National Fire Plan

Reducing Fire Risk and Restoring Desert Bighorn Sheep Habitat with Landscape-Scale Prescribed Fire

The U.S. Fish and Wildlife Service's San Andres National Wildlife Refuge is located in the southern third of the San Andres Mountains in south central New Mexico. This mountain range is one of the largest contiguous, relatively undisturbed Chihuahuan Desert land masses in the United States. Since the refuge was established in 1941, its primary emphasis has been restoring a remnant population of desert bighorn sheep (*Ovis canadensis mexicana*), a state-listed endangered species in New Mexico. Because there is restricted access and the lands remain relatively undisturbed, the refuge serves as a natural laboratory supporting research on southwestern flora and fauna, Chihuahuan Desert ecosystems, hydrological status, and the effects of fire, both natural and prescribed.

The build-up of woody species that has encroached on these desert grasslands serves as fuel for wildfires. This has potentially disastrous consequences for the refuge, and nearby federal facilities such as the U.S. Army's White Sands Missile Range. Periodic controlled burns reduce the fuel loads and therefore the threat of uncontrollable wildfire and create habitat diversity, and enhanced watershed function. For the desert bighorn sheep, the nutrients that are recycled after burning encourage the growth of nutrient rich shoots, and promote the growth of native species. Also, escape routes are made available for bighorn sheep from predators like mountain lions and bobcats that use dense vegetation to stalk their prey.

Using fire to manage habitats over broader landscapes has reduced the fire risk to important facilities in this area while also helping prevent the need for federal protection for the desert bighorn sheep.

A radio-collared desert bighorn sheep heads out toward San Andres National Wildlife Refuge. (Photo courtesy WSMR website, Jim Eckles, photographer)

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