

2.2 RESEARCH NATURAL AREAS

Theme: Research Natural Areas (RNAs) form a long-term network of ecological reserves designated for nonmanipulative research, education, and the maintenance of biodiversity. This prescription is applicable to both designated RNAs and areas which are proposed for RNA designation.

Desired Condition

Physical/Biological

Maintain natural (relatively pristine or presettlement) conditions by allowing ecological processes to prevail with minimal human intervention. Vegetation, habitat, soil productivity, water quality, and ecological processes are in a natural condition (within the range of natural variability). Vegetation manipulation may be utilized in limited circumstances to maintain the ecosystem or unique features for which the RNA was established or to reestablish natural ecological processes, such as a natural fire regime.

Populations of exotic (nonnative) plant and animal species are controlled where feasible using methods which minimize threats to native species. Allow natural outbreaks of native insects and diseases to proceed without intervention, unless they are a substantial threat to the characteristics for which the RNA was created.

Develop specific management area direction (use of prescribed fire, grazing, etc.) for each RNA as part of the Establishment Record or in a separate Management Plan.

Social

Recreational use is allowed unless special values are threatened. Use of the area for interpretation and education can be emphasized. Avoid publicity that attracts the general public to the area.

Administrative

Prohibit buildings and developed recreational sites, unless there are exceptional circumstances (such as historic sites listed in the National Registry) which do not threaten the values for which the RNA was established. Prohibit motorized use, except when necessary to provide research, administrative, or educational access.

Acquire inholdings and adjacent parcels if needed to achieve area objectives or if imminent development would be inconsistent with the fulfillment of the objectives of the remaining National Forest System lands. Acquire mineral estates and lands or rights-of-ways that are needed to meet resource goals and objectives. Retain all NFS lands.

There may be some evidence of research or study activities which are conducted using methods that are nondestructive and nonmanipulative. Limit activities other than research and study to nondestructive activities without roads or facilities unless provided for in the Establishment Record or in the individual RNA Management Plan.

Allow no surface extractive uses except those arising from existing federal leasing and private subsurface mineral rights.

Standards and Guidelines

1. (ST) Prohibit habitat manipulation for wildlife, unless it is part of a management plan to perpetuate natural conditions or when it is necessary for the protection of threatened, endangered, and sensitive species.

Exception: Prescribed fire and the appropriate management response of prescription control may be used on the North St. Vrain RNA to improve habitat for bighorn sheep. In this area habitat improvement is compatible with perpetuating and restoring natural conditions by helping to correct for the results of past fire suppression.

2. (ST) Withdraw the area from mineral entry in conformance with Section 204 of the Federal Land Policy and Management Act of 1976 (PL 94-576) when withdrawal is necessary to protect the values for which the RNA was established.
3. (ST) Permit special uses only when they do not conflict with the values for which the RNA was proposed.
4. (ST) Prohibit the construction of new roads and trails, except when new trails are necessary to correct resource damage occurring from existing trails.
5. (ST) Prohibit motorized and mechanized use, except when they provide necessary access for scientific, administrative, or educational purposes.

Exception: Snowmobile and mountain bike use will be allowed on that portion of the Bowen Gulch RNA that occurs outside Wilderness and inside the Congressionally designated Bowen Gulch Protection Area in accordance with the regulations governing the use of the Protection Area. Snowmobile and mountain bike use will also be allowed on maintained Forest Service trails in that portion of the RNA outside Wilderness. These exceptions are made in recognition of existing use and federal law governing the Protection Area. Because of dense forest and few trails, use is expected to be light.

6. (ST) Prohibit logging, wood gathering, and other types (herbs, mushrooms, etc.) of gathering activities.

7. (GL) Prohibit livestock grazing, except when it is used to approximate a natural grazing regime for maintaining the native vegetation.
8. (GL) Close or obliterate existing roads, except where they provide necessary access for scientific, administrative, or educational purposes.
9. (GL) Limit wildland fire management techniques to those which minimize disturbance. Do not use heavy ground-disturbing equipment unless approved by the Forest Supervisor. Use natural barriers to confine or contain fire where possible.

Mount Goliath Existing RNA

The Mount Goliath RNA contains a large old-growth stand of bristlecone pine which is easily accessible and visited by thousands of people yearly for its scenic and educational values. The management emphasis is on protecting the natural conditions of the bristlecone pine stand while providing opportunities for interpretation, enjoyment, and study of the area.

Hell Canyon Proposed RNA

This 18,312-acre area is located on the Sulphur Ranger District west of the Continental Divide; 17,067 acres lie within the Indian Peaks Wilderness. The area is bounded on the north by Rocky Mountain National Park and is adjacent to the Paradise Park Research Natural Area within the National Park. These two areas would enhance each other's values and would provide an opportunity for interagency cooperation in management, research, data-gathering, and monitoring. The area includes 27 ponds and lakes and the complete watersheds of six small creeks. The diversity of ecosystem types is very extensive, including good representation of lodgepole pine and Engelmann spruce/subalpine fir forests and subalpine grasslands. The forests occur over a broad range of elevations, slopes, aspects, and successional stages. Areas of alpine tundra, sagebrush-bitterbrush shrublands, and montane, subalpine and alpine wetlands are also found in this site. Pleistocene glaciation has produced a landscape of peaks, high-elevation cirques, and U-shaped canyon bottoms typical of the Front Range in Colorado.

Bowen Gulch Proposed RNA

This 10,126-acre area is located on the Sulphur Ranger District west of the Continental Divide near the southern end of the Never Summer Mountains. The area is contained within portions of the Never Summer Wilderness and the Bowen Gulch Protection Area and includes the complete watershed of Bowen Gulch. This proposed RNA contains one of the largest and most outstanding areas of old-growth Engelmann spruce/subalpine fir forest in Colorado. Smaller areas of lodgepole pine forest and alpine tundra are also found within the site.

Boston Peak Fen Proposed RNA

This 550-acre area is located on the Redfeather Ranger District in the upper Laramie River

valley. The site contains a unique wetland ecosystem supporting outstanding examples of rare plant populations and unusual fen and willow carr plant communities. The wetland is also noteworthy for its deep deposits of peat and lake sediments. The complete watershed of this wetland is contained within the proposed RNA and is primarily lodgepole pine forest with small areas of limber pine and aspen.

Lone Pine Proposed RNA

This 4,558-acre area is located on the Redfeather Ranger District and borders the western boundary of the Lone Pine State Wildlife Area. This site includes a large trailless area of low-elevation ponderosa pine and Douglas-fir forests in gently rolling terrain. There are also several small canyons and excellent examples of Parry's oat-grass montane meadows. The site would also offer added protection to an extensive occurrence of a Region 2 endemic sensitive plant species, the branched cinquefoil.

Pennock Creek Proposed RNA

This 6,330-acre area is located on the Estes-Poudre Ranger District and borders the northern boundary of Rocky Mountain National Park. This site provides a good representation for high-elevation limber pine forest. The north-facing drainage basin of this site includes the complete watershed of Pennock Creek and contains one of the larger examples of Engelmann spruce/subalpine fir forest east of the Continental Divide in Colorado. Much of this spruce-fir forest is old growth. Most of this area (5,698 acres) is located in the Comanche Peak Wilderness.

Sheep Creek Proposed RNA

This 1,250-acre area is located on the Estes-Poudre Ranger District approximately 12 miles west of Fort Collins. This area is notable for its dense riparian vegetation along a perennial stream in a foothills canyon of the Front Range. A variety of eastern woodland relict species such as the beaked hazelnut are found on this site. The south-facing slopes of this canyon also contain the Colorado wildrye/wax currant plant community, which is endemic to the northern Front Range of Colorado. The uplands are predominately ponderosa pine and Douglas-fir.

West Creek Proposed RNA

This 2,997-acre area is located on the Estes-Poudre Ranger District and lies within the Comanche Peak Wilderness. This area adjoins the West Creek Research Natural Area in Rocky Mountain National Park. These two areas would enhance each other's values and would provide an opportunity for interagency cooperation in management, research, data-gathering, and monitoring. The area is primarily Douglas-fir, ponderosa pine and lodgepole pine forest, with a particularly large occurrence of the Douglas-fir/waxflower plant community.

North St. Vrain Proposed RNA

This 4,793-acre area is located on the Boulder Ranger District and includes approximately 6 miles of North St. Vrain Creek, one of the major streams that have cut deep canyons as they flow east out of the Front Range. In addition to the diverse and high-quality examples of riparian vegetation, the area also contains the largest known expanses of the endemic shrubland plant community, antelope bitterbrush/mountain muhly, and stands of old-growth ponderosa pine. The north-facing slopes of the canyon are Douglas-fir forest and the south-facing slopes and uplands are mostly a mixture of shrublands, grasslands, and open ponderosa pine stands. The area also offers protection to populations of the Colorado aletes, a rare plant species that is on the Region 2 sensitive species list.

Indian Caves Proposed RNA

This 386-acre area is located in the northeast portion of the Pawnee National Grassland near the Logan County line. The northern part of this area is a relatively flat upland dominated by blue grama-buffalo grass prairie containing many small depressions in which spike-rush grows. Small amounts of needle-and-thread blue grama prairie and little bluestem-sideoats grama prairie are also found on the site. The uplands fall away to the south in a band of cliffs and steep slopes that are dominated by shrublands that include chokecherry and skunkbush.

Little Owl Creek Proposed RNA

This 1,108-acre area is located in the western portion of the Pawnee National Grassland about 6 miles northeast of the town of Nunn. The area includes good examples of short-grass prairie on soils derived from the Laramie Formation. Most of the short-grass prairie is the blue grama-buffalo grass type, with smaller areas of plant communities containing varying mixtures of sideoats grama, needle-and-thread, fourwing saltbush, sand dropseed, and yucca. The area also contains riparian and lowland plant communities along intermittent streams and nearby perennial ponds, including inland saltgrass-alkali sacaton-western wheatgrass and alkali sacaton-blue grama. The area provides habitat for two Region 2 sensitive species, the ferruginous hawk, the Iowa darter, and the mountain plover, a U.S. Fish and Wildlife Service Category bird species.

Keota Proposed RNA

This 827-acre area is located in the central portion of the Pawnee National Grassland about 3 miles southeast of the town of Keota. The area includes good examples of short-grass prairie on soils derived from the White River Formation, with a good representation of fourwing saltbush shrublands as well as the more common blue grama-buffalo grass prairie. The area provides small rock outcrops that provide habitat for a diversity of wildlife. This proposed RNA also has known occurrences of three Region 2 sensitive species, the ferruginous hawk, swift fox, and mountain plover, a U.S. Fish and Wildlife Service Category bird species.