well.

3.5.2 TER-S-Related Organizational Structure

The main organizational component involved with TER-S research at DLA is DLA Installation Support, Environmental Management, headquartered at Fort Belvoir, Virginia.

DLA also has several other environmental support offices that will address TER-S concerns depending on the type of facility within their organizational structure. Because DLA leases land and facilities from other agencies/Military Services, it relies on technical support from the lessor (Army, Navy, etc.) to address land management and natural resources issues. Figure 3.5 represents those DLA organizations pertinent to TER-S management.

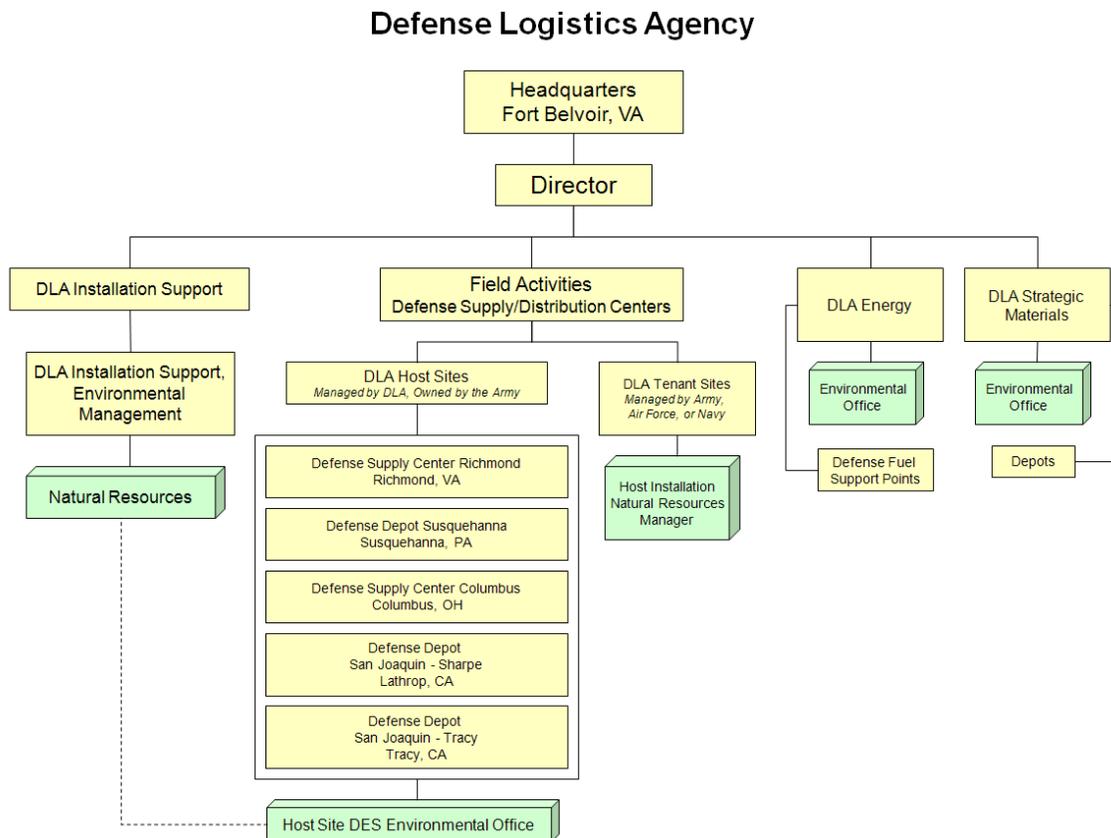


Figure 3.5. TER-S-Related Organization Structure of the DLA

3.5.2.1 Defense Supply Centers and Depots

At DLA Host Sites (i.e., where DLA manages the installation even though the site is owned by the Army), the TER-S point of contact is the DES Environmental Office located at that installation.

At DLA Tenant Sites, where the lessor (Army, Navy, etc.) is the responsible agency, the TER-S point of contact is the Natural Resources Specialist for the managing service.

3.5.2.2 Defense Energy Support Center

In most cases, the point of contact for environmental issues is the DLA Energy Environmental Office, located at DLA HQC, Fort Belvoir, Virginia. However, there are exceptions, depending on the research need and the location of the facility.

Defense Fuel Support Point San Pedro

Defense Fuel Support Point (DFSP) San Pedro is a self-contained, Navy-owned site operated by DLA that maintains an environmental specialist position on-site. Although the Defense Energy Support Center has oversight of the management and daily operation of DFSP San Pedro, the DLA worked with NAVFAC Southwest to establish and fund research/restoration programs when two species of concern, the Palos Verdes Blue Butterfly and the California Gnatcatcher, were identified at the facility. For more information on the Palos Verdes Blue Butterfly and California Gnatcatcher restoration programs, contact DFSP San Pedro or the Natural Resources Specialist at NAVFAC Southwest (see Section 3.4 for point of contact information).

3.5.2.3 DLA Strategic Materials

The Chief of the Environmental Management, Safety, and Occupational Health Division, located at DLA HQC in Fort Belvoir, Virginia, addresses DLA Strategic Materials (formerly Defense National Stockpile Center) depots and other environmental efforts.

3.5.3 Research Program Processes

There is no internal TER-S-related research and development program or funding process at the DLA. This agency addressed research requirements on an as needed basis, and tends to utilize Legacy, SERDP, or other existing funding programs as appropriate. Inter- or intra-office collaboration is expected and encouraged, but not formalized.

3.5.4 TER-S-Related Points of Contact

3.5.4.1 Headquarters

Defense Logistics Agency
Andrew T. McNamara Building
ATTN: DLA Installation Support
Environmental Management, Natural
Resources Manager
8725 John J. Kingman Road
Fort Belvoir, VA 22060-6221

Defense Depot Susquehanna (DDSP)
ATTN: DLA Installation Support Environment
and Safety
Building 750-1
New Cumberland, PA 17070
<http://www.ddc.dla.mil/Sites/ddsp.aspx>

3.5.4.2 DLA Host Sites

DLA Aviation
ATTN: Environment, Safety, and Occupational
Health
8000 Jefferson Davis Highway
Richmond, VA 23297-5100
804-279-3861
<http://www.dscr.dla.mil/>

DLA Land and Maritime (formerly Defense
Supply Center Columbus DSCC)
ATTN: DLA Installation Support at Columbus
Environmental
P.O. Box 3990
Columbus, OH 43218-3990
<http://www.dsccl.dla.mil/>

Defense Depot San Joaquin – Sharpe
(DDJC-Sharpe)
Located at Lathrop, CA
DLA Distribution San Joaquin
DES-JC-PSS, Building 16B Mezzanine
P.O. Box 960001
Stockton, CA 95296

DLA Energy (Formerly known as Defense
Energy Support Center DESC)
Environmental and Safety Division
Andrew T. McNamara Building
8725 John J. Kingman Road
Fort Belvoir, VA 22060-6221
703-767-8315
<http://www.desc.dla.mil/>

Defense Depot San Joaquin – Tracy
(DDJC-Tracy)
Located at Tracy, CA
DLA Distribution San Joaquin
DES-JC-PSS, Building 16B Mezzanine
P.O. Box 960001
Stockton, CA 95296

DLA Strategic Materials (Formerly known as
Defense National Stockpile Center DNSC)
Environmental Safety and Occupational Health
Office, Room 3229
Andrew T. McNamara Building
8725 John J. Kingman Road Fort Belvoir, VA
22060-6221
703-767-6522
<https://www.dnsc.dla.mil/>

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3.6 Strategic Environmental Research and Development Program

3.6.1 General Description

SERDP is the DoD's environmental science and technology program, planned and executed in full partnership with the Department of Energy (DOE) and the Environmental Protection Agency (EPA), with participation by numerous other Federal and non-Federal organizations. To address the highest priority issues confronting the Army, Navy, USAF, and USMC, SERDP focuses on cross-service requirements and pursues high-risk/high-payoff solutions to DoD's most intractable environmental problems.

SERDP pursues research in five Program Areas:

- Environmental Restoration;
- Munitions Response;
- Resource Conservation and Climate Change (RC);
- Energy and Water; and
- Weapons Systems and Platforms.

3.6.2 TER-S-Related Organizational Structure

TER-S-related issues are touched upon within the RC Program Area, which addresses natural resources research requirements in general. Figure 3.6 represents the SERDP organization pertinent to TER-S management issues.

Strategic Environmental Research and Development Program (SERDP)

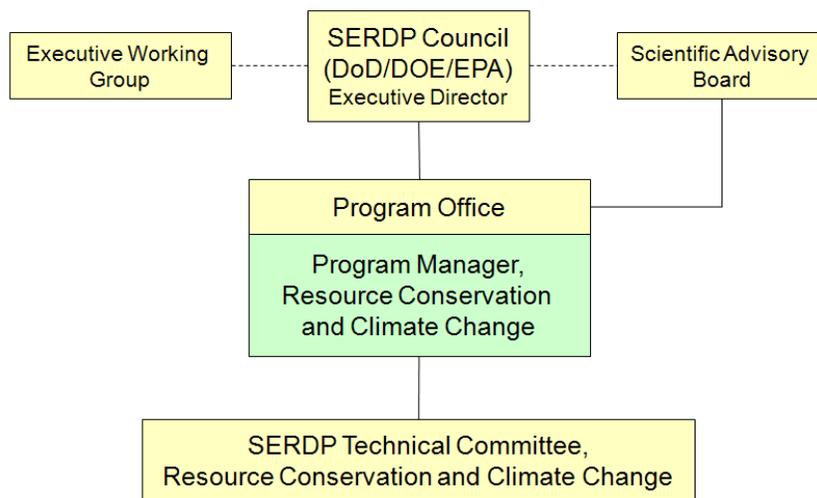


Figure 3.6. TER-S-Related Organization Structure of SERDP

3.6.2.1 SERDP Council

The SERDP Council oversees the management of SERDP and is the sole funding approval authority. It is a multi-agency body that is intended to maximize exchange of information and minimize duplication of environmental research activities through close coordination with the military departments and defense agencies, the DOE, the EPA, and other departments and agencies of the Federal, state, and local governments. Members of the Council are designated in the SERDP statute.

3.6.2.2 Executive Working Group

The Executive Working Group (EWG) is an extension of the SERDP Council and serves as a working level representation of the Council. This group contributes to the SERDP investment strategy and annual program plan development. The EWG members facilitate the submittal of proposals from the Federal sector.

3.6.2.3 Scientific Advisory Board

The SERDP Scientific Advisory Board (SAB) was established in accordance with the SERDP statute and ensures that the Program maintains a clear focus on technical quality. The SAB is a formal Federal Advisory Committee, and has the authority to make recommendations to the SERDP Council regarding technologies, research, projects, programs, activities, and funding. The SAB is composed of between six and fourteen members who are jointly appointed by the Secretary of Defense and the Secretary of Energy in consultation with the Administrator of the EPA.

3.6.2.4 SERDP Technical Committees

SERDP relies on the technical skills offered by the participating Military Services and Agencies to assist in the technical aspects of program development, project monitoring, and technology transfer. For each of the five program areas, a SERDP Technical Committee (STC) assists in identifying solicitation topics, reviews technical proposals, and formulates and recommends the annual program plan. Each committee also conducts technical reviews of the ongoing projects, and facilitates the transfer of scientific understanding and technologies developed under SERDP according to the needs of their users in the field. STC members are selected by the Military Services and Agencies represented on the SERDP Council. The RC Program Area STC also includes a representative from the USGS.

For complete information on SERDP, please visit <http://www.serdp-estcp.org>.

3.6.3 Research Program Process

SERDP responds directly to high-priority defense environmental requirements generated by the Military Services and sanctioned by the Deputy Under Secretary of Defense for Installations and Environment. It uses a competitive process to maintain high technical quality and solicit focused proposal topics to ensure relevance to DoD's needs. Researchers from industry, academia, and

government research organizations lead projects. Annual solicitations are released in the forms of BAAs for private sector organizations and Calls for Proposals for Federal organizations. The competitive proposal selection process can include a brief pre-proposal, followed by a full proposal and an oral presentation upon request.

SERDP issues two annual solicitations for projects; the Core Solicitation and the SERDP Exploratory Development (SEED) Solicitation. The Core Solicitation seeks proposals for basic and applied research and advanced technology development. Core projects vary in cost and duration, consistent with the scope of the work proposed, but they are usually multi-year proposals. The SEED Solicitation is designed to investigate innovative approaches that involve high technical risk or require supporting data to provide proof of concept. SEED projects are limited to not more than \$150,000, and are approximately one year in duration. SEED projects that are successful are considered for additional follow-on funding. All proposals must be in response to distinct Core and SEED Statements of Need (SONs) associated with the solicitation. Table 3-6 presents the general timeline for the SERDP solicitations.

Table 3-6. The SERDP Solicitation Timeline

Summer/Fall	SONs for upcoming solicitation are under development.
October/November	SONs and BAA and Federal Call for Proposals released.
January/February	BAA pre-proposals are due. Pre-proposal screening is conducted. BAA full proposals are requested.
March	BAA and Federal full proposals are due.
Spring	Peer review conducted on full proposals.
July/August	Proposal selection finalized. Proposers notified.
September/October	Core solicitation proposers present to the SERDP Scientific Advisory Board.
March/April	Award of projects.

For complete information on SERDP Solicitations, visit <http://www.serdp-estcp.org/Funding-Opportunities/SERDP-Solicitations>.

3.6.4 TER-S-Related Points of Contact

SERDP and ESTCP Office
 901 North Stuart Street, Suite 303
 Arlington, VA 22203
 Phone: 703-696-2117
 Fax: 703-696-2114

Executive Director

Phone: 703-696-2120

Deputy Director

Phone: 703-696-3826

Program Manager, Resource Conservation and Climate Change

Phone: 703-696-2125

3.6.5 Additional Information

The following sections detail events and programs.

3.6.5.1 Annual Symposium

The SERDP and ESTCP annual Partners in Environmental Technology Technical Symposium and Workshop brings together the United States' leading environmental researchers and technology developers with the defense user and regulatory communities. This forum focuses on DoD's priority environmental issues, cutting-edge environmental science and technologies, and the exchange of information among colleagues from around the nation and abroad.

For more information, visit <http://www.serdp-estcp.org/News-and-Events/Annual-Symposium> .

3.6.5.2 The Environmental Security Technology Certification Program

The Environmental Security Technology Certification Program (ESTCP) is DoD's environmental technology demonstration and validation program. SERDP established the Program in 1995 to promote the transfer of innovative technologies that successfully establish proof of concept to field or production use. ESTCP demonstrations collect cost and performance data to overcome the barriers against employing an innovative technology from concerns regarding technical or programmatic risk.

ESTCP's goal is to identify and demonstrate the most promising innovative and cost-effective technologies and methods that address DoD's high-priority environmental requirements. Projects conduct formal demonstrations at DoD facilities and sites in operational settings to document and validate improved performance and cost savings. To ensure the demonstrated technologies have a real impact, ESTCP collaborates with end-users and regulators throughout the development and execution of each demonstration. Transition challenges are overcome with rigorous and well-documented demonstrations that provide the information needed by all stakeholders for acceptance of the technology.

ESTCP issues an annual solicitation for proposals from the Federal government, academia, and industry, and employs a competitive selection process to ensure that ESTCP funds high-quality demonstrations. ESTCP requires each project to develop a formal test and evaluation plan. Demonstration results are subject to rigorous technical reviews to ensure that the conclusions are accurate and well supported by data.

The RC Program Area encompasses the natural resources and climate change impacts and adaptation components of ESTCP.

For complete information on ESTCP, go to <http://www.serdp-estcp.org/About-SERDP-and-ESTCP/About-ESTCP>.

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3.7 Bureau of Land Management

3.7.1 General Agency Description

The BLM, an agency within the DOI, administers the National System of Public Lands (BLM Public Lands) in the United States. It is responsible for a variety of programs that promote the management and conservation of public lands. The BLM manages resources on 253 million surface acres, as well as on an additional 400 million acres of subsurface mineral estate. These public lands make up about 13 percent of the total land surface of the United States and more than 40 percent of all land managed by the Federal government.

3.7.2 TER-S-Related Organizational Structure

The BLM headquarters office is located in Washington, DC. Field operations are administered from twelve state offices. At the headquarters level, TER-S research falls under the purview of the Division of Fish, Wildlife, and Plant Conservation, under Renewable Resources and Planning. Figure 3.7 represents the BLM organizations pertinent to TER-S management.

Bureau of Land Management

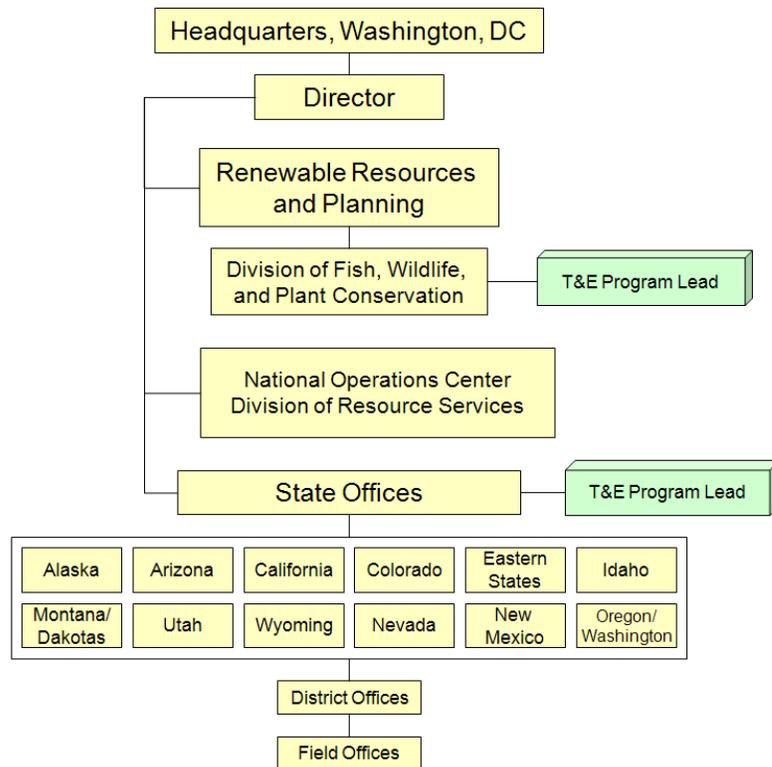


Figure 3.7. TER-S-Related Organization Structure of BLM

3.7.3 Research Program Processes

There is no formal, agency-wide research prioritization/decision-making process at the BLM. Informal processes exist, but they are not centralized and are only performed on an as-needed basis. For the most part, research planning processes are formulated at the local or state level, and are coordinated with other Federal and state agencies or contracted at the field office or district office level. Depending on the funding source, state office-initiated projects are reviewed and approved at the headquarters level. Some national level research needs are initiated and addressed by headquarters which are then directed to the appropriate state office.

The BLM can execute projects in three ways: 1) Internal Call for Proposals (through quarterly, semi-formal coordination with the USGS), 2) Independent contracts, and 3) Agreements with educational institutions or other government agencies.

This agency has one budget line item for TES, one for wildlife, and another for fisheries. Research is usually funded in cooperation with other efforts (i.e., the USGS, USFS, universities, etc.).

The BLM has some open-competition projects [for example, the Desert Tortoise Request For Proposal (RFP)], but they are not part of a recurring program. Open-competition projects are only conducted on an as-needed basis. If necessary, BLM has the ability to fund projects with USGS, USFS, and other federal entities. However, if BLM needs to go outside of any of these governmental agencies, it is required to justify going sole-source, and the project is considered competitive. The BLM can also shift money to state research programs.

3.7.4 TER-S-Related Points of Contact

3.7.4.1 Headquarters

Bureau of Land Management
1849 C Street Northwest
Washington, DC 20240-0001

TES Program Lead
Division of Fish, Wildlife, and Plant Conservation
202-912-7366

3.7.4.2 Technical Support

National Operations Center, Division of Resource Services
P.O. Box 25047
Bldg.50, Denver Federal Center
Denver, CO 80225-0047
303-236-2772
<http://www.blm.gov/nstc/>

3.7.4.3 State Offices

Some of the BLM State Offices designate TES program leads while others do not. Depending on the State Office, the program lead with TES responsibilities could be the Wildlife Program Lead, Fisheries Program Lead, or the Plant Conservation Program Lead (see list below for alternate designations in each state office).

Fisheries Program Lead

Alaska State Office
222 West 7th Avenue #13
Anchorage, AK 99513-7504
907-271-5960
<http://www.blm.gov/ak/st/en.html>

TES Program Lead

Arizona State Office
One North Central Avenue
Suite 800
Phoenix, AZ 85004-4427
602-417-9200
<http://www.blm.gov/az/st/en.html>

TES Program Lead

California State Office
2800 Cottage Way, Suite W-1623
Sacramento, CA 95825-1886
916-978-4400
<http://www.blm.gov/ca/st/en.html>

Wildlife Program Lead

Colorado State Office
2850 Youngfield Street
Lakewood, CO 80215
303-239-3600
<http://www.blm.gov/co/st/en.html>

Wildlife Program Lead

Eastern States Office
7450 Boston Boulevard
Springfield, VA 22153-3121
703-440-1600
<http://www.blm.gov/es/st/en.html>

Wildlife Program Lead

Idaho State Office
1387 South Vinnell Way
Boise, Idaho 83709
208-373-4000
<http://www.blm.gov/id/st/en.html>

TES Program Lead

Montana/Dakotas State Office
5001 Southgate Drive
Billings, MT 59101
406-896-5000
<http://www.blm.gov/mt/st/en.html>

Wildlife Program Lead

Nevada State Office
1340 Financial Boulevard
Reno, NV 89502
775-861-6400
<http://www.blm.gov/nv/st/en.html>

TES Program Lead

New Mexico State Office
301 Dinosaur Trail
Santa Fe, NM 87508
505-954-2000
<http://www.blm.gov/nm/st/en.html>

TES Program Lead

Oregon State Office
333 S.W. 1st Avenue
Portland, OR 97204
503-808-6001
<http://www.blm.gov/or/index.php>

Plant Conservation Program Lead
Utah State Office
440 West 200 South, Suite 500
Salt Lake City, UT 84145-0155
801-539-4001
<http://www.blm.gov/ut/st/en.html>

TES Program Lead
Wyoming State Office
5353 Yellowstone
Cheyenne, WY 82009
307-775-6256
<http://www.blm.gov/wy/st/en.html>

3.7.5 Additional Information

Research program opportunities are not available to the general public.

3.8 U.S. Fish and Wildlife Service

3.8.1 General Agency Description

An agency of the DOI, the USFWS is responsible for conserving, protecting, and enhancing fish and wildlife and their habitats for the continuing benefit of the American people through federal programs relating to migratory birds, endangered species, inter-jurisdictional fish and marine mammals, and inland sport fisheries.

3.8.2 TER-S-Related Organizational Structure

The USFWS is made up of the headquarters office in Washington, DC and eight regional offices. Within each region, there are multiple Ecological Services Field Offices (ESFOs). See Figure 3.8 below for the organizational structure related to TER-S programs and management issues.

U.S. Fish and Wildlife Service

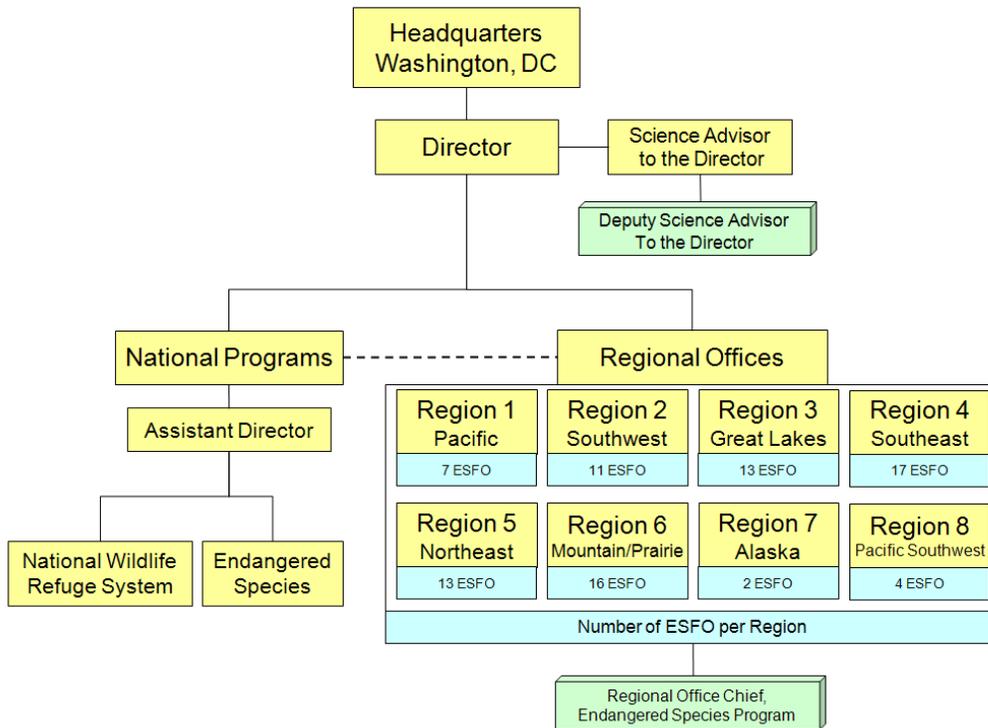


Figure 3.8. TER-S-Related Organization Structure of FWS

The USFWS has dual responsibilities with regard to TER-S:

1. Management of the National Wildlife Refuge System (NWRS), which is comprised of 548 wildlife sanctuaries, covering over 96 million acres nationwide.
2. Endangered Species Listing Program, which is one of eleven other programs at the USFWS. The Program is responsible for the designation of plants and animals for federal protection in accordance with the ESA.

3.8.3 Research Program Processes

The USFWS participates in two partner-driven research programs with USGS. One is the Science Support Partnership Program (SSP) and the other is the Quick Response Program (QRP).

3.8.3.1 Science Support Partnership Program

The SSP is a USGS/USFWS national resources management partnership program. Through the SSP, the USGS has undertaken hundreds of projects in support of USFWS local, regional, and national programs such as migratory bird management, endangered species recovery, freshwater fisheries restoration, ecosystem-based management, coastal habitat conservation, fish and wildlife law enforcement, and NWRS management.

The research process for SSP starts in late February or early March. Each USFWS Region issues an RFP to their ESFO after collaboration with USGS. The RFPs can be broad or very specific. USFWS project officers submit proposals to their regional offices in June. The regional offices then review all submissions and make recommendations for funding to the USGS National SSP Coordinator by August. In September, the USGS National SSP Coordinator reviews and approves proposals that fit within the scope of the SSP and its available budget. Funding is awarded in October.

3.8.3.2 Quick Response Program

The QRP is almost identical to the SSP in that it is a USGS/USFWS national resources management partnership with similar objectives and virtually the same funding timelines. However, this program's projects are generally of shorter duration, more limited budgets, and are managed by the three USGS regional offices rather than headquarters.

3.8.3.3 Mixed Funding

Occasionally, proposals will receive mixed funding from both the SSP and QRP programs. When this occurs, SSP and QRP staff work together to coordinate the availability of funding.

3.8.4 TER-S-Related Points of Contact

3.8.4.1 Headquarters

U.S. Fish and Wildlife Service
1849 C Street NW
Washington, DC 20240

Deputy Science Advisor to the Director
U.S. Fish and Wildlife Service
4401 North Fairfax Drive
Mail Stop: 130-D ARLSQ
Arlington Square, VA 22203
703-358-1878

3.8.4.2 Regional Offices

Contact the Regional Office Chief, Endangered Species Program for more information.

Pacific Region (1)
911 NE 11th Avenue
Portland, Oregon
503-231-6120

<http://www.fws.gov/pacific/>

Northeast Region (5)
300 Westgate Center Drive
Hadley, MA 01035-9589
413-253-8200

<http://www.fws.gov/northeast/>

Southwest Region (2)
P.O. Box 1306
500 Gold Avenue SW
Albuquerque, NM 87102
505-248-6911

<http://www.fws.gov/southwest/>

Mountain-Prairie Region (6)
134 Union Boulevard
Lakewood, Colorado 80228
303-236-7905

<http://www.fws.gov/mountain-prairie/>

Midwest/Great Lakes Region (3)
One Federal Drive
Fort Snelling, MN 55111-4056
612-713-5360

<http://www.fws.gov/midwest/>

Alaska Region (7)
1011 East Tudor Road
Anchorage, AK 99503
907-786-3414

<http://alaska.fws.gov/>

Southeast Region (4)
1875 Century Boulevard, Suite 400
Atlanta, GA 30345
404-679-4000

<http://www.fws.gov/southeast/>

Pacific Southwest Region (8)
2800 Cottage Way, W-2606
Sacramento, CA 95825
916-414-6464

<http://www.fws.gov/cno/>

3.8.5 Additional Information

Visit the following websites for more information on USFWS programs and services:

NWRS

<http://www.fws.gov/refuges/>

Endangered Species Program

<http://www.fws.gov/endangered/>

USFWS Office Directory

<http://www.fws.gov/offices/directory/default.cfm>

3.9 U.S. Geological Survey

3.9.1 General Agency Description

The mission of the USGS is to serve the nation by providing reliable scientific information to describe and understand the Earth; minimize loss of life and property from natural disasters; manage water, biological, energy, and mineral resources; and enhance and protect our quality of life.

3.9.2 TER-S-Related Organizational Structure

USGS headquarters is located in Reston, Virginia and houses the five technical disciplines of Biology, Geography, Geology, Water, and Geospatial Information. The Biological Resources Discipline (BRD) holds the primary oversight responsibility for fisheries and wildlife-related research, including TER-S. The Wildlife: Terrestrial and Endangered Resources Program and the Fisheries: Aquatic and Endangered Resources Program are supported by an Imperiled Species Coordinator. However, TER-S-related issues may arise within any of the other disciplines, and BRD will work cooperatively with them to plan and implement the necessary research. Figure 3.9 shows the USGS organizational structure for fish and wildlife research, including the location of science centers and research centers involved with fish and wildlife programs. Along with DoD SERDP, USGS is one of two research-only entities described in this report.

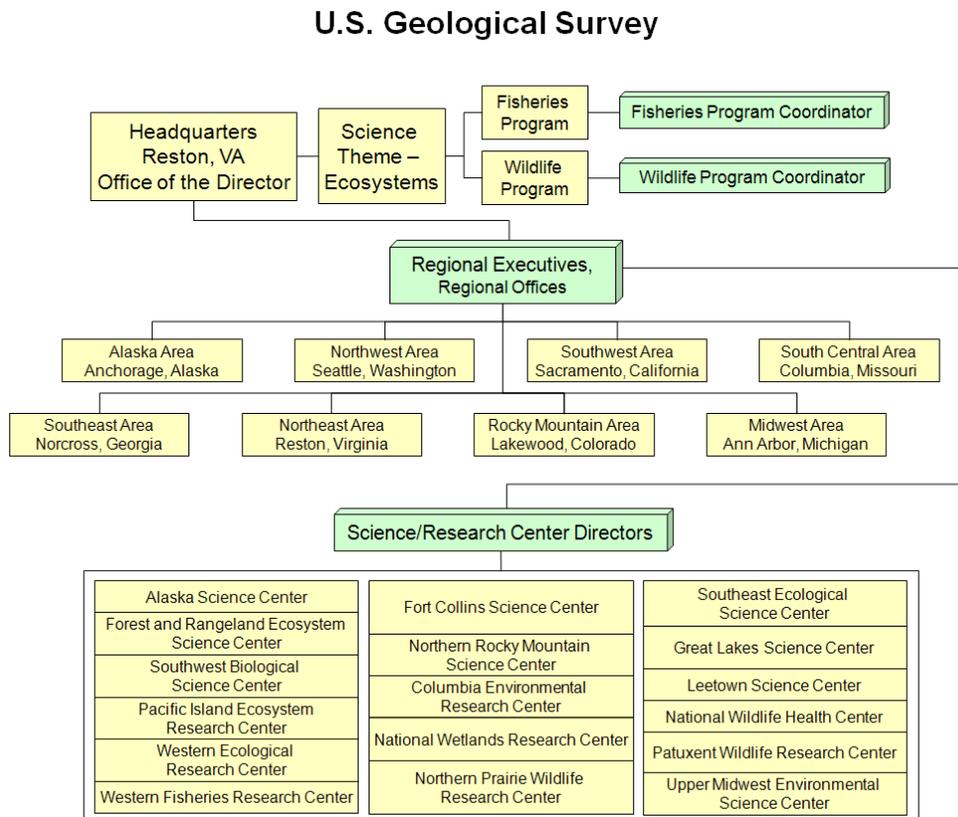


Figure 3.9. TER-S-Related Organization Structure of the USGS

3.9.2.1 Regions

There are nine regional offices that coordinate the activities of the Science Centers and Research Centers within each region:

- Eastern Regional Office, Reston, VA (Regional Executive for Biology)
- Central Regional Office, Denver, CO (Regional Executive for Biology)
- Western Regional Office, Seattle, WA (Regional Executive for Biology).

Reorganization of these regions is in the planning stages, and area offices will eventually replace these regions. The area offices will report to the regional executives and will be responsible for oversight of the Science/Research Centers within their regional boundaries.

3.9.3 Research Project Processes

USGS funds and manages a variety of internal and cooperative research programs. In the 1990s, all research functions within the DOI were consolidated within USGS. USGS now maintains its own research infrastructure in addition to managing numerous partnering programs that are accessed by the USFWS, NPS, BLM, the Bureau of Reclamation, and the Minerals Management Service. Research program opportunities are not open to the general public.

3.9.3.1 Internal Research Process

USGS employs a decentralized structure to implement the majority of their internal TER-S-related research projects. Most of the research planning is conducted at the regional or local level. The Science Centers and Research Centers identify the research needs based on local and regional inputs. Typically, the Research Centers will issue an annual internal RFP to their scientists. The proposals are then reviewed internally, and the Research Centers award funding based on these reviews. Most of the day-to-day decisions are made at the Science Center level with input from the relevant regional federal partners.

On the national level, there is a five-year strategic planning process that sets higher level priorities and supports the annual budget cycles. Much interagency coordination will happen through stakeholder meetings held during the development of the five-year plan. Additionally, there is guidance that goes out to the research centers from headquarters to receive their input and needs throughout these planning processes. USGS also has a 10-year bureau plan.

Headquarters is responsible for giving final approval of federally-mandated research needs, and the Associate Director has approval authority.

3.9.3.2 Partner-Driven Research Process/Programs

USGS/USFWS

USGS participates in two partner-driven research programs with the USFWS: the SSP and the QRP. The SSP is a USGS/USFWS national resource management partnership that allows USGS to participate in hundreds of projects in support of USFWS local, regional, and national programs including migratory bird management, endangered species recovery, freshwater fisheries restoration, ecosystem-based management, coastal habitat conservation, fish and wildlife law enforcement, and National Wildlife Refuge System management. For more information on SSP research processes and proposal and funding timelines, see Section 3.8.3.1.

The QRP is almost identical to the SSP in that it also involves a USGS/USFWS partnership, similar program objectives, and nearly identical timelines. However, this program's projects are generally of shorter duration, more limited budgets, and are managed by the three USGS regional offices rather than headquarters. Each region may submit multiple Quick Response Research requests, not to exceed \$50,000 total per region. USFWS regions with shared research needs may coordinate requests to combine the total funding allocated to address that need.

Table 3-9 – The USGS Timeline for SSP and QRP Projects

December	RFP development for next FY ends.
February/May	RFP are issued in late February or early May.
June	Full proposals due.
August	RFP development for next FY begins.
October	Funding is awarded.

Proposals will occasionally receive mixed funding from both the SSP and QRP. When this occurs, SSP and QRP staff work together to coordinate the availability of funding.

USGS/NPS

- Natural Resources Preservation Program
- National Parks Monitoring Project
- Park-Oriented Biological System.

USGS/BLM

- A USGS partnership with BLM is proposed in this year's budget request

3.9.3.3 Cooperative Research Units Program

The CRUs Program is a USGS partnership with host universities, state natural resources agencies, the Wildlife Management Institute, and the USFWS. The program's mission is to foster the science-based management and conservation of state and federal natural resources. CRUs conduct natural resources research, participate in graduate student education efforts, provide technical assistance on natural resources issues, and offer continuing education opportunities for natural resources professionals. There are 40 CRUs in 38 states.

3.9.3.4 National Climate Change and Wildlife Science Center

USGS also recently initiated research efforts through the National Climate Change and Wildlife Center (NCCWSC). Funding is provided through Congress in support of Energy Bill H. R. 3221. The Center's goal is to improve the capacity of fish and wildlife agencies to respond to climate change. NCCWSC research addresses "high priority climate change effects on fish and wildlife identified by Federal and state fish and wildlife management agencies".

3.9.4 TER-S-Related Points of Contact

Currently, two positions at the USGS headquarters, BRD in Reston, VA are main points of contact for TER-S research at the National level:

- Fisheries Program Coordinator
- Wildlife Program Coordinator

3.9.4.1 Headquarters

USGS National Headquarters
Biological Resource Discipline
Mail Stop 301, 12202 Sunrise Valley Drive
Reston, VA 20192

Program Coordinator
Fisheries: Aquatic and Endangered
Resources
703-648-4215

Assistant Program Coordinator
Fisheries: Aquatic and Endangered
Resources
703-648-4066

Imperiled Species Coordinator (Vacant)

Cooperative Research Units Program
703-648-4260

Amphibian Research and Monitoring
Initiative
703-648-4028

Program Coordinator
Wildlife: Terrestrial and Endangered
Resources
703-648-4019

Program Analyst
Wildlife: Terrestrial and Endangered
Resources
703-648-4036

3.9.4.2 Geographic Area Offices, Science/Research Centers

Geographic Area Program Officers are the points of contact for regional TER-S issues. For the Regional Science and Research Centers, the Center Director is the point of contact for TER-S issues.

Eastern Geographic Area Offices and Science/Research Centers:

Northeast Area
12201 Sunrise Valley Drive, MS 953
Reston, VA 20192, USA
Program Officer: 703-648-5114

Southeast Area
3850 Holcomb Bridge Road, Suite 160
Norcross, GA 30092
Program Officer: 770-409-7705

Midwest Area
1451 Green Road
Ann Arbor, MI 48105
Program Officer: 734-214-7218

Southeast Ecological Science Center
7920 NW 71st Street
Gainesville, FL 32653
Phone: 352-378-8181
<http://fl.biology.usgs.gov/>

Great Lakes Science Center
1451 Green Road
Ann Arbor, MI 48105
313-994-3331
<http://www.glsc.usgs.gov/>

Leetown Science Center
11649 Leetown Road
Kearneysville, WV 25430
304-724-4401
<http://www.lsc.usgs.gov/>

National Wildlife Health Center
6006 Schroeder Road
Madison, WI 53711-6223
608-270-2400
<http://www.nwhc.usgs.gov/>

Patuxent Wildlife Research Center
12110 Beech Forest Road
Laurel, MD 20708-4039
301-497-5503
<http://www.pwrc.usgs.gov/>

Upper Midwest Environmental Sciences
Center
2630 Fanta Reed Road
La Crosse, WI 54603
608-783-6451
<http://www.umesc.usgs.gov/>

Central Geographic Area Offices and Science/Research Centers:

North Central Area
1345 Corporate Center Curve
Suite 200
Eagan, MN 55121
Program Officer: 651-379-2744

Rocky Mountain Area
P.O. Box 25046, Denver
Federal Center, MS 911
Denver, CO 80225
Program Officer: 303-236-6484

South Central Area
1700 East Pointe Drive
Suite 202
Columbia, MO 65201
Program Officer: 573-777-1665

Center for Biological Informatics
P.O. Box 25046, DFC MS302
Denver, CO 80225-0046
303-202-4220
<http://biology.usgs.gov/cbi/>

Columbia Environmental Research
Center
4200 New Haven Road
Columbia, MO 65201
573-875-5399
<http://www.cerc.usgs.gov/>

Fort Collins Science Center
4512 McMurry Avenue
Fort Collins, CO 80525-3400
970-226-9398
<http://www.fort.usgs.gov/>

National Wetlands Research Center
700 Cajundome Blvd.
Lafayette, LA 70506
318-266-8501
<http://www.nwrc.usgs.gov/>

Northern Prairie Wildlife Research Center
8711 37th Street, S.E.
Jamestown, ND 58401-7317
701-253-5515
<http://www.npwrc.usgs.gov/>

Northern Rocky Mountain Science Center
Montana State University
Bozeman, MT 59717-0278
406-994-5041
<http://www.nrmssc.usgs.gov/>

Western Geographic Area Offices and Science/Research Centers:

Alaska Area
4210 University Drive
Anchorage, AK 99508
Program Officer: 907-786-7065

Northwest Area
909 First Avenue, Suite #800
Seattle, WA 98104
Program Officer: 206-220-4616

Southwest Area
3020 State University Drive East
Modoc Hall, Suite 3005
Sacramento, CA 95818
Program Officer: 503-251-3246

Alaska Science Center
1011 East Tudor Road
Anchorage, AK 99503-6199
907-786-3512
<http://alaska.usgs.gov/>

Forest and Rangeland Ecosystem Science
Center
3200 S.W. Jefferson Way
Corvallis, OR 97331
541-750-7307
<http://fresc.usgs.gov/>

Southwest Biological Science Center
2255 N. Gemini Drive, Room 341
Flagstaff, AZ 86001
520-556-7094
<http://sbosc.wr.usgs.gov/>

Pacific Island Ecosystems Research Center
Room 408, 3190 Maile Way
Honolulu, HI 97822
808-956-5668
<http://biology.usgs.gov/pierc/>

Western Ecological Research Center
California State University, Sacramento
6000 J Street, Placer Hall
Sacramento, CA 95819-6129
916-278-3027
<http://www.werc.usgs.gov/>

Western Fisheries Research Center
6505 N.E. 65th Street
Seattle, WA 98115
206-526-6282
<http://wfrc.usgs.gov/>

3.9.5 Additional Information

Final approval for research is usually handled at the regional or local level. Coordination generally happens through stakeholder meetings for the five-year plan or by personal contacts/networking at national conferences and/or TES subcommittees by program coordinators.

3.10 Federal Highway Administration

3.10.1 General Agency Description

FHWA is primarily a funding pass-through agency, with three primary road delivery programs: (1) the Federal Aid Highway program, which mainly transfers gas tax funds to state departments of transportation as cost share for road construction; (2) the Federal Lands Highway program, which builds roads on Federal lands in support of the land management agency mission (e.g., National Wildlife Refuges, National Forests, National Parks, military roads, Native American Reservations); and (3) emergency relief disaster assistance for federal aid and Federal lands roads damaged in a declared disaster. The FHWA does not own any roads; however, all the standard federal obligations apply with the transfer of funds or facilities to states and local governments. The FHWA is almost always the lead Federal agency under ESA for the above-listed programs. Regardless of ownership, the FHWA maintains a stewardship, oversight, and legal responsibility for the life of roads built with Federal Highway Trust Fund monies, particularly ESA and NEPA. The FHWA strives to positively influence the decisions of states and local governments through stewardship, research, technical assistance, and other forms of guidance and best practice suggestions. It has unique environmental stewardship responsibilities in California, and TER-S issues in that state may be closely coordinated with CalTrans ecologists.

3.10.2 TER-S-Related Organizational Structure

TER-S research at FHWA is managed by the Office of Planning, Environment, and Realty and its subordinate office, the Office of Project Development and Environmental Review. Figure 3.10 represents the FHWA organizations pertinent to TER-S management issues.

Federal Highway Administration



Figure 3.10. TER-S-Related Organization Structure of the FHWA

3.10.3 Research Program Processes

A major part of the decision making process for FHWA involves the Surface Transportation Environment and Planning Cooperative Research Program (STEP). The objective of STEP is to improve understanding of the complex relationship between surface transportation, planning, and the environment. Projects are selected using a rolling, yearly process. Each fiscal year during the summer, an announcement is published in the Federal Register requesting suggested lines of research.¹

Stakeholders include Federal agencies, the DoD, state agencies, NGOs, universities, and the private sector. Their submissions are used by FHWA contact persons identified for each research emphasis area to coordinate and develop the annual STEP Plan. The FHWA Associate Administrator for the Office of Planning, Environment and Realty makes final funding decisions and approves the annual STEP Plan. The annual STEP Plan and key points of contact can be found on the FHWA website at: www.fhwa.dot.gov/hep/step/index.htm.

A variety of procurement mechanisms are used to award STEP funds, including indefinite quantities contracts, cooperative agreements, small purchase contracts, interagency agreements, etc. BAAs are also used to obtain diverse perspectives and possible available options for advancing particular research initiatives. Information regarding RFPs is posted on the STEP website as it becomes available.

Table 3-10 - The STEP Timeline

December	Post current fiscal year plan on STEP website.
Winter	Begin to implement current fiscal year, through appropriate procurement methods, agreements and partnerships. (May shift depending on appropriations)
Spring/ Summer	Refine STEP Implementation Strategy/Goals/Emphasis Areas. Publish <i>Federal Register</i> notice and update website information to solicit feedback on next fiscal year STEP activities. Conduct outreach for next fiscal year by emphasis area, review research needs, and identify gaps.
Spring/ Summer	Develop priorities for and fund critical research. Develop next draft fiscal year STEP Plan for comment.
Fall/Winter	Post current fiscal year plan on STEP website. (May shift depending on appropriations)

STEP research program input is solicited from other agencies to get input on their particular year-to-year priorities, initiatives, and national level policy issues. The FHWA's highway programs are principally delivered through state DOTs or Federal land management agencies, so emerging issues are commonly

¹ The FY 2011 announcement was published in the Federal Register on July 2, 2010 (Volume 75, Number 127). The deadline for feedback is September 30, 2010.

identified in project level ESA compliance and other environmental reviews. TER-S research-needs may be addressed through the research program if project level issues are of regional or national significance.

3.10.4 TER-S Research Points of Contact

3.10.4.1 Headquarters

Director
Office of Project Development and Environmental Review
Federal Highway Administration
1299 New Jersey Avenue SE, Room E76-312
Washington, DC 20590
202-366-2037

Senior Ecologist
Office of Planning, Environment, and Realty
202-366-2851

Program/Outreach Manager
STEP Cooperative Research Program
202-366-1263

3.10.5 Additional Information

3.10.5.1 Other Programs of Note

The following programs and initiatives are not under the purview of FHWA, but knowledge of their involvement may be of use:

- Cooperative Agreements/Memorandums of Understanding: FHWA partners with DoD, Federal agencies, state agencies, NGOs, and the private sector. Some examples include: the EPA, USFWS, NPS, the U.S. Coast Guard, the Oregon Department of Fish and Wildlife, The Nature Conservancy, NOAA, and the USACE.
- Transportation and Research Ideas (TERI) Database: Managed by the American Association of State Highway and Transportation Officials (AASHTO), TERI is the Standing Committee on Environment's (SCOE) central storehouse for tracking and sharing new transportation and environmental research ideas. The Center for Environmental Excellence, managed by AASHTO, maintains TERI and keeps all content relevant. Annually, the SCOE subcommittee on Natural Systems and Ecological Communities prioritizes research needs, some of which are submitted to FHWA for consideration under STEP or other FHWA and DOT research programs.

While there are many Transportation Research Board committees with an environmental interest, the primary committee focusing on the ESA is the TRB ADC30 Ecology and Transportation Committee. They routinely submit proposals to transportation research funding sources.

The National Cooperative Highway Research Program Quick Turnaround Environmental Research receives 600 to 700 thousand dollars in funding per year. These funds undergo management review by the 25-25 Panel for evaluation and prioritization.

4.0 Findings

This section provides a summary of the findings resulting from the interviews and the information provided in Section 3.0, Agency Descriptions.

4.1 General

Five of the participating agencies have direct research responsibilities that include addressing TER-S-related issues:

- 1) SERDP addresses the priority issues facing the Military Services in partnership with DOE and the Environmental Protection Agency (EPA). SERDP fosters inputs from numerous sources to develop its research agenda but does not have its own research infrastructure. It conducts an annual, competitive research proposal solicitation that is open to government, industry and academia. Upon selection and approval, SERDP provides funds to those organizations.
- 2) USGS is the research arm of DOI with a network of Science Centers and Research Centers across the country. USGS conducts research based on annual and five-year plans (including FWS, BLM, and NPS) and also manages research programs in cooperation with other DOI agencies.
- 3) ERDC develops plans and conducts research in response to AERTA. ERDC provides BAAs for research proposals that are accepted throughout the year. It also supports military installation TER-S research on an as-needed basis.
- 4) The USFS manages the National Forest System and also conducts forest and grassland research managed through its Regional Offices and Research Station network (monitored by Headquarters Research and Development Office). The USFS also supports the needs of private and international forest stakeholders.
- 5) FHWA publishes an annual announcement to solicit research ideas from the public via the web utilizing the STEP website. Projects are selected internally and implemented via numerous contracting mechanisms.

As noted above, SERDP and ERDC are the only agencies with a solicitation process open to all qualified researchers. Conversely, the remaining research agencies, with their distinct research infrastructures, generally maintain the funds and conduct research internally. There is, however, a large amount of cooperative funding and resource sharing with other stakeholders involved in the actual implementation of the research projects.

The remaining five agencies (USAF, Navy, DLA, BLM, and USFWS), all with land management responsibilities, do not have active TER-S research programs, but will initiate, cooperatively fund, and participate in research projects on an as needed basis. Their scientists and natural resources managers, whose primary responsibility is land or other program management, can access the research resources within their own agency or department, and can also take advantage of the numerous federal, state, local, non-profit, and private research programs that are available to them, including the agencies mentioned above.

4.2 Timeframes for Collaboration

In general, the interviewees stated that there is no “best” time to make contact with their agency. Setting priorities, program planning, and decision-making are tied to both long-term and annual budget and planning cycles. The research agencies do have regular planning and/or solicitation schedules, and collaboration would be best achieved in the months or even a year prior to a solicitation or request for proposals. When applicable, specific timeframes are provided in the agency descriptions in Section 3.0.

For the land management agencies, planning timeframes are difficult to define since research requirements arise on as-needed basis. They require support from the research and/or technical support divisions of their agencies, plus project planning and budget support from their management. As stated earlier, external resources can also be part of the research project. Thus, timeframes can be dependent upon these organizations’ schedules. See Section 3.0 for information on all agency management and technical support infrastructure and key points of contact. Table 1-1 provides a summary of this information.

4.3 Recommendations

Although the goal of this Manual was to collect data about participating agency research programs and resources, the project team also made several observations resulting in the following:

1. Several representatives asked about expanding this effort to additional agencies. Therefore, a follow-on effort should be conducted to collect research program information from more organizations or agencies. Specific agencies mentioned in this report that do or may have TER-S stewardship and, potentially, research responsibilities or opportunities include:
 - a. EPA (Office of Research and Development)
 - b. NSF
 - c. DOI NPS (USGS maintains a research fund for them, similar to USFWS, that can be used for research)
 - d. DOI Bureau of Reclamation
 - e. NOAA Fisheries
 - f. NOAA's National Centers for Coastal Ocean Science
 - g. Other DOT and transportation-related organizations, such as the Transportation Research Board and AASHTO².
 - h. Department of Homeland Security, U.S. Coast Guard Research and Development Center
 - i. USDA Agricultural Research Service
2. There is a need for a system to comprehensively collect information into a central data system on specific TER-S and TER-S-related research projects, including planned and current projects. Representatives repeatedly expressed their desire to coordinate yet felt frustrated by the lack of coordinating mechanism. A periodic data call to all relevant agencies and organizations could be performed and the information assembled into a simple, web-based data system for easy retrieval of information. A classification scheme for these projects could be developed to facilitate a

² DOT is quite complex and the large transportation bills (reauthorized approximately every five years) distribute billions of dollars for all types of programs, including research.

search capability that will produce information on projects with common characteristics. The National Biological Information Infrastructure (NBII) does maintain the DoD TES Document Repository³, but this houses reports and other information types, and does not include the kind of project data mentioned above. Perhaps NBII, and the nation's biological information repository, could develop or adapt an existing site to fulfill this function.

3. Concurrent with #2 above should be the formation of a TER-S research coordinating body. Current initiatives such as the LCC (see Section 2.4.2) would provide suitable infrastructure for the creation and maintenance of such a body to not only execute the project data collection effort, but also provide a regional venue for networking and data sharing among researchers. This body could issue the data calls and coordinate the collection and assimilation of the data into the central data system. The NSF Research Coordination Networks Program (see Section 2.4.5) should also be explored to facilitate and provide funding for the formation of such a body.

³ See http://www.nbii.gov/portal/server.pt/community/dod_tes_document_repository/558 for more information on that resource.