

CONSERVATION COMPROMISES



Refuges work with oil and gas companies to find solutions

BY KENDALL SLEE | The thorn forests on Lower Rio Grande Valley National Wildlife Refuge in Texas provide the endangered ocelot with one of its last vestiges of habitat in the United States. Knowing that only an estimated 50 ocelots remain in the United States, refuge managers are concerned that oil- and gas-related pipelines, and roads transecting the forest give the ocelot's dominating competitors—coyotes and bobcats—inroads to one of the species' last footholds.

Egrets fly over an oil well at Hagerman National Wildlife Refuge in Texas.

The ocelot specializes in hunting in dense, almost impenetrable vegetation where larger predators have limited access. This wild feline—twice the size of a house cat—once ranged across Texas, southern Arizona and into Louisiana and Arkansas, but now its only U.S. presence is in the southern tip of Texas.

Lower Rio Grande Valley's thorn forest is transected by pipelines that are periodically cleared of vegetation, threatening to degrade part of the cat's fragile habitat.

As in many aspects of oil field management, the most economical practices to maintain oil and gas pipelines may be detrimental to wildlife.

Oil and gas operators traditionally use herbicides to clear vegetation over pipelines, creating a 10- to 30-foot-wide corridor that reduces the risk of line damage from plant roots and allows monitoring for leaks. Now, Lower Rio Grande Valley Refuge Manager Bryan Winton is reaching out to energy companies that operate on the refuge and beyond to encourage them to mow pipeline corridors. Killing native vegetation with herbicides encourages invasive plants to infiltrate the refuge. Herbicides can also degrade water quality as heavy rains can wash them into streams or wetlands.

Even if operators mow, clearing vegetation remains detrimental to the ocelot because it opens corridors for competing predators.

"There is no permanent solution for pipelines we inherited on refuge lands," Winton explains. "For safety purposes, companies will always have to maintain their lines." He encourages pipeline owners to minimize their footprint in the thorn forest. "If we can get a company with a 50-foot right of way to agree to maintain only 30 feet, then that is a big habitat savings," he says. The refuge requires new pipelines to be routed around high quality ocelot habitat to align with roads or other existing disturbances, even if it takes miles of additional pipeline.

Building Relationships

The complications of managing wildlife alongside oil and gas operations exist on many refuges, and could extend to yet more refuges as oil and gas extraction technologies evolve. While the Service owns and manages the land on most national wildlife refuges, in many areas the mineral rights—the right to extract the below-surface oil, gas and minerals—are owned by private parties, says Mary Maddux, Service regional oil and gas specialist at Hagerman National Wildlife Refuge in Texas. In fact, on a number of refuges in Texas and Louisiana, oil and gas drilling was underway when the refuges were established.

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—MARY MADDUX, Service oil and gas specialist

What is particularly difficult, Maddux says, is that state laws give mineral rights legal priority over surface rights. That gives mineral owners the right to construct roads and well pads, to drill wells, and to install pipelines and storage tanks to access those minerals. That can leave refuge managers, who have few specific regulatory protections, in a climate of stark conservation compromises. "If you've spent decades trying to improve a habitat and an oil and gas operation comes in to drill, they can annihilate that area," Maddux says. "It makes it hard to plan your conservation objectives, because you don't know where they're going to develop oil and gas in the future."

Experiences vary by state, refuge and company. States vary on how they regulate oil and gas as they do in the strength of their environmental protections.



Above: Only an estimated 50 ocelots remain in the United States, and now it is being further threatened by the removal of its habitat to clear space for pipelines.

Right: Discarded pipes sit on a well pad at San Bernard National Wildlife Refuge in Texas.



Additionally, it is easier to start on the right environmental footing with an oil and gas company rather than fix situations decades later. Moreover, oil and gas companies also operate with varying degrees of environmental consciousness.

Billy Leonard, oil and gas specialist for Southwest Louisiana Refuge Complex, says that the complex has been able to work with mineral owners on the specifics of how they access oil and gas. “In some cases we have had them drill off-refuge to get to minerals that are under the refuge. In one case, a producer built his entire production facility off-refuge,” he says.

Furthermore, the large company that owns most of the mineral rights on the refuge has spent time, funding and effort in restoration, Leonard notes. In 2013, for example, the company worked with refuge management to create a 20-acre wetland on a former road and drilling area no longer in use; the company routinely restores and improves refuge roads damaged by heavy industrial equipment.

Sabine National Wildlife Refuge, part of the complex, is designated a Globally Important Bird Area due to the numerous wading, water and marsh birds that use it throughout the year—some alongside oil and gas wells. Leonard encourages open lines of communication about spills, drips, leaks and equipment malfunctions because fast action can save habitat and mean lower cleanup and restoration costs for operators.

“There are mistakes made and mechanical breakdowns. I advise them on what needs to be done,” he says. “If soil has been contaminated by a leak, we have the

operator replace contaminated soil before allowing them to continue their work.”

When oil spilled from a tank onto marsh grasses during the 2005 Hurricane Ike storm surge, Leonard advised the responsible party to promptly mow and remove all the affected vegetation. The company followed his advice, helping to prevent marsh birds from moving through the vegetation, getting oil on their plumage and ingesting it.

Such an approach is the result of years of building trust by working with oil and gas companies to address problems, and in a state with reasonable regulations.

Finding a balance

In some oil fields, brine or saltwater is produced along with oil and must be managed and disposed of by the oil operator. Brine spills can be more lethal to refuge habitat than an oil spill. Brine causes long-term damage to soil and kills vegetation. On Hagerman Refuge, a brine spill killed a half-acre of woodlands including some 100-year-old trees that were important to migrating songbirds and other wildlife. The responsible party has agreed to replant and maintain pecan and oak trees in a new location, although the refuge did not regain the 100 years it takes to replace the habitat.

Hagerman Refuge has tightly restricted operator access to drilling platforms that jut into Lake Texoma, where endangered interior least terns nest. Volunteers and oil and gas operators help monitor the nests, and noisy and disruptive activities on the platforms are delayed until after September to minimize disruption to the birds.

Because many migratory birds overwinter on Sabine Refuge, Leonard advises oil and gas operators to wait until after March to undertake drilling and other activities that can be particularly loud and involve heavy equipment.

Remedies

The Service has made progress on a number of fronts to better address the complicated challenges of managing oil and gas on refuges. These include:

- Hired several regional and national oil and gas specialists to give technical assistance to national wildlife refuge field staff and help develop national guidance.
- Developing a national database of oil and gas wells and other structures that are now on refuges.
- Trained 162 refuge and supporting staff on oil and gas operations, Service policy and ways to improve management practices since 2005.
- Issued a Service handbook on management of oil and gas on refuges in 2010.

“Much more needs to be done to address the challenge,” says Kim Trust, Refuge System chief for Wildlife Resources. “The Refuge System is examining the environmental effects of oil and gas activity on refuge wildlife and habitat, reviewing state oil and gas regulations, and seeking to improve the Service’s regulations for management of oil and gas on refuges.” □

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