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WILDLIFE MANAGEMENT ACTIVITIES IN WILDERNESS AREAS IN THE SOUTHWESTERN UNITED STATES



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Keywords: habitat, non-native species, restoration, water development, wildlife management

Background & Management Issues:

Wildlife management activities commonly occur in wildernesses throughout the United States. Some argue that the very concept of wilderness precludes active management, including activities to manage wildlife. Others maintain that management practices in general and wildlife management activities in particular are needed to maintain or restore wilderness values. The nature of wilderness areas in the southwestern United States makes these questions particularly relevant. Management activities such as water developments, introduction or re-introduction of species, and fencing to keep wildlife or livestock away from fragile plant communities, have the potential to affect wilderness values and visitor experiences.

Project Objectives:

To determine the type and extent of current federal and state wildlife management activities in all designated wildernesses in southern California, Arizona, New Mexico, Utah, and Nevada.

To evaluate these activities in the context of enhancing or maintaining wilderness values

Project Description: In 1998, the authors surveyed 110 state and federal employees responsible for wildlife management in wilderness areas in the Southwest. The questionnaire listed management activities according to three categories: habitat management (e.g., fencing or water development), animal management (e.g.,

removing or introducing species), and human management (e.g., hiker education and hiker or pet restrictions). An “other” category was included for activities not on the list. Respondents were asked to indicate which management activities were being implemented in wilderness areas for which they had knowledge. Responses were tabulated and the activities evaluated for their maintenance or enhancement of wilderness values.

Results: Wildlife management activities were conducted in 67% of the surveyed wildernesses. By far the most common activity was maintaining artificial water developments that existed prior to wilderness designation. Most water developments were intended to benefit desert bighorn sheep and mule deer. Other habitat management activities included fencing projects to protect sensitive plant communities (e.g., in riparian areas) from trampling by livestock and wild ungulates. In addition, fences were erected to protect critical habitat for wildlife species. Fence-removal projects were also reported. In some cases, vegetation was eradicated or planted to maintain habitat integrity for native wildlife species. Fire also was used to maintain habitat and reduce non-native vegetation.

Removal of non-native species was the most common animal management activity reported (44 of 273 areas). Additionally, non-native species, primarily cold-water gamefish, were introduced in 31 wildernesses. The reintroduction of native species thought to have been extirpated in the late Holocene, including bison, was also reported. Although predators had been controlled in 18 areas at some time following wilderness designation, most respondents noted that control had not been used recently.



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Restrictions to human access, particularly of nesting and birthing areas or critical watering areas, were established in 29 wildernesses. Pets were banned from all NPS wilderness areas and restricted in 24 other wildernesses to prevent wildlife disturbance. Conservation education was reported in 51 areas, including signs and trailhead interpretive programs within and on wilderness boundaries.

Management Implications:

- ❖ Water development is the most controversial and the most common management activity in wilderness areas in the southwest. Little conclusive research supports the assumption that water is a limiting factor for wildlife in arid areas. The authors note that judgment of experienced ungulate managers is indispensable in decisions pertaining to construction and maintenance of watering facilities. Consideration of the potential detrimental effects of construction, especially irreversible destruction of fragile plant communities, also may be important when making these decisions.
- ❖ Artificial structures may negatively impact the “wilderness experience” of some visitors. Fences are important to protect native plant communities, but the need for fences may indicate native ungulate populations are unnaturally large. Communication between federal and state managers responsible for setting harvest regimes is important in these instances.
- ❖ The desire for a “complete” wilderness ecosystem drives the translocation of native species. Where reintroduction of species extirpated during the Holocene is concerned, subsequent changes in biogeography and the causes of those extinctions are important considerations.
- ❖ Eradication of non-native species from wilderness is a goal of many wilderness managers, yet non-native fish species are routinely stocked in wilderness. Public education may be necessary, especially for anglers, where non-native fish stocking is discontinued in a wilderness area.
- ❖ Conservation education efforts can be expanded to benefit both wildlife and wilderness values. On-site education may be effective, especially when linked with visible projects or habitats.

Publications / Products:

- ❖ Krausman, Paul R.; Czech, Brian. 2000. Wildlife management activities in wilderness areas in the southwestern United States. *Wildlife Society Bulletin*. 28(3): 550-557. **Leopold Publication Number 412.** [Read the abstract here.](#)

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