Managing ranches, conserving habitat

By using sustainable grazing practices, southern Arizona ranchers are providing good habitat for a wide range of wildlife, including jaguars. In large part, this is because jaguars want the same things on the landscape as most ranchers: healthy ecosystems, consistent access to water, and healthy wildlife populations.

The resource values needed to support jaguars and ranching are mutually beneficial. Instead of threatening ranching in the region, the designation of critical habitat for jaguars may provide the impetus for new investment in southwestern rangelands to advance large-landscape conservation. Understanding jaguar habitat characteristics may also help you avoid conflicts between your operation and jaguars.

There are several range management practices that could benefit your operation and wildlife at the same time. Wildlife water facilities provide water for wildlife away from areas where cattle are grazing. Providing water for wildlife helps encourage healthy prey populations and reduces the risk of livestock depredations by jaguars and mountain lions. Reintroducing fire to the landscape improves the quality of rangelands for livestock grazing and for wildlife by reducing woody shrub encroachment and encouraging reestablishment of native grasses. Jaguars are also less common in open grasslands. Erosion control projects also help native grasses, providing forage and in some cases ephemeral water sources for livestock and wildlife.

What does jaguar habitat look like?

Jaguars occupy a wide range of habitats in North, Central, and South America—from the Amazon rainforest to the arid grasslands of the U.S. Southwest. In Arizona and New Mexico, most sightings of jaguars have been in areas of mixed grassland-scrub and woodland vegetation.

As with other wildlife, jaguars need access to water to survive. No jaguars have been seen in Arizona or New Mexico more than six miles from streams with year-round or intermittent flow (and most jaguars have been sighted within three miles of water). Also, in southern Arizona and southwestern New Mexico, jaguars tend to prefer rugged terrain at mid-elevations (5000 ft. to 7000 ft.) in the mountains (“sky islands”) and areas that do not have a lot of people or artificial light.

In general, areas with healthy, sustainably-managed rangeland and forestland are areas with good habitat for jaguars and other wildlife.

Jaguars and mountain lions are natural predators and will prey on cattle and calves. There are a number of practices that may help prevent conflict between jaguars and livestock. These practices have two basic aims: to provide adequate prey for jaguars so they are not dependent on livestock and to keep livestock and jaguars separate.

The jaguars seen in southern Arizona come from the Sonora population. Jaguars in Sonora have an average population density of about one jaguar per 100 square kilometers. Average precipitation may affect jaguar population density, so it is reasonable to assume a lower potential population density in Arizona and New Mexico. Therefore, jaguars will likely continue to be rare in Arizona and New Mexico.

In Sonora, most jaguar predation takes place during the dry season in riparian habitats. Recommended management practices include:

- Development of upland water sources
- Limit cattle access to heavily vegetated areas like riparian forests, especially during dry seasons and drought periods
- Move cattle away from areas where depredation has occurred
- Group cattle to deter predators, especially mountain lions
- Limit calving to a single season rather than year round to limit opportunities for depredation
Conservation ranching

Sustainable range management produces many benefits for both ranchers and society as a whole. These benefits are termed “ecosystem services,” and include things like forage for livestock and wildlife, and erosion control.

In southern Arizona and southwestern New Mexico, ecosystem services may play a role in the “ranch of the future” by providing a way to develop multiple, diverse income sources from traditional production operations as well as from activities created by sustainable ranching like creating wildlife habitat and providing water on the landscape.

For example, ways that ranchers might earn income from the ecosystem services of their land include:

- **Wildlife habitat-management funds:** Programs across the country are paying ranchers to restore or maintain habitat (with similar programs being proposed for the Southwest).

- **Ecotourism and hunting revenues:** Managing habitat for wildlife creates opportunities to generate revenue from bird watchers and hunters from fees for access to private lands, guiding on public lands, or providing meals and lodging.

- **Wetland and stream restoration fees:** Federal laws require developers to offset damages they have on wetlands and streams by restoring such lands elsewhere, providing a “market” and payments to ranchers who might want to do such restorations on their land.

- **Other ecosystem services:** Additional sources of income may arise, such as from a market for “carbon sequestration,” the management of range vegetation to absorb carbon dioxide from the atmosphere.

For More Information on conservation incentives and jaguars, and wildlife habitat conservation on rangelands:

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PROTECTING HABITAT AND CONSERVING RANCHES ON RANGELANDS IN THE SOUTHWEST U.S.