

Scoping Document

BEAVER HABITAT IMPROVEMENT PROJECT

Uinta National Forest, Heber Ranger District

AREA DESCRIPTION

Drainage:	Strawberry River
County:	Wasatch
Legal Description:	T1S, R12W, NE ¼ of Section 23; and T2S, R12W, NE ¼ of Section 19
USGS Quads:	Heber Mountain and Twin Peaks
Proposed Treatment Area:	40 acres
Target NEPA Completion Date:	July 2004
Proposed Implementation Date:	August – September 2004

BACKGROUND

Forest ecologists have shown that aspen forests in the Interior West have been declining during the past century. Dale Bartos, a forest ecologist with the Forest Service Rocky Mountain Research Station analyzed forest inventory data and concluded that aspen forests have declined by about 60% in Utah. Aspen is a relatively short-lived species that typically regenerates following natural disturbance.



Prior to pioneer settlement around 1850, the most common natural disturbance was likely wildfire. Although different factors have been identified, the primary factor believed to be responsible for aspen decline in the West is reduction in wildfire occurrence, both as a result of active fire suppression and livestock grazing (livestock grazing reduces levels of fine fuels that carry wildfire). Aspen is highly shade intolerant, and without periodic wildfire, shade-tolerant conifers such as subalpine fir become established and eventually replace aspen. Also, without periodic wildfire or other disturbance, aspen forests become dominated by mature to old stands, with little age-class diversity and few young stands. Young aspen stems provide an important source of food and construction material for beavers, and age-class diversity of aspen is important for maintaining sustained beaver habitat.

Conifer encroachment into aspen stands is occurring across large areas of the Uinta National Forest, as well as other national forests in Utah. Conifer encroachment is readily apparent in different areas within the upper Strawberry River watershed above Strawberry Reservoir. Aspen forests provide many resource values, so aspen decline has important implications for forest management. Aspen forests provide extremely important forage and browse for both domestic livestock and wildlife. Because of their open structure, understory vegetation production is substantial in aspen forests. Understory vegetation production is significantly reduced under the more shaded, conifer-dominated stands. Research indicates that forage production typically declines by more than 75% as aspen stands become overtaken by conifers. Such declines in forage and browse production has significant implications for both wildlife management and livestock grazing management. Aspen forests also provide crucial water resources. Research has shown that water yields can decline as aspen stands are replaced by conifer-dominated stands because of the higher transpiration rates of conifers. Aspen forests provide extremely important wildlife habitat, including critical fawning and calving cover for mule deer, elk, and moose. It has been reported that aspen forests have the second highest level of biodiversity in the West – second only to riparian habitats. Aspen forests also have great recreation value – aspen stands are probably the most popular site for dispersed recreation on the Uinta National Forest.



The beaver is a Management Indicator Species (MIS) on the Uinta National Forest. The beaver is considered a keystone species because it substantially affects ecosystem structure and function by building dams and creating ponds, thus influencing hydrologic processes and habitat conditions for numerous aquatic and terrestrial species. Some of the positive effects of beavers include: 1) beaver dams store water and gradually release that water late into the season when many streams have gone dry; 2) beaver dams temporarily store (sometimes up to many decades) large amounts of sediment; 3) beavers add carbon and other nutrients into the stream system through the addition of woody vegetation; 4) beaver dams raise the water table and greatly increase the size of wetlands; 5) beaver ponds create habitat for a wide variety of aquatic and semi-aquatic species (e.g., dragonflies and numerous other aquatic insects, cutthroat trout and other fish species, native amphibians, mallards and other species of ducks, muskrats); 6) raised water tables often lead to increased area of willows, and willow communities provide important habitat and food for a wide variety of terrestrial species, from Neotropical migratory birds to moose; 7) streams occupied by beavers are more resistant to environmental disturbances such as large storm events.

PURPOSE AND NEED

In 2003 many beaver colony sites on the Heber Ranger District of the Uinta National Forest were identified from aerial photos and surveyed to assess habitat conditions and colony status (active or abandoned). Beavers were no longer present at many of these historical beaver colony sites. Beaver habitat condition at many of these sites was poor: subalpine fir was replacing aspen, and there was little young aspen.



The purpose of the proposed action is to improve beaver habitat at selected beaver colony sites by restoring aspen stands threatened by conifer encroachment and declining age-class diversity. The need results from reduced wildfire and the resulting increased conifer encroachment and decreased age-class diversity, which is resulting in reduced habitat suitability for beavers and other aspen-associated wildlife species.

PROPOSED ACTION

The proposed action is designed to accomplish two objectives at beaver colony sites considered to be at risk due to long-term habitat decline: 1) reduce the rate of conifer encroachment, and 2) stimulate new aspen regeneration. A total of 40 acres at two at-risk beaver colony sites are proposed for treatment under this project. To reduce conifer encroachment (primarily subalpine fir), invading conifers would be either cut down (trees with a diameter-at-breast-height of 8 inches or less) or girdled (trees with a diameter-at-breast-height of greater than 8 inches). Larger conifers would be girdled rather than cut down to reduce slash levels on the forest floor and to create snags for cavity-nesting birds. Aspen regeneration would be stimulated by cutting down mature aspens in small patches. Killing mature aspens disrupts the flow of a sucker-suppressing plant hormone from the crown down to the root system, which allows another type of plant hormone to stimulate aspen suckering. To reduce the accessibility of the patch cuts to livestock and elk, cut aspens would be felled so that aspen stems crisscrossed each other ("jackstrawed"). Livestock and elk use of these patch cuts would be discouraged in order to help protect aspen regeneration from excessive ungulate browsing. One of the proposed sites is located within the West Daniels Cattle Allotment, and one site is located within the Mill B Sheep Allotment. Both areas are relatively high elevation sites (8,400 and 9,200 feet elevation) that provide summer range but not winter range for elk (excessive elk browsing of aspen regeneration has been shown to be more of a problem within or near elk winter range). Heavy elk browsing of aspen has not been identified as a problem in either area. Patch cuts would be 1 to 4 acres in size.

There would be no commercial component to this project. Implementation would be done by a Forest Service crew or by private contractors through a service contract.

LAND MANAGEMENT PLAN OBJECTIVES

Both sites are located within the Strawberry Reservoir Management Area on the Uinta National Forest. One site is within an area with Management Prescription 5.1: Forested Ecosystems – Limited Development. The other site is within an area with Management Prescription 5.2: Forested Ecosystems – Vegetation Management. Both management prescriptions emphasize maintaining or restoring vegetation to achieve multiple resource values. Both proposed sites fall within areas with a Visual Quality Objective of “Modification.” Modification implies that management activities may visually dominate the original characteristic landscape; however, activities of vegetative and landform alteration must borrow from naturally established form, line, color, or texture so completely and at such a scale that its visual characteristics are those of natural occurrences within the surrounding area or character type.

POTENTIAL ISSUES

Wildlife Habitat

Habitat for wildlife species associated with aspen forests would be enhanced as a result of the proposed action, and habitat for species associated with conifer forests would be diminished.

Fire

Conifer-dominated forests pose much greater wildfire risks than do aspen-dominated forests. Restoring aspen forests by slowing the rate of conifer encroachment should thus reduce long-term wildfire risks. Cutting and girdling trees, however, alters current fuel characteristics within the project area.

Range

Forage production declines significantly as aspen stands are replaced by conifer-dominated stands. Conifer encroachment thus has direct negative impacts on range quality. However, protecting aspen regeneration resulting from this project would require some short-term special management considerations in the administration of one sheep allotment and one cattle allotment. In addition to jackstrawing aspen and small-conifer stems to impede livestock and elk access to the regeneration patches, alteration of pasture rotation would be considered to reduce late-season use of the treated sites (livestock favor aspen sprouts more in the later season when green herbaceous vegetation has died back and dried).

Forest Insects

Most of the conifers invading the 2 proposed project sites are subalpine fir trees, but there are also some Engelmann spruce trees. Dead subalpine fir does not

pose a substantial insect infestation risk on the Heber Ranger District, but Engelmann spruce does. Only Engelmann spruce less than 8 inches in diameter at breast height would be cut. Larger spruce trees, which are susceptible to spruce beetle attack, would not be cut or girdled.

Water Quality, Fisheries, and Riparian Habitat

Because the primary purpose of the proposed action is to improve beaver habitat, treatments would occur adjacent to streams where beavers feed. Soil disturbance would be minimal because cut trees would be left in place and not skidded for removal. Girdled trees along streams would add coarse woody debris to streams gradually over time as they fall.

Recreation and Visuals

Implementation of the proposed action would alter the visual quality of the treated areas. Aspen patch cuts would be small (1 to 4 acres), and an attempt would be made to make them blend into the surrounding vegetation as much as possible. Girdling larger subalpine firs would result in standing dead trees that would turn brown and then drop needles. The Visual Quality Objective for both proposed treatment sites is Modification (see Land Management Plan Objectives above). Most of the treated area at the West Daniels site would not be visible from any dispersed or developed recreation site, road, or trail. Part of the Mill B site would be visible from the Mill B Canyon Road (Forest Service Road 093).

Access and Roads

Neither proposed treatment site is located within or adjacent to an inventoried roadless area. No roads would be created or enhanced to complete the proposed action.

DECISION TO BE MADE

Through the environmental analysis process, the Forest Service will decide what type of treatments and activities, if any, will be implemented within the proposed project area.

WHAT IS NEEDED FROM YOU

The Forest Service uses public input to aid in project design and the decision-making process. The Forest Service needs to know what the public thinks about the proposal and whether there are additional issues or alternatives that should be considered.

WHEN ARE YOUR COMMENTS NEEDED

Public comments can best be incorporated into project planning if submitted early in the process. Please submit comments by July 12, 2004.

ADDITIONAL INFORMATION

Contact Jeff Waters (Wildlife Biologist and Interdisciplinary Team Leader) at (435) 654-7227 or jwaters@fs.fed.us if additional information is needed.

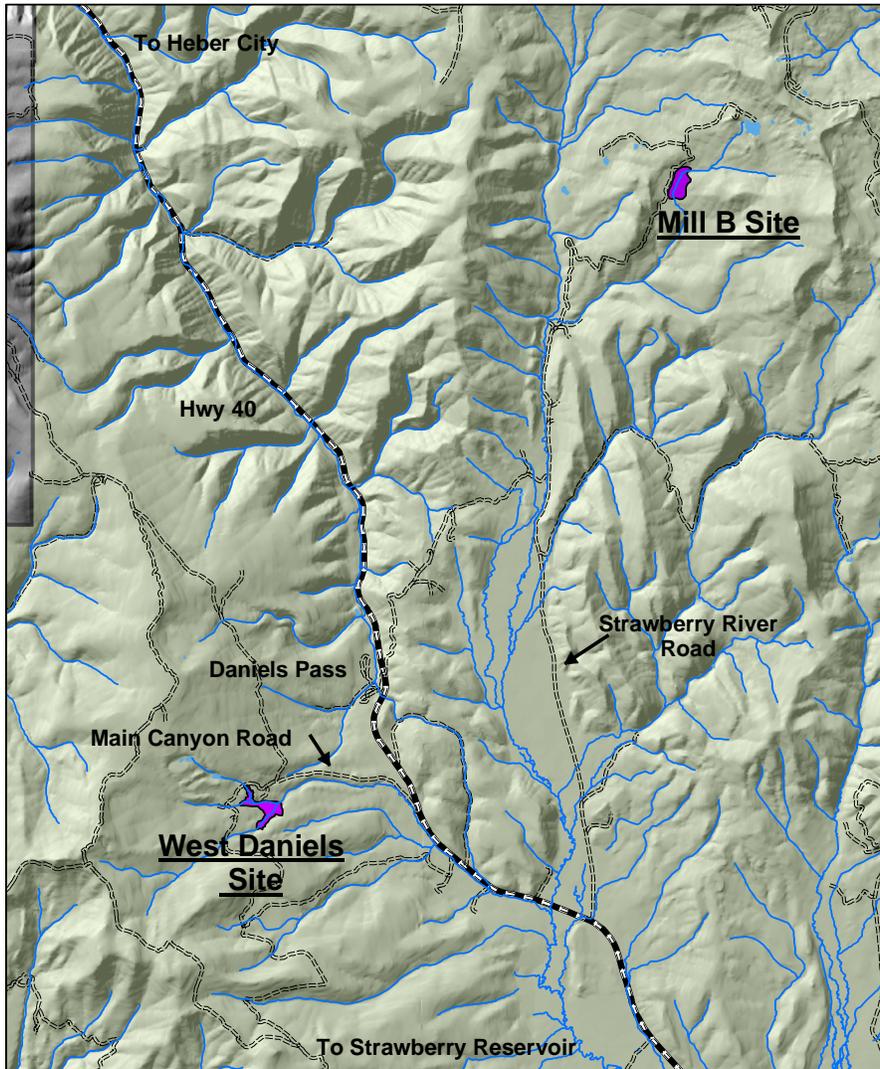
COMMENT SUBMISSION

Comments can be submitted in writing to:

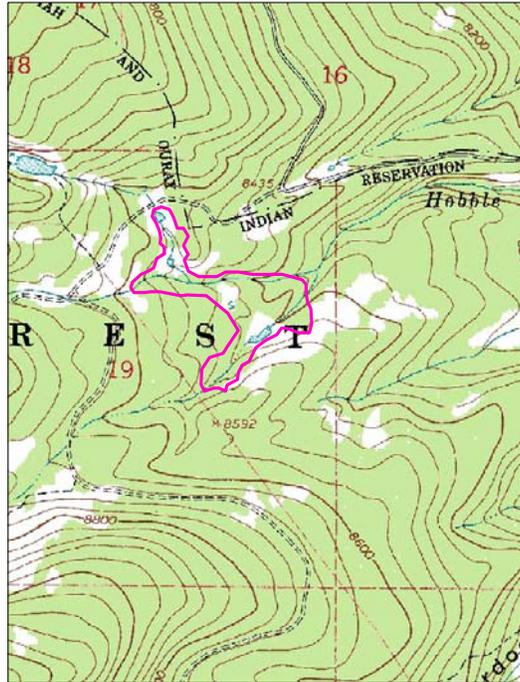
Julie King, District Ranger
Heber Ranger Station
2460 South Highway 40
P.O. Box 190
Heber City, UT 84032

Or by email to <mailto:comments-intermtn-uinta-heber@fs.fed.us>.

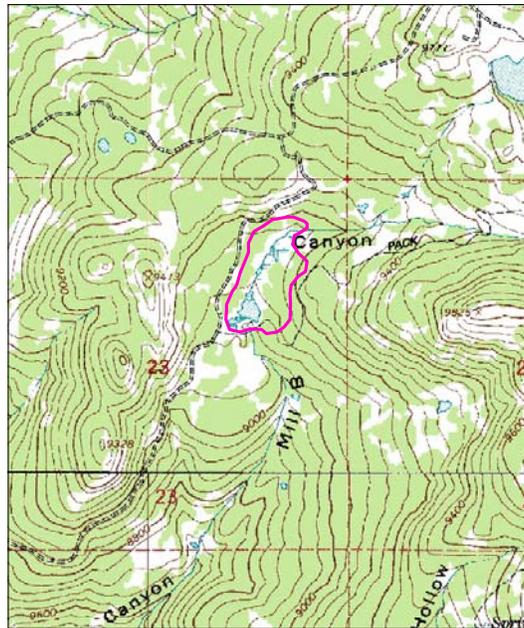
Beaver Habitat Improvement Project Areas



West Daniels Site



Mill B Site



0 0.15 0.3 0.6 Miles

