

New Mexico's Environmental Database Act

*The Development, Operation and Maintenance of a Web-based
Information Portal for State Environmental Data.*

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Water and Natural Resources Committee

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New Mexico's Environmental Database Act

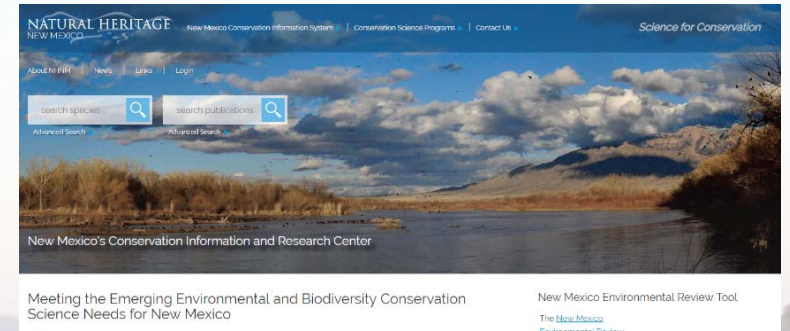
- GOAL: to improve our environmental data infrastructure to address the state's natural resources and environmental management needs.
 - A state Environmental Database will:
 - Support governmental transparency,
 - Inter-agency cooperation and information sharing, and
 - widespread access to the best scientific data to address pressing environmental issues.
- How: build on existing database content and platforms to create a flexible web-based tool to serve multiple stakeholder needs.
- Who: University of New Mexico in partnership with state agencies with an interest in conservation, natural resources, and environmental management along with contributions from other universities and organizations.

Natural Heritage New Mexico (NHNM) University of New Mexico

Since 1991, NHNM has been gathering and databasing environmental data on species, ecosystems, vegetation, soils, geology, wetlands, and other natural resources of New Mexico .

The Mexico Conservation Information System (NMCIS) has been developed in partnership with state and federal agencies to house and maintain the data.

The NMCIS serves a diverse community of practitioners with a wide variety of projects e.g., ecological restoration, oil and gas exploration, alternative energy siting, forest and range management, conservation planning, roads and buildings, and more.



<https://nhnm.unm.edu/data>

NMCIS makes the data available to the public via several web-based tools and customized data products.

New Mexico Conservation Information System

Explore New Mexico's Rich Biodiversity



Conservation and Natural Resource Management Tools



Sensitive Species Data

[Search the NM Conservation Information System](#)



New Mexico Environmental Review Tool (NM ERT)

The [NM ERT](#) is an interactive tool for conservation planning and New Mexico Department of Game and Fish (NMDGF) review of important resources for wildlife and habitats.



NM Animals

[Biota Information System of New Mexico \(BISON-M\)](#) contains species accounts for all vertebrate and many invertebrate species of wildlife that occur in New Mexico.



New Mexico's Crucial Habitat Assessment Tool

[New Mexico's Crucial Habitat Assessment Tool](#) is an online planning tool that displays crucial wildlife habitat across New Mexico.



NM Rare Plants

The [New Mexico Rare Plants Website](#) has species accounts for rare plants in New Mexico.



The New Mexico Rare Plant Conservation Strategy

The [New Mexico Rare Plant Conservation Strategy](#) was developed to protect and conserve New Mexico's rare and endangered plant species and their habitats and to avoid federal listing.



Research and Publications

[Search NM CIS publications](#) and data references



State Wildlife Action Plan (SWAP)

The [State Wildlife Action Plan \(SWAP\)](#) is a non-regulatory planning document that provides a high level overview of the status of species and habitats in New Mexico.

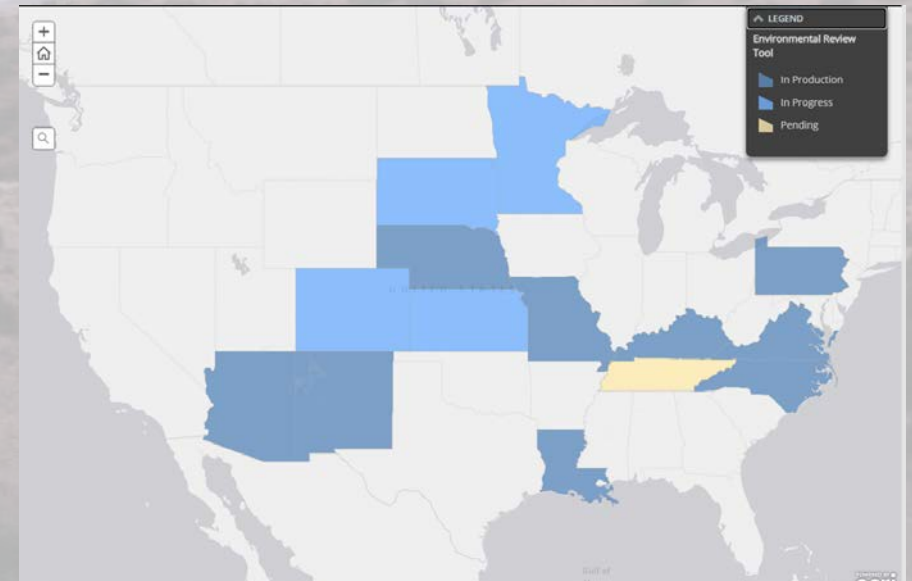
NM Environmental Database Web Interface Prototype

NM Dept. of Game and Fish Environmental Review Tool (ERT)

An online conservation planning and project review tool



The screenshot shows the web interface for the Environmental Review Tool. At the top, there is a navigation bar with the title "ENVIRONMENTAL REVIEW TOOL" and a "My account Log out" button. Below the navigation bar is a menu with links: Home, Create Project/Map, My Projects, Admin, Terms and Conditions, Contact Us, and Help. The main content area features a "View Edit" tab and a row of five images: a salamander, a bat, a spotted salamander, a woodrat, and a yellow bird. Below the images is a welcome message: "Welcome to the New Mexico Environmental Review Tool (ERT)—an interactive tool for conservation planning and New Mexico Department of Game and Fish (NMDGF) review of important resources for wildlife and habitats. The ERT provides conservation information on wildlife and habitat diversity, protected lands, and other natural resources, and allows users to submit proposed projects for review of potential impacts to species status species and their habitats in New Mexico." Below the welcome message is a "Conservation Planning" section: "The Explorer allows users to access conservation planning information without having to log in. Here, users will see locations of lands managed for wildlife, important wildlife areas from the Crucial Habitat Assessment Tool, and Conservation Opportunity Areas identified in the State Wildlife Action Plan. See the Create Project/Map tab for a full list of layers accessible to all users."



Game and Fish ERT layers

The list is expandable!



Over 300,000 rare and endangered species observations

Layers
Feature Search

▼ Restricted ▲▼

- NHNM Source Features
- Project Footprint
- Black Tailed Prairie Dog Towns
- Burrowing Owl Habitat
- Dunes Sagebrush Lizard Habitat
- Fish Species Distributions
- Gunnison's Prairie Dog Towns
- HSP Buffered Water Projects
- Important Bat Areas
- Playa Habitats
- Springs
- Tribal Lands
- Urban Footprint

▼ Resource Layers

- NMDGF Fish Management Plan Waters
- NM SWAP Conservation Opportunity Areas
- NM Audubon Important Bird Areas
- NM Important Plant Areas
- USFWS Critical Habitat
- USFWS Refuges

▼ CHAT Layers ▲▼

- Crucial Habitat
- Species Of Concern
- SERI
- Riparian Corridors
- Large Natural Areas
- Natural Vegetation

▼ Reference Layers ▲▼

- Counties
- NM Ownership
- Watersheds (HUC8)

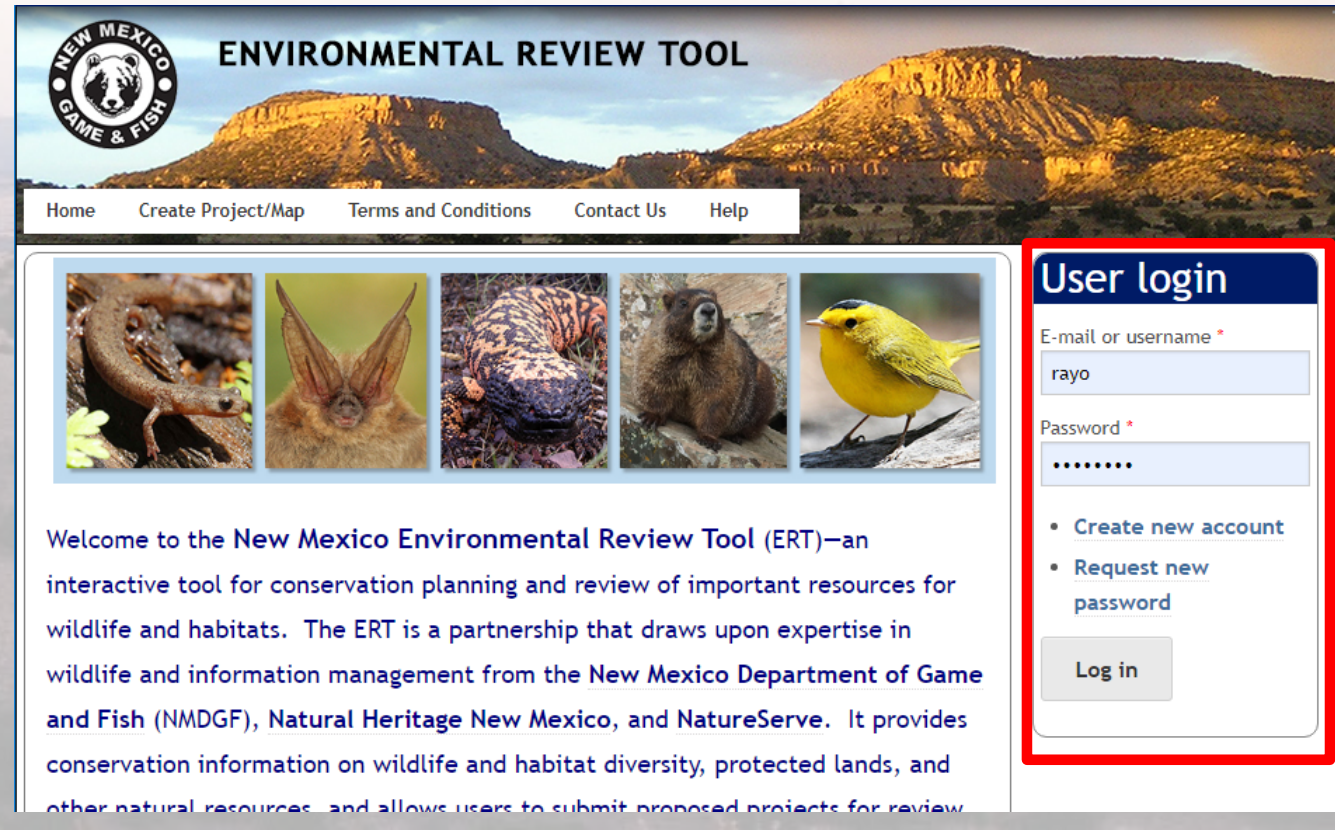
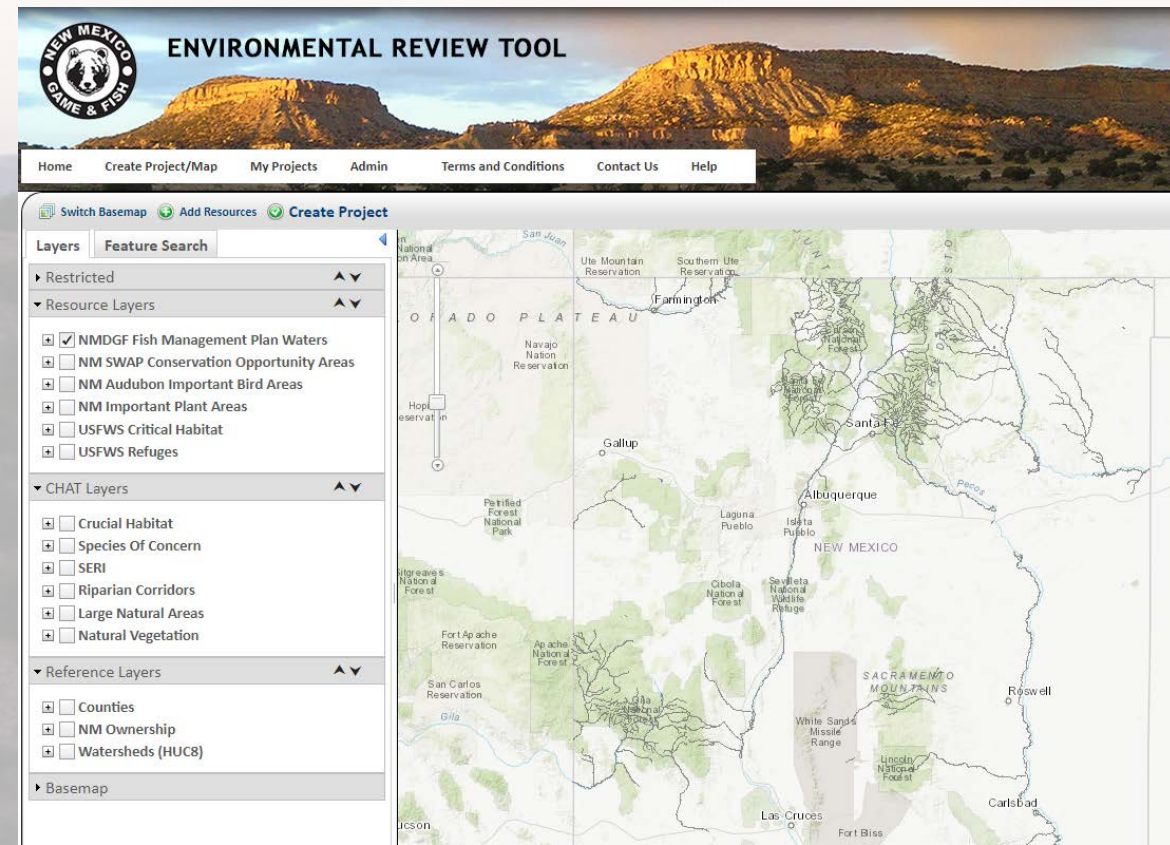
▶ Basemap

Current ERT Data Layers

Using the ERT is easy!

- Users can explore data layers for project planning and information gathering.

- Create an account to receive a report and agency review.



Customized to project footprints

The screenshot displays the 'ENVIRONMENTAL REVIEW TOOL' interface. At the top left is the 'NEW MEXICO GAME & FISH' logo. The main header features a landscape image with the title 'ENVIRONMENTAL REVIEW TOOL'. Below the header is a navigation menu with links: Home, Create Project/Map, My Projects, Admin, Terms and Conditions, Contact Us, and Help.

The interface includes a toolbar with options: Switch Basemap, Add Resources, and Create Project. On the left, there is a 'Layers' panel with the following sections:

- Restricted (collapse/expand arrows)
- Resource Layers (collapse/expand arrows)
 - NMDGF Fish Management Plan Waters
 - NM SWAP Conservation Opportunity Areas
 - NM Audubon Important Bird Areas
 - NM Important Plant Areas
 - USFWS Critical Habitat
 - USFWS Refuges
- CHAT Layers (collapse/expand arrows)
- Reference Layers (collapse/expand arrows)
 - Counties
 - NM Ownership
 - Watersheds (HUC8)
- Basemap (collapse/expand arrows)

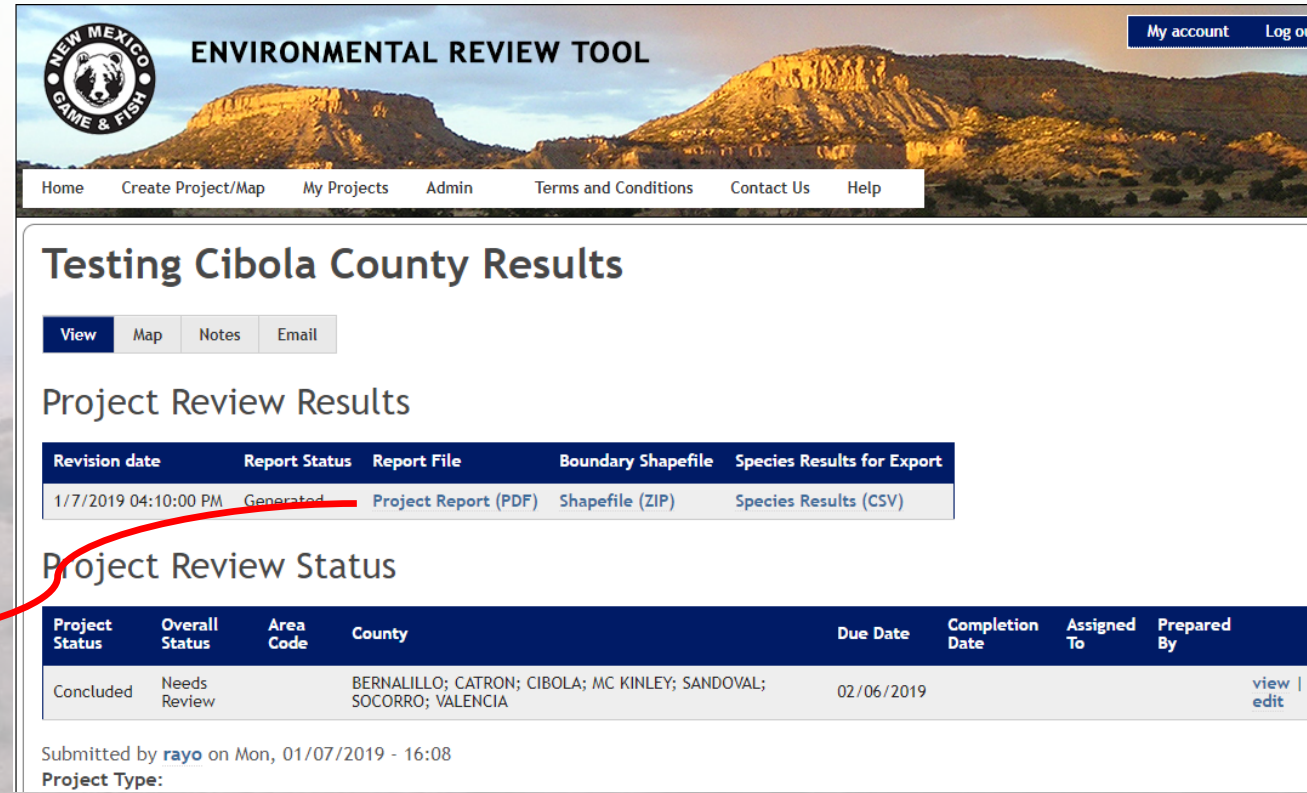
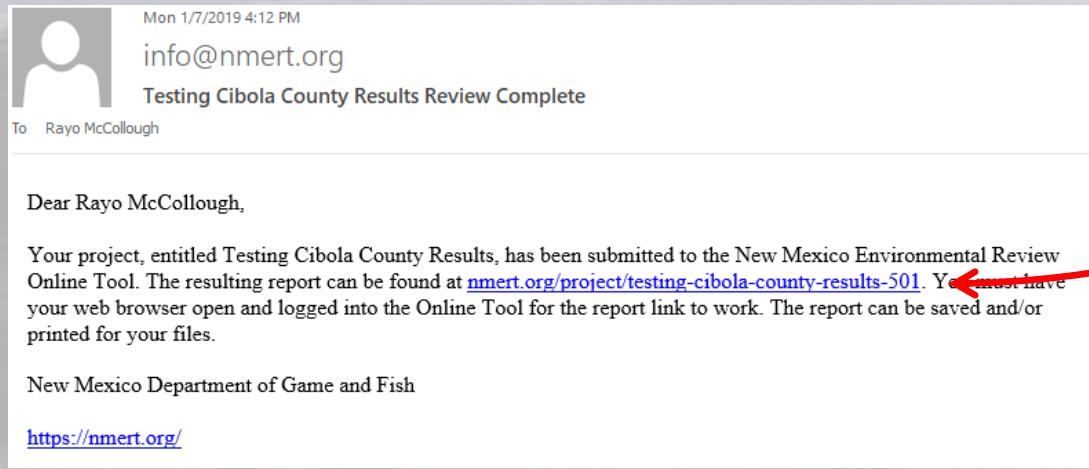
The central map shows a topographic view with a cyan polygon drawn over a section of the terrain. A 'Draw/Edit' panel is overlaid on the map, displaying the following information:

- Draw Mode: Polygon
- Total Area: 11,092.896 acres
- Total Perimeter: 92,095.982 ft

The panel includes a 'Cancel' button and an 'Accept' button. The map also shows contour lines and labels for 'ESTALINE CANYON' and 'MILL CANYON'.

User's and agencies get immediate project responses

The ERT generates a response to the project proponent with a link to the project information stored in the tool



Users get Project Reports

- Provides a species list with links for more information.
- Provides feedback and recommendations on management
- The data model can be expanded and replicated to meet multiple natural resources management needs.

DGF Example

New Mexico Department of Game and Fish
Project ID: NMERT-12

PROJECT INFORMATION

Project Title: Test Lincoln NF
Project Type: ANIMAL DAMAGE
Latitude/Longitude (DMS): 32.893014 / -105.845998
County(s): OTERO
Project Description: Testing Manually Drawn Polygon in Lincoln NF

REQUESTOR INFORMATION

Project Organization:
Contact Name: Rayo McCollough
Email Address: rayo@unm.edu
Organization: Natural Heritage New Mexico
Address: MSC03 2020, 1 University of New Mexico, Albuquerque NM 87131-0001
Phone: 5052773822 x 225

OVERALL STATUS

This report contains an initial list of recommendations regarding potential impacts to a proposed project. Your project proposal is being forwarded to a biologist for review to additional recommendations regarding the proposed actions. You should be notified further recommendations regarding this project proposal.

About this report:

- This environmental review is based on the project description and location that be updated if the project type, area, or operational components are modified.
- This is a preliminary environmental screening assessment and report. It is no knowledge gained by having a biologist conduct a field survey of the project intended to replace consultation required under the federal Endangered Species Act for federal resource that use the U.S. Fish and Wildlife Service's Information System (<https://ecos.fws.gov/ipac/>).
- The New Mexico Environmental Review Tool utilizes species observation local models, both of which are subject to ongoing change and refinement. Inclusion a report can not guarantee species presence or absence at a precise point loc through comprehensive biological surveys. Specific questions regarding the p vulnerable wildlife populations or habitats, especially in areas with a limited hi require further on-site assessments.
- The New Mexico Department of Game and Fish encourages use of the Environme proposed projects for avoidance, minimization, or mitigation of wildlife impacts intended to be used in a repeatedly iterative fashion to adjust project attributes determined recommendation is generated. This tool serves to asses impacts developed. The New Mexico Crucial Habitat Assessment Tool (

New Mexico Department of Game and Fish
Project ID: NMERT-12

Special Status Animal Species within 1 Miles of Project Area

Common Name	Scientific Name	USFWS (ESA)	NMDGF (WCA)	NMDGF (SGCN/SERI)
Sacramento Mountain Salamander	<i>Aneides hardi</i>		T	SGCN
Northern Leopard Frog	<i>Lithobates pipiens</i>			SGCN
Eared Grebe	<i>Podiceps nigricollis</i>			SGCN
American Bittern	<i>Botaurus lentiginosus</i>			SGCN
Common Black-Hawk	<i>Buteo galus anthracinus</i>		T	SGCN
Aplomado Falcon	<i>Falco femoralis</i>		E	SGCN
Peregrine Falcon	<i>Falco peregrinus</i>		T	SGCN
Yellow-Billed Cuckoo	<i>Coccyzus americanus</i>		LT	SGCN
Mexican Spotted Owl	<i>Strix occidentalis lucida</i>		LT	SGCN
Mexican spotted owl Designated Critical Habitat	CH for <i>Strix occidentalis lucida</i>	Threatened		
Lewis's Woodpecker	<i>Melanerpes lewis</i>			SGCN
Williamson's Sapsucker	<i>Sphyrapicus thyroideus</i>			SGCN
Flinyon Jay	<i>Gymnorhinus cyanocephalus</i>			SGCN
Clark's Nutcracker	<i> Nucifraga columbiana</i>			SGCN
Junco Timonae	<i>Baeolophus ridgwayi</i>			SGCN
Pygmy Nuthatch	<i>Sitta pygmaea</i>			SGCN
Western Bluebird	<i>Sialia mexicana</i>			SGCN
Bendire's Thrasher	<i>Toxostoma bendirei</i>			SGCN
Sprague's Pipit	<i>Amphisp. spraguei</i>			SGCN
Loganhead Shrike	<i>Lanius ludovicianus</i>			SGCN
Gray Vireo	<i>Vireo vicinior</i>		T	SGCN
Spotted Bat	<i>Euderma maculatum</i>		T	SGCN
Black-Tailed Prairie Dog	<i>Cynomys ludovicianus</i>			SGCN
New Mexico meadow jumping mouse Designated Critical Habitat	CH for <i>Zapus hudsonius luteus</i>	Endangered		SGCN
Black Bear	<i>Ursus americanus</i>			SERI
Cougar	<i>Puma concolor</i>			SERI
Elk	<i>Cervus canadensis nelsoni</i>			SERI
Mule Deer	<i>Odocoileus hemionus</i>			SERI

ESA = Endangered Species Act, WCA = Wildlife Conservation Act, SGCN = Species of Greatest Conservation Need, SERI = Species of Economic and Recreational Importance

Special Status Plant Species within 1 Miles of Project Area

Common Name	Scientific Name	USFWS (ESA)	NMAC	NMRPCS
Sacramento Mountains Thistle	<i>Cirsium vancouver</i>	LT	E	SS
Wright's Marsh Thistle	<i>Cirsium wrightii</i>	C	E	SS
Sacramento Mountain Fleabane	<i>Erigeron rhyban</i>			SS
Sacramento Groundsel	<i>Senecio sacramentanus</i>			SS

Page 3 of 5

New Mexico Department of Game and Fish
Project ID: NMERT-12

Test Lincoln NF

New Mexico Department of Game and Fish
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New Mexico Department of Game and Fish
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Special Status Plant Species within 1 Miles of Project Area

Common Name	Scientific Name	USFWS (ESA)	NMAC	NMRPCS
Golden Bladderpod	<i>Physaria aurea</i>			SS
Villard's Pinonchalo Cactus	<i>Escobaria villardi</i>		E	SS
Winged Blinnet	<i>Astragalus albus</i>			SS
Sierra Blanca Lupine	<i>Lupinus sierrae-blancae</i>			SS
Mescalero Currant	<i>Ribes mesoacutum</i>			SS
Silvercholla	<i>Cholla</i>			SS
White Mountain False-Penny-Royal	<i>Hedeoma pulcherrima</i>			SS
Sacramento Prickly-Poppy	<i>Argemone pinnatisecta</i>	LE	E	SS
White Mountain Larkspur	<i>Delphinium novomexicanum</i>			SS
Alamo Beardtongue	<i>Penstemon alamosanus</i>			SS
New Mexico Beardtongue	<i>Penstemon neomexicanus</i>			SS
Giant Helleboone Orchid	<i>Epipactis gigantea</i>			SS

NMAC = New Mexico Administrative Code, NMRPCS = New Mexico Rare Plant Conservation Strategy, SS = NM Rare Plant Conservation Strategy Species

Project Recommendations

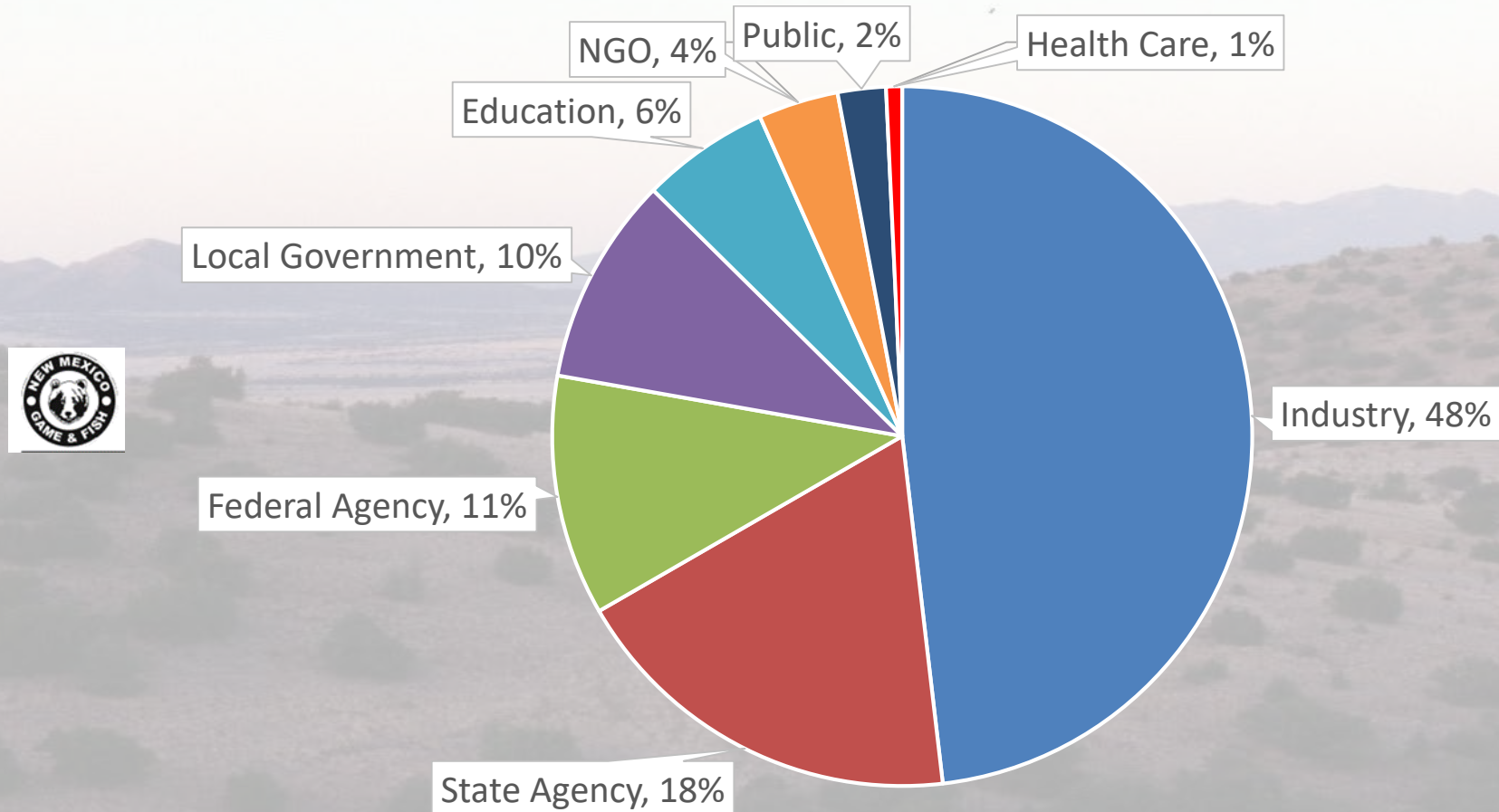
The proposed project occurs within a riparian area. Because riparian areas are important wildlife habitats, your project requires a custom review by Department staff.

If your project involves removal of non-native riparian trees or planting of native riparian vegetation, please refer to our riparian habitat guidelines: <http://www.wildlife.state.nm.us/download/conservation/habitat-handbook/project-guidelines/feature-habitat-handbook-restoration-and-management-of-native-and-non-native-trees-in-sw-riparian-ecosystems.pdf>

If your project involves bridge or road construction in a stream or riparian area, please refer to the following guidelines: <http://www.wildlife.state.nm.us/download/conservation/habitat-handbook/project-guidelines/Bridge-&Road-Construction-in-Riparian-Area-Guidelines-2012.pdf>

Page 4 of 5

The DGF ERT serves a diverse community of practitioners and a NM Environmental Database and ERT will further expand the user base



New Mexico Environmental Database and Environmental Review Tool Development

- Build on the NMCIS infrastructure and partnerships to create a New Mexico Environmental Database to support project planning to avoid environmental conflicts and aid in natural resources management.
- Use the DGF ERT as a model for developing a NM Environmental Database web interface that will incorporate datasets from a wide variety of sources.
- The New Mexico Environmental Database and ERT can be designed as a common platform for agencies and the public to access the same environmental data – an example from the Virginia Commonwealth.

End