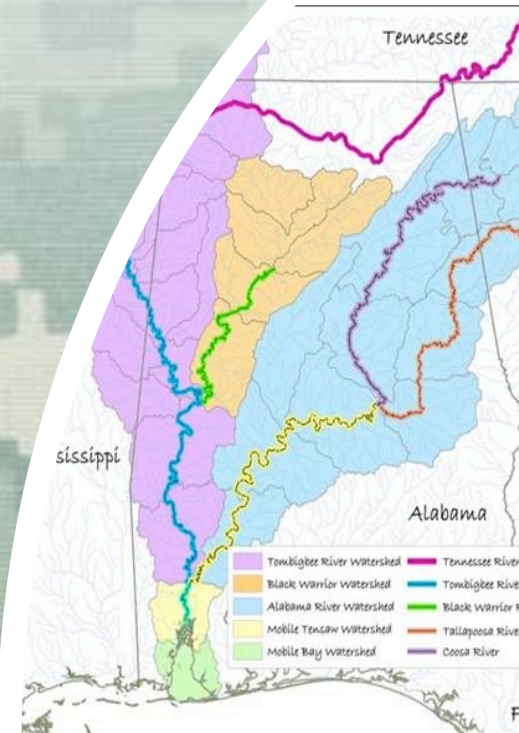


# Threatened and Endangered Species Team (TEST)

Richard A. Fischer, Ph.D.  
Research Wildlife Biologist  
USACE – ERDC  
Environmental Laboratory

6 December 2016



# Section 7(a)(1) of the Endangered Species Act—Supporting Agency Missions through Proactive Conservation Planning and Endangered Species Recovery



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*Hoover/Killgore*

# Federal TES Expenditures

Agency/Land Ownership	Expenditure (2014)
NPS – 84 million acres	\$ 13,000,617
FWS – 89 million acres	\$159,368,673
BLM – 253 million acres	\$ 22,398,174
USFS – 193 million acres	\$ 45,983,888



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# Federal TES Expenditures

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BLM – 253 million acres	\$ 22,398,174
USFS – 193 million acres	\$ 45,983,888
DoD – 42 million acres	\$337,383,601
U.S. Military	\$111,760,850
USACE	\$225,622,751



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# What is the Problem?

## USACE TES Expenditures

- ▶ USACE TES conservation and compliance spending averages ~\$230 million per year

**FY14 Top Ten Costliest TES Species**

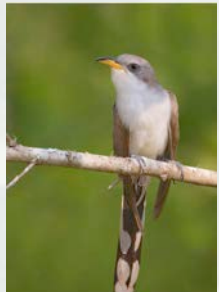
	Common Name	Total
1	Salmon, chinook	\$65,209,235
2	Sturgeon, pallid	\$62,619,597
3	Steelhead	\$31,828,548
4	Salmon, sockeye	\$10,715,945
5	Tern, least	\$8,431,784
6	Plover, piping	\$8,307,257
7	Flycatcher, southwestern willow	\$3,847,451
8	Salmon, coho	\$3,270,107
9	Salmon, chum	\$2,305,573
10	Trout, bull	\$2,302,528
<b>Top 10 Total</b>		<b>\$198,838,025</b>
<b>Percent of FY14 Total</b>		<b>87.57%</b>



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# What is the Problem?

- 85% of USACE expenditures are on fish
- 10% on birds



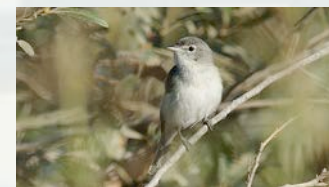
Salmon, chinook (9 Populations)	\$73,851,410
Steelhead (11 populations)	\$51,907,342
Sturgeon, pallid	\$48,718,484
Salmon, sockeye (2 Populations)	\$14,293,621
Flycatcher, southwestern willow	\$7,668,176
Salmon, chum (2 Populations)	\$6,102,995
Minnow, Rio Grande silvery	\$5,787,904
Plover, piping (2 Populations)	\$5,339,877
Tern, least	\$4,467,906
Salmon, coho (4 Populations)	\$3,404,322
Sturgeon, Atlantic	\$2,248,191
Vireo, least Bell's	\$2,229,661
Sturgeon, shortnose	\$1,628,115
Sturgeon, North American green	\$1,385,026
Woodpecker, red-cockaded	\$1,058,791
Trout, bull	\$979,656
Smelt, delta	\$586,391
Bat, Indiana	\$560,676
Sea turtle, loggerhead	\$496,875
Manatee, West Indian	\$469,134

FISH

BIRDS

MAMMALS

REPTILES/AMPHIBIANS



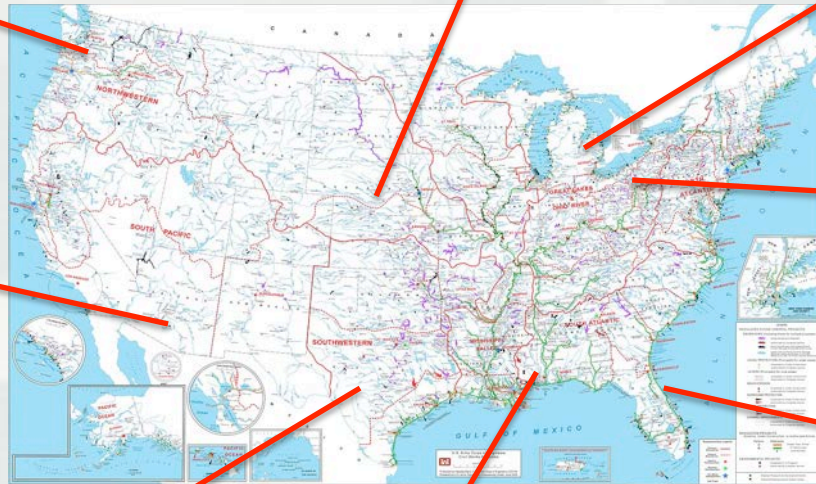
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# What is the Problem?

- ▶ TES conservation concerns currently exist at over 430 USACE projects, for over 300 different species



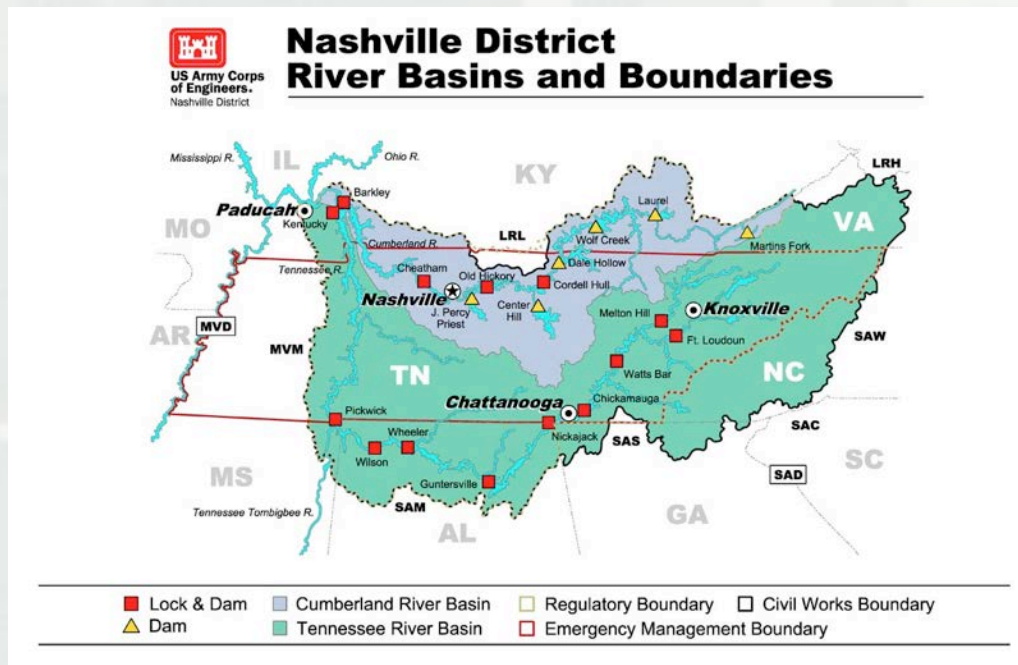
A piping plover incubates its eggs in a sandy hollow. Image courtesy of the U.S. Army Corps of Engineers.



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# What is the Problem?

- ▶ An additional 200+ species listings or critical habitat designations are expected to occur by 2018

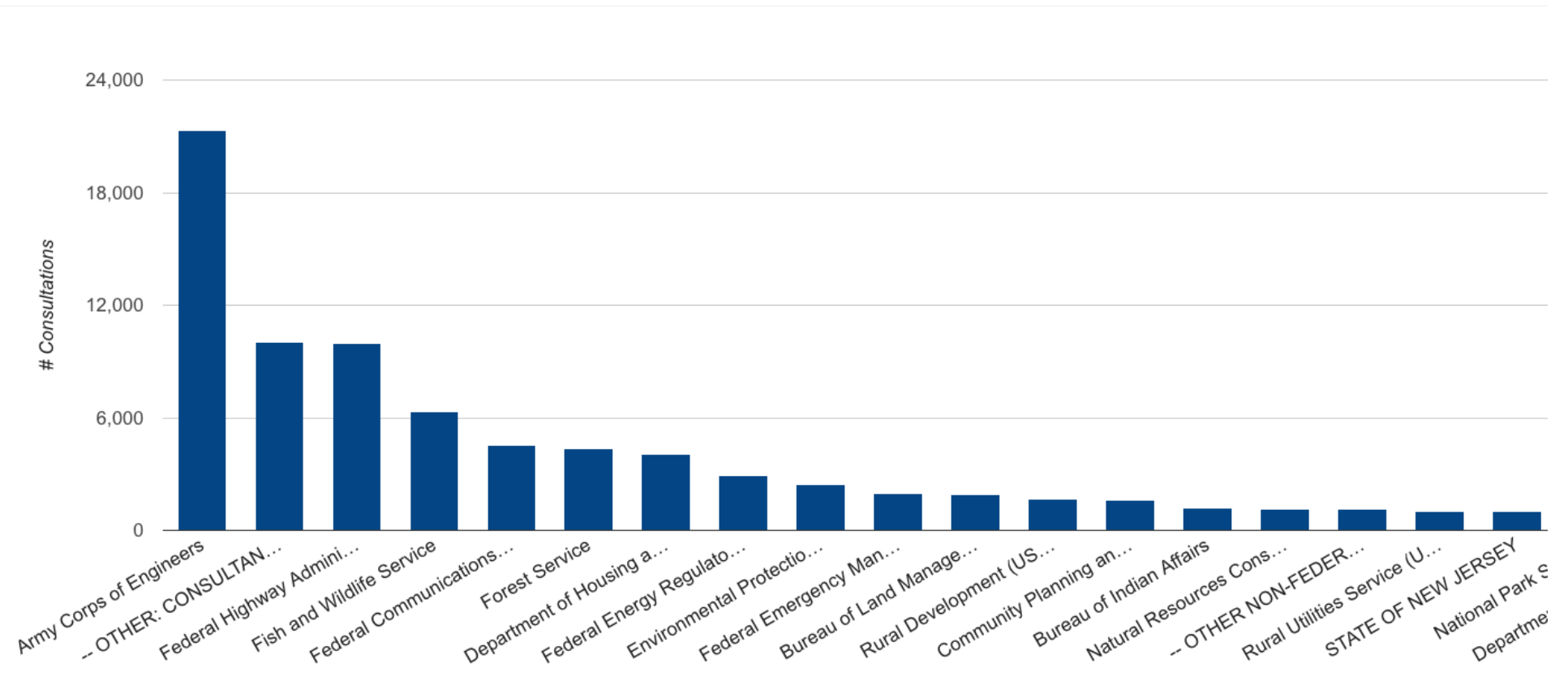


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# What is the Problem?

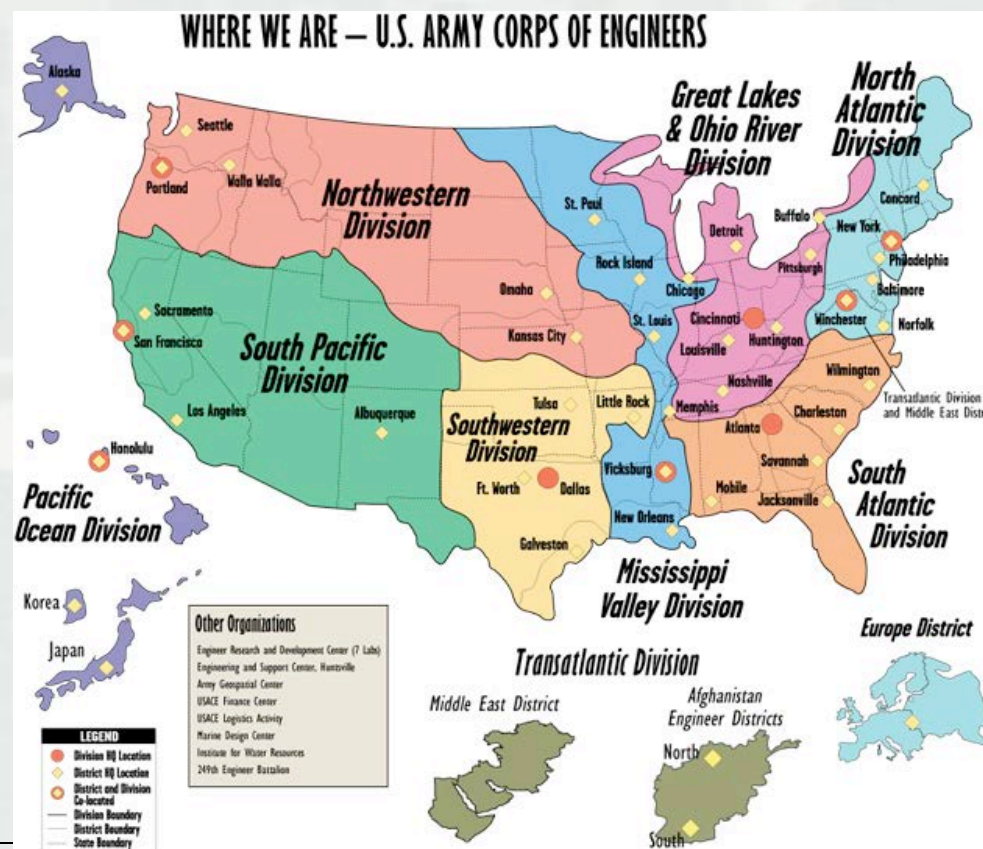
Consultations by agency (top 25)



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# What is the Problem?

- ▶ USACE has no formal and organized strategy to address TES
- ▶ Single-species approaches used to date have provided mixed results in terms of meeting the objective of easing operational constraints on the Corps, or significantly contributing toward recovery goals.



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# USACE Threatened & Endangered Species Team (TEST)

- Purpose

*Accelerate the development of solutions to priority threatened and endangered species issues that will:*

- ▶ *Improve operational flexibility*
- ▶ *Reduce future costs*
- ▶ *Improve budget planning capabilities*
- ▶ *Reduce adverse impacts to mission execution*
- ▶ *Improve species conservation outcomes (including Recovery)*



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# Endangered Species Team (TEST)?

- Develop a comprehensive long-term strategy for addressing TES within USACE
- Identify and document TES with biggest impacts to USACE mission (monetarily and operationally)
- Establish a prioritized TES list to better inform how we make investments (and subsequent ROI)
- Identify needed R&D that has high impact to TES recovery and/or decreased mission impact
- Identify opportunities for conservation planning using ESA Section 7(a)(1) authority
- Identify internal and external partnering opportunities to address high priority species
- Develop a proactive strategy addressing at-risk species likely to impact future missions

# USACE Threatened & Endangered Species Team -TEST

## Advancing the USACE Approach

### ■ “T” in TEST

- ▶ HQ - Mr. Joe Wilson, Coordinating Lead; Legal, Business Line Leaders, Others
- ▶ MSC & District Chiefs and T&E Leads
- ▶ ERDC - Dr. Todd Bridges, Senior Scientist; Dr. Richard Fischer, Lead Coordinator; and Subject Matter Experts (SMEs) across labs
- ▶ District Staff – Project Managers, SMEs
- ▶ Additional USACE Resources – IWR, Mr. Jeff Krause (NRM); Military Programs T&E SMEs, others
- ▶ Resource Agencies, Industry, Academia, Other Stakeholders



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An aerial photograph of a wide river with a sandy bar in the center, surrounded by green fields and some buildings. The image is semi-transparent, serving as a background for the text.

# **PURPOSE OF SECTION 7(a)(1)**

**To address the conservation (recovery) needs of listed species relative to Federal Program impacts.**

- ▶ Section 7(a)(1) conservation programs are to improve listed species baselines within the scope of Federal action agency authorities.

An aerial photograph of a wide river with a sandy bar in the center, surrounded by green fields and some trees. The image is semi-transparent, serving as a background for the text.

# Conservation Benefits

“Section 7a1 allows FWS or NMFS to work continuously with a Federal agency to develop a program of species conservation that uses all the agency’s authorities, is at the agency’s disposal at all times, and does not depend on the presence of a particular project for implementation.” (Ruhl 1995)

# Conservation Management Agreements

- Explicit plan for specific management actions
- Formal agreement enables long-term management
  - ▶ Any combination of agencies and organizations
  - ▶ Partners must have legal authority for management
  - ▶ Agreement must contain funding mechanisms
  - ▶ Agreement must be legally enforceable
- De-listing possible (protections of ESA not needed)



# USACE/USFWS 7(a)(1) Coordination



United States Department of the Interior

FISH AND WILDLIFE SERVICE  
Washington, D.C. 20240



In Reply Refer To:  
FWS/AES/DER/BCP/058968

JAN 09 2015

Memorandum

To: Regional Directors  
Attn: Assistant Regional Directors, Ecological Services

From: Deputy Director *Steph Hunt*

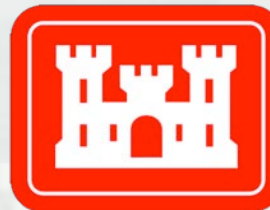
Subject: Working with the U.S. Army Corps of Engineers to Improve the Effectiveness of the Endangered Species Act (ESA) by expanding the use of Section 7(a)(1)

Section 7(a)(1) of the ESA requires all Federal agencies to use their authorities, in consultation with the Service, to carry out programs for the conservation of listed threatened and endangered species. Proactive and collaborative conservation using 7(a)(1) programs can improve outcomes for listed species and streamline Section 7(a)(2) consultation processes. In addition, larger scale, more integrated approaches to the conservation of these species should improve interagency communication, cooperation, and trust, as well as promote adaptive management, strategic habitat conservation, and operational flexibility.

Recently, USACE Mississippi Valley Division and the Service's Southeast Region broke new ground through collaborative development and implementation of a Section 7(a)(1) Conservation Plan for three species in the Lower Mississippi River as part of the Mississippi River and Tributaries Channel Improvement Program (see attached fact sheet). The USACE and Service believe this model can and should be replicated across the Nation.

By this memorandum, you are empowered and encouraged to work with your USACE counterparts to use creative solutions suitable to your Region to implement Section 7(a)(1). Major General John Peabody, Deputy Commanding General for Civil and Emergency Operations, USACE, recently transmitted a similar memorandum to USACE Divisional Leadership (attached).

For questions or comments regarding improving the effectiveness of the ESA through implementing Section 7(a)(1) please contact Mr. Craig Aubrey, our Ecological Services Division Chief for Environmental Review at 703-358-2442.



DEPARTMENT OF THE ARMY  
U.S. ARMY CORPS OF ENGINEERS  
441 G STREET, NW  
WASHINGTON, DC 20314-1000

REPLY TO  
ATTENTION OF

CECW-ZA

30 June, 2015

MEMORANDUM FOR COMMANDERS, MAJOR SUBORDINATE COMMANDS, CHIEFS,  
OPERATIONS DIVISIONS

SUBJECT: Improving the Efficiency of Project Operations and Effectiveness of Endangered Species Act Compliance for U.S. Army Corps of Engineers Projects

1. References.

a. Endangered Species Act Section 7(a) Federal Agency Actions and Consultations.

(1) The Secretary shall review other programs administered by him and utilize such programs in furtherance of the purposes of this Act. All other Federal agencies shall, in consultation with and with the assistance of the Secretary, utilize their authorities in furtherance of the purposes of this Act by carrying out programs for the conservation of endangered species and threatened species listed pursuant to Section 4 of this Act.

b. Endangered Species Act Section 7(a) Federal Agency actions and Consultations.

(2) Section 7(a)(2) requires Federal agencies to consult with the Service to ensure that actions they fund, authorize, permit, or otherwise carry out will not jeopardize the continued existence of any listed species or adversely modify designated critical habitats.

c. Fact Sheet, USACE and Service Implement an Innovative Conservation Approach that Yields Success for Wildlife, U.S. Fish and Wildlife Service, September 2014.

d. Memorandum for all Counsel, HQ, Divisions, Districts, Centers, Labs & FOA offices, subject: ESA Guidance, dated 11 June 2013.

e. Memorandum for See Distribution, subject: Reissuance of the U.S. Army Corps of Engineers (Corps) Environmental Operating Principles, dated 7 August 2012.

2. Purpose. The purpose of this directive is to increase the environmental value of how the U.S. Army Corps of Engineers (USACE) operates existing Civil Works projects by conducting a holistic review of Endangered Species Act (ESA) Section 7(a)(1) and (2). Designing projects in ways that are compatible with the conservation needs of listed species and their ecosystems can be one of the most effective methods of ensuring an efficient Section 7 consultation process, as well as species' recovery.

3. Summary. The USACE operates, maintains, and manages a variety of projects throughout the Nation, often in a complex and inter-mixed natural and built environment that includes the potential to affect species listed as threatened or endangered under the ESA or to affect such species' habitats. The purposes of the ESA are to provide a means for conserving the ecosystems upon which endangered and threatened species depend by

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# Recovery of the Interior Least Tern

A fresh approach to Species Recovery  
through ESA Section 7(a)(1)



**US Army Corps  
of Engineers.**



# Other Opportunities?



Rio Grande Silvery Minnow



Least Bell's Vireo

Salmon, chinook (9 Populations)	\$73,851,410
Steelhead (11 populations)	\$51,907,342
Sturgeon, pallid	\$48,718,484
Salmon, sockeye (2 Populations)	\$14,293,621
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Smelt, delta	\$586,391
Bat, Indiana	\$560,676
Sea turtle, loggerhead	\$496,875
Manatee, West Indian	\$469,134



Southwestern Willow Flycatcher



Western DPS Yellow-billed Cuckoo



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# TEST – Opportunities?

1. Los Angeles County Drainage Area-- subsumes LA River, Whittier Narrows Dam



**Willow Flycatcher**



**Least Bell's  
Vireo**



**Western Pond  
Turtle**

2. Santa Ana River/Prado Basin -- working with Orange County Water District, Riverside City, San Bernardino County and larger teams that oversee entire watershed



**Santa Ana Sucker**



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# TEST – Opportunities?

3. Russian River including USACE Warm Springs and Coyote Valley Dams.



**Coho Salmon**



**Steelhead**

4. American/Sacramento Rivers feeding into Bay Delta -- we have huge navigation interests in Sacramento River to San Francisco Bay



**Coho Salmon**



**Green Sturgeon**



**Western Garter  
Snake**



**Delta Smelt**



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# Threatened and Endangered Species WebAppBuilder

with Web AppBuilder for ArcGIS

To query Threatened and Endangered species, click the  icon.

This will open a set of tools at the bottom of the map



Use the following tools to enter a point, line or area you are interested in

Locate Incident



Buffer the area accordingly. Enter 0 if you have drawn an area and do not wish to buffer

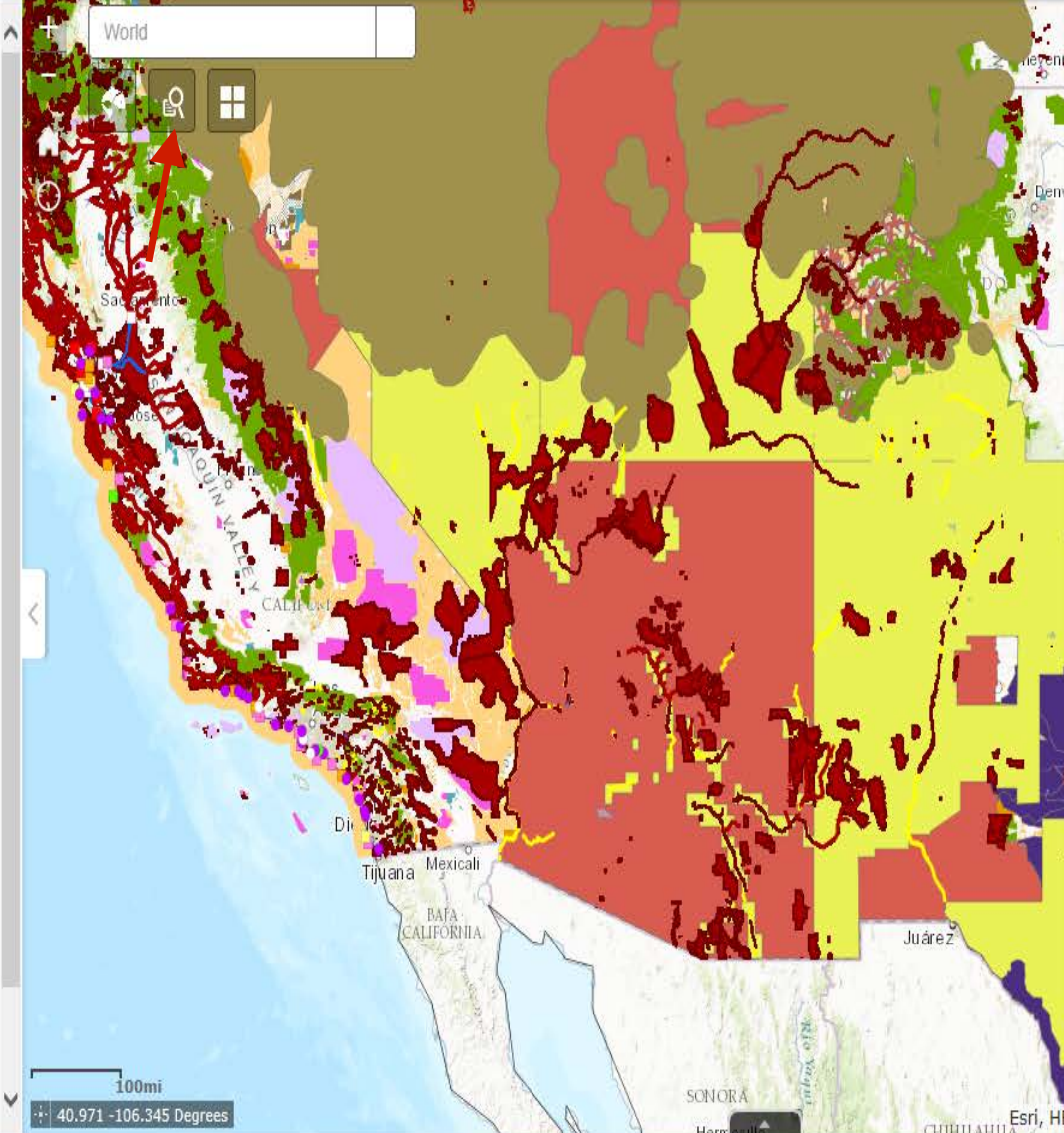
Buffer Distance (Miles)

10

Once you have your area defined, click each of the tabs below to query the results that fall within that category and download a CSV if desired

Query Species Query Reservoirs Query Channels

To quickly find an existing project (Channel, Reservoir, Shore Protection) or a Species, click the  icon.



### Layer List

Operational Layers

- Shore Protection Projects
- Navigation Projects
- Channels
- USACE Reservoirs
- Critical Habitat - Linear Features
- Critical Habitat - Polygon Features
- Endangered Species Lines
- Endangered Species Areas
- Bureau of Indian Affairs
- Bureau of Land Management
- Bureau of Reclamation
- Department of Defense
- Forest Service
- Fish and Wildlife Service
- National Park Service
- Other Agency Control

To query Threatened and Endangered species, click the



icon.

This will open a set of tools at the bottom of the map

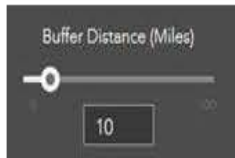


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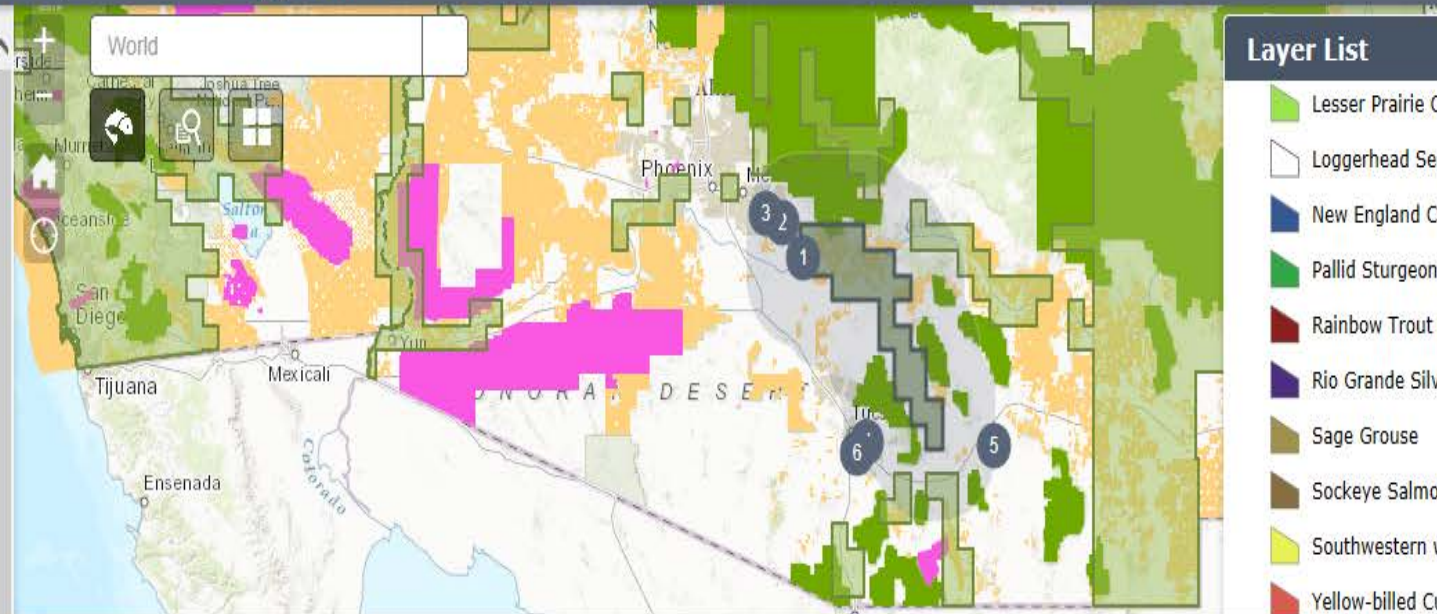
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icon.



### Layer List

- Lesser Prairie C
- Loggerhead Se
- New England C
- Pallid Sturgeon
- Rainbow Trout
- Rio Grande Silv
- Sage Grouse
- Sockeye Salmo
- Southwestern v
- Yellow-billed C

DOWNLOAD CSV

1 Miles: 0 Army DOD	2 Miles: 9.23 Air Force DOD	3 Miles: 18.27 Air Force DOD	4 Miles: 20.36 Air Force DOD
------------------------	--------------------------------	---------------------------------	---------------------------------

Core Protection  
  Critical Habitat Areas  
  Critical Habitat Linear  
  BIA  
  BLM  
  BOR  
  DOD  
  Forest Service  
  FWS  
  NP

activityStatus	commonName	isNative	kingdom	mediaIDFK	natureServeID	scientificName	sdsFeatureDesc	sdsFeatureName	sdsID
	Southwestern willow flycatcher								
	Southwestern willow flycatcher								

The Department of Defense.csv download has completed.

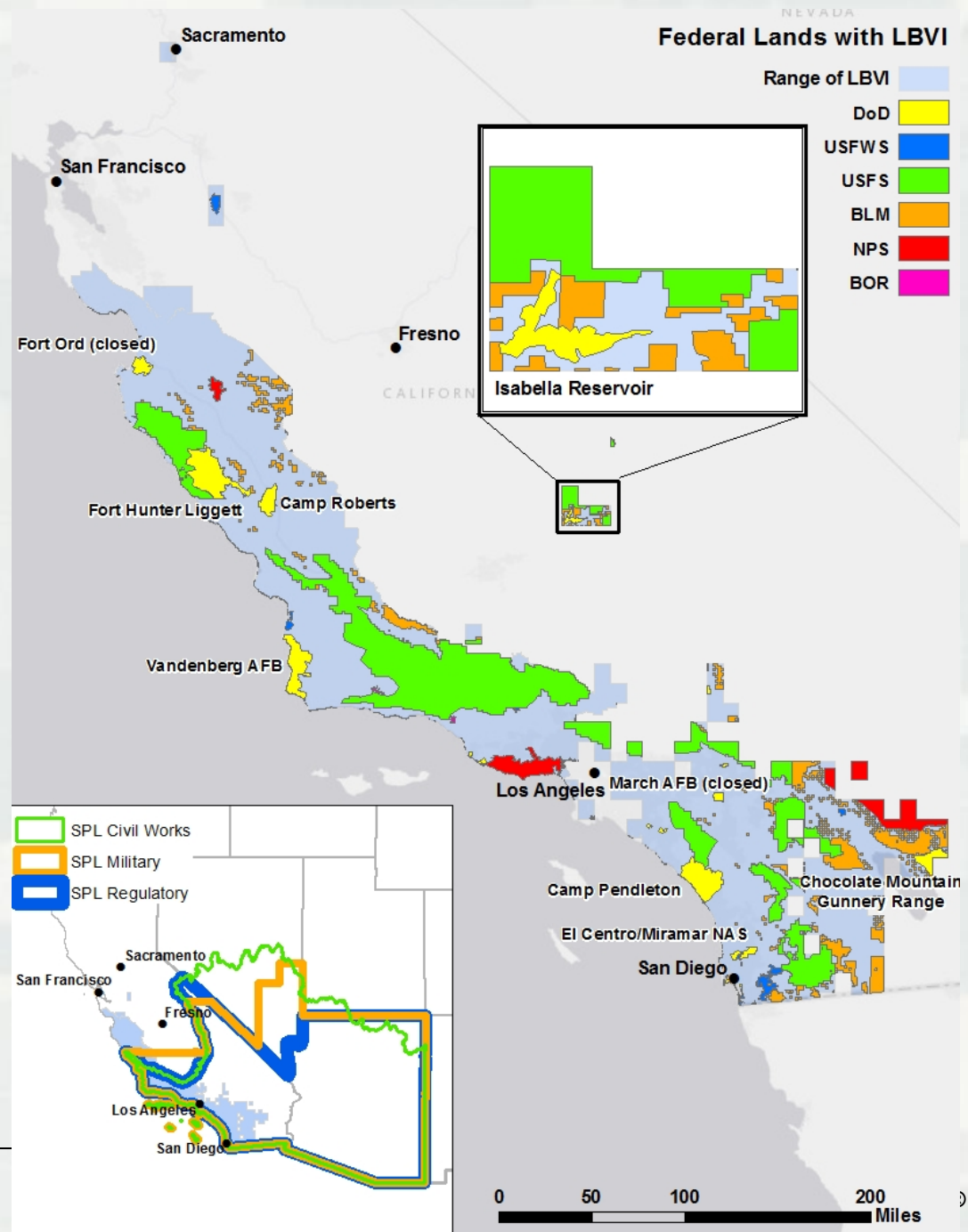




# Least Bell's Vireo

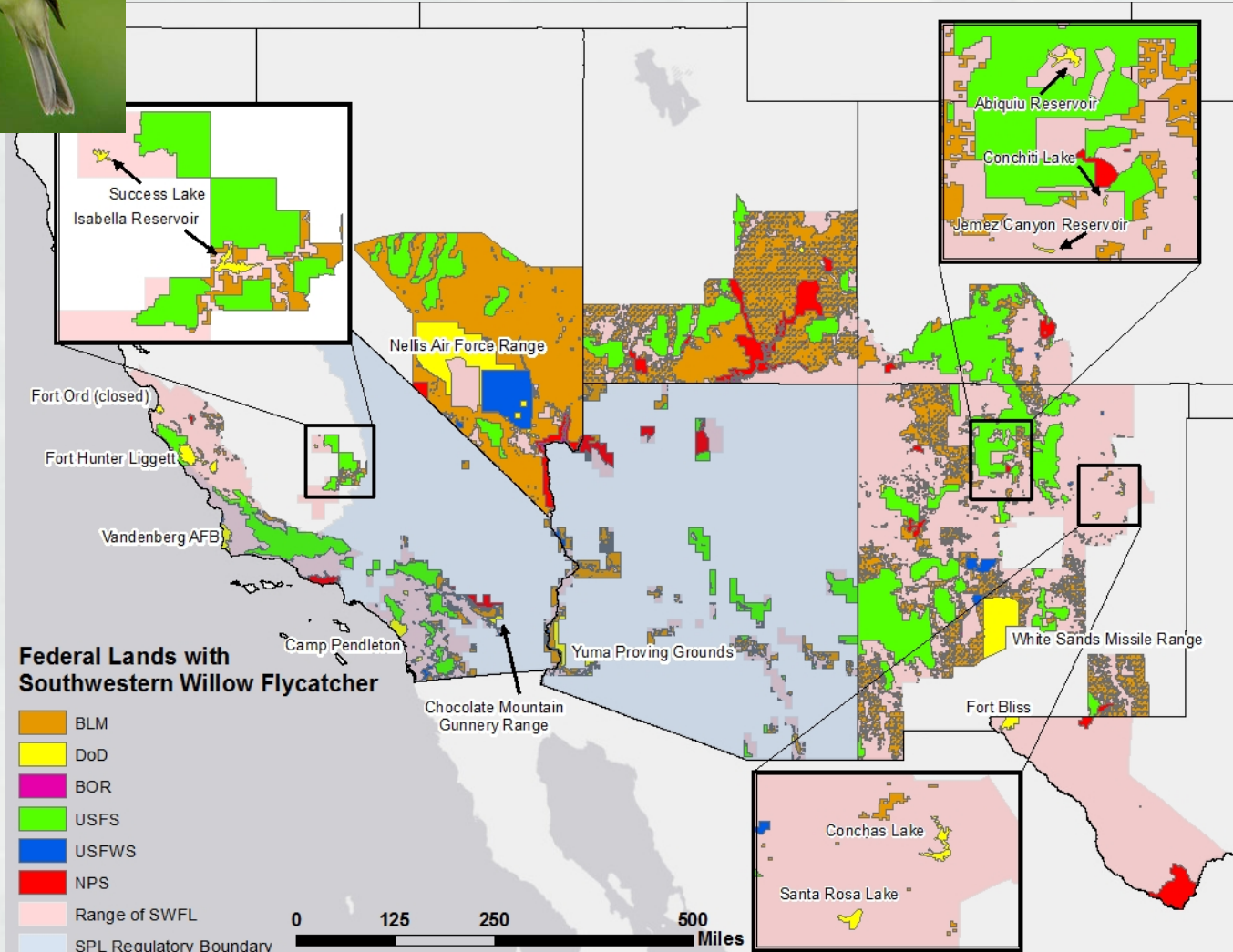


Least Bell's Vireo near Todd Barranca  
Ventura County 4-04-05 CA © Jim Greaves





# Southwestern Willow Flycatcher



## Federal Lands with Southwestern Willow Flycatcher

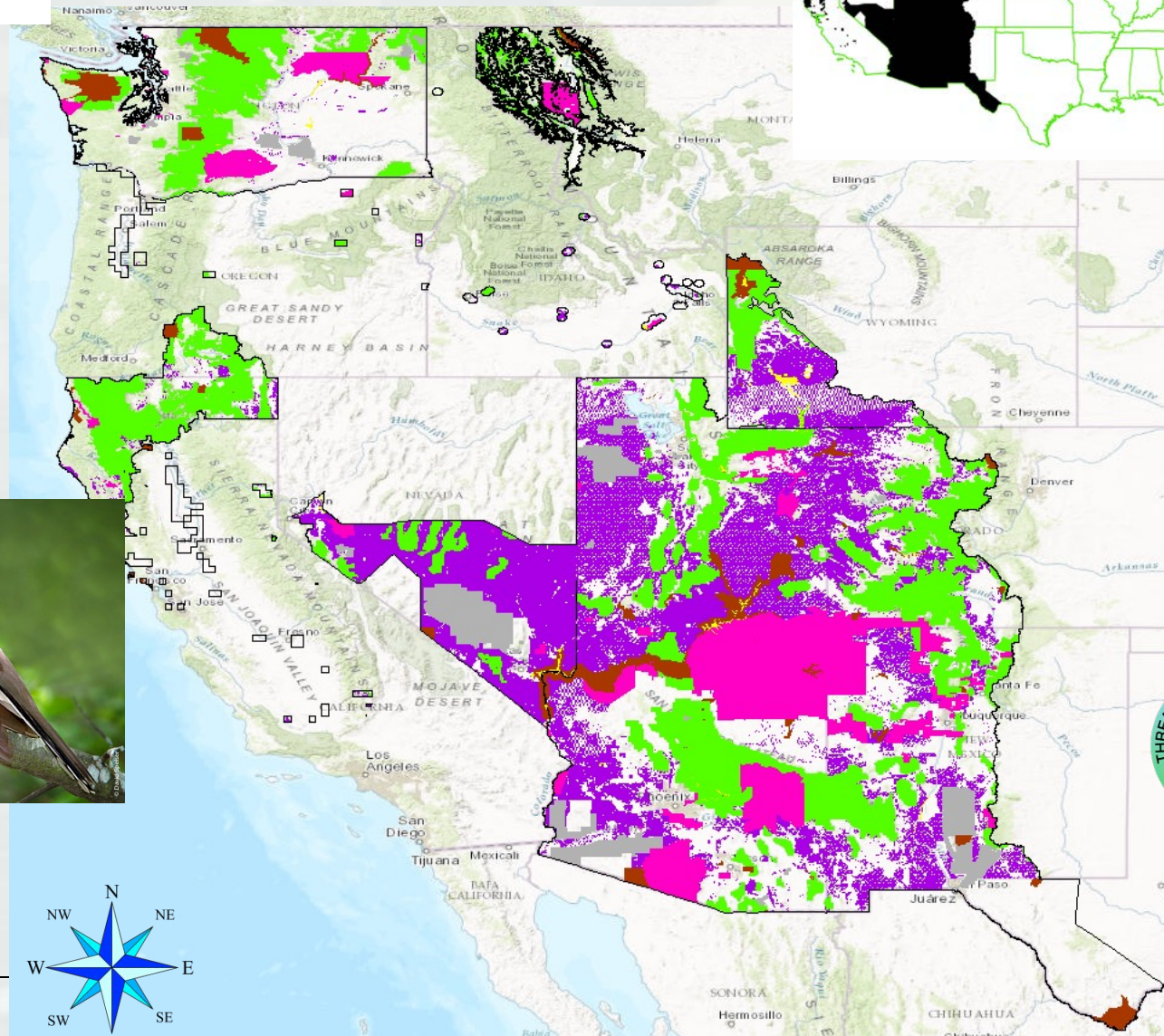
- BLM
- DoD
- BOR
- USFS
- USFWS
- NPS
- Range of SWFL
- SPL Regulatory Boundary



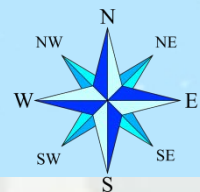
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# Yellow-billed Cuckoo

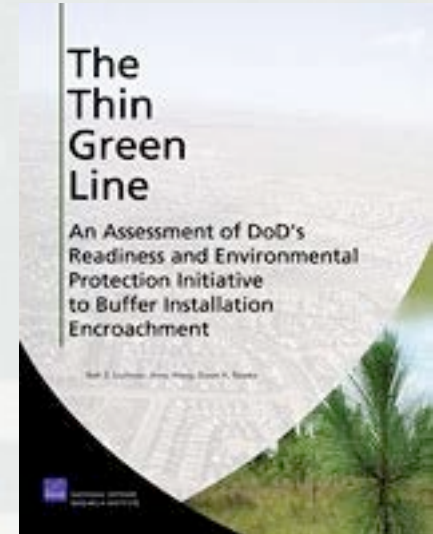
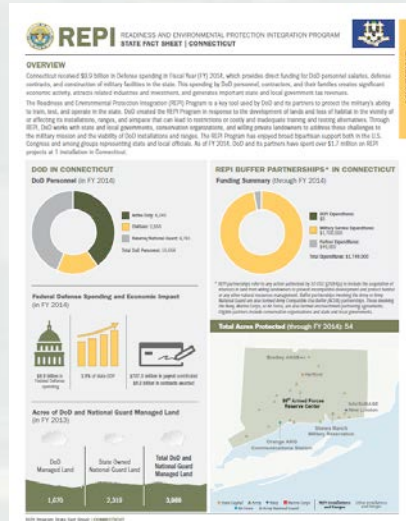
- Tribal Lands
- Bureau of Land Management
- Bureau of Reclamation
- Department of Defense
- Forest Service
- National Park Service



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# Collaborative Wildlife Protection and Recovery Initiative



# Collaborative Wildlife Protection and Recovery Initiative

- Developing a defined, coordinated strategy for addressing species under a ESA Section 7(a)(1) framework.
- Deploy and leverage resources, capabilities and tools needed to accomplish the strategy.
- Define the landscape boundaries of the protection and recovery initiative
- Management-based pro-active approach to recovering and protecting species and habitat.
- Enlist partners who will add their resources, capabilities and tools to support the strategy.
- Enlist stakeholders for the resources, capabilities, and tools to carry out the necessary activities to recover or protect species and restore habitat.
- Designate local coordinators for every project; empower and support them with institutional reach back, resources, capabilities, and tools




US Army Corps  
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# DoD/Army Investigations

- Candidate Conservation Agreements have proven to be successful for many species.
- Development of conservation agreements was among the most important predictors of USFWS listings
- Proactive management and conservation of species proposed for listing could reduce the likelihood of their listing.
- Conservation planning promotes operational flexibility
- If a conservation agreement was in place, species were listed 53% of the time; the absence of a conservation agreement increased the probability of being listed to 80%.


ERDC/CERL TR-15-DRAFT

  
**US Army Corps of Engineers**  
Engineer Research and Development Center

  
INNOVATIVE SOLUTIONS  
for a safer, better world

**Evaluation of 757 Species Under U.S. Endangered Species Act Review on U.S. Department of Defense Lands and their Potential Impact on Army Training**

Jinelle H. Sperry, Wade A. Wall, and Matthew G. Hohmann December 2015



Construction Engineering Research Laboratory

Approved for public release; distribution is unlimited.



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USDA

Natural Resources Conservation Service

United States Department of Agriculture

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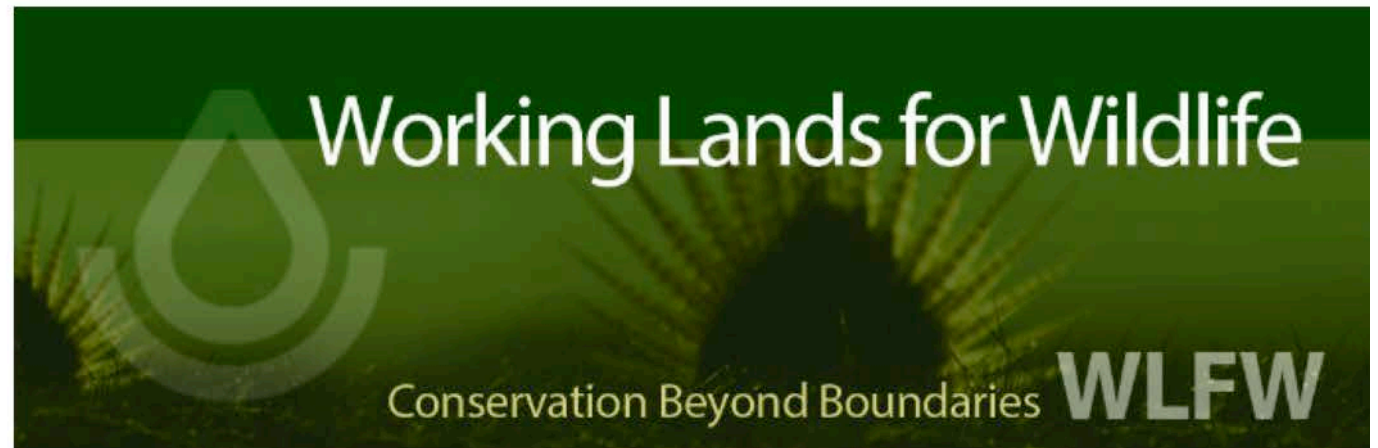
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*Stay Connected*



## Working Lands for Wildlife



Working Lands for Wildlife is a partnership between NRCS and the U.S. Fish and Wildlife Service (FWS) to use agency technical expertise combined with \$33 million in financial assistance from the Wildlife Habitat Incentive Program to combat the decline of seven specific wildlife species whose decline can be reversed and will benefit other species with similar habitat needs.

# Partnering Opportunities Outside of USACE



## WRP MISSION

WRP provides a proactive and collaborative framework for senior-policy level Federal, State and Tribal leadership to identify common goals and emerging issues in the states of Arizona, California, Nevada, New Mexico and Utah and to develop solutions that support WRP Partners and protect natural resources, while promoting sustainability, homeland security and military readiness.



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# Threatened and Endangered

*Threatened/Endangered species (TES) concerns currently exist for 300+ species at over 430 USACE projects. The ERDC has developed a formal strategy for reducing costs and operational impacts while promoting TES conservation.*

## Key Points:

- USACE spends \$230 million annually on TES
- 85% of expenditures on fish; 10% birds; 5% other
- Significant impacts to navigation, hydropower, and coastal engineering
- Using power of Endangered Species Act and partnerships for recovery



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# Questions/Comments?



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