



Prescribed Fire

RESOURCE BRIEF

Importance

Prescribed fire is an important management tool for improving bighorn sheep habitat and reducing hazardous fuels in Bighorn Canyon National Recreation Area (NRA). Decades of fire suppression policy, climate change, overgrazing, and dispersal of seed by livestock related to settlement of the area have contributed to the increase of hazardous fuels and the distribution and dominance of juniper woodland. Juniper woodland composes about 40% of Bighorn Canyon NRA and is important habitat to the long-term viability of the park's small bighorn sheep population. Expanding juniper competes with forage grasses and impede the ability of bighorn sheep to avoid predation by detecting mountain lions. Most natural wildfires in the Bighorn Canyon area occur in juniper woodland and in approximately 30-50 year intervals. Prescribed fire reintroduces the natural process of fire into the ecosystem, improves habitat, and is a tool for maintaining historic landscapes, protecting resources, and reducing exotic species.



Fire in Bighorn Canyon

Status and Trend in Bighorn Canyon

Bighorn Canyon NRA began using prescribed fire in the early 1990s as a tool to improve bighorn sheep habitat and reduce hazardous fuels which accumulated after decades of natural fire suppression. Through the use of prescribed fire and other methods, Bighorn Canyon NRA has reduced fuel accumulations near historic structures, designated archaeological sites, park buildings, campgrounds, and other visitor use areas. The first prescribed fires in Bighorn Canyon NRA were conducted in the Yellowtail Wildlife Habitat Management Area (YWHMA). Fires were conducted between 2001 and 2007 in southern Bighorn Canyon NRA and targeted juniper for bighorn sheep habitat improvement. Future prescribed fires are planned for habitat improvement. Fire behavior and effects monitoring is conducted by the Grand Teton National Park Fire Management Office in coordination with Bighorn Canyon NRA staff.

Discussion

In 2004, the U.S. Geological Survey published management recommendations from a three-year study which investigated the causes of decline in the bighorn sheep population of Bighorn Canyon NRA and the surrounding area. Based on recommendations from the study, multiple habitat treatments, including prescribed fire and mechanical thinning, have been conducted to improve habitat. Fuel loads are also reduced by mechanical thinning, removal, and chemical treatments under Bighorn Canyon NRA's fire management plan. Mechanical clearing of fire breaks and suppression of human caused fires have been conducted on the YWHMA, which has high hazardous fuel loads.



Figure 1. Prescribed fire in Bighorn Canyon NRA, South District

