

# New Mexico Comprehensive Wildlife Conservation Strategy

## What is a wildlife action plan?

Congress asked each state to develop a wildlife action plan, known technically as a comprehensive wildlife conservation strategy (CWCS). These proactive plans examine the health of wildlife and prescribe actions to conserve wildlife and vital habitat before they become more rare and more costly to protect.

## New Mexico snapshot

**Geography:** New Mexico is the 5th largest state, encompassing nearly 122,000 square miles. Though primarily a dry state it has approximately 234 square miles of rivers, streams, lakes, and reservoirs. New Mexico spans a variety of regions from the Great Plains, Rocky Mountains, Colorado Plateau and Madrean Archipelago to the Great Basin, and the Chihuahuan Desert. Elevations range from about 2,800 feet at Red Bluff Reservoir in the southeastern desert to over 13,000 feet at Wheeler Peak in the northern Sangre de Cristo range.



Cranes/New Mexico

**Landscape:** Approximately 34% of New Mexico is federally owned, 12% is state owned, 44% is privately owned, and 10% is within Native American reservations. Federally owned lands are primarily under the stewardship of the Bureau of Land Management, USDA Forest Service, Department of Defense, and the National Park Service. There are 22 tribes and reservations within the state. The Navajo Nation and Zuni Tribe own much of the northwestern part of the state, especially along the Arizona border, and the Jicarilla and Mescalero Apache Tribes

own land in the north and southeast, respectively. Most of the Pueblo tribes are located along the northern half of the Rio Grande. In rural New Mexico agriculture is among the top 5 industries and is of significant economic, cultural, and social importance to the state.

**Wildlife:** Size, topography, physical location, and the convergence of several life zones in its southwestern quadrant combine to make New Mexico a biologically diverse state, with more than 4,500 different species of plants and animals. More than 1,000 species of mammals, birds, fish, frogs, toads, salamanders, snakes, turtles, and lizards occur within the state's borders. Though the total number of species is unknown, diversity is also high among animal groups such as snails, shrimp, insects and spiders.

## New Mexico's planning approach

The Comprehensive Wildlife Conservation Strategy for New Mexico focuses upon species of greatest conservation need, key wildlife habitats, and the

*"This strategy demonstrates our concern for wildlife and habitat resources here and across the nation. It is our job to keep our wildlife populations healthy and sustainable, and we take that responsibility seriously. The approaches to conservation expressed in the Strategy are both substantial and sensible. We have focused on strategic actions that are intended to keep common species common and work to prevent wildlife from becoming endangered."*  
- New Mexico Governor  
Bill Richardson

challenges affecting the conservation of both. The overriding desired outcome is that New Mexico's key habitats will persist in the condition, connectivity, and quantity necessary to sustain viable and



Sonorella/New Mexico

resilient populations of these species while hosting a variety of land uses with reduced resource use conflicts.

The scope, focus, and content of the Strategy were influenced by the direct involvement of over 170 individuals external to the New Mexico Department of Game and Fish who provided valuable technical and socio-economic

insights and constructive criticism from diverse and often conflicting perspectives. Participants included interests who did not necessarily agree with all portions of the CWCS or with the CWCS initiative in general. The Strategy is intended as a

blueprint to guide collaborative and coordinated wildlife conservation initiatives involving the New Mexico Department of Game and Fish, local, state, federal, and tribal government agencies, non-governmental organizations, and interested individuals.

## Primary challenges to conserving wildlife in New Mexico

Habitat degradation or loss are the most significant factors adversely affecting New Mexico's wildlife. As might be expected in a dry state, aquatic habitats and the lands immediately associated with them may be at higher risk of alteration than other New Mexico habitats. Conversion to other uses, extraction of minerals or water, excessive removal of biological resources, and pollution present the highest probability of altering New Mexico's key habitats. The presence of non-native aquatic species also has considerable adverse effects upon native fish and other inhabitants of New Mexico's aquatic habitats. For example:

**Habitat Conversion:** Conversion of habitats to urban, residential, commercial, energy, and recreational development,

Wildlife	Total number of species	Species of Greatest Conservation Need*	
		Number	%
Amphibians	26	15	58
Birds	504	74	15
Crustaceans	35	32	91
Fish	130	37	28
Mammals	184	42	23
Molluscs	182	66	36
Reptiles	105	32	31
Subtotal	1166	298	26
Arthropods	Unknown	154	--
<b>Totals</b>	<b>--</b>	<b>452</b>	<b>--</b>

\*Species that are indicative of the diversity and health of New Mexico's wildlife and, with some exceptions, are also associated with key habitats. Indicative species include those considered to be declining or vulnerable, those that are keystones of ecosystem function, populations restricted to small geographic areas, those with isolated or disjunct populations, those dependent upon vast areas, and those of high recreational, economic, or charismatic interest.

## Wildlife highlights

Key Habitats	Wildlife (examples)	Issue (examples)	Action (examples)
<b>Madrean Forests and Woodlands</b>  <b>Ownership: Mixed public and private.</b>	<ul style="list-style-type: none"> <li>• Gould's wild turkey</li> <li>• Mexican gray wolf</li> <li>• Jaguar</li> <li>• Western red bat</li> <li>• Sonoran mud turtle</li> </ul>	Habitat fragmentation	<ul style="list-style-type: none"> <li>• Work with state, federal, and private landowners to develop measures, such as closure of unnecessary roads, to reduce habitat fragmentation.</li> <li>• Work with willing private landowners to obtain conservation easements on lands valuable as corridors connecting Madrean mountain ranges..</li> </ul>
<b>Western Great Plains Shortgrass Prairie</b>  <b>Ownership: Mixed public and private.</b>	<ul style="list-style-type: none"> <li>• Bald eagle</li> <li>• Scaled quail</li> <li>• Sandhill crane</li> <li>• Black-tailed prairie dog</li> <li>• Mule deer</li> <li>• Tiger salamander</li> </ul>	Changes in plant diversity and structure alter grassland habitats and wildlife species composition.	<ul style="list-style-type: none"> <li>• Work with land management agencies, private land managers, and the agriculture industry to identify and promote rangeland grazing systems that ensure long-term ecological sustainability and are cost effective for livestock interests. Such practices may include collaborative development of grazing management plans, altering livestock and wildlife stocking rates, time, use and distribution, and promoting grass banking opportunities that allow rangelands to recover.</li> </ul>
<b>Statewide Riparian Habitats and 5th Order Streams</b>  <b>Ownership: Mixed public and private.</b>	<ul style="list-style-type: none"> <li>• Eared grebe</li> <li>• Beaver</li> <li>• Western Boreal toad</li> <li>• Chiricahua leopard frog</li> <li>• Roundtail chub</li> <li>• Colorado pikeminnow</li> <li>• Razorback sucker</li> </ul>	Altered natural flow regimes	<ul style="list-style-type: none"> <li>• Work with federal and state agencies, private landowners, non-government organizations and research institutions to design and implement projects that establish flow regimes downstream of reservoirs that mimic the historic high-flow dynamics of the original river system.</li> </ul>

### Recommended actions to conserve New Mexico's wildlife

agriculture and other such land uses have accelerated over the past century. Consequently, large areas of formerly contiguous landscapes have become increasingly fragmented and isolated. Many aquatic habitats have become altered and fragmented by dams and water diversions associated with such conversions.

**Pollution:** Concerns about pollution in New Mexico are primarily focused on aquatic habitats. Runoff from livestock feedlots, dairy operations, and urban road surfaces introduces nutrients and contaminants to aquatic habitats. Petrochemicals from extraction sites and refineries also reach aquatic habitats. Both petrochemicals and mercury have been found in many of New Mexico's reservoirs.

**Consumptive Biological Uses:** Logging, deforestation, fuel wood collection, and improper domestic livestock and wildlife grazing regimes (those that reduce long-term plant and animal productivity) can adversely affect species of greatest conservation need and their habitats

throughout New Mexico. In areas where multiple consumptive biological uses occur, concerns persist about the ability of these habitats to sustain viable and resilient wildlife populations.

### Working together for New Mexico's wildlife

The New Mexico Department of Game and Fish (NMDGF) initiated public involvement early in the process by announcing its intent to develop the Strategy and soliciting interest through articles in more than 30 newspapers with a total circulation of 332,000. Drafts of the Strategy were made available on the Department's website where reviewers were encouraged to complete an on-line survey or simply share their thoughts by e-mail. Presentations were made to the New Mexico Wildlife Federation and the Native American Fish and Wildlife Society. NMDGF conducted several forums seeking to identify and engage potential partners from local, state, federal, and





Mule Deer/New Mexico

*“This Comprehensive Wildlife Conservation Strategy for New Mexico is both a culmination and a springboard. It is a culmination of 2 years of efforts on the part of resource professionals, conservation organizations, commodity interests, private individuals, tribal interests, municipal governments, and others to construct a better wildlife conservation overview for New Mexico. It is the springboard to an important conservation future for wildlife in New Mexico and the Southwest. Its potential can only be realized through a broad array of natural resource agencies, other public programs, and private interests all being guided by this approach and pulling together to implement its conservation actions.”*

- Dr. Bruce Thompson, Director, New Mexico Department of Game & Fish

tribal government agencies and non-governmental organizations representing recreation, conservation, agriculture, and energy development interests. In addition, through other meetings, e-mails, and phone conversations the Department exchanged information with a broad range of groups who did not participate in the forums. In all, the scope, focus, and content of the strategy were influenced by the direct involvement of over 170 individu-

als external to the Department, not all of whom agreed with all portions of the CWCS or the CWCS initiative in general. NMGDF also participated in the 2004 Wildlife Values in the West Survey which contained questions intended to inform our perceptions about public attitudes pertaining to the conservation of New Mexico’s biodiversity. The Department received survey responses from 859 individuals.

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