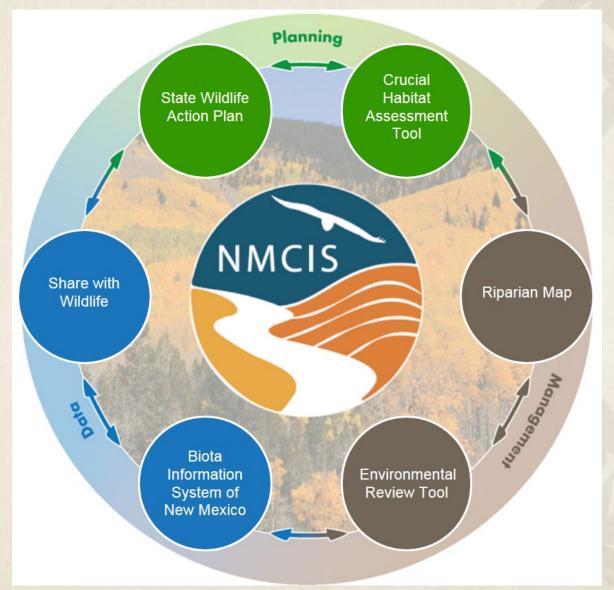
Conservation Information System

Matt Wunder

Ecological and Environmental Planning Division NM Department of Game and Fish

Conservation Information System



NMCIS Overview

- ➤ The Ecological and Environmental Planning Division (EEP) has developed and/or maintains 4 conservation-related tools, 1 statewide dataset, and 1 grant program
- These tools, dataset, and program are all interrelated and interconnected
- Several help inform infrastructure and other project reviews performed by EEP Technical Guidance staff
- The Conservation Information System (CIS) was developed to present the Department's publicly-available conservation related information

Natural Heritage New Mexico

- Natural Heritage acquires and distributes biodiversity conservation information to the public
- Every state has a Natural Heritage program
- Some are housed in state wildlife agencies
- New Mexico's Natural Heritage program is a division of the Museum of Southwestern Biology at the University of New Mexico
- Important partner on 5 of the 6 CIS components



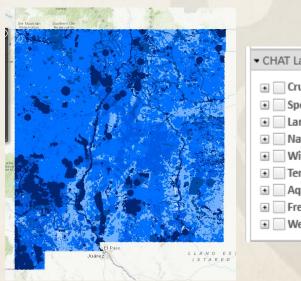
Introduced and Acronyms



Crucial Habitat Assessment Tool

- Developed through Western Governors' Association
- Present a consistent west-wide map of wildlife habitat values
- To inform regional level landscape scale project planning
- Connections: Used in development of Conservation Opportunity Areas in the SWAP; data layers in NMERT





Crucial Habitat Assessment

Tool

2013

https://www.wafwachat.org/

http://nmchat.org/



Department of Game and Fish



State Wildlife Action Plan 2020

STATE WILDLIFE ACTION PLAN for New Mexico

22 November 2016

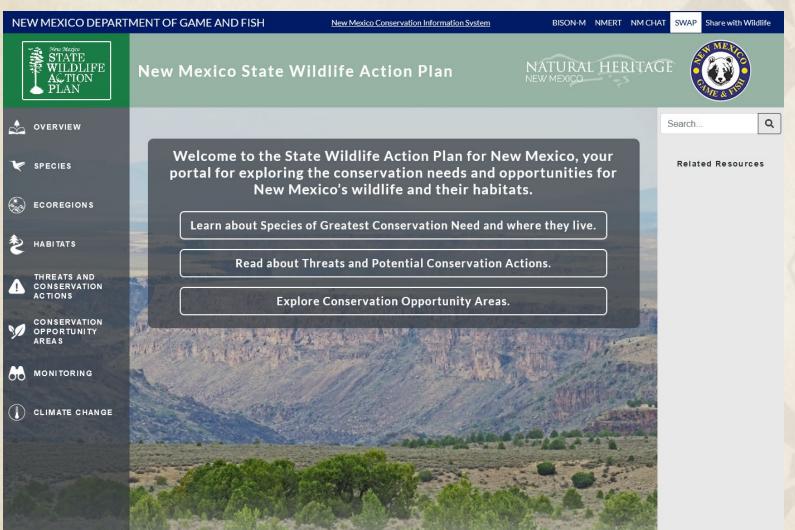


SWAP Website

- User-friendly access to New Mexico's revised State Wildlife Action Plan approved in 2017
- Website follows format of official document
- Identifies Species of Greatest Conservation Need (SGCN), ecoregions, key habitats, threats, and conservation actions
- Qualifies the Department to apply for State Wildlife Grant and potentially RAWA funds through the U.S. Fish and Wildlife Service
- Connections: Links to BISON-M species accounts; informs SwW project proposal development







Ecoregions

NEW MEXICO DEPARTMENT OF GAME AND FISH

New Mexico Conservation Information System

BISON-M NMERT NM CHAT

SWAP Share with Wildlife





Ecoregions







2020

State Wildlife Action Plan



overview



SPECIES



ECOREGIONS



CHIHUAHUAN DESERT

COLORADO PLATEAUS

HIGH PLAINS AND TABLELANDS

MADREAN ARCHIPELAGO

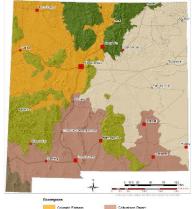
SOUTHERN ROCKY MOUNTAINS

Ecoregions

An ecoregional framework was adopted based on Griffith et al. (2006) to support collaborative, multi-jurisdictional conservation planning and implementation of conservation actions for SGCN and their habitats. These ecoregions are areas of general similarity in ecosystems and in the type, quality, and quantity of environmental resources.

Ecoregions:

- . Contain a focused set SGCN and the terrestrial habitats they occupy
- · Provide a tailored analysis of Threats and Conservation Actions for those species and habitats
- · Region-specific Conservation Opportunity Areas (COAs) to help operationalize conservations actions at local scales









SWAP document section on Ecoregions

HABITATS THREATS AND CONSERVATION ACTIONS



CONSERVATION OPPORTUNITY AREAS



MONITORING



CLIMATE CHANGE



Chihuahuan Desert

Colorado Plateaus



Southern Rocky Mountains





Arizona/New Mexico Mountains Ecoregion

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New Mexico Conservation Information System

BISON-M NMERT NM CHAT SWAP

Arizona/New Mexico Mountains Ecoregion



♦ BACK TO ECOREGIONS LIST



The Arizona/New Mexico Mountains ecoregion in New Mexico is comprised of nine separate mountain complexes totaling 46,870 km2 (18,097 mi2). The largest is part of an 83,000 km2 (32,047 mi2) complex that extends from western New Mexico through central Arizona. In New Mexico, elevations range from 1,300 to 3,800 m (4,300 to 12,400 ft) and terrain consists of steep mountains and some deeply dissected plateaus. Climates include desert, mid-latitude steppe, and subarctic. Mean annual temperatures range from 3 to 19 oC (37 to 66 oF) depending largely upon elevation; annual precipitation averages 49 cm (19.3 in) (range: 27 to 100 cm (11- 39 in)) with half occurring from December to March as rain or snow and half occurring from July to September as summer thundershowers.

Habitats



Warm Interior Chaparral



Madrean Montane Forest &



Chihuahuan Semi-Desert Grassland



Southwest Riparian Forest



Rocky Mountain Pinyon - Juniper Woodland



Perennial Lakes, Cirques, Ponds



Ephemeral Marshes/Cienegas /Springs



Madrean Lowland Evergreen



Cliff, Scree & Rock Vegetation



Perennial Warm Water Streams



Ephemeral Catchments



Perennial Marsh/Cienega /Spring/Seep

Rocky Mountain Lower Montane

Intermountain Juniper Woodland

Rocky Mountain Montane Riparian

Perennial Cold Water Streams

Species of Greatest Conservation Need in the Arizona/New Mexico Mountains Ecoregion















SGCN Birds in the Arizona/New Mexico Mountains Ecoregion









Related Resources Species of Greatest Conservation Need in the Arizona/New Mexico Mountains Ecoregion Threats and Conservation Actions Arizona/New Mexico Mountains View a map of this ecoregion

State Wildlife Action Plan 2020

Species of Greatest Conservation Need (SGCN)

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Species

NATURAL HERITAGE

NEW MEXICO

State Wildlife Action Plan 2020

Species

Species considered for inclusion as Species of Greatest Conservation Need (SGCN) had to occur within the state (www.bison-m.org/) and meet at least one of the following conditions:

- Declining: Species that have experienced substantial long-term declines in habitat or numbers.
- Vulnerable: Species in which some aspect of their life history and ecology makes them disproportionately susceptible to decline within the next 10 years.
 Factors include, but are not limited to, concentration to small areas during migration or hibernation; low reproductive rates; susceptibility to disease, inability to respond to changing climate conditions, habitat loss, wildfire, and overexploitation for anthropogenic purposes.
- . Endemic: Species that are limited to New Mexico.
- Disjunct: Species that have populations geographically isolated from other populations of the same species and are thereby disproportionately susceptible to local decline or extirpation.
- Keystone: Species that are crucial to the integrity and the functioning of their ecosystems. These species may represent more value to conservation of biological diversity than the size of their population or their distribution would suggest.











Search...

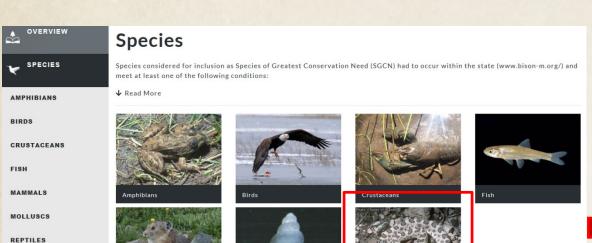


Related Resources

Species

SWAP document chapter on SGCN

SGCN Search



ECOREGIONS













Mexican Gartersnake



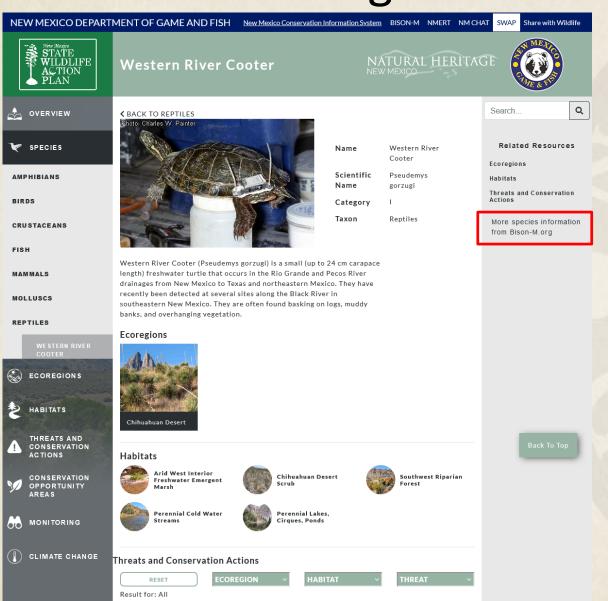








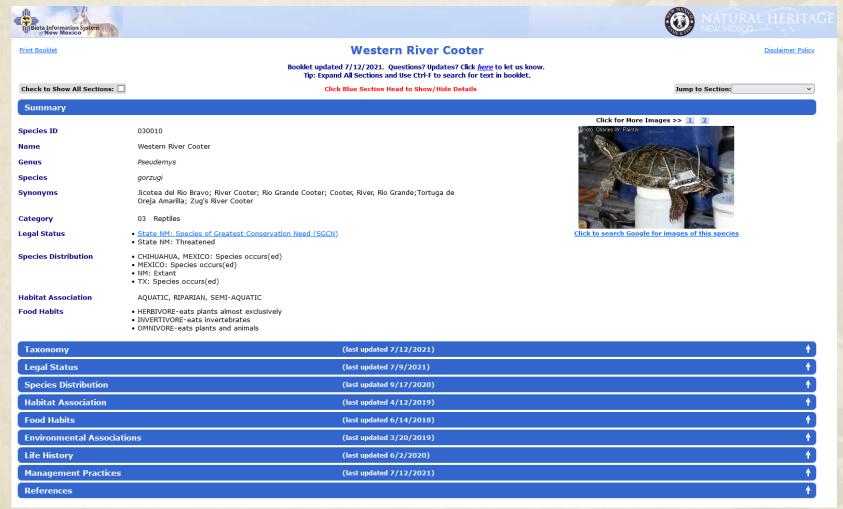
SGCN Page



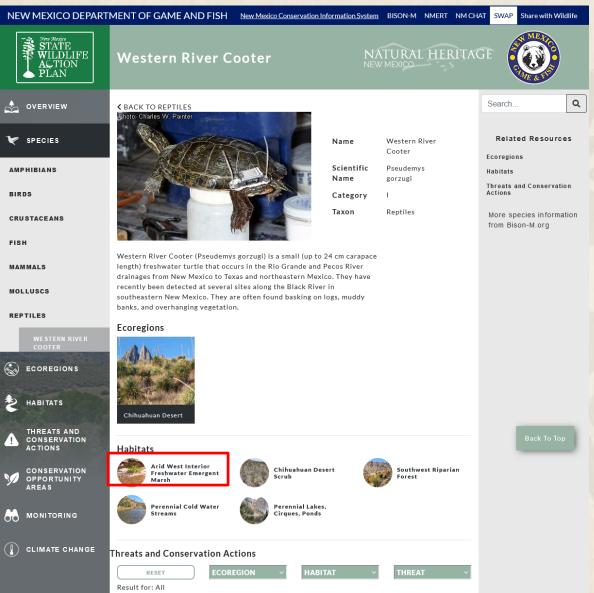
State Wildlife Action Plan 2020

BISON-M Species Booklet





SGCN Page



State Wildlife Action Plan 2020



Arid West Interior Freshwater **Emergent Marsh**







OVERVIEW







ಶ HABITATS

ALPINE AND MONTANE VEGETATION

AQUATIC

ARROYO RIPARIAN

CLIFF SCREE ROCK VEGETATION

DESERT GRASSLAND AND

INTRODUCED SEMI

PLAINS MESA GRASSLANDS

RIPARIAN WOODLANDS AND WETLANDS



THREATS AND CONSERVATION



CONSERVATION OPPORTUNITY AREAS



MONITORING



◆ BACK TO HABITATS LIST



SWAP Habitat Arid West Interior Freshwater Emergent Marsh Arid West Interior Freshwater Emergent Marsh SWAP General Vegetation Type RIPARIAN WOODLANDS and WETLANDS

Arid West Interior Freshwater Emergent Marsh [M888] occurs in the Chihuahuan Desert ecoregion and, to a lesser extent, in the surrounding ecoregions. Encompassed within this habitat is wetland vegetation of shallow freshwater to brackish waterbodies found below seeps and in bottomlands along drainages, river floodplain depressions, cienegas, oxbow lakes, frequently flooded gravel bars, low-lying sidebars, in-fill side channels, small ponds, stock ponds, ditches, and slow-moving perennial streams in valleys and mountain foothills. This type of marsh is characterized by a typically lush herbaceous layer than can be diverse or approach a single-species monoculture. Structure varies from emergent forbs, which barely reach the water surface, to tall graminoids that reach as tall as 4 m (13 ft). Dominant species typically include wetland-obligate species such as threesquare (Schoenoplectus pungens), chair maker's bulrush (S. americanus), broadleaf cattail (Typha latifolia), southern cattail (T. domingensis), common spikerush (Eleocharis palustris), mountain rush (Juncus balticus), knotgrass (Paspalum distichum), clustered field sedge (Carex praegracilis), wooly sedge (Carex pellita), flatsedges (Cyperus spp.), beggarticks (Bidens spp.), water hemlocks (Cicuta spp.), monkey flowers (Mimulus spp.), and canarygrasses (Phalaris spp.). This type of wetland is mostly confined to small areas in suitable floodplain or basin topography with a consistent source of freshwater, Marshes may be semipermanently flooded, but some marshes only receive seasonal flooding. They are also found along the borders of ponds, lakes, or reservoirs that have more open water. Some occurrences are interdunal wetlands in wind deflation areas where sands are scoured down to the water table. Soils typically show indications of high water tables and anoxic conditions (gleying).

Species that live in Arid West Interior Freshwater Emergent Marsh









Q

Related Resources

Species that live in Arid West Interior Freshwater Emergent Marsh

Threats and Conservation

More information from US National Vegetation Classification



Click here to view an interactive map of the habitats of New Mexico (zoom past ecoregions in map at area of interest to reveal habitat layer.)

State Wildlife **Action Plan** 2020

Habitats

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New Mexico Conservation Information System

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Habitats

Habitats

Conservation strategies for SGCN revolve around understanding and effectively managing the terrestrial and aquatic habitats they occupy. Here, habitats are identified within and among ecoregions and watersheds to provide a focus for addressing conservation threats, actions, and identifying conservation opportunities for target species.

SWAP Aquatic Habitats are:

- Perennial and ephemeral waters found in streams, lakes, reservoirs, marshes, and springs
- There are eight specific aquatic habitats in New Mexico that were mapped using the National Hydrography Dataset and aerial photography from the National Agriculture Imagery Program.
- They are described in terms of persistence, temperature regimes and environment following state standards.
- Aquatic habitats are a priority because of New Mexico's limited water supply and surrounding land use impacts.

SWAP Terrestrial Habitats are:

- Grouped into six general types with 33 finer-scale habitats.
- . Mapped based on SWReGAP 2005
- Linked to the US National Vegetation Classification System (USNVC) Macrogroup descriptions to provide detailed information on composition and ecology.
- Are tiered reflect their habitat value and needs for conservation (Tier 1 through 4: most to least urgent; Tier 5: non-habitat) with riparian and wetland habitats ranking highest.



View Interactive Map















8 general groups of
habitats
33 Terrestrial Habitat Types
Based on National
Vegetation Classification
System Macrogroups
Habitat Distribution based
on Southwest ReGap
8 Aquatic habitat types





Habitat Page

State Wildlife **Action Plan** 2020

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Search.

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Madrean Lowland Evergreen Woodland





Related Resources



SWAP Habitat Madrean Lowland Evergreen Woodland Madrean Lowland Evergreen Woodland SWAP General Vegetation Type ALPINE and MONTANE VEGETATION

The Madrean Lowland Evergreen Woodland [M010] (also known as oak woodland or encinal) occurs at elevations of 1,300-2,225 m (4,265-7,230 ft) in foothills, canyons, gently sloping alluvial fan piedmonts (bajadas), steeper colluvial foothill slopes, ridges, and mesa tops of the Arizona/New Mexico Mountains and Madrean Archipelago ecoregions. It also occurs in isolated locations of the Chihuahuan Desert and High Plains and Tablelands ecoregions. At the upper elevation limit, woodlands can be found as small-patch stands in a mosaic with Madrean montane forests. This habitat is characterized by a short (3-15 m (10-49 ft)), open to closed canopy of evergreen, conifer, and broad-leaved trees. Diagnostic species may have their center of distribution southward in the Sierra Madre of Mexico and include alligator juniper, Mexican piñon, border piñon (Pinus discolor), Arizona white oak (Quercus arizonica), Emory oak (Q. emoryi), gray oak (Q. grisea), and Mexican blue oak (Q. oblongifolia). At the northern end of the range, communities may be dominated or codominated by northern tree species, including oneseed juniper (Juniperus monosperma) and two-needle piñon (Pinus edulis), but Madrean species will always be present. The understory may be sparse on some substrates or dominated by shrubs or grasses. Common shrubs include sacahuista (Nolina microcarpa), pungent oak (Q. pungens), Sonoran scrub oak (Q. turbinella), skunkbush sumac (Rhus aromatica), and banana yucca (Yucca baccata). Madrean grass species, such as bullgrass, longtongue muhly (M. longiligula), New Mexico muhly, piñon ricegrass (Piptochaetium fimbriatum), Pringle's speargrass (P. pringlei), and Texas bluestem (Schizachyrium cirratum), can be abundant. Fire regimes vary from stand-replacing, high severity but infrequent fires (or no fires) to low severity, surface fires of savannas.

More information from US National Vegetation Classification

Species that live in Madrean Lowland Evergreen Woodland









Species that live in Madrean Lowland Evergreen Woodland Link to USNVC Threats and Conservation

> Statewide map of habitat distribution

website (usnvc.org)

More information from US National Vegetation Classification Click here to view an interactive map of the habitats of New Mexico (zoom past ecoregions in map at area of interest to reveal

M010 Juniperus deppeana - Pinus cembroides - Quercus arizonica Madrean Lowland Evergreen Woodland Macrogroup

Print Report

Type Concept Sentence: This Madrean pinyon, juniper and oak savanna and woodland macrogroup is characterized by open to closed evergreen, conifer and broad-leaved tree canopies composed of diagnostic Madrean species that include Juniperus coahuilensis, Juniperus deppeana, Juniperus flaccida, Juniperus pinchotii, Pinus cembroides, Pinus discolor, Pinus remota, Quercus albocincta, Quercus arizonica, Quercus chihuahuensis, Quercus emoryi, Quercus grisea, and Quercus oblongifolia. At the northern end of the range, communities may be dominated or codominated by northern tree species such as Juniperus monosperma and/or Pinus edulis, but Madrean species will always be present as differential species. It occurs in foothills and lower mountains in northern Mexico (both Sierra Madre Orientale and Sierra Madre Occidentale) and extends into Trans-Pecos Texas, southern New Mexico and southern Arizona.

Collapse All :: Expand All

Overview

Common (Translated Scientific) Name: Alligator Juniper - Mexican Pinyon - Arizona White Oak Madrean Lowland Evergreen Woodland Macrogroup

Colloquial Name: Madrean Lowland Evergreen Woodland

Hierarchy Level: Macrogroup

Type Concept: This Madrean mixed pinyon, juniper and oak (encinal) savanna and woodland macrogroup is characterized by a short (3-15 m), open to closed canopy of evergreen, conifer and broad-leaved trees. Stands are composed of diagnostic Madrean species such as Juniperus coahuilensis, Juniperus deppeana, Juniperus flaccida, Juniperus pinchotii, Pinus cembroides, Pinus discolor, Pinus remota, Quercus albocincta, Quercus arizonica, Quercus chihuahuensis, Quercus emorvi, Quercus arisea, and Quercus oblongifolia. At the northern end of the range, communities may be dominated or codominated by northern tree species such as Juniperus monosperma and/or Pinus edulis, but Madrean species will always be present as differential species. The understory may be sparse on some substrates or dominated by shrubs or grasses. If present, the shrub layer varies from open to dense and is composed of chaparral or mountain shrub species (particularly following fire or on rocky substrates). Characteristic species include Arctostaphylos pungens, Ceanothus greggii, Cercocarpus montanus, Frangula betulifolia, Garrya wrightii, Nolina microcarpa, Purshia mexicana, Quercus grisea (shrub form), Quercus turbinella, or Rhus trilobata. An herbaceous layer is usually prominent, especially in interspaces between trees in open woodlands. Dominant species are typically warm-season perennial grasses such as Aristida spp., Bouteloua curtipendula, Bouteloua eriopoda, Bouteloua gracilis, Bouteloua rothrockii, Digitaria californica, Eragrostis intermedia, Hilaria belangeri, Leptochloa dubia, Muhlenbergia emersleyi, Muhlenbergia pauciflora, Muhlenbergia setifolia, Piptochaetium fimbriatum, Piptochaetium pringlei, and Schizachvrium cirratum. Stands occur in foothills and lower mountains in northern Mexico extending into Trans-Pecos Texas, southern New Mexico and southern Arizona. They are typically found between 1300 and 2225 m elevation in canyons (including alluvial terraces), on gently sloping alluvial fan piedmonts (bajadas), steeper colluvial foothill slopes and ridges, as well as mesatops. Pinyon- and juniper-dominated stands occur down to 760 m elevation in Trans-Pecos ranges. Oakdominated encinals may also extend down to 900 m elevation in southern Sonora, but generally range from around 1350 m where it is intermixed with semi-desert grasslands. At upper elevations, the woodlands can be found in a mosaic with Madrean montane forests as small-patch stands.

Diagnostic Characteristics: This Madrean pinyon, juniper and oak savanna and woodland macrogroup has a typically short (3-15 m tall), open to moderately dense canopy of evergreen trees (5-60% cover) with an understory dominated by shrubs or grasses. The presence of Madrean pinyon, juniper or oak tree species is diagnostic of this macrogroup. Diagnostic and often dominant trees include conifers Juniperus coahuilensis, Juniperus deppeana, Juniperus flaccida, Juniperus pinchotii, Pinus cembroides, Pinus remota, and oaks Quercus arizonica, Quercus emoryi, Quercus graciliformis, Quercus gravesii, Quercus grisea, Quercus oblongifolia, and in Mexico, Quercus chihuahuensis and Quercus albocincta. At the northern end of the range, communities may be dominated or codominated by northern tree species such as Juniperus monosperma and/or Pinus edulis, but Madrean species will always be present as differential species. Juniperus deppeana's core distribution is in this Madrean macrogroup and is a diagnostic species when dominant; however, it has a broader range, extending north in other montane woodlands and forests, but has low cover there. The understory is variable ranging from absent to dense shrub and/or herbaceous layers. If present, the shrub layer may be open to dense with desert scrub, chaparral, foothill and montane shrub species, or shrubby oaks. Characteristic species include Acacia angustissima, Arctostaphylos pungens, Ceanothus greggii, Cercocarpus montanus, Dasylirion leiophyllum, Dasylirion wheeleri, Garrya wrightii, Mahonia trifoliolata, Mimosa aculeaticarpa var. biuncifera, Mimosa dysocarpa, Nolina microcarpa, Quercus mohriana,



U.S.
National
Vegetation
Classification
Report

State Wildlife Action Plan 2020

Threats

- Developed by Salafsky et al. 2008
- Adopted by the International Union for Conservation of Nature (IUCN) and Conservation Measures Partnership (CMP)
- Classify threats to species or habitats throughout the world

Salafsky, N., D. Salzer, A. J. Stattersfield, C. Hilton-Taylor, R. Neugarten, S. H. Butchart, B. Collen, N. Cox, L. L. Master, S. O'Connor, and D. Wilkie. 2008. A standard lexicon for biodiversity conservation: unified classifications of threats and actions. Conservation Biology 22(4):897-911.

IUCN Level I and II Threat Categories

- > Residential and Commercial Development
- > Agriculture and Aquaculture
- Energy Production and Mining
- > Transportation and Service Corridors
- ➤ Biological Resource Use
- > Human Intrusions and Disturbance
- > Natural System Modifications
- > Invasive and Problematic Species
- > Pollution
- Climate Change



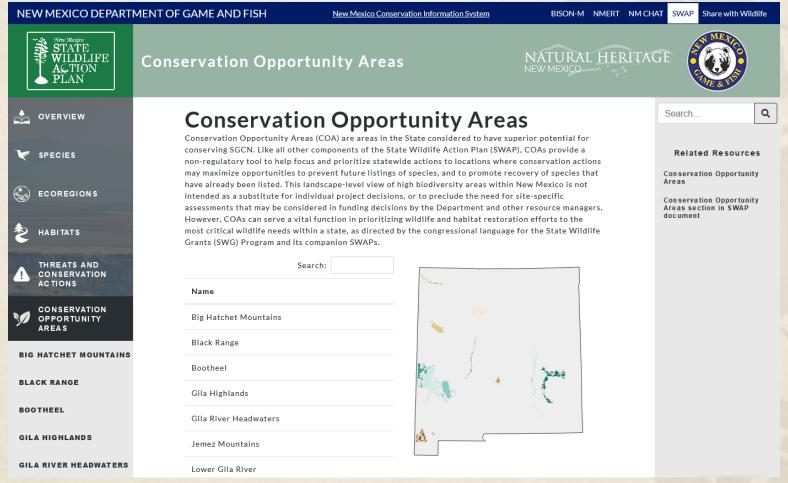
Conservation Actions



- ➤ General and not project specific
- > Subject to change with new information
- Lack of Department authority requires partner collaboration to implement
- Resource limitations generally preclude direct monitoring of effectiveness
- > Should be considered "potential" actions

Conservation Opportunity Areas (COA)







WILDLIFE ACTION PLAN

Gila River Headwaters





SPECIES

acoregions

HABITATS

ACTIONS CONSERVATION OPPORTUNITY AREAS

BLACK RANGE BOOTHEEL GILA HIGHLANDS

JEMEZ MOUNTAINS LOWER GILA RIVER LOWER PECOS AND BLACK

MESCALERO SANDS MIDDLE PECOS RIVER

MIDDLE RIO GRANDE

NORTHERN SACRAMENTO

SAN FRANCISCO RIVER

MIMBRES RIVER

THREATS AND CONSERVATION

BIG HATCHET MOUNTAINS

≺ BACK TO CONSERVATION AREAS LIST

The Gila River Headwaters Conservation Opportunity Area (COA) encompasses 54,733 ha (135,248 ac) in the Gila National

Forest of western New Mexico. Almost all is managed by USFS (96%). It contains only one Important Bird Area (Gila-Cliff Area), but 77% of the COA is protected. Landcover includes 15 native vegetation habitats plus open water and a small amount of disturbed lands. The COA is dominated by three native vegetation habitats: Rocky Mountain Lower Montane Forest (41.2%), Intermountain Juniper Woodland (24%), and Madrean Lowland Evergreen Woodland (20%), Perennial aquatic habitats include 285 km (177 mi) of warm water streams, 118 km (73 mi) of cold water streams, and 23.6 ha (58.3 ac) of reservoirs.

3.87

117.45 0.36

2138.76

New Mexico Conservation Information System

Hahitats

Habitats	
Habitat Name	Habitat Size in Hectares
Chihuahuan Desert Scrub	62.55
Chihuahuan Semi-Desert Grassland	124.74
Cliff, Scree & Rock Vegetation	1628.1
Intermountain Dry Shrubland & Grassland	465.57
Intermountain Juniper Woodland	13286.79
Madrean Lowland Evergreen Woodland	11086.38
Madrean Montane Forest & Woodland	659.88
Montane-Subalpine Wet Shrubland & Wet Meadow	1.8
Open Water	20.43
Recently Disturbed or Modified	50.13
Rocky Mountain Lower Montane Forest	23589.27
Rocky Mountain Montane Shrubland	7.56
Rocky Mountain Subalpine-High Montane Conifer Forest	1396.98



Click here to view an interactive map of this conservation opportunity area

Search..



Related Resources

Habitats

Species (SGCN)



More info on Gila River Headwaters

Species (SGCN)

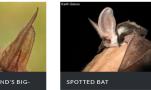
Southwest Riparian Forest

Desert Alkali-Saline Wetland

Warm Interior Chaparral

SAN JUAN RIVER





Rocky Mountain Subalpine-High Montane Meadow







Share with Wildlife



- Department grant program that funds wildlife habitat enhancement, research, education, and wildlife rehabilitation projects
- Voluntary contributions, license plate sales, and tax checkoffs
- Focus on species without other funding sources
- Since 2005, research and habitat projects focused on Species of Greatest Conservation Need
- Connections: Informs BISON-M, SWAP revision

Share with Wildlife

- New: The list of Share with Wildlife projects to be funded in 2022 has been released and is available for viewing on the Applications-Reports tab. The call for proposals for 2023 projects will be released in spring, 2022.
- New: Use the Wildlife Artwork form available on MVD's <u>website</u> to order a Share with Wildlife license plate. See the "Donate Now!" tab for more information.



Introduction **Project Highlights** Applications - Reports **Donate Now!** Share with Wildlife New Mexico Game & Fish Share With Wildlife Watch on VouTube 12 TO WITH WILDING Share with Wildlife is a New Mexico Department of Game and Fish program initiated in 1981 that depends on taxdeductible donations from the public. Its mission is to help those species that do not receive funding from any other source. The program funds four categories of wildlife projects: research, education, habitat enhancement, and rehabilitation. It

receives much of its funding through the state income tax check-off program. It is also supported through Share with Wildlife license plate sales and direct donations. Matching federal funds maximize the program's support of New Mexico's wildlife.

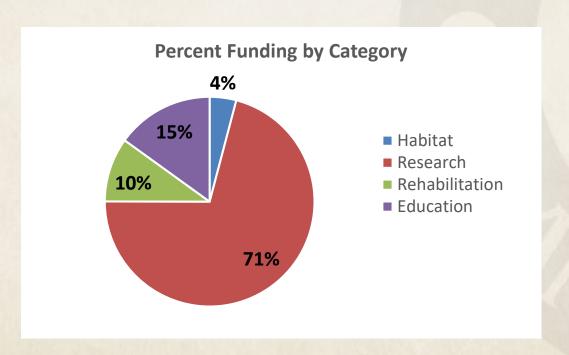
(Video still: Broad-billed hummingbird artwork above by Hira Walker).

Share with Wildlife 1981

http://www.wildlife.state.nm.us/conservation/share-with-wildlife/

Share with Wildlife: Past Decade

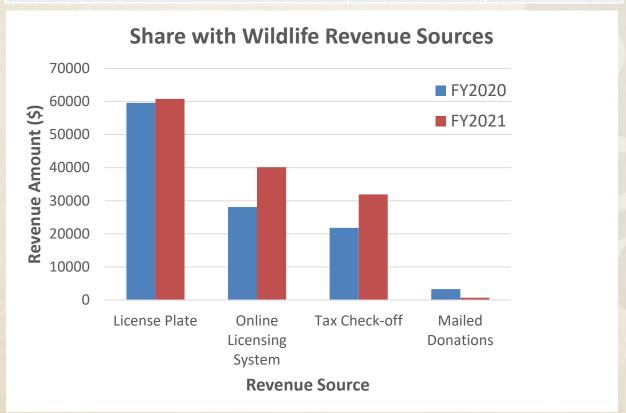
- ➤ Funded 89 projects focused on ~75 species
- > Average of 14 projects per year (up to 24)
- > ~ \$1.9 million dispersed to ~ 52 different contractors





Recent Revenue

Source	FY2020	FY2021
License Plate	\$59,600	\$60,797
Online Licensing System	\$28,110	\$40,157
Tax Check-off	\$21,811	\$31,926
Mailed Donations	\$3,288	\$650
Total	\$112,809	\$133,530









- Web-enabled database
- Over 6,800 species accounts
- Accounts contain information on species distribution, biology, ecology, and references
- Connections: Search for SwW contracts; informs SWAP revision and NMERT reports; links to NMERT

Biota



SPECIES SIMPLE SEARCH



Biota Information System of New Mexico About > Help ▶ Searches > State Map Links Contact Login



Welcome to the Biota Information System of New Mexico (BISON-M). BISON-M was developed by New Mexico Department of Game and Fish and numerous partners. BISON-M contains species accounts for all vertebrate and many invertebrate species of wildlife that occur in New Mexico. New information is continuously being added and errors do occur. Users are encouraged to refer to the original cited source to assess the completeness, correctness, and currency of the information provided in BISON-M.









Species Search

County Reports

Document Search

Contract Search

Species Search



NEW MEXICO DEPARTMENT C	F GAME AND FISH	New Mexico Conservation	on Information System	BISON-M	NMERT NM CHAT S	WAP Share With Wildlife
Biota Information System	SPECI	ES SIMPLE SEARCH			NATURAL NEW MEXICO	HERITAGE
About ► Searches ► S	tate Map Links	Help ►				Contact Login
SPECIES SIMPLE SEARCH		BISON-M	Species Search ①			e field in search results. onal related search terms.
TAXONOMY	0 DIST	RIBUTION	HABITA	T	Search	Print
Common Name Least Shrew	State	~ □	General	~ _	Clear	PDF Excel
Scientific Name	₩ NM County	~ □	⊕ Macrogroup	v 🗆	Legal Status Report	PDF O Excel
Latin Taxon	☐	~ _	Land Use/Cover	v 🗆	Show Search Codes Onl	
ALL O Vertebrates O Invertebrates	Accident County	~ _	Ecoregions	v 🗆		ISTORY
Category	☐ ⊕ Historic County	· -	① National Wetlands	v 🗆	Codes	
Account Type		~ _	FOOD HAR		① Interaction Type	
Photo OALL OYes ONG	Other NM	~ _	Trophic	511S ▼□	① Disease	<u> </u>
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<u>ID</u> <u>Common</u>	<u>Name</u>		Scientific Name		<u>Habitat</u>	<u>Documents</u> <u>Photo</u>
050705 <u>Least Shrew</u>		Cryptotis parvus				View List

Species Booklet

Least Shrew Print Booklet Disclaimer Policy Booklet updated 3/29/2019. Questions? Updates? Click here to let us know. Tip: Expand All Sections and Use Ctrl-F to search for text in booklet. Check to Show All Sections: Click Blue Section Head to Show/Hide Details Jump to Section: Summary Click for More Images >> 1 2 Species ID 050705 Name Least Shrew Genus Cryptotis Species parvus Synonyms Musarana Chica (Hispanic); North American least shrew Category 05 Mammals • State NM: Species of Greatest Conservation Need (SGCN) **Legal Status** Click to search Google for images of this species · State NM: Threatened Species Distribution • CO: Species occurs(ed) . KS: Species occurs(ed) • NM: Extant OK: Species occurs(ed) . TX: Species occurs(ed) Habitat Association LOWLANDS, RIPARIAN, TERRESTRIAL **Food Habits** • INVERTIVORE-eats invertebrates · SCAVENGER-feeds on carrion & refuse (last updated 3/29/2019) **Taxonomy** (last updated 4/26/2019) Legal Status **Species Distribution** (last updated 4/5/2021) **Habitat Association** (last updated 4/29/2019) **Food Habits** (last updated 6/2/2020) **Environmental Associations** (last updated 4/26/2019) Life History (last updated 4/29/2019) (last updated 3/24/2021) **Management Practices** References

Biota Information System of New Mexico 1991

Document Search



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August:22-23. View Maracchini, G.A. 1995. I Midland, TX, USA.	Letter submitted to the Texa	co Exploration an	d Production, Inc.,	1995	Other Agency Publications	Conservation, Energy of	development (oil, gas),	, Habitat mod	lification/conver	sion	· <u>Dunes Sagebrus</u>	h Lizard	
View New Mexico Departmen Endangered Species Se		Ounes sagebrush l	izard. Wildlife Notes:	1993		Behavior, Conservation	, Food habits				· <u>Dunes Sagebrus</u>	h Lizard	
	izard (Sceloporus arenicolus Il Aid in Sport Fish and Wildl	s) in New Mexico.	Completion Report	1999	NMDGF Documents	Behavior, Conservation Population study/surve			abitat modificati	on/conversion,	• <u>Dunes Sagebrus</u>	h Lizard	
	agement plan for sand dune 1. Completion report submit gram at the US Fish and Wile	ted to the Federal	Aid in Sport Fish and	2002	NMDGF Documents	Behavior, Conservation modification/conversion				at	Dunes Sagebrus	h Lizard	
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	Fitzgerald. 2011. Source-sin porus arenicolus) at Caproc ment, Carlsbad Office, Carls	k Wildlife Area. R		2011	Contractor Report	Behavior, Conservation management	, Habitat management,	, Population s	study/survey, W	ildlife	· <u>Dunes Sagebrus</u>	h Lizard	
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View Arritt, S. 1997. Little gro	ouse on the prairie: reversin	ng the decline of le	esser prairie-chickens.	1997	NMDGF	Behavior, Conservation	, Habitat fragmentation	n/connectivity	y, Population stu	idy/survey,	· Lesser Prairie-Cl	nicken	~

Contract Search

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1379 Status Assessment of Rattlensake (Crotalus Mexico	Arizona Black	2020	Wildlife Research	Bruce Christman	<u> </u>	\$25,	_	_		and T.J. Gierma
1420 Full-season productivit associations of gray vi		2020	Wildlife Research	Dr. Henry Streby	and Kathy Granillo, University of	Toledo \$33,	,435 91%	· <u>Fischer, S., K</u>	. Granillo, and H.M	I. Streby. 2021
1421 Life history and activit Peñasco least chipmur minimus atristriatus) 2	nk (Neotamias	2020	Wildlife Research	Dr. Fitsum Gebres State University	selassie and Fiona McKibben, Nev	v Mexico \$15,	,170 65%	• McKibben, F.B	., F.A. Gebreselas	sie, and J.K. Fr
1422 Population status and vireo subspecies in Ne		2020	Wildlife Research	Andrew Johnson a New Mexico	and Dr. Christopher Witt, Univers	ity of \$10,	,500 65%	· Johnson, A.,	E. Gyllenhaal, M. J	Andersen, M. Bau
1423 An eDNA-based invent distribution and abund chub and Rio Grande s River basin 2021	ance of Chihuahua	2021	Wildlife Research	Dr. Michael Young, and Fish Conserva	, National Genomics Center for V ation	Vildlife \$43,	,932 65%	1		
1424 Status and distribution in southwest New Mexi		2021	Wildlife Research	J. Eric Wallace		\$29,	,064 65%	•		
1425 Conservation genomic western peripheral pop shrew (Cryptotis parva	pulations of the least	2021	Wildlife Research	Dr. Andrew Hope,	Kansas State University	\$25,	,230 75%	• <u>Hope, A.G., F</u>	J. Combe, and T.I	4. Galfano. 2021
1426 Status assessment of rattlesnake Crotalus of Mexico 2021		2021	Wildlife Research	Bruce Christman		\$32,	,853 65%	• <u>Christman, E</u>	I.C., R.D. Jennings	, and T.J. Gierma
1427 Status and limiting fac montane vole in New I		2021	Wildlife Research	Dr. Jennifer Frey,	Frey Biological Research	\$23,	,385 65%	• Frey, J. 2021	. Status and limitin	ng factors for
1428 An eDNA-based surver of Rio Grande sucker a in the upper Rio Grand basins 2022	and Rio Grande chub	2022	Wildlife Research	Thomas Franklin, and Fish Conserva	National Genomics Center for W ation	ildlife \$37,	,300 65%			
1429 Pinyon jay surveys in Forest 2021	the Gila National	2021	Wildlife Research	Dr. Kristine Johnso	on, University of New Mexico	\$24,	,450 65%	,		
1430 American mink (Vison population survey in n		2022	Wildlife Research	Martha Peale, NM	River Otter/Martes Working Gro	ups \$25,	,200 1009	/a		V
		2022		Martha Peale, NM	River Otter/Martes Working Gro	ups \$25,	,200 1009	/a		

Biota Information System of New Mexico 1991

- Website for project proponents to enter details on proposed projects and initiate EEP review
- NMERT generates a species list and initial set of recommendations
- ➤ If needed, EEP staff coordinate evaluations of potential species/habitats impacts and provide guidelines to avoid or mitigate those impacts
- Connections: Species lists link to BISON-M; display of CHAT, NMRipMap, and SWAP data layers













Welcome to the New Mexico Environmental Review Tool (ERT)—an interactive tool for conservation planning and review of important resources for wildlife and habitats. The ERT is a partnership that draws upon expertise in wildlife and information management from the New Mexico Department of Game and Fish (NMDGF), Natural Heritage New Mexico, and NatureServe. It 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 special status species and their habitats in New Mexico.

Conservation Planning: 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.

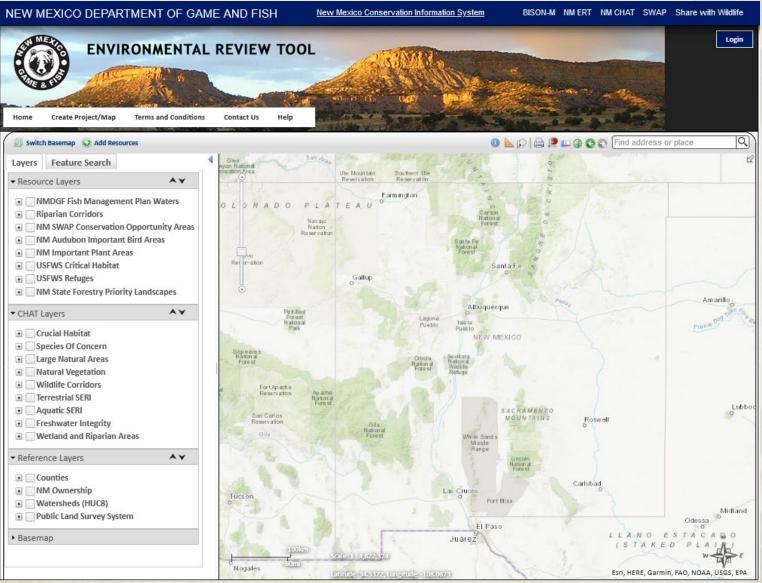
NMDGF Environmental Review: To be able to submit proposed projects for environmental review, users are required to register and login. To register as a new user, click on 'Create new account' below. After logging in, use the 'Create Project' function or the Create Project/Map tab to create and submit a project for review. The review will evaluate state and federally listed threatened and endangered species, along with other wildlife of conservation interest, that may be present within the vicinity of the project site. The review will also provide guidance for helping to maintain and enhance wildlife populations and habitats that could be affected by the proposed project.

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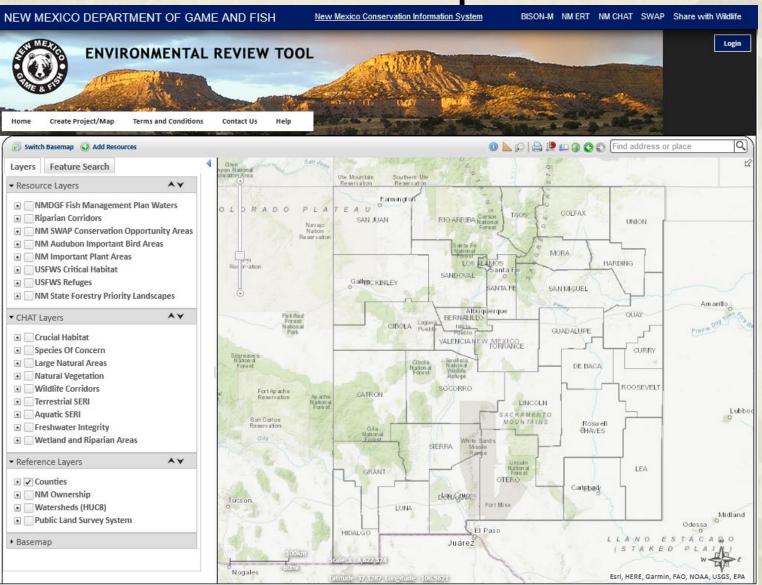
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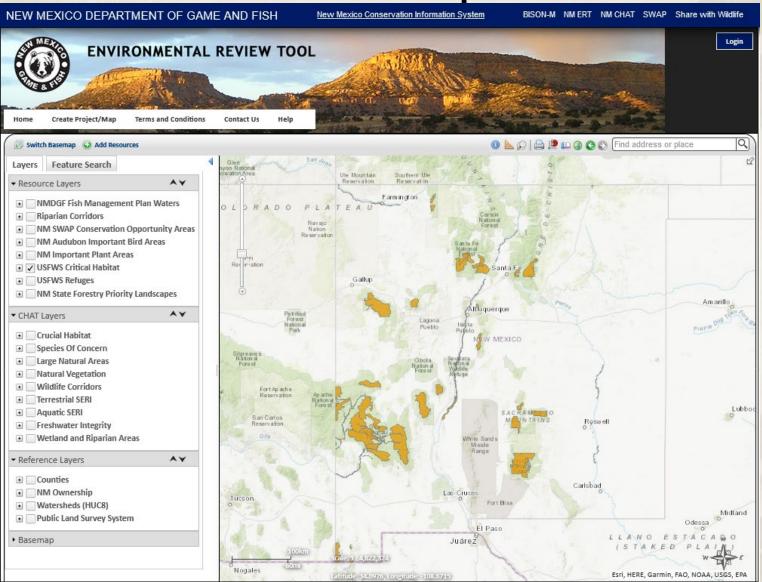
Environmental Review Tool 2018



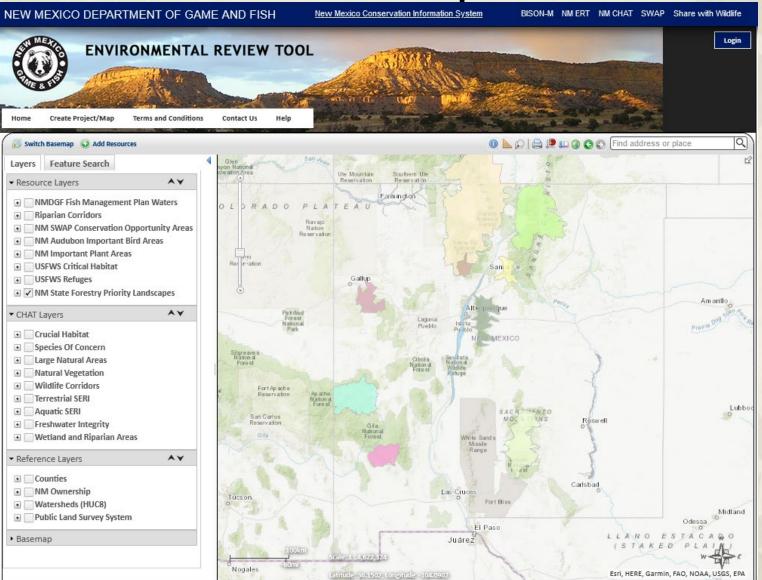




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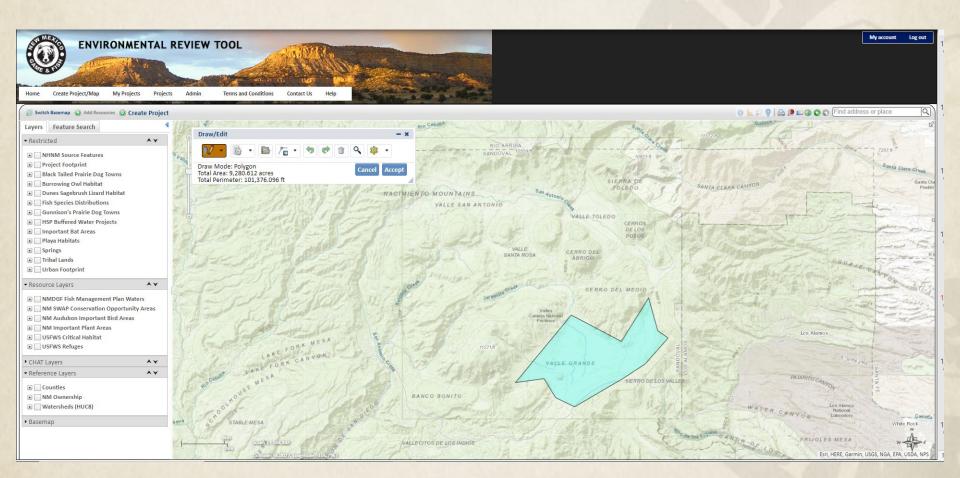






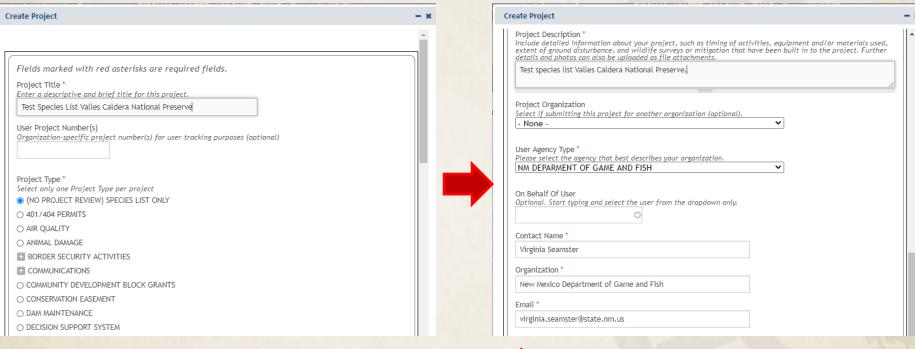
Project Data Entry





Project Data Entry









Project Report/ Species List



New Mexico Department of Game and Fish Project ID: NMERT-865

Environmental Review Tool 2018

Special Status Animal Species within 2000 Meters of Project Area	Special Status	Animal Species	within 2000	Meters of Project Area	
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Common Name	Scientific Name	USFWS (ESA)	NMDGF (WCA)	NMDGF SGCN/SERI
Jemez Mountains Salamander	Plethodon neomexicanus	Endangered	E	SGCN
Northern Leopard Frog	Lithobates pipiens			SGCN
Eared Grebe	Podiceps nigricollis			SGCN
American Bittern	Botaurus lentiginosus			SGCN
Peregrine Falcon	Falco peregrinus		T	SGCN
Mountain Plover	Charadrius montanus			SGCN
Flammulated Owl	Otus flammeolus			SGCN
Mexican Spotted Owl	Strix occidentalis lucida	Threatened		SGCN
Boreal Owl	Aegolius funereus		T	SGCN
Black Swift	Cypseloides niger			SGCN
Lewis's Woodpecker	Melanerpes lewis			SGCN
Red-Headed Woodpecker	Melanerpes erythrocephalus			SGCN
Williamson's Sapsucker	Sphyrapicus thyroideus			SGCN
Olive-Sided Flycatcher	Contopus cooperi			SGCN
Bank Swallow	Riparia riparia			SGCN
Pinyon Jay	Gymnorhinus cyanocephalus			SGCN
Clark's Nutcracker	Nucifraga columbiana			SGCN
Juniper Titmouse	Baeolophus ridgwayi			SGCN
Pygmy Nuthatch	Sitta pygmaea			SGCN
Western Bluebird	Sialia mexicana			SGCN
Loggerhead Shrike	Lanius Iudovicianus			SGCN
Brown-Capped Rosy-Finch	Leucosticte australis			SGCN
Rio Grande Cutthroat Trout	Oncorhynchus clarkii virginalis			SERI
Rio Grande Sucker	Catostomus plebeius			SGCN
Preble's Shrew	Sorex preblei			SGCN
Spotted Bat	Euderma maculatum		Т	SGCN
American Pika	Ochotona princeps			SGCN
American Pika	Ochotona princeps			SGCN
Gunnison's Prairie Dog	Cynomys gunnisoni			SGCN
Wrinkled Marshsnail	Stagnicola caperata		E	SGCN
Black Bear	Ursus americanus			SERI
Cougar	Puma concolor			SERI
<u>Elk</u>	Cervus canadensis nelsoni			SERI
Mule Deer	Odocoileus hemionus			SERI
				SERI

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



New Mexico Department of Game and Fish Project ID: NMERT-433 Project Number: 660774

PROJECT INFORMATION

Project Title: NM_ABQ_UNMNORTH_009 - A

Project Type: COMMUNICATIONS, OTHER BUILDINGS/STRUCTURES

Latitude/Longitude (DMS): 35.088405 / -108.624069

County(s): BERNALILLO

Project Description: The Site is located at 1800 Mesa Vista Road Northeast, Albuquerque, Bernalillo County,

NM 87106, and consists of the removal of an existing Blue Emergency Response Pedestal and replacement of it with a 22.3-foot tall Code Blue Pedestal small cell pole communications tower with an overall height of 22.3 feet. The proposed tower site is

approximately 5,126.2 feet above mean sea level.

REQUESTOR INFORMATION

Project Organization:

Contact Name: Emily Senne

Email Address: e.senne@trileaf.com
Organization: Trileaf Corporation

Address: 2121 W Chandler Blvd, Suite 108, Chandler AZ 85224

Phone: 480-850-0575

OVERALL STATUS

The information contained within this report comprises the recommendations of the New Mexico Department of Game and Fish (Department) for management and mitigation of proposed project impacts to wildlife and habitat resources. No further consultation with the Department is required.



Project Report

Page 1 of 5 3/2/2020 12:28:12 PM

- Statewide dataset
- Provides enhanced detail on plant community structure and composition of riparian habitats
- Can inform riparian restoration project planning and technical reviews of projects that may impact riparian areas
- Map partially available and will be completed in 2022
- Connections: Addresses key habitat from the SWAP; data displayed in NMERT; can inform SwW project proposal development





Home » Conservation Science Programs » NMRipMap is a publically-available map resource to support the conservation and management of New Mexico's riparian and wetland habitats

NMRipMap is a publically-available map resource to support the conservation and management of New Mexico's riparian and wetland habitats.

The New Mexico Riparian Habitat Map (NMRipMap) provides a comprehensive, fine-scale spatial view of the composition, cover, and structure of riparian and wetland vegetation along New Mexico's perennial streams and rivers (see Project Summary).

NMRipMap is designed to serve wildlife habitat management, wetland and riparian conservation and restoration planning, non-native species management, riparian monitoring design, identifying refugia, and more.

Products include a comprehensive New Mexico Riparian Corridor Map and Riparian Habitat maps for major basins of the state as they become available.

Project Areas Explore the Map Now Available Now Available

The map is being developed progressively by major river basins.

Three-tiered hierarchical legend based on composition, height, leaf retention, and biogeography. *More info...*











NMRipMap Products and Data

Project Summary

Legend

Annotated Legend

Attribute List

Map Downloads

Middle Rio Grande (MRG) Riparian Habitat Map 1.1

<u>Upper Rio Grande (URG) Riparian</u> Habitat Map 2.4

Canadian and Upper Pecos (CUP) Riparian Habitat Map 1.1

Gila Region and San Juan (GRS. Riparian Habitat Map 1.1

New Mexico Riparian Corridor Map 3.0
A comprehensive map of riparian corridors containing perennial streams and rivers and their floodplains.

(Information on versions)

NMRipMap Sponsors

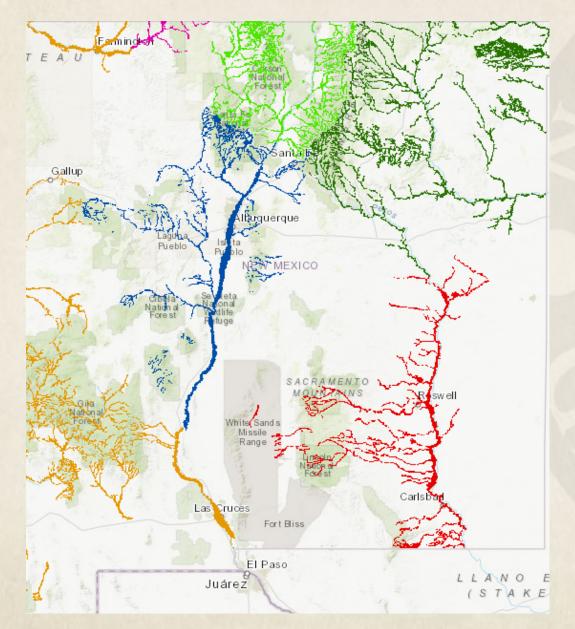
- New Mexico Department of Game and Fish (NMDGF)
- USDA Forest Service Southwest Region
- Natural Heritage New Mexico (NHNM) of the Museum of



Natural Heritage New Mexico

https://nhnm.unm.edu/riparian/nmripmap

Riparian Corridor



Riparian Map 2022

Riparian Habitat Map Legend

Table 1. New Mexico Riparian Habitat Map Legend structured

New Mexico Riparian Habitat Man Legend

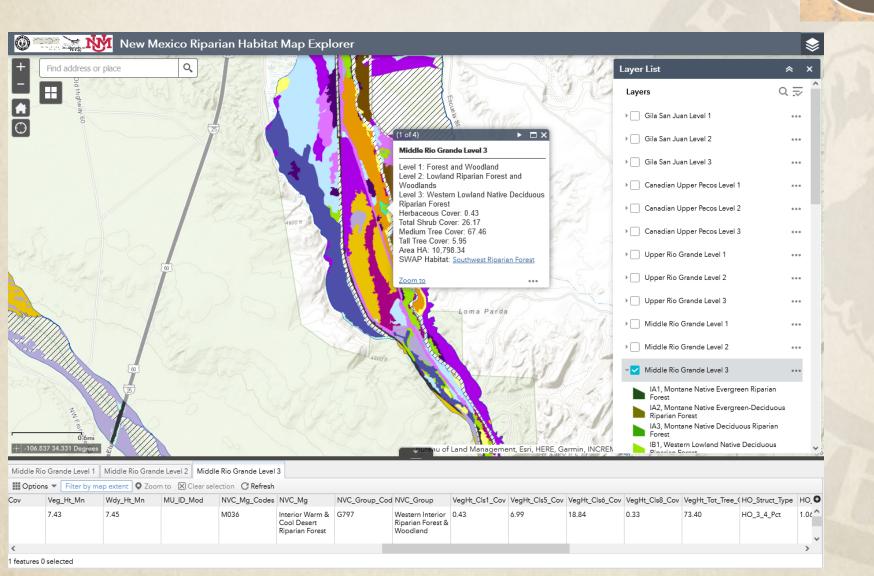
New Mexico Riparian Habitat Map Legend		Wap Legend [Version 1.1 20210	[Version 1.1 2021082/]			
Leve	el Codes	and Name	es	L3 MI	JID	
FOREST and WOODLAND						
	IA	Montan	n Forest and Woodlands			
	IA1			Montane Native Evergreen Riparian Forest	12	
			IA2	Montane Native Evergreen-Deciduous Riparian Forest	23	
			IA3	Montane Native Deciduous Riparian Forest	11	
	IB	Lowland	Forest and Woodlands			
			IB1	Western Lowland Native Deciduous Riparian Forest	6	
			IB2	Great Plains Lowland Native Deciduous Riparian Forest	36	
			IB3	Lowland Native-Introduced Russian Olive Deciduous Riparian Forest	24	
			IB4	Lowland Native-Introduced Tamarisk Deciduous Riparian Forest	25	
			IB5	Lowland Native-Introduced Russian Olive - Tamarisk Deciduous Riparian Forest	42	
			IB6	Lowland Native Evergreen Dry Riparian Forest	7	
			IB7	Lowland Native Evergreen-Deciduous Riparian Forest	41	
			IB8	Southwest Warm Desert Native Deciduous Riparian Forest	45	
	IC	Lowland	Introduc	ed Riparian Woodland and Scrub		
			IC1	Russian Olive Introduced Riparian Woodland and Scrub	16	
			IC2	Tamarisk Introduced Riparian Woodland and Scrub	15	
			IC3	Russian Olive - Tamarisk Introduced Riparian Woodland and Scrub	26	
			IC4	Mixed Introduced Forest and Scrub	27	
	ID	Upland I	Forest an	d Woodland		
			ID1	Upland Forest and Woodland	20	
IE Semi-Natural Riparian Woodland and Scrub						
			IE1	Semi-Natural Riparian Woodland and Scrub	34	
I	SHRUB					
	IIA	Montan		n Shrubland		
			IIA1	Subalpine-Montane Riparian Shrubland	18	
			IIA2	Montane Dry Riparian Shrubland	35	
IIB Lowland			Ripariar	n Shrubland		



[Version 1 1 20210827]

Community Detail





Download as CSV

Home > Explore The Classification

Explore The Classification



The USNVC Hierarchy Explorer provides detailed descriptions of vegetation types in the U.S. USNVC Version 2.031 is the January, 2021 release of the classification. The USNVC is still under development for some geographies for details see Status of USNVC Vegetation Hierarchy.

General Citation for USNVC 2.031:

USNVC [United States National Vegetation Classification]. 2021. United States National Vegetation Classification Database, V2.031. Federal Geographic Data Committee, Vegetation Subcommittee, Washington DC. [usnvc.org] (accessed [day] [month] [year])

Search Results

6 records matching the following criteria:

Search Term: G797

Database Fields Searched: Scientific Name, Colloquial Name, Translated Name, Synonomy, Floristics, Concept Type, Database Code

Units Selected:

Collapse All :: Expand All :: New Search

- 1 Forest & Woodland Class
 - 1.B Temperate & Boreal Forest & Woodland Subclass
 - 1.B.3 Temperate Flooded & Swamp Forest Formation
 - 1.B.3.Nd Western North American Interior Flooded Forest Division
 - M036 Interior Warm & Cool Desert Riparian Forest Macrogroup
 - ▼ G797 Western Interior Riparian Forest & Woodland Group <a>Image: March M

Collapse All :: Expand All :: New Search

Riparian Map 2022

G797 Western Interior Riparian Forest & Woodland Group

Print Report

Type Concept Sentence: This group consists of riparian woodlands dominated by trees and tall arborescent shrubs, with species such as Acer negundo, Celtis laevigata var. reticulata, Cephalanthus occidentalis, Fraxinus velutina, Juglans major, Platanus wrightii, Populus deltoides, Populus fremontii, Platanus racemosa, Quercus lobata, Salix gooddingii, Salix laevigata, Sapindus saponaria, and Washingtonia filifera. It is found throughout lowlands of the Interior West, including southwestern warm and cool deserts and Mediterranean California.

Collapse All :: Expand All

Overview

Common (Translated Scientific) Name: Western Interior Riparian Forest & Woodland Group

Colloquial Name: Western Interior Riparian Forest & Woodland

Hierarchy Level: Group

Type Concept: This group consists of riparian woody vegetation. Dominant trees may include Acer negundo, Celtis laevigata var. reticulata, Cephalanthus occidentalis, Fraxinus velutina, Juglans major, Platanus wrightii, Populus deltoides ssp. wislizeni, Populus deltoides ssp. monilifera, Populus fremontii, Platanus racemosa, Quercus lobata, Salix amygdaloides, Salix gooddingii, Salix laevigata, Sapindus saponaria, and Washingtonia filifera. Dominant shrubs include Alnus oblongifolia, Baccharis salicifolia, Prunus spp., Salix exigua, Salix lasiolepis, Shepherdia argentea, and Vitis californica. Other dominants on serpentine substrates include Aquilegia eximia, Carex serratodens, Cirsium fontinale, Hesperocyparis sargentii, Frangula californica ssp. tomentella, Mimulus glaucescens, Mimulus guttatus, Packera clevelandii, Salix breweri, Solidago spp., Stachys albens, and Umbellularia californica. The variety of plant associations within this group reflects elevation, stream gradient, floodplain width, and flooding events. It also includes springs, seeps, and perennial and intermittent streams and riparian areas found on serpentine substrates. These are disturbance-driven systems that require flooding, scour and deposition for germination and maintenance. Periodic flooding and associated sediment scour are necessary to maintain growth and reproduction of vegetation. Flooding regimes have been significantly altered in all but a few tributaries that support this group. This group occurs throughout lowlands of the interior west, including southwest warm and cool deserts and Mediterranean California, generally below about 1800 m (6000 feet) elevation. Known occurrences include the following rivers and their tributaries: Colorado, Gila, Pecos, Rio Grande, Sacramento, San Joaquin, Santa Cruz, Salt, San Pedro, Truckee, Snake and others.

Diagnostic Characteristics: This group is wide-ranging in the western U.S. and occurs in the warm desert regions (Sonoran and Mojave) of the southwestern U.S. and adjacent Mexico, Mediterranean California, and the cool desert interior in riparian corridors along perennial and seasonally intermittent streams and spring-fed depressions. Diagnostic tree species trees include Juglans major, Platanus racemosa, Platanus wrightii, Populus deltoides ssp. monilifera, Populus deltoides ssp. wislizeni, Populus fremontii, Salix amygdaloides, Salix laevigata, and Washingtonia filifera. Shrubs are rich and varied. Stands are always adjacent to streams or their floodplains and have been observed to follow narrow tributaries. Seasonal flooding and soil saturation by a rising water table are necessary to maintain growth and reproduction of vegetation.

Rationale for Nominal Species or Physiognomic Features:

Classification Comments: This group combines warm southwestern deserts with cool interior lower elevation rivers, and occurs from sea level, but does not include montane elevations.

Similar NVC Types:

G510 Interior West Ruderal Riparian Forest & Scrub, note:

G541 Warm Semi-Desert Shrub & Herb Dry Wash & Colluvial Slope, note:

G533 North American Warm Desert Riparian Low Bosque & Shrubland, note:

Riparian Map 2022

Questions?

