

CONSERVING WILDLIFE (and Culture) on the Flathead Indian Reservation

The Confederated Salish and Kootenai Tribes use the latest science to successfully manage grizzlies, deer, swans, falcons, and other species in harmony with traditional values. **BY DARYL GADBOW**

WILDLIFE CULTURE A juvenile red-tailed hawk looks for prey in a meadow, part of an ambitious 11,000-acre wetlands-complex restoration project on the Flathead Indian Reservation. Another major tribal wildlife project is the recent installation of 43 passageways (right) along 56 miles of newly reconstructed U.S. Highway 93. The above-ground and underground tunnels reduce vehicle collisions with wildlife and restore habitat connectivity broken by the motorway.



stretch through the Flathead Indian Reservation, wildlife began making the perilous crossing often unseen by the stream of passing motorists. Thanks to a cooperative effort between the Confederated Salish and Kootenai Tribes (CSKT) and state and federal highway agencies, new wildlife passageways make the motorway permeable to animal movement while reducing both traffic accidents and the likelihood of wildlife becoming roadkill.

Much credit for the passageways project goes to the CSKT's Tribal Wildlife Management Program. This little-known unit of the Tribes' Division of Fish, Wildlife, Recreation & Conservation is responsible for conserving wildlife on the 1.34 million-acre reservation, an area larger than Delaware. The staff of seven biologists, four wildlife technicians, a habitat restoration ecologist, and program manager Dale Becker work on everything from game species such as pheasants to federally protected animals like grizzly bears. That wildlife diversity comes from a varied natural environment ranging from high-elevation alpine terrain in the Mission Mountains to wetlands complexes and sagebrush grasslands in the Flathead Valley. "The reservation has an incredible mix of wildlife species," Becker says, "and that creates an incredible mix of wildlife and habitat issues."

A GOOD FIT

Becker says wildlife has always been an integral aspect of tribal culture, which guides and

For decades, wildlife species ranging from moose to mice have tried to cross busy U.S. Highway 93 in western Montana. Usually they made it through the stream of trucks and cars, but too often they didn't, resulting in injured and dead deer, bears, bobcats, and other species. Then there was the hazard to motorists. On some stretches, nighttime drivers faced a gauntlet of wild critters, the animals' eyes glittering in frozen reflection as speeding vehicles swerved past.

Today the highway is safer for both people and wildlife. Beginning in 2006 on a newly reconstructed 56-mile



KEVIN R. FREDENBERG

STEVE MITCHELL

directs the reservation's wildlife management program. His team meets regularly with the Tribal Council, culture committees, and tribal elders to discuss projects and how they mesh with the Tribes' overall goals. Becker says tribal leaders have asked him and his staff to maintain viable and stable wildlife populations, restore habitat, and conserve all species, especially indigenous ones. "Those cultural goals make a good fit with biologists' overriding philosophy that all species are important parts of the environment," he says.

The tribal wildlife program works closely with state agencies including Montana Fish, Wildlife & Parks. "It's rare when the Tribes' wildlife management objectives don't mesh with ours," says Jim Williams, FWP regional wildlife manager in Kalispell. One joint project is a cooperative hunting and fishing agreement between FWP and the Tribes, in place since 1990, which allows hunting and fishing on the Flathead Reservation by people who are not tribal members. Another is the cooperative management by the Tribes with FWP of a shared bighorn sheep herd in the Perma-Paradise area for hunting by both tribal members and the general public.



TEAM APPROACH The Tribal Wildlife Management Program has worked with the U.S. Fish & Wildlife Service to successfully restore trumpeter swans and leopard frogs—two species that had disappeared from the Flathead Indian Reservation.

“Those (tribal) cultural goals make a good fit with biologists’ overriding philosophy that all species fit into the whole ecology.”

Becker's staff also works with the U.S. Fish & Wildlife Service (USFWS) on trumpeter swan, leopard frog, and peregrine falcon reintroductions, grizzly bear and wolf management, bison hunting by tribal members, and bat research.

One of the Tribes' most important wildlife projects helps offset damage to thousands of acres of tribal wetlands and other wildlife habitat caused when Kerr Dam was built on

Daryl Gadow is a writer in Missoula.

the Flathead River in the 1930s. Using mitigation funding the Tribes negotiated from the dam's corporate owner and the Federal Energy Regulatory Commission, the wildlife program has spearheaded the acquisition of more than 11,000 acres of wetland and riparian habitat on the reservation owned by non-tribal members. Becker says restoration of those ecologically rich habitats, many damaged by drainage, tillage, and overgrazing, is ongoing. According to Williams, the restored wetlands, combined with additional ones

recently acquired and restored by FWP and the USFWS, are creating a rich wetlands complex in the Mission Valley. "It also opens up public access to some incredible waterfowl and other hunting," he adds.

DEER UNDER THE ASPHALT

If all this activity weren't enough, Becker and his staff have also spent much of the past decade helping wildlife move unharmed from one side of U.S. Highway 93 to the other. The animals' safe passage is made possible by

43 crossing structures integrated into the highway reconstruction under an agreement—the culmination of years of negotiations starting in the 1990s—among the CSKT, the Montana Department of Transportation, and the Federal Highway Administration. Tribal wildlife biologists, along with representatives of the state and federal highway agencies, visited Banff National Park in Alberta to learn about overpass and underpass structures. They also studied underground structures used successfully in Florida and Europe.

The initial 42 underground passageways on U.S. Highway 93 were sited at spots from Polson to Evaro Hill that had significant wildlife losses. So that animals would be funneled toward the 12-foot-high culverts, fencing was installed on both sides of the highway where the passageways were built.

The underground wildlife corridors worked. On one curvy highway stretch near Ravalli notorious for deer collisions, accidents immediately and dramatically declined after passageways and fencing were installed. "That shows how the structures are enhancing safety both for wildlife and the people driving the highway," says Becker.

Motion-detecting cameras installed in the underpass crossings have documented a wide range of species. "We have tons of wildlife going through," says Whisper Camel, a wildlife biologist assigned to monitor the crossings. On one highway section north of St. Ignatius, cameras at three closely located underpass crossings documented in 2008 a combined total of 3,647 white-tailed deer, one black bear, and 110 "miscellaneous species," including bobcats, muskrats, skunks, raccoons, badgers, mice, rabbits, wood rats, weasels, pheasants, and partridges. That same year at a crossing in grassland habitat on Ravalli Hill, a camera recorded 23 black bears, one elk, 147 mule deer, 17 mountain lions or bobcats, 121 coyotes, and 145 miscellaneous animals. Even grizzly bears and otters move through the tall culverts. "Each time an animal uses the passageways, that represents a collision with a vehicle that might have otherwise occurred," Becker says.

Initially, the wildlife program staff was concerned the underground crossings would

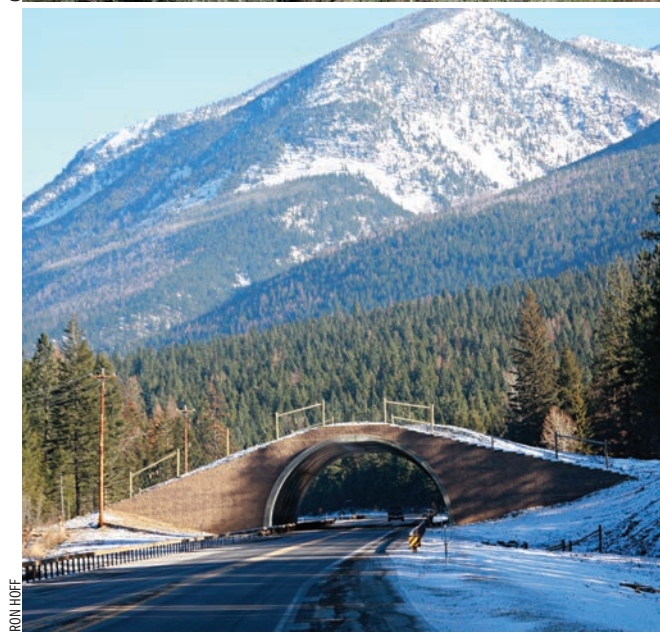
act as "predator traps," where foxes, coyotes, and other carnivores would lie in wait for prey animals concentrated at the culvert openings. "We haven't documented any of that happening other than one owl that hangs out on a camera and pounces on small mammals and birds," Camel says.

CAUTION: MOOSE OVERHEAD

The newest crossing structure allows wildlife to travel *over* traffic. Located on Evaro Hill, about 20 miles north of Missoula, the new overpass is built of 33 concrete rings forming

a tunnel above the highway 54 feet wide and nearly 200 feet long. The top is covered with 17,000 cubic yards of dirt that will be planted with vegetation this summer to give the wildlife walkway a natural appearance. The price tag for the structure, completed in August 2009, was \$1.88 million. "There's nothing like this in Montana and nothing quite of this type in the entire United States," says Pat Basting, a wildlife biologist for the Montana Department of Transportation.

Becker calls the overpass a "sliver of continuous habitat" that allows large animals—



BIG PICTURE APPROACH

Maintaining historical habitat connectivity is a goal of the CSKT, says tribal wildlife program manager Dale Becker (above, overlooking the lower Flathead River.) "On the reservation, wildlife is viewed as both a natural resource and a cultural resource," he says. Helping protect wildlife from vehicles is the new Evaro overpass (left), 20 miles north of Missoula, the only one of its kind in the United States.



VERIFIED Motion-sensing cameras and animal tracking beds monitor wildlife using the underground crossing structures. Clockwise from top left: bobcat, owl, mountain lions, whitetail doe, camera, black bear. Below: A restored wetland on the Flathead Indian Reservation.



PHOTOS COURTESY OF CONFEDERATED SALISH & KOOTENAI TRIBES AND MONTANA DEPARTMENT OF TRANSPORTATION

moose, elk, deer, and bears—to cross the busy highway. “It’s a connective corridor between the Seeley-Swan Range and the Selway-Bitterroot Wilderness,” he says.

Additional underground passageways are planned along the highway in the Ninepipe area. Smaller culverts, designed for smaller animals such as turtles and frogs, will reconnect wetlands bisected by the highway. Larger ones will link riparian habitats.

According to Becker, these and previously installed structures “serve a greater function in maintaining habitat connectivity for wildlife on both sides of the highway.” FWP’s Williams calls the Tribes’ wildlife passageway system “cutting edge” and adds that “as far as I know, it’s the most significant, large-scale habitat-linking wildlife project in the western United States.”

Give credit to the tribal biologists and the state and federal highway engineers who made the culvert and bridge crossings possible. But give some to wildlife, too. When given half a chance, they’ll do their best to find a safe way home. 🐾



CHUCK HANEY