

F. BALANCING RECREATION & CONSERVATION

Outdoor recreation activities provide a broad range of community and individual benefits that are gained by interacting with the natural world. These benefits include the enjoyment of solitude and natural quiet, opportunities for exercise and physical challenge, opportunities to observe wildlife and learn about the environment, and opportunities to enjoy the outdoors with friends and family. However, all forms of outdoor recreation in the natural environment inherently result in localized impacts to wildlife due to human disturbance, habitat fragmentation, and the potential introduction of non-native species and predators (e.g., dogs). Since the enjoyment of nature and hunting, fishing, wildlife observation and photography are valuable recreation opportunities and tourism draws, it is important that the SLVGO Coalition and its partners protect habitat and wildlife in concert with building and improving recreation experiences.

Well-designed trail systems need not come at the detriment of natural resources. Careful planning and management of recreational use and facilities can minimize their impacts while maximizing the benefits of outdoor recreation. Trails can actually help protect resources by fostering appreciation for the great outdoors and by managing users to minimize impacts while maximizing fun. This section provides an overview of the ecological impacts of trail-based recreation, best practices for minimizing those impacts, and special circumstances related to wetland and sensitive wildlife species.

Wildlife and Habitat Considerations in the San Luis Valley

All wildlife need adequate habitat and security to survive. Many species of wildlife depend on undisturbed, intact blocks of natural habitat as well as connectivity between adjacent habitat types (such as riparian corridors). Human disturbances from trails and recreation use can reduce the size or disrupt the connectivity of habitat, making it less useful or secure for wildlife. Wetlands and riparian habitat are among the most sensitive habitat types in the San Luis Valley. Riparian corridors along rivers, creeks, and streams provide water, food, nesting and rearing areas, and movement corridors for many wildlife species. Likewise, wetland areas, both large and small, provide unique and diverse habitat. Together, wetland and riparian areas are critical for the survival of a broad range of wildlife species throughout the valley.

Incidentally, many of the natural and scenic features in the San Luis Valley also contain important wetland and riparian habitats. While outdoor recreation

opportunities in these areas provide important opportunities to learn from and appreciate our connection to the natural world, trails and other facilities can also have negative impacts on wildlife and habitat.

General Impacts of Trails and Recreation

The following general concepts about trail impacts can be drawn from scientific studies on the impacts of trails and recreation on wildlife:

- Trails and recreation sites have a “zone of influence” within which human disturbance may alter the behavior. The effects of vary by species and individual animal, and can range from no effect, interruption of activity, flight, to abandonment of nesting or foraging sites
- These impacts can be exacerbated by the presence of dogs
- The zone of influence will typically range from between 150 and 300 feet, and is usually greater in open terrain than in wooded areas
- In developed or high-use areas, some animals may become habituated to predictable and recurrent use of trail corridors, reducing their sensitivity to human use
- There is little difference in wildlife response between hikers and mountain bikers

Best Practices for Minimizing Impacts to Habitat and Wildlife

Recognizing the conflicting objectives of outdoor recreation and habitat conservation, many of the following guidelines can be useful in making real-world trail planning and management decisions.

- Provide reasonable and enjoyable trail experiences and connections in appropriate locations to minimize the proliferation of unplanned social trails
- Use thoughtful and creative planning to minimize redundant and unnecessary trails
- Avoid new fragmentation of large, undisturbed blocks of habitat
- Retain a variety of undisturbed habitat types to provide a refuge for a variety of wildlife species
- Maintain visual or physical barriers (e.g., thick vegetation or rock outcrops) between trail corridors and habitat areas
- Not all areas have the same values or sensitivities. Understand the particular ecological dynamics and threats to sensitive species/habitats (e.g., human disturbance, erosion, noxious weeds).

- Protect habitat areas that are currently known to support rare or sensitive species, as well as those that have the potential to support them in the future.
- Reference and use available maps, management plans, and research documents when planning recreation development to ensure sensitive wildlife areas are avoided. Available resources include:
 - Sensitive SLV Resource Map: http://www.slvvec.org/images/stories/docs/6.23.10.SLVWPCEC_solarsensitiveresources_47x36_6162010.pdf
 - Alamosa Ranch Management Plan (draft): <http://www.slvvec.org/images/docs/ranch%20management%20plan.pdf>
- Support studies and surveys to better understand wildlife requirements and to identify sensitive habitat areas.
- Tailor management and protection measures to address the specific values of and threats to each area.
- Collaborate with conservation groups and biologists when planning recreation to ensure habitat impacts are understood and addressed.

There are frequently trade-offs between competing habitat values (e.g., new habitat disturbances may be necessary to avoid more sensitive areas), or between habitat values and other management priorities (e.g., new disturbances to make existing trails more sustainable or functional). Each situation should be evaluated on a case-by-case basis.

Environmental Permitting Considerations

Wetlands

Section 404(b)(1) of the Clean Water Act regulates impacts to wetlands, which may require a permit from the U.S. Army Corps of Engineers (Corps) and potentially impact mitigation commitments. While the Corps reviews projects and issues permits on a case-by-case basis, the following guidelines may apply:

- The type and quantity of wetland impacts will determine the level of coordination, permitting, and mitigation is required
- Projects with minor wetland impacts (generally less than 0.1 acre) or those associated with linear transportation projects (including trails) may qualify for a “Nationwide” permit, which is a streamlined,

programmatic process

- Projects with larger impacts (generally greater than 0.1 acre) or those with impacts associated with seeps, springs, fens, or other special conditions would likely require a more involved “Individual” permit or other, more stringent requirements

Threatened, Endangered, and Sensitive Wildlife Species

The San Luis Valley is home to several rare and endangered wildlife species that require careful consideration to avoid harming their habitat and to minimize costly permitting requirements. These include the following:

- The southwestern willow flycatcher (endangered) and the yellow-billed cuckoo (threatened), which are known to occur within the woody riparian corridors along the Rio Grande and other major streams
- The Canada lynx (threatened) is found in the high-elevation forests of the San Juan Mountains
- The Rio Grande cutthroat trout (proposed threatened) may be found in many higher elevation mountain streams
- The Rio Grande chub may be found in lower elevation streams on the eastern side of the valley
- In addition, several other sensitive species that are not federally-listed are found in the valley

Federally listed threatened or endangered species are protected under the Endangered Species Act (ESA), which outlines requirements for federal agencies when their actions may harm a listed species or its habitat. Consider the following when developing new trails and recreation facilities near habitat for federally-listed or otherwise rare species:

- Consult with local land use departments or natural resource agencies, state and federal land management agencies to determine where habitat is located – these areas should be avoided to the greatest extent possible
- In cases where localized impacts are unavoidable, those impacts would need to be authorized (and in some cases permitted and mitigated) by the U.S. Fish and Wildlife Service
- Projects on federal land or those requiring wetland permits would include endangered species authorization as part of the federal permitting process

CASE STUDIES: Balancing Conservation and Recreation

Staunton State Park (Conifer, CO)

The planning for trails and recreation facilities at Staunton State Park began with an understanding of sensitive natural resources including nesting raptors, wetlands, rare plant communities, and undeveloped wildlife habitats. This information drove the overall park design and the trails and facilities, which were specifically designed to avoid and minimize resource impacts in the park. In addition, trail corridors and alignments were specifically designed in the field to avoid wetland impacts and minimize wildlife habitat fragmentation, while also providing the scenic views and interesting experiences throughout the trail system.

Raptor Nesting Closures (Boulder, CO)

Rock outcrops along Colorado's Front Range foothills provide rare and important habitat for cliff-nesting raptors, including golden eagle, prairie falcon, and peregrine falcon. These same areas also provide desired recreational destinations for rock climbing and trail-based recreation. To balance these competing demands on the resource, City of Boulder Open Space and Mountain Parks have implemented seasonal closures that are specific to the affected area. These closures prohibit rock climbing

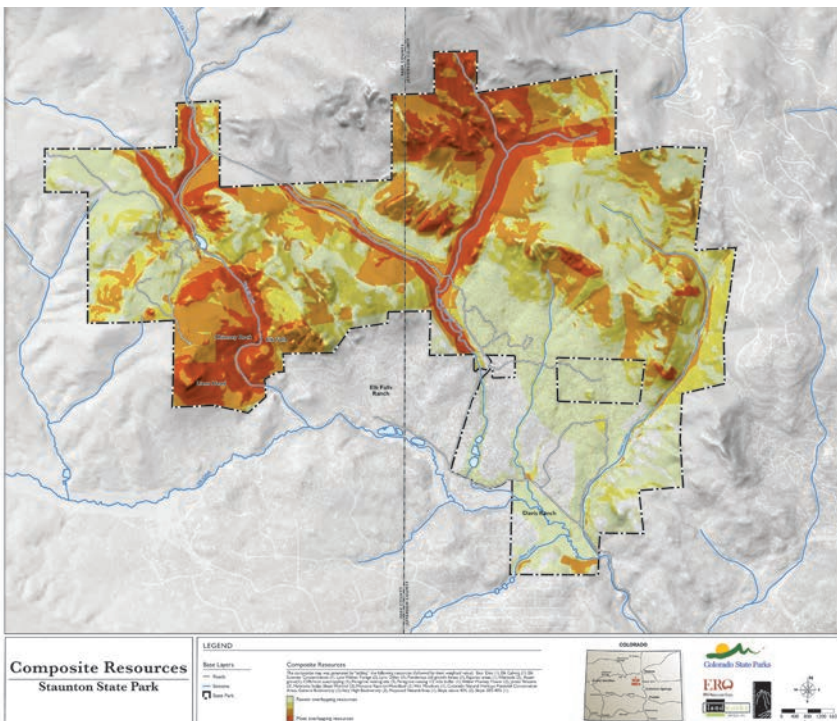
and off-trail access from February 1 through July 31 of each year. Closure areas are clearly mapped and signed, and nearby trails that do not pose a threat remain open.

Boulder's closure maps are good examples of information graphics: <https://bouldercolorado.gov/osmp/cliff-nesting-raptor-closures>

Cucumber Gulch Preserve (Breckenridge, CO)

The 117-acre Cucumber Gulch Preserve is located near the base of Breckenridge Ski Area, and is dominated by a sensitive fen wetland complex that provides important wildlife habitat. Cucumber Gulch is also a recreational asset, with an extensive network of summer trails and winter use by the Breckenridge Nordic Center. Given these values, and the fact that it is surrounded on three sides by residential and resort development, the Town of Breckenridge has implemented several policies to allow public access while minimizing environmental damage. These include the special designation of the area as an "overlay protection district" to enable resource protections, the prohibition of dogs, the limitation of group size to 8 visitors, the closure of summer trails until July 1 (to protect

wildlife breeding), and limitations on summer gondola operation (which crosses over the preserve). Each of these restrictions are based on scientific studies and location-specific actions to address location-specific resource threats. While these restrictions limit some recreational opportunities, they are important to maintaining a balance between outdoor recreation and the protection of sensitive habitats. <http://www.townofbreckenridge.com/index.aspx?page=1214>



A map depicting habitat sensitivity at Staunton State Park (courtesy of ERO Resources).