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Salamanders!

Three species call New Mexico home.



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# Jemez bighorns return



## Wildfire clears way for sheep transplant

By Dan Williams

**O**n a warm November evening, Kai-T Blue-sky gazed across the expanse of his pueblo's ancestral domain of Cochiti Canyon and witnessed something he thought may never happen. The same terrain where a massive 2011 wildfire threatened to sterilize all it touched was showing signs of new life.

"After all the destruction, this is the best thing that could happen here," Blue-sky, Cochiti Pueblo's wildlife biologist, said after watching the Department of Game and Fish release 45 Rocky Mountain bighorn sheep on the mesa overlooking the canyon. "It's like a dream come true."



Photo: Dan Williams

Soon, the sheep began descending steep canyon walls, scoured of all trees but showing new growth of grasses and shrubs. It was a far different place than the pre-fire thickets of pine that blocked now spectacular views. In a strange twist of nature, the fire had created a near perfect habitat for bighorn sheep, which require steep, open country so they can avoid predators.

Conservation officer Kyle Jackson attends to two lambs.

The sheep were the first to leave tracks on the mesa since the late 1800s, when unregulated hunting and perhaps disease decimated the population statewide. Department biologists hope to transplant more bighorns to the area in 2016.

... continued on Page 6



Photos: Dan Williams

Forty-five Rocky Mountain bighorn sheep were captured in the Wheeler Peak Wilderness, carried to trailers by helicopter and later released in the Jemez Mountains.





Photo: Jim Stuart

Giant sacaton, foreground, and Tisner Grove, which contains New Mexico's state champion velvet ash tree, provide habitat for a variety of wildlife species at the River Ranch along the Mimbres River.

## River Ranch purchase benefits wildlife

The New Mexico State Game Commission recently purchased more than 1,000 acres of riparian habitat along the Mimbres River in southwestern New Mexico. The \$585,000 purchase will allow the Department of Game and Fish to manage the property and its diverse wildlife habitat.

"The River Ranch is an opportunity for the department to conserve valuable habitat for many wildlife species," Department Director Alexa Sandoval said. Approximately half the purchase price came from the

department's Share With Wildlife tax-refund check-off donations, money targeted for nongame wildlife conservation.

Part riparian area and part Chihuahuan desert grasslands, the River Ranch and adjoining 2,920 acres of state and federal leased lands supports a high diversity of native plants and wildlife. The last free-flowing stretch of the Mimbres River cuts through the property, supporting large stands of broadleaf cottonwood, Arizona walnut and other large-diameter trees, including the New

Mexico's State Champion velvet ash tree. Deer, black bears, Arizona gray squirrels, cougars, Merriam's turkeys, Gambel's quail and two species of bats also make the River Ranch their home.

The State Game Commission made the purchase of the River Ranch possible through a conservation easement by the ranch owners, Gene and Elizabeth Simon. The Simons wanted to protect the ranch from development, preferring for it to be managed for conservation and education.

## Cutthroat no longer endangered list candidate

New Mexico's state fish, the Rio Grande cutthroat trout, no longer is a candidate for listing under the Endangered Species Act, the U.S. Fish and Wildlife Service announced Tuesday.



Rio Grande cutthroat trout

Since 2008, aggressive conservation efforts by the New Mexico Department of Game and Fish and its partners have enhanced or restored pure-strain native cutthroats in 127 streams that are open to public fishing. Rio Grande cutthroats now occupy about 700 miles of stream habitat.

After reviewing current scientific information about the cutthroat's populations, genetic diversity and habitat conditions in its historic range in northern New Mexico and southern Colorado, the federal agency deemed that the fish is in no danger of extinction. The Rio Grande cutthroat was designated a candidate for listing in 2008, mostly because its habitat had dwindled to 11 percent of what it once was.

"Tuesday's decision is a tribute to

the hard work by the department and its public and private partners to conserve our state fish and keep it off the endangered species list," said Paul Kienzle, chairman of the State Game Commission. "It also ensures recreational public fishing opportunities for Rio Grande cutthroat trout for years to come."

Cutthroat restoration partners include Trout Unlimited, New Mexico Trout, Colorado Parks and Wildlife, the U.S. Fish and Wildlife Service, U.S. Forest Service, Turner Enterprises Inc., northern tribes and pueblos, and others.

The most impressive restoration effort has been the ongoing project to restore pure-strain native cutthroats to the Rio Costilla watershed, which

consists of more than 150 miles of streams, 25 lakes and the Costilla Reservoir. More than 70 miles of streams have been restored and more than 33,000 native fish have been stocked in those waters since that project began in 2007. This year, the department plans to stock another six miles of restored waters.

All of the stocked Rio Grande cutthroats come from the department's Seven Springs Hatchery in the Jemez Mountains, which raises nothing but genetically diverse, pure-strain fish for restoration and recreation.

"Keeping native trout in our state's streams and lakes is extremely important to us, not only because it's the department's mandate to protect native species, but also because it's our goal to provide anglers with opportunities to catch them," said Bryan Bakevich, the department's Rio Grande cutthroat trout biologist. "The Rio Grande cutthroat is found only in one place in the world - northern New Mexico and southern Colorado. We need to keep them around."



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Please visit our website,  
[www.wildlife.state.nm.us](http://www.wildlife.state.nm.us)



# Study: Hunters, anglers bring \$660 million to NM

New Mexico's hunters and anglers spend more than \$613 million on their recreational activities and contribute another \$51.4 million to the state's economy in labor income and taxes, according to a study conducted for the Department of Game and Fish.

The study by Southwick Associates, specialists in fish and wildlife economics and statistics, was commissioned to determine the amount of participation and subsequent economic impacts hunters and anglers have on New Mexico overall and by county.

"Hunting and fishing are among New Mexico's most cherished traditions," Governor Susana Martinez said. "The impressive numbers from this study demonstrate the value our natural resources bring to our state."

According to the study, New Mexico has more than 160,000 resident and nonresident anglers who spend \$268 million a year on fishing-related activities. The state also has 87,600 hunters who spend \$345.5 million a year on hunting-related activities.

Hunters and anglers also support more than 7,900 jobs in New Mexico

that provide more than \$267 million in labor income, according to the study. The multiplier effect from that income contributes \$453 million to the state's gross domestic product and adds \$106.5 million in tax revenue.

The study used license-sale records and survey-based data to estimate economic contributions based on retail spending related to recreational hunting and fishing in the state. The report included individual contributions for each of the state's 33 counties. The report also included estimated contributions by hunters who pursue selected species.

Data was collected from an online survey conducted in April and May of 2014 and sent to all hunting and fishing license buyers who provided an email address at purchase. Surveys were delivered to 66,092 license buyers, and 15,570 responded, for a response rate of 23.6 percent.

The complete report by Southwick Associates is available on the Department of Game and Fish website, [www.wildlife.state.nm.us](http://www.wildlife.state.nm.us).



Photo: Mike Perry

**Department of Game and Fish conservation officers check hunters' licenses during a recent big-game hunting season.**

## Hunters: Expect roadblocks statewide

The Department of Game and Fish will conduct roadblocks throughout the state during hunting seasons to collect harvest data and to detect wildlife law violations.

Hunting seasons are ongoing for deer, elk, bears and some other species as listed in the department's Hunting Rules & Information booklets.

At roadblocks, conservation officers also will check for compliance with the Off Highway Motor Vehicle Act and the Aquatic Invasive Species Control Act. Drivers of vehicles hauling wood products will be asked to produce documentation as

required by the Forest Conservation Act.

Department officers may be assisted by other law enforcement agencies such as the U.S. Forest Service, Bureau of Land Management, New Mexico State Police or county sheriff's offices. As a result, the public may encounter minor delays.

To report a wildlife-law violation, please contact a department office in Santa Fe, Albuquerque, Raton, Roswell or Las Cruces, or call the toll-free Operation Game Thief hotline at (800) 432-GAME (4263). Callers can remain anonymous and earn rewards for information leading to charges being filed.

## Get involved

Many organizations in New Mexico are dedicated to wildlife conservation, habitat improvement and wildlife-related recreation. Whether you are interested in hunting, fishing, trapping or wildlife watching, chances are there is an outfit you'll deem worth supporting. Here are some of them:

**New Mexico Quail, Inc.:** A conservation organization of more than 140 members from southwestern New Mexico, with goals to improve wildlife habitat and hunting opportunities primarily for upland birds. John Moen, (575) 644-3936.

**Ducks Unlimited, New Mexico:** More than 1,500 members support the organization's mission to restore and manage wetlands and habitats for North American waterfowl. Cindy Wolfe, [cjwolfe@gilanet.com](mailto:cjwolfe@gilanet.com), (575) 854-3365.

**New Mexico Chapter, Wild Sheep Foundation:** The organization's goal is "putting more sheep on the mountain." Members work with the Department of Game and Fish to increase populations of desert and Rocky Mountain bighorn sheep in New Mexico. Lanny Rominger, (505) 821-5064.

**New Mexico Trout:** Dedicated to the preservation and enhancement of trout fishing in New Mexico's waters through protection and restoration of riparian habitats and through educating the public about trout fishing and the ecological and social value of trout habitats. [newmexicotrout@gmail.com](mailto:newmexicotrout@gmail.com), [www.newmexicotrout.org](http://www.newmexicotrout.org).

**The Nature Conservancy:** A national organization dedicated to the preservation of plants, animals and natural communities by protecting the lands and waters they need to survive. In New Mexico, it has worked to preserve 1.4 million acres of landscapes and waterways. [www.nature.org/newmexico](http://www.nature.org/newmexico).

**New Mexico Wildlife Federation:** Founded by Aldo Leopold in 1914, the organization is a strong lobbyist in the New Mexico Legislature, "dedicated to protecting New Mexico's wildlife, habitat and outdoor way of life." (505) 299-5404, [www.nmwildlife.org](http://www.nmwildlife.org).

**Rocky Mountain Elk Foundation:** A large national organization dedicated to ensuring the future of elk, other wildlife and their habitat. The organization actively supports efforts to protect and enhance elk country, conservation education and to restore elk herds. New Mexico information: (505) 892-1250, [www.rmef.org](http://www.rmef.org).

**Sportsmen for Fish & Wildlife:** A conservation organization organized to promote the protection and enhancement of wildlife habitat, wildlife management programs and America's family heritage of hunting and fishing. (505) 486-4921.

**Trout Unlimited, New Mexico:** Dedicated to the restoration, protection and conservation of all coldwater fisheries, their tributaries and watersheds, and the fish that inhabit them. (505) 470-4878, [www.newmexicotu.org](http://www.newmexicotu.org).

**Audubon New Mexico:** Devoted to the protection, preservation and enjoyment of the environment, with a particular emphasis on birds. The organization has chapters statewide, with headquarters at the Randall Davey Audubon Center in Santa Fe. (505) 983-4609, <http://nm.audubon.org>.

**New Mexico Muskies, Inc.:** A group of anglers interested in fishing for tiger muskies in Bluewater and Quemado lakes formed this organization in 2008 as a chapter of Muskies, Inc. Information: Matt Pelletier, (505) 264-2999, [www.newmexicomuskiesinc.org](http://www.newmexicomuskiesinc.org).

**Friends of the Bosque del Apache National Wildlife Refuge:** An organization of about 1,000 members supporting the Bosque del Apache National Wildlife Refuge and promoting appreciation and conservation of wildlife and habitat through environmental education. (575) 878-2320, [www.friendsofthebosque.org](http://www.friendsofthebosque.org).

**Albuquerque Wildlife Federation:** A volunteer organization focused on New Mexico's wildlife and habitat resources. It offers monthly meetings with guest speakers, in-the-field habitat restoration projects and a monthly newsletter. (505) 281-4609, <http://abq.nmwildlife.org>.

**New Mexico Council of Outfitters and Guides:** An organization of about 78 members that supports hunters and the outfitting industry, and efforts to promote wildlife conservation on private and public lands. (505) 440-5258, [www.nmoutfitters.com](http://www.nmoutfitters.com).

**Southwest Consolidated Sportsmen:** An organization representing at least 15 sporting and conservation groups of diverse interests. The group's objectives are to "disseminate wildlife and habitat information, participate in habitat projects, and review proposals involving wildlife habitat." (575) 526-5056.

**New Mexico Wild Turkey Federation:** Supports scientific wildlife management on public, private and corporate lands as well as wild turkey hunting as a traditional North American sport. (505) 869-3837, [www.nwtf.org](http://www.nwtf.org).

**Safari Club International:** Promotes wildlife conservation worldwide while protecting the hunting heritage and supporting many education and humanitarian projects. Southern New Mexico Chapter: LTC R.A. "Pancho" Maples, [pancho1@plateautel.net](mailto:pancho1@plateautel.net). Northern New Mexico Chapter: Brian Payne, [b\\_payne10@msn.com](mailto:b_payne10@msn.com).

**Southeast New Mexico Wildlife, Inc.:** A conservation organization dedicated to preserving and enhancing wildlife habitat, especially quail habitat, in southeastern New Mexico. (575) 393-2895.

**New Mexico Trappers Association:** Promotes and protects trapping and wild furbearers native to New Mexico. Works with agencies and groups to advance scientifically based management protocols, and educates trappers and the public about ethical trapping equipment and practices. (505) 897-0719, [www.newmexicotrappers.com](http://www.newmexicotrappers.com).



# Field work can pay off in wet years

By Ross Morgan

Like most years in New Mexico, summer brings some dry weather that can last through the winter, or in cases like 2014, can be followed by rain during the monsoon season.

What does this mean when it comes to hunting and wildlife habitat? It usually means that water holes will be plentiful and hunting over them could be less productive than the drier years.

I think most of us can agree that during years with low amounts of moisture, finding those off-the-grid water holes that contain water can pay pretty big dividends when it comes to hunting. On the other hand, what about those years when the monsoon rains bring good rainfall and every water hole that you know of are full?

During these years, I have found that it is much harder to harvest an animal at a water hole because the animals have plenty to choose from. Because of this, it can be a toss-up on whether they will show up at the water hole you have chosen to watch.



Photo: Dan Williams

**Sometimes the best strategy for deer hunting is to learn the animals' routes between bedding and feeding areas.**

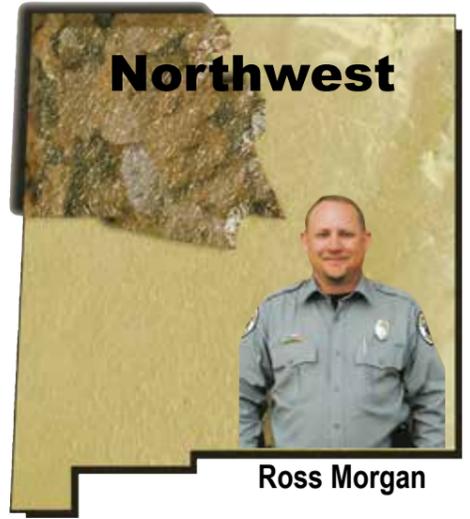
So what should you do during these years to help increase your odds of harvesting an animal? I recommend spending a little more time in the

field during years like this, either a few weeks or even a month before your hunt, scouting and studying the movements of deer and elk as they move to and from their bedding areas to feed.

I recently asked a good friend who seems to harvest animals every year what made him so successful. He told me that he has had great success harvesting animals when they are moving to and from their bedding areas to feed. He said that deer can be a little challenging because they tend to be a little more sporadic than elk, but with elk it can mean all the difference between harvesting an animal and going home empty handed.

With today's technology, we have more options during our scouting trips that were not possible when most of us were growing up. Game cameras have proven to be a very effective tool when scouting for places to hunt. Today, they can be very affordable, some of them costing around \$40 to \$50.

Most of the time we use these cameras to help determine which



Ross Morgan

water holes are more productive. We also can use them to find which routes the animals are using to move from their bedding areas to feed.

Some of us have the luxury of taking a lot of time off to study these animals and see where they are, but most of us don't. That is where these cameras come in handy. Whether you have one camera or 20, you can place them on trails throughout the weeks leading up to your hunt to see where and when the animals are moving.

*Ross Morgan is the Department of Game and Fish public information officer and a conservation officer for the Northwest Area. He can be reached in Albuquerque at (505) 222-4707 or ross.morgan@state.nm.us.*

# Parched southwestern wildlife get some relief

By Jeremy Lane

Tropical storm Odile brought a much-needed increase in moisture to southwest New Mexico in 2014, adding to our monsoonal rains. While torrential downpours can wreak havoc, there's no denying that the increased precipitation ultimately benefitted wildlife. I recently sat down with Department wildlife biologist James Pitman and habitat biologist Kevin Rodden to discuss some big game hunting prospects for this fall and how recent rains might affect them.

## Deer

There was a high fawn-to-doe ratio last year, which increased white-tailed and mule deer numbers this year. Although deer densities are still low, this looks to be shaping up to an average year for deer. That may not be the best news you would like to hear, but it beats "below-average" or "poor," which were possibilities under current drought conditions.

Mule deer populations are down across the west, and this is true of our area, too. White-tailed deer, however, appear to be increasing.

"Across southwest New Mexico, the quality of white-tailed deer harvests has been excellent, with larger antlers on older individuals," Pitman said. He credits management decisions for the boost, saying, "conservative tag numbers have increased hunt quality."

Deer should be going into winter in good physical condition because of an increase in browse species. However, because food is abundant this year, deer will be dispersed. Rodden suggests hunters get to high vantage



Photo: Dan Williams

**Pronghorn populations have held steady in southwestern New Mexico this year.**

points and glass the countryside to find animals. If precipitation does not continue, later season hunters could benefit by focusing searches near water sources.

Rodden also suggested that hunters try "focusing on areas that have burned in the last 5-10 years because browse should be good there with the current abundance of moisture."

## Bear

There have been reports of good bear numbers this year, especially in the Gila. The rains have produced good acorn and berry crops and the bears have been readily spotted feeding.

There is still time for more moisture to come our way this season, and we should welcome every drop. Road closures may be an inconvenience, but I think you will agree that

improving big game species numbers is well worth it. Just make sure you bring a shovel and survival gear on your next hunt. Stay warm, stay safe and happy hunting.

## Pronghorn

There have been reports of pronghorn in good numbers this year, with good recruitment. Grasslands north of the Gila, including the San Augustine plains, were productive for hunters this year. In 2014, a world record pronghorn buck was taken north of the Gila.

## Elk

2014 was another excellent season for elk hunts because of continued sound management. Antler growth appears to be average this year with the exception of some high-scoring bulls spotted in the Gila National Forest.

Conservation officers reported high bull-to-cow ratios and Pitman noted that "elk are expanding their range into areas where we did not use to have them."

Like deer, elk were spread out this year, with no shortage of grass growth to focus herds. Recovering burn scars provide good forage availability, as cleared woody and shrubby cover return with grasses and forbs.

"In recent years there has been a lack of late-winter and early spring moisture, which has played a part in recruitment being average," Pitman said. "This year's calving numbers should be better."

As with deer hunts, the biologists recommend hunters get to high locations and scan with binoculars, and if later months are dry, hunt near water sources.

*Jeremy Lane is the Department of Game and Fish public information officer for the Southwest Area. He can be reached in Las Cruces at (575) 532-2100 or Jeremy.lane@state.nm.us.*



Jeremy Lane



# Seasonal rains helped wildlife, hunters

By Clint Henson

Hunting season is nearly finished already, too soon for most of us.

In 2014, the news was good for hunters. Northeastern New Mexico was green from a steady supply of rain since June, and we are in better shape than in recent years.

All big-game hunts were good to excellent, but hunters had to do some hiking. It is common in New Mexico to hunt the water holes, but with last year's abundance of water, the game was more dispersed. Deer and elk herds have remained stable to increasing, so they are out there. Better nutrition also meant larger antler growth and better body condition.

Bear and lion populations seem to be on the increase, even though there have been fewer depredation complaints in Raton, Las Vegas and Taos. This drop in complaints can be contributed to more rain and more available wild food sources. Acorn mast surveys showed an increase in available forage for bears last fall. Remember that bear and lion licenses must be purchased two days before you begin your hunt. Make sure you also call the Bear and Lion Hotline each day to verify that the zone you plan to hunt is still open.

Fall turkey season also was good, with a better than average hatch of chicks. The hard part in northeastern New Mexico is getting written permission on private land or legally



Photo: Dan Williams

## Populations of canvasbacks, above, and other ducks and geese were up in 2014, according to the U.S. Fish and Wildlife Service.

accessing the state land. State land maps are available on the State Land Office website. Make sure you have written permission to hunt on private property.

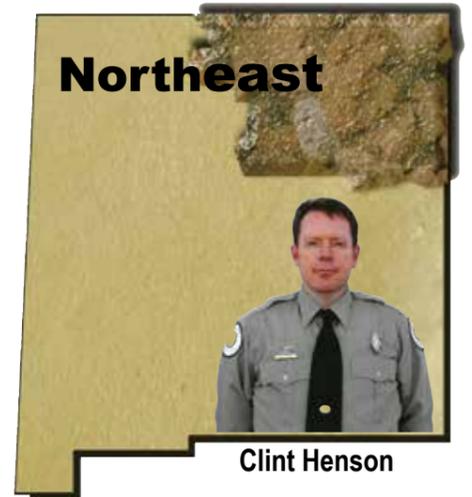
If you didn't have any luck in the draw, there are other opportunities to go hunting. You can try for Barbary sheep. There are still rumors of big sheep in the Canadian River drainage. These licenses are available over the counter and are good year-round so you can get in some great hunting when it is convenient and the weather is good.

Feral hogs are always in season and no license is required. There was an unconfirmed report of feral hogs in

Game Management Unit 52 near Tres Piedras. We need hunters to keep pressure on them. Again, it is another opportunity to get out and hunt when it is convenient for you.

Upland game species such as quail, dove and pheasant populations are still low in northeastern New Mexico from past drought years. However, migratory bird populations, such as ducks and geese, are generally up.

Each year, the U.S. Fish and Wildlife Service, in cooperation with the Canadian Wildlife Service, surveys more than 1 million square miles to estimate migratory bird habitat condition and populations. In 2014, habitat conditions were similar



Clint Henson

or better to 2013 and population estimates for ducks and geese were an all-time high at 49.2 million. That's a population increase of 8 percent over 2013 estimates. More information is available at [www.flyways.us](http://www.flyways.us).

Please contact the Department of Game and Fish if you have any questions about hunt areas or regulations. Remember that it is your responsibility to know, and follow, New Mexico's hunting laws and regulations. The most common violations are hunters shooting from a road or vehicle and hunting outside of the allowable hunt area.

Remember that hunting is a privilege and there is no guarantee that you will be successful. Be safe and be smart.

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# Southeastern hunters enjoy improved quail season

By Mark Madsen

Things are looking better for upland game-bird hunting in southeastern New Mexico, especially for dove and quail. Many areas had above-average rainfall during the monsoon season, improving habitat conditions and resulting in increased bird populations. Overall the dove-hunting forecast is good and the quail forecast fair, much improved over past years.

Mourning and white-winged dove hunting was be good with ample water being available along with a good sunflower crop in many areas. The South Zone late season (Dec. 5-31) was good, with doves concentrated in patches of sunflowers throughout the sand country east of Roswell, Hagerman, and Carlsbad. Doves usually are found in sunflower patches, feeding on ripening and drying seeds.

Changes have been made to address the growing populations of Eurasian-collared doves. The State Game Commission has approved a yearlong season for collared dove with no daily bag limits or possession limits. The commission also legalized the use of pellet guns for taking grouse, squirrels, and collared doves.

With most of the collared dove being found in close proximity to urban areas, hunters need to be aware that in most cities or towns the use of pellet guns within the city or town limits is unlawful. Be sure to check



Photo: Dan Williams

## Scaled quail are one of three species of quail found in southeastern New Mexico.

local ordinances before pursuing collared doves in urban areas.

The fall forecast for quail was better than the last couple of years. Some department officers reported seeing a couple of hatches in their respective districts.

"I don't think I have ever seen as many quail on such a consistent basis as I have this year, scaled and bobwhites," Clovis District Officer Clay Moyers said.

Keep in mind that most of the property in Roosevelt and Curry counties is private, so hunters must have written permission to hunt. Those hunters willing to find legally accessible state land usually find some good action. Quail hunters also should be able to find some birds on the Department's prairie chicken management areas near Milnesand south of Portales. Hunters hunting on the prairie chicken management areas must use nontoxic shot.

Similar quail hunting success was reported throughout southeastern New Mexico, including several hatches and a healthy quail population around Roswell. Hunters also should concentrate their efforts on public lands throughout Eddy and Lea counties. Hunters found a lot of young-of-the-year birds in their daily bags.

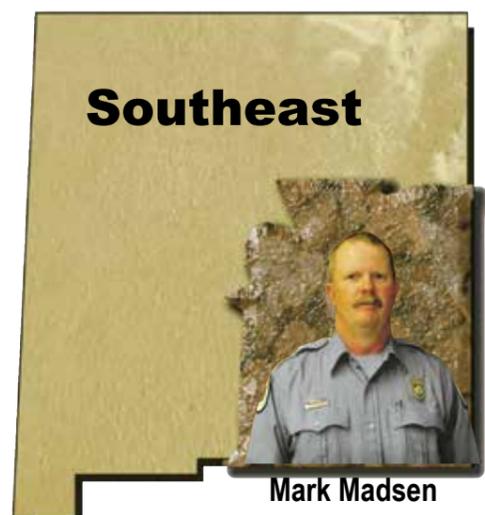
Bobwhite quail opportunities can be found mainly along the eastern side of the state from Clovis south to Hobbs. A few bobwhites also have been reported in Mescalero Sands east of Hagerman. Scaled or blue quail can be found scattered throughout the southeast, with a few Gamble's being found in the Tularosa Basin. For the more adventurous hunter, Mearn's or Montezuma quail can be found throughout the pinon-juniper, oak brush country in the Capitan, Sacramento and Guadalupe Mountains.

The hunting forecast for pheasants

does not look very promising. Most people are reporting fewer and fewer birds every year. Historically, the better pheasant hunting occurred in the Clovis-Portales area on private property. Public-land pheasant hunting is limited in southeastern New Mexico.

For more information about upland game-bird and migratory bird hunting in New Mexico, check out the "Hunting Rules and Information" booklet and the "Migratory Game-Bird Hunting Supplement." Both are available online at [www.wildlife.state.nm.us](http://www.wildlife.state.nm.us).

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Mark Madsen



# Bighorns

Continued from Page 1 . . .

Bighorn sheep biologist Eric Rominger said the department needed another place to transplant Rocky Mountain bighorns, which thanks to ongoing restoration efforts have begun outgrowing their habitat in the high, rugged terrain of the Sangre de Cristo Mountains. The new residents of Cochiti Canyon were trapped in the Wheeler Peak Wilderness.

“Fortunately we have the ability to translocate sheep out of the alpine tundra in the Pecos and Wheeler wilderness country, where populations are above carrying capacity,” Rominger said. “The Jemez country opening up presented a good opportunity because we were basically out of places to put Rockies.” He said he envisions 400 to 500 bighorns eventually inhabiting the fire-cleared habitat in Bandelier National Monument, White Rock and Cochiti canyons.



Photo: Nicole Quintana

**Lured by food and salt, Rocky Mountain bighorn sheep walk under the trap net in the Wheeler Peak Wilderness.**

That’s good news to Cochiti Pueblo’s Blue-sky, who along with members of Zia and Santa Clara pueblos watched the Cochiti Mesa release in November. Before that, he said the pueblos had been focusing on restoring pronghorns and wild turkeys to the area.

“Bighorn sheep weren’t on our radar at that time,” Blue-sky said. “Then one day while walking up a canyon I came across a petroglyph, and there was no question – it was a perfect bighorn sheep.”

With support from the pueblos and the U.S. Forest Service, the Department of Game and Fish was able to bring bighorns back to their native habitat. Within weeks of their release, many of the bighorns that were fitted with GPS collars had wandered as far as Bandelier National Monument, Los Alamos, Zia Pueblo and the outer edge of Espanola.

“They went on sort of a post-release foray,” Rominger said. “Our big concern at the time was disease – them catching something by running into domestic sheep or goats.” One infected bighorn can pass along deadly diseases such as pneumonia to an entire herd, sometimes wiping it out.

Fortunately, only one bighorn came into contact with a domestic goat and was removed before it could infect others. The remaining 44 were reportedly still thriving, having returned to within miles of the original release site.

The new Jemez herd is part of a statewide Rocky Mountain population of about 1,000

in 10 mountain ranges and reflects the department’s successful restoration program that began in 1932. Because of that success, the department was able to offer 17 hunting licenses for Rocky Mountain bighorn rams and 24 licenses for ewes in the 2015-16 draw.

Also in November, the department captured and released 66 desert bighorns into the Big Hatchet Mountains in southwestern New Mexico, completing one of the largest bighorn transplants into a single mountain range.

The transplant of 38 rams and 28 ewes increased the bighorn herd in the Big Hatchets to about 117 and significantly improved the herd’s future expansion.

The three-day capture and transplant operation began in the Fra Cristobal Mountains, where 40 desert bighorns were captured and moved. It concluded when 27 bighorns were captured in the Red Rock Wildlife Area and later released in the Big Hatchets. Only one bighorn died during the operation, reflecting the department’s continued success in keeping capture-transplant mortalities extremely low for these types of events.

The department’s desert bighorn restoration program has increased the statewide herd from 170 in 2001 to about 1,000 today in six mountain ranges. The species was removed from the state endangered list in 2011. This year, the department will offer 21 public desert bighorn hunting licenses in the big-game draw.



Photo: Nicole Quintana

**Wildlife biologist Stewart Liley signals the helicopter pilot to lift a cargo of Rocky Mountain Sheep and transport them from near Wheeler Peak to waiting veterinarians and trailers at Taos Ski Valley.**

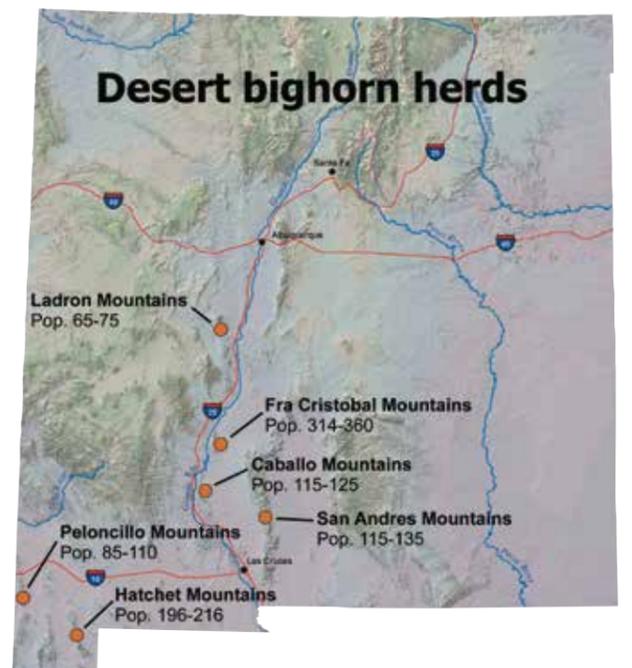
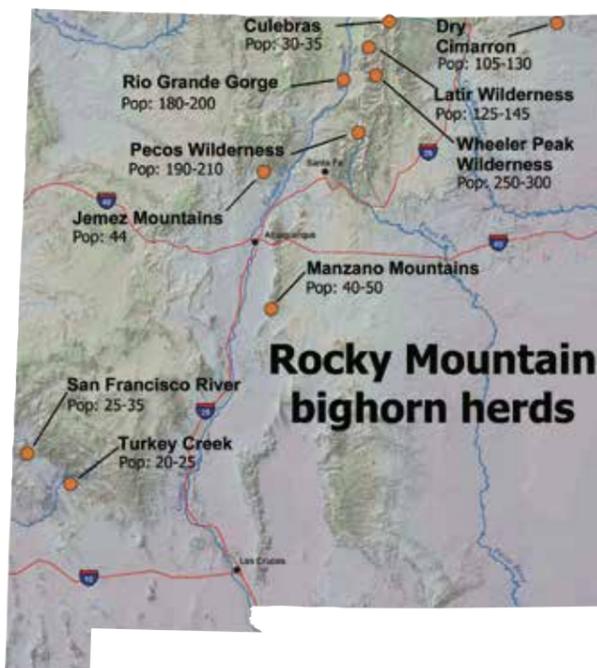




Photo: Clint Henson

The Department of Game and Fish uses an improved version of a wing trap invented in 1937 by department wildlife biologist T. Paul Russell.

# Relocations key to pronghorns' recovery

## Animals, landowners benefit from department's capture-release operations

By Dan Williams

**A**bout 125 pronghorns have new homes and landowners in northeastern New Mexico have fewer threats to their crops following a successful capture-relocation operation by the Department of Game and Fish.

The pronghorns captured Jan. 12-15 on the UU-Bar Ranch near Cimarron were released on U.S. Bureau of Land Management properties northwest of Roswell and east of Truth or Consequences. Fifteen pronghorn does also were released near Fort Stanton, where graduate students will monitor them and their fawns.

The operation was the fifth of its kind since 2009, when the department resumed pronghorn trapping after an 11-year hiatus. Before that, traps were fairly common as the agency continued its efforts to relocate pronghorns and build the statewide population. Using an improved version of a wing trap invented in 1937 by department wildlife biologist T. Paul Russell, the agency gradually helped bring statewide pronghorn populations from a low of 1,740 reported by Aldo Leopold in 1916 to around 40,000 today.

While the expanded pronghorn population has been good for the native species and hunters, it has caused problems for some landowners when too many hungry pronghorns compete with agricultural operations. Using traps, the department has been successful easing stress on crops while relocating pronghorns to less populated areas. Captured pronghorns also have been traded to neighboring states for desert bighorn sheep and Gould's turkeys to bolster New Mexico's populations of those species.

"These pronghorn traps and the skilled biologists and staff who build and operate them are among our department's biggest successes," Department Director Alexandra Sandoval said. "Their hard work, with help from our landowner partners, is keeping our state's pronghorn population healthy for hunters and everyone who enjoys native wildlife."

Elizabeth Thomas, a neighbor of the UU-Bar Ranch, said she was impressed by this month's trap when she stopped by to observe.

"It was something I don't believe I will ever forget," Thomas said. "The coordination, camaraderie, preparedness, communication and gut-wrenching hard work were truly incredible. Most inspiring



**To capture pronghorns, the department uses a helicopter to herd the animals into a mile-long wing trap. When the pronghorns approach the end of the trap, department staff fall in behind, forcing the animals into a corral where a 10-foot tall gate is closed behind them.**

Photos: Don MacCarter, above; Dan Williams, left.

was everyone's effort to protect the animals and each other."

Only one pronghorn died during the operation, a remarkable feat considering the animals' extreme sensitivity to stress and heat.

The mile-long wing trap is a simple V-shaped design, with fences set up along traditional antelope routes. Crews set up the trap days in advance, pounding posts and lining wire and netting with 8-foot tarps so the trapped animals can't see out or easily escape as they are driven into a small corral, first by a helicopter, then by a line of crew members who fall in behind and block the gaps. As the animals approach the corral, a hidden gate is quickly closed behind them before they realize they are in a trap.

Once they are in the corral, the pronghorns are

allowed to settle down a bit before they are forced into a padded, darkened chute, where two crew members catch and carry the animals to waiting veterinarians. To help keep them calm once they are caught, the animals' hooves are not allowed to touch the ground until they are released into the trailers.

Veterinarians were on hand during the capture to help the pronghorns survive their journey. Before they were loaded in trailers, each pronghorn had its horns clipped for safety and was given shots to fend off parasites and infection. They also received vitamin supplements, ear tags and a tranquilizer for the road. Some were fitted with radio collars so they could be tracked in their new habitats.

"All involved spoke in hushed tones, seemingly out of respect for the animals they were tenderly working with and trying valiantly to calm," Thomas said. "My hats and gloves are off to them."





Motion camera photos

Drinkers constructed in remote areas by the State Land Office, Department of Game and Fish and BLM attract a myriad of wildlife species.

# Agencies work to help thirsty wildlife

## Rainwater catchments help slake wild thirsts during stressful droughts

By Marti Niman

Monsoon rains brought much relief to the desert southwest last summer, tinting the usual brown landscape a pale sage-green. The moisture has helped all residents, especially the wildlife that often struggle to find water in the remote reaches where they live.

Many animals, especially reptiles, can get much of their moisture requirements from plants. Many other animals require fresh water and will search miles if their usual water holes have evaporated into the blistering heat. That's why many land management agencies, including the State Land Office, the Department of Game and Fish and the U.S. Bureau of Land Management (BLM) try to help wildlife through difficult times by placing rainwater catchments, or drinkers, in remote areas. Often these drinkers target one or two species but also serve all of the area's thirsty animals.

"The first drinkers we did on trust land were with Quail Unlimited in the southeast portion of the state," former State Land Commissioner Ray Powell said. "We have had help from sportsmen's groups and other agencies installing drinkers on trust lands throughout the state."

Portions of the Bootheel region on state trust land are prime habitat for desert bighorn sheep, said Diego Villalba, Silver City district resource manager. The State Land Office in cooperation with the BLM upgraded a bighorn drinker in that area about 15 years ago. There are drinkers on BLM land in the area as well, and the two agencies often work together to maintain them.

It's a full-day trek in and out of some of the most inhospitable, but spectacular, desert terrain. Steep, gravelly rock slopes dotted with spiky cacti and Spanish dagger are more suited to deer and mule hooves than human feet.

The drinkers are large, inverted umbrellas called guzzlers that catch rainwater and dew, piping the collected water into a tank for drinking. The drinker tank operates much like a standard toilet tank. "The guzzler holds 6,000 gallons of water and spans 16 feet," said Willie Lucero, Socorro district resource manager. "There's a float in the drinker that's attached to a valve at the bottom. As the water rises, the float closes the valve and as animals drink, it fills up again."

The guzzler is made of Fiberglas wedges that are sealed together at the seams with resin, with the pipe running along a seam to add stability and help anchor it to the ground. Often the guzzler parts may be trucked in, but some remote or wilderness areas require a lift by helicopter.

In the West Potrillo Wilderness Study Area, now part of the Organ Mountains-Desert Peaks National



Motion camera photos

Cougars and their prey, desert bighorn sheep, often share the same artificial water sources in the Bootheel region of southwestern New Mexico.



Monument, a drinker was installed in December 2013 as a collaborative project between the Department of Game and Fish and the State Land Office.

Three drinkers are on Luera Peak southwest of Socorro, where maintenance has proved a challenge due to high winds and bears.

"Bears can play in the water all day. I have had bears get inside the tank and bite the float off, then all the water goes out and there's nothing left," Lucero said. "That water is supposed to last them all summer. Once it runs out of water, they can smell wet water in the tank and pipes and will do everything to get at it."

The southern part of the state is not the only region

for drinkers. North of Tres Piedras, a thinning project last summer on trust land alerted the Field Operations Division staff to a drinker opportunity.

"We identified it as really good elk and deer habitat, but there's no water source up there," said Jason Lithgow, Santa Fe district resource manager. They found a wooded area next to a big field, where they could hide the guzzler but put the drinker tank in the open.

"You don't want to put the drinker in a place with a lot of trees where it will just be a mountain lion buffet," Lithgow said. So the staff used a concrete pad and storage tank buried four feet deep.

"Tres Piedras is one of the coldest places in the state, so the pipes are all buried as well," he said. "We put in a couple of drains to empty the drinker in the fall and keep the rest in the guzzler for spring. When we turned it back on this year, a dog showed up out of nowhere and drank for about 10 minutes!"

Land Office staff worked with local rainwater catchment specialist Charlie Myers to design the drinker in Tres Piedras, and so far it has not had the same bear problems that Lucero has in Luera Peak.

*Marti Niman, former editor of "New Mexico Wildlife," retired in December 2014 as public information officer for the State Land Office.*





# Dear Smokey,

## Now that you're 70, please . . . Don't do wildlife many more favors

In 1944, fueled by fears that World War II bombing might spark horrendous forest fires, a group of advertising wizards gave birth to what would become the most successful ad campaign ever: Smokey Bear. Eight years later, New Mexico contributed to the campaign by providing the perfect mascot, a burned, orphaned bear cub rescued from a forest fire.

Soon, Smokey's message had become a mantra. "Only you can prevent forest fires," was on signs, on television and in comic books. All forest fires were vigorously fought. No one dared to suggest that some fires might benefit the forest or the wildlife. A "prescribed burn" was unthinkable.

Forestry and firefighting have come a long way since then, as scientists and conservationists have recognized the value of some fires and toned down Smokey's message. Ladd S. Gordon, director of the New Mexico Department of Game and Fish from 1963-1975, was one of the pioneers in those efforts. His message, published in "New Mexico Wildlife" and controversial at the time, eventually was embraced by conservationists concerned with forest health and wildlife.

We thought that message was appropriate to repeat now that Smokey is 70.

## Department director urged Smokey to recognize 'good' fires

By Ladd S. Gordon, 1970

**W**e think it is time for those of us in the game and fish business to take a good hard look at the bare facts surrounding the symbolism portrayed by Smokey Bear.

We think, here in the State of New Mexico, and, particularly in the Department of Game and Fish, we have more reason than most in feeling free to take a critical look at the relationship between the Smokey Bear program and wildlife management. After all, the real live Smokey is a New Mexico product and owes his life to personnel of this Department who rescued him in a badly-burned condition during a forest fire on Capitan Mountain some 18 years ago.

Contrary to the belief supported by tens of millions of Americans, Smokey Bear is not necessarily synonymous with all that is good in conservation, though we will all readily admit there is much good to be said about his teachings. Smokey certainly has played a major role in conditioning the minds of a vast majority of younger Americans, as well as a few of the rest of us, toward a deeper awareness and respect for conservation of our natural resources.

We feel, however, that he has overplayed his part in the role of a fire fighter.

Smokey has played his role so well and with such deep-seated conviction that he can be blamed for declines in wild animal populations, particularly big game, throughout the western United States. It is obvious to those of us involved in wildlife administration that Smokey's glowing success in the fire prevention campaign has changed the ecology of forested lands and this change is far from favorable for many game species.

Obviously, there are many other factors interwoven into this complex picture, but we strongly feel that highly efficient fire prevention and control measures over the past several years, aided and abetted by Smokey Bear, have played a major part in removing favorable game habitat conditions throughout much of the country.

Many Americans have learned the Smokey Bear fire-prevention story too well and our outspoken thoughts probably will alienate . . . temporarily we hope . . . many individuals who question how we, as conservationists, make such rash statements.



**Ladd S. Gordon, Director, New Mexico Department of Game and Fish, 1963-1975**

This typifies the problem that faces many professionals today. We recognize that old Smokey has sold his program better than we have been able to do and we fear public reaction in trying to expose him for the damage he has done and is continuing to do. However, it is time for us to get our heads out of the sand and to recognize our responsibilities to the sportsmen and to start taking positive steps to correct the Smokey Bear illusion that all forest fires are bad.

This will not be a popular or an easy job for us to carry out, but all the facts and evidence are on our side. At this point, I, perhaps, should say again that I am not suggesting "Smokey Bearism" is all wrong. None of us are advocating any change in attitude toward public carelessness with fire, nor do we favor wild, uncontrolled fires in any form, even though we undoubtedly realize some distinct wildlife benefits from large forest fires, such as we had prior to the Smokey Bear era. We recognize that such uncontrolled burning is not in the best overall public interest.

Our big problem lies in the fact that Smokey has done his job so well that we find it exceedingly difficult to gain acceptance of the idea of using controlled burning where it is badly needed to create wildlife habitat. There are many areas in

forested lands throughout New Mexico and other Western States where properly controlled burning and less active control applied to accidental man-caused or lightning fires, during certain periods of the year, would significantly enhance wildlife conditions.

Most game animals prefer areas that have openings interspersed with forested areas, places where there is an adequate food supply, but which have nearby escape cover as well. Ecologists call this a sub-climax or dis-climax. Fire, if properly used, can be the quickest and most effective way to provide this desirable habitat condition.

Without some form of interruption in the ecological process, the "climax" forest, consisting of large, heavily forested areas, develops and is undesirable as far as game habitat is concerned.

Most foresters also recognize the need for burning, under proper conditions, to bring our forests back to their former productive state.

Fire, as a beneficial game management tool, is certainly no new or novel idea and some good work has already been done on national forests and on other lands in some parts of the country. Here again, however, many of the people responsible for the administration and management of our forested lands are reluctant to proceed with such programs, fearing that such action will be in conflict, in the public mind, with the Smokey Bear "prevent all forest fires" philosophy.

What can the New Mexico Department of Game and Fish do to start bringing this problem into proper perspective? First, as a department, we will begin to de-emphasize our use of the typical Smokey Bear slogans. We have, for many years in cooperation with the U.S. Forest Service and other land management agencies, strongly promoted Smokey Bear anti-fire slogans in our releases, hunting and fishing proclamations and in many other ways. Second, we will take advantage of every opportunity to discuss this problem with sportsmen and others and, with the evidence and facts available to us, convince these people that our game populations can no longer afford the luxury of almost total protection from fire.

This Department can and should take the leadership in reversing and correcting this particular Smokey Bear concept. We're behind this idea and, once again, are going to stick our necks out a little for the benefit of wildlife in our state.



# Online licensing system convenient for everyone

By Chad Nelson

New Mexico Game and Fish's new web-based vendor sales system was rolled out last year, so over-the-counter customers can say goodbye to those old, familiar hand-written licenses.

"The new online system is a huge improvement over the previous system," said Licensing Supervisor Rhonda Holderman "We've been very happy with the vendors' progress in learning the new system, and we've had very few license errors since the new system was implemented."

Many New Mexico Game and Fish customers already know a bit about interacting with the department online, because all draw applications, harvest reports and secondary sales have been online-only for several years.

In the past, when you bought a license over the counter, you'd give the vendor your driver's license and they would copy the information from it onto your license by hand, check the boxes for the appropriate licenses and then take your payment. Now, vendors use the same web-based system that the department has been using for more than a year.

"The system makes the process easier for vendors in a variety of ways, and makes buying a license much easier for New Mexico's hunters and anglers as well," Holderman said.

The online system requires each customer to have an account in the department's Online License System. The system works very well for the vast majority of transactions, but vendors must be able to locate the customer's account in the system.

Of course, the easiest way to buy a license is to do it using your own computer and printer, or by calling (888) 248-6866 from 8 a.m. to 5 p.m. weekdays. For those who choose to buy a license from a vendor, here are answers to a few frequently asked questions to help customers and vendors navigate the new system:

**Q: Can I still buy a license from a license vendor?**

**A:** Vendors can still sell licenses, but instead of writing them by hand, they now use an online system and print a standardized license. A list of

license vendors is available on the department website, [www.wildlife.state.nm.us](http://www.wildlife.state.nm.us).

**Q: The vendor can't find my account in the system.**

**A:** Most vendors use a driver's license scanner, which in most cases brings up the customer's account immediately. Problems can arise if the customer's account isn't registered, or if they have more than one account set up in their name. In most cases, if the vendor searches for the customer by their last name and the last four digits of their Social Security number, they'll find the customer in the system and can either register the account or sell the license. If that doesn't work, the vendor or the customer can call the department's Information Center at (888) 248-6866 for immediate assistance from 8 a.m. to 5 p.m., Monday through Friday.

**Q: The vendor says I already have an account, but I never created one.**

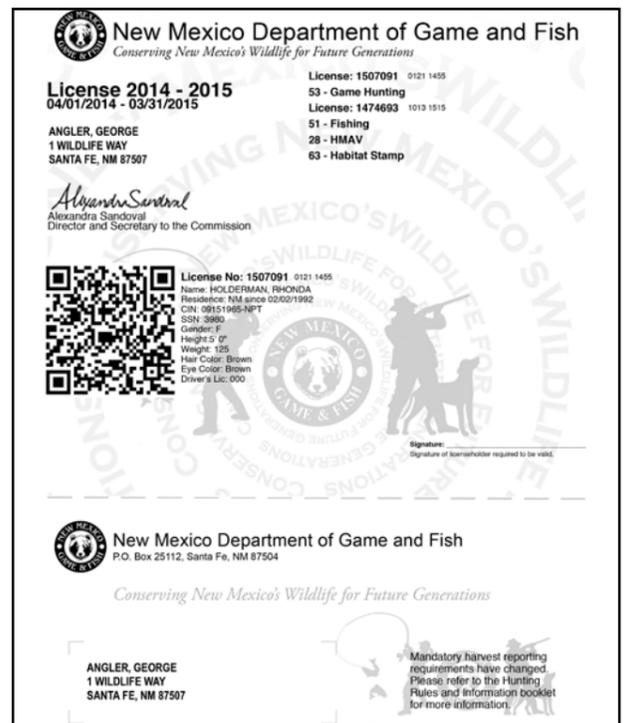
**A:** The system uses data that has been entered in the past from hand-written licenses, so a customer may have an account without realizing it, or they could have more than one account. If they only have one account, the vendor should be able to locate it by searching the last name and the last four digits of the Social Security number. If a customer has multiple accounts, they'll need to contact the department Information Center.

**Q: The vendor says duplicate accounts match my information.**

**A:** Vendors or customers can contact the department Information Center to have duplicate accounts merged. This is relatively common due to misspellings or slight differences in the date of birth or Social Security numbers entered, and can be easily taken care of during normal business hours.

**Q: The vendor says I have to file a harvest report before they'll sell me a license.**

**A:** The online system generates a popup if the customer has not completed their mandatory harvest report for big game, turkey or trapping from the previous year. Sometimes this is bit confusing for vendors, but they can still sell the license. The customer should be directed to contact the Information Center to submit the harvest report and pay the late fee if required, or submit the report online.



**New Mexico's fishing and hunting licenses have a new look since all license sales became online-only. Now, licenses can be purchased and produced from computers and printers at home or at license vendors.**

**Q: What if I lose my license?**

**A:** You can simply print another one. Any license purchased from a vendor, online or allocated through the draw can be accessed from the customer's account in the Online License System by logging into their account and clicking "My Purchases" in the main menu. Look for a "Print License" link under General License Purchases.

**Q: The vendor says I need a Habitat Stamp or a Habitat Management and Access Validation.**

**A:** It is the customer's responsibility to know the license requirements for the area they're fishing, hunting or trapping. Anglers 18 to 69 and hunters and trappers 18 and older must have a Habitat Management and Access Validation in addition to their license. Anglers 12 to 69, trappers 12 and older, and all hunters must have a Habitat Stamp in addition to their license for these activities on U.S. Forest Service or BLM lands. Disabled American Veteran (DAV) card holders are exempt from the stamp requirements if fishing or hunting small game, waterfowl or deer, but they still need the appropriate stamps if they're hunting any other species or trapping.

*Chad Nelson is the Information Center supervisor for the Department of Game and Fish. He can be reached in Santa Fe at (505) 476-2558 or [chad.nelson@state.nm.us](mailto:chad.nelson@state.nm.us).*

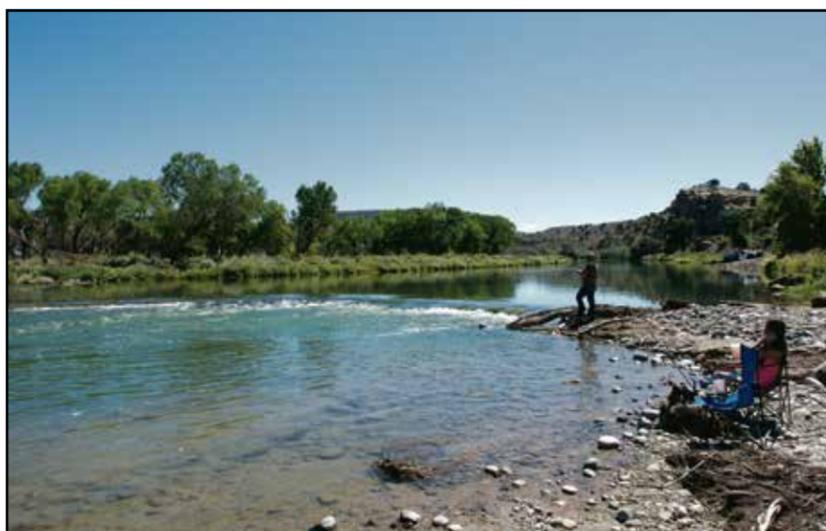
## Anglers, hunters get more access to San Juan River

Anglers who enjoy New Mexico's world-class trout waters of the San Juan River now have another mile of prime fishing with the recent habitat restoration and dedication of the Hammond Tract Wildlife Management Area.

New Mexico Gov. Susana Martinez and members of the State Game Commission joined representatives of partner agencies, conservation groups and area businesses Aug. 29 to officially dedicate the 80-acre area. New Mexico Sportsmen for Fish and Wildlife, WPX Energy, ConocoPhillips, the San Juan Soil and Water Conservation District, New Mexico Forestry and the Department of Game and Fish spent \$550,000 to complete the project.

"The Hammond Tract restoration is a great example of how public and private groups can come together to create something that future generations of anglers and hunters can enjoy," Gov. Martinez said. "These types of projects make New Mexicans proud."

Improvements to the Hammond Tract include enhanced trout habitat, a new waterfowl pond accessible to hunters, a concrete boat ramp and



**A partnership between the New Mexico Department of Game and Fish, other government agencies, conservation groups and private enterprise restored a prime fishing and hunting area along the San Juan River.**

Photo: Dan Williams

new restrooms. Non-native plants throughout the area were removed and replaced by native riparian vegetation.

"This project is the latest of several habitat restorations and stream improvements we've accomplished on the San Juan River," Department Director Alexandra Sandoval said. "And with the

help of our private and public partners, we hope to accomplish even more."

Visitors can find the Hammond Tract Wildlife Area off N.M. 511 two miles upstream from Blanco and 14 miles downstream from Navajo Dam.

For more information, please call (888) 248-6866.



# Year of the Salamander showcases rare amphibians

Continued from Page 12 . . .

species to suffer from air or water pollution.

New Mexico's other two salamander species do not have lungs. They breathe through mucous membranes in their mouth and throat and through their skin. These two salamander species spend their entire lives on land, and they are known to live in only two places.

The Jemez Mountains salamander (*Plethodon neomexicanus*), is found only in the Jemez Mountains. The Sacramento Mountains salamander (*Aneides hardii*), is found only in the Capitan, White and Sacramento Mountains of Lincoln County.

When animals have such a limited home range with habitat problems, they are in need of protection, and federal and state wildlife agencies can list the species as either threatened or endangered.

The State of New Mexico and the U.S. Fish



Photos: Mark Watson, above; Jim Stuart, right

**Frehley is a border collie specially trained to sniff out small salamanders under rocks and decaying logs.**



salamanders are able to survive by burrowing deep enough into the ground, where temperatures are cooler in summer and warmer in winter than surface temperatures.

and Wildlife Service list the Jemez Mountains salamander as endangered. The state lists the Sacramento Mountains salamander as threatened.

Coming to the rescue and helping biologists sniff out and locate these threatened and endangered salamanders is "man's best friend," the dog.

The Conservation Canines Program from the University of Washington trains high-energy dogs to sniff out rare and hard-to-find animals. These dogs are motivated by a reward of playing catch with a ball if they find the right animal. Most of the dogs are rescued from animal shelters.

Ten-year-old Sampson, a Labrador retriever, made news in New Mexico when he helped biologists from the Department of Game and Fish, U.S. Fish and Wildlife Service, U.S. Forest Service and The Nature Conservancy search for Sacramento Mountains salamanders along the paved road leading to Ruidoso's Ski Apache. The road will be widened next spring and guardrails will be added to improve safety for drivers.

"Sampson helped biologists to find 24 Sacramento Mountain salamanders that would have been impacted by the road construction," Watson said. All salamanders found that day were relocated to habitat nearby."

Frehley, a Border collie from Conservation Canines, and Sampson have been able to find the endangered Jemez Mountains salamander under rocks and decaying logs.

These special dogs are helping conservationists find salamanders in habitats not surveyed, or looked at, before.

The Douglas fir forest in the Jemez Mountains is considered critical for the endangered salamanders because large fires damaged their homes under rocks, logs and tree roots. The

## Awesome wildlife words

- **Species:** A group of animals or plants with common or shared characteristics.
- **Amphibian:** Animal that typically lives in an aquatic habitat when young and lives mostly on land as an adult, breathing with lungs and through moist glandular skin.
- **Reptile:** A cold-blooded type of animal that includes snakes, lizards, crocodiles, turtles and tortoises. They have dry, scaly skin.
- **Conservation:** The use of natural resources in a way that promotes their continuing availability for future generations; the wise and intelligent use or protection of natural resources.
- **Aquatic larval stage:** To the life cycle of an amphibian in which the larva grows in a water habitat and later emerges or leaves to live as a terrestrial, land-based animal.
- **Breeding season:** The time when animals produce young.
- **Permeable:** A substance that allows another material to move through it, such as water through a sponge.
- **Mucous membranes:** Slimy soft body tissues that connect with external air, sometimes helping with breathing.
- **Endangered species:** A type of animal in grave danger of being able to survive.
- **Threatened species:** A type of animal that could become endangered without careful conservation.
- **Ectothermic:** A type of animal whose body temperature is controlled by its environment.

Colleen Welch is co-coordinator for conservation education for the Department of Game and Fish. She can be contacted at (505) 476-8119 or [colleen.welch@state.nm.us](mailto:colleen.welch@state.nm.us).

## Hybridization, habitat loss, drought threaten Arizona toad

By Leland Pierce

The New Mexico Department of Game and Fish is funding research into the status of a species of toad found in southwestern New Mexico.

Researchers from the University of New Mexico have conducted surveys for the Arizona toad, *Anaxyrus microscaphus*, for the past two years. The toad is only found in the southwestern United States, mostly in Arizona as well as the extreme southeastern corner of Nevada and extreme southwestern corner of Utah.

In New Mexico, the species is known from Catron, Grant, Hidalgo, Luna, Socorro, and Sierra Counties. It favors flowing streams and many of its known populations are disjunct, or separated, from other populations.

In 2013, the researchers specifically looked for signs of hybridization with a closely related and



Photo: Jim Stuart

more common species, Woodhouse's toad, *Anaxyrus woodhousii*. Hybridization between the two species has been reported in Arizona and is a conservation concern for the Arizona toad.

While no hybridization was indicated, the results of the New Mexico surveys were worrisome: The species was detected at fewer than 20 percent of the known localities sampled. Based on those surveys, the department contracted with the researchers to continue surveying for the toad.

Along with loss of genetic diversity due to hybridization, the Arizona toad suffers from drought and loss of habitat due to severe wildfires and development.

The researchers visited historic sites as well as potential new sites starting in March, when Arizona toads begin to breed. Preliminary results indicated the Arizona toad has been found at more than 30 percent of the sites sampled, breeding in many instances. While better than the previous year's study, the low percentage was a concern.

The Arizona toad is not listed by the State of New Mexico as threatened or endangered, but is considered a Species of Greatest Conservation Need under the 2006 Comprehensive Wildlife Conservation Strategy for New Mexico ([http://wildlife.state.nm.us/conservation/comp\\_wildlife\\_cons\\_strategy/index.htm](http://wildlife.state.nm.us/conservation/comp_wildlife_cons_strategy/index.htm)). In addition, the U.S. Fish and Wildlife Service has been petitioned to review the status of the species.

Leland Pierce is terrestrial species recovery coordinator for the Department of Game and Fish. He can be reached at (505) 476-8094 or [leland.pierce@state.nm.us](mailto:leland.pierce@state.nm.us).





# Year of the salamander

## Three species survive in dry New Mexico

By Colleen Welch

**F**or being such a dry state overall, it may seem incredible that New Mexico has 26 species of amphibians, animals that usually live in water when young and on land as adults.

Salamanders are one kind of amphibian you might be surprised to find in a dry state. Last year, the conservation group Partners in Amphibian and Reptile Conservation, named 2014 as its Year of the Salamander.

What is a salamander? According to the group, "Salamanders are amphibians. They live in moist places and have smooth, damp skin that helps them to breathe. If you find a salamander, that's good news! It means the environment is clean and healthy. Salamanders also keep bugs like mosquitoes and beetles in check and in turn serve as food for animals like owls, turtles, songbirds, and bears. Not to mention, they add color and wonder to our world! Happy Year of the Salamander!"

New Mexico has two families of salamanders. Within these families, there are three species, and two of those are found only in New Mexico. In general, salamanders are found throughout most of the Americas including parts of Canada, Mexico and the United States. North Carolina, one of the wettest places in the country, is home to 60 species of salamanders.

"It is important to conserve New Mexico's three salamander species because two of those species occur no where else in the world, and all three species eat and help control insects while themselves providing food for other



Photo: Jim Stuart

**The tiger salamander is the most common of New Mexico's three salamander species.**

wildlife that prey on them," said Mark Watson. He is a habitat specialist with the Department of Game and Fish and a member of the multi-agency New Mexico salamander conservation team.

Tiger salamanders are the best-known of the state's salamanders. *Ambystoma tigrinum* (their scientific name), are found statewide where there is good habitat. An animal's habitat is the place where it finds all the food, water, shelter and cover that it needs.

The aquatic larval stage of tiger salamanders frequently are seen in ponds and cattle tanks. Sometimes they are called mudpuppies or waterdogs. The adult stage is terrestrial (land-dwelling) and remains underground except during breeding season in early spring or during wet or rainy weather, when they can be found near ponds and clear lakes. Tiger salamanders require clean, unpolluted water. Because their skin and eggs are permeable (like a sponge), they often are one of the first

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Photos: Mark Watson

**Endangered Jemez Mountains salamanders are marked with special dye to help biologists locate and better understand the species.**

