

**RSC PRECOMMERCIAL THINNING AND ASPEN REHABILITATION
ENVIRONMENTAL ASSESSMENT**

EA OR-025-01-014

**Bureau of Land Management
Burns District Office
HC 74-12533 Hwy 20 West
Hines, Oregon 97738**

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CHAPTER I. INTRODUCTION: PURPOSE OF AND NEED FOR ACTION

The Burns District of the Bureau of Land Management (BLM) proposes to implement forest health activities on the Three Rivers Resource Area. The areas to be covered by this assessment are located near Rattlesnake Creek (T. 21 S., R. 32 E., Sections 25, 26; T. 21 S., R. 32½, Sections 30, 31), Squaw Creek (T. 18 S., R. 35 E., Sections 23, 24, and 25), and Cricket Creek (T. 21 S., R. 28 E., Sections 13, 24, and 25; see map Appendix A). This land is located in Harney County. The project is expected to be completed over the next 4 years.

A. Purpose and Need

The purpose of this proposal is to:

- Reduce stocking of overstocked ponderosa pine stands to improve forest health by increasing the growth and vigor of retained trees.
- Reduce the risk of stand replacement fires.
- Protect areas of high resource value from catastrophic wild fire, insects and disease.
- Improve and protect bald eagle roost habitat.
- Restore degraded aspen stands.

This project is being proposed for the following reasons:

- Overstocked stands are resulting in mortality to large, older trees.
- The overstocked stands pose a fire hazard to adjacent landowners and high value wildlife habitat (eagle roosts, deer winter range, a variety of cavity-nesting birds).
- Due to the absence of fire and conifer encroachment, several aspen stands are declining and in need of rehabilitation.

B. Conformance with Applicable Land Use Plans

This EA is in compliance with management direction established in the Three Rivers Resource Management Plan (August 1992).

CHAPTER II. ALTERNATIVES INCLUDING THE PROPOSED ACTION

A. Proposed Action

Improved forest health and restoration of special habitats are the focus of the proposed action. The following activities make up the proposed action:

- Precommercial thinning would take place on approximately 1,240 acres (see Appendix A).

- Slash would be treated by machine and hand piling, burning of slash piles and underburning.
- Most conifers would be cut on approximately 10 acres of aspen in various areas.
- In the aspen units, the cut conifers could be sold and removed if it is economical, otherwise, all conifers and slash would be left in place as barriers to browsing animals.
- Unthinned islands would be left to provide hiding cover for wildlife.

Other Design Features

1. If any logs are removed from the aspen areas, the logging would take place when the ground is dry or frozen. Machine piling would also take place when ground conditions are dry or frozen.
2. The aspen stands would be fenced to protect the aspen suckers from browsing animals if the remaining slash does not provide adequate protection.
3. In order to not effect roosting eagles in the Rattlesnake roost area, work activities would be conducted between the hours of 1000 and 1400 from December 1 through April 1 in that area.
4. Equipment would be required to enter BLM land free of noxious weed seeds or reproductive plant parts.

Monitoring

1. The growth of the aspen stands would be monitored every 3 years to determine when the young aspen trees are tall enough that they no longer need to be protected from browsing animals.
2. Disturbed sites would be monitored for noxious weeds 3 years following the last treatment. If noxious weeds become established, appropriate treatments would be undertaken pursuant to the Burns District Weed Management Plan.

B. No Action Alternative

Under this alternative no forest health treatments would take place.

C. Alternative Considered but not Analyzed in Detail

Thin the proposed units using only fire. This alternative was not developed because to burn these stands successfully there would be a high level of risk and it was determined to be uneconomical. The fuel type, loading, and arrangement are far outside their historic condition.

CHAPTER III. AFFECTED ENVIRONMENT

This section is a description of the human environment in the project area. The following resources are not known to exist within or adjacent to the project areas: Wilderness, Wilderness Study Areas, Areas of Critical Environmental Concern, Wild and Scenic Rivers, minority or economically depressed populations, floodplains, farmlands, paleontology, American Indian Religious concerns, mining claims or hazardous materials.

A. Critical Elements

1. Water Quality

The proposed project is within the drainages of Rattlesnake, Coffeepot, Squaw, and Cricket Creeks. Rattlesnake Creek and Coffeepot Creek are 303(d) listed streams because they do not meet water quality standards for temperature. The riparian conditions along these streams range from fair to good.

2. Special Status Plant and Animal Species

No Special Status plant species are known to exist within or near the proposed project areas.

A bald eagle communal winter roost is located about one-half mile from the Rattlesnake site. Eagles frequently fly in the vicinity of this site during the winter roosting period. Eagles may be present in the area from December through April.

3. Air Quality

Air quality is very good with no known pollution sources at or in the vicinity of the project areas.

4. Cultural Resources

The area has a moderate likelihood for the location of cultural resources. Historic and prehistoric resources have been located in adjacent areas.

B. Noncritical Elements

1. Soils

The soil types are generally a well-drained gravelly loam with moderate potential for erosion.

2. Vegetation

The vegetation within the stands proposed for thinning consists of scattered large overstory trees and an overstocked ponderosa pine understory. The understory is beginning to experience extensive mortality from mountain pine beetle. In addition, western pine beetle and pine engraver are causing mortality in the overstory. These stands were lightly logged in the 1950's to 1960's.

Other species associated with this ponderosa pine plant community are elk sedge, Idaho fescue, western juniper, mountain mahogany, and numerous forbs.

The aspen stands are in a state of decline and low in vigor. The existing condition is due to the absence of fire, the encroachment of conifer trees, and grazing from cattle and big game animals. Without a major disturbance these clones could be permanently lost.

3. Wildlife

The proposed project is within year-round Rocky Mountain elk range and mule deer summer range. Other species that inhabit the areas proposed for treatment include a variety of woodpeckers and sap suckers, common flicker, coyote, porcupine, and numerous other nongame mammals and songbirds.

4. Fire

All of the areas proposed for treatment are at high risk to stand replacement type fires since fire has been absent for 50 or more years. The stands are overstocked and have both excessive ladder and ground fuels. The stand proposed for treatment in the Cricket Creek area was threatened by a fire that started on private land in 1996.

5. Rangeland Management

The units fall into four different grazing allotments; Otis Mountain, Camp Harney, Cricket Creek, and Hines Field. The area is generally grazed during the summer months, with the exception of the Hines Field which is currently closed to grazing.

6. Nonnative Invasive Species

No noxious weeds were found within the project area. Noxious weed infestations are suspected to occur on private and National Forest lands in the area.

7. Recreation

The primary recreation activities in the proposed project area are deer and elk hunting.

8. Visual Resources

The treatment sites are located within Visual Resource Management (VRM) Class III (80 acres) and IV (1,160 acres). The units are generally located in the background of their respective areas and have low visibility from major travel routes and key viewing sites. A portion of the project area along Cricket Creek is in the foreground and is visible from Road 47.

9. Transportation

All units are accessible from the existing transportation system. No additional rights-of-way are needed.

CHAPTER IV. ENVIRONMENTAL CONSEQUENCES

This section analyzes the impacts that would occur to determine if environmental impacts are anticipated.

A. Critical Elements - Proposed Action

1. Water Quality

No measurable changes in water quality are anticipated. The proposed thinning activities would be low impact and widely scattered. Thinning the tree canopies would reduce interception and transpiration allowing more water to enter the soil.

2. Special Status Plant and Animal Species

There would be no effect on bald eagles, peregrine falcon, Canada lynx or any other Special Status plants or animals. Site-specific clearances for listed plant species would be conducted during the appropriate season prior to implementation of the proposed action. If any are located, mitigation would be avoidance through unit modification.

3. Air Quality

Burning the slash piles would temporarily reduce air quality until the gases and particulates that make up smoke are dissipated. The smoke would not be pushed very high into the atmosphere therefore the effects would be local. The landowners at the mouth of Rattlesnake may be affected by smoke at night for a few days.

4. Cultural

Ground-disturbing treatments or burning could potentially disturb or destroy unidentified cultural and/or paleontological resources on or near the ground surface. Cultural resource inventories of the affected areas would precede management actions that could damage cultural resources or impact culturally important plants.

B. Noncritical Elements

1. Soils

Minor erosion or soil movement may occur the first year following machine piling of slash in places where bare soil is exposed. If any logging occurs in the aspen stands some compaction may occur in landings or skid trails (less than one-quarter acre).

2. Vegetation

Following the proposed treatments, tree vigor and growth would increase and tree mortality from insects and diseases would decline. There would also be an increase in grasses and forbs as more sunlight reaches the forest floor. Due to increased vigor and growth rates, remaining trees would reach larger diameter sizes in a shorter period of time.

In the aspen stands, vigorous sprouting would occur in the first 2 years following treatment. The clone would be invigorated and in 10 to 20 years develop into a high quality aspen habitat.

3. Wildlife

In the ponderosa pine stands there would be a reduction in hiding cover for big game animals and a reduction in habitat quality for those birds and animals preferring dense understories. However, this would be partially mitigated by the retention of unthinned areas. Habitat for species preferring more open pine stands would improve. In the long term as the trees get larger, animal species such as cavity nesters that prefer large trees would also have improved habitat.

4. Fire

Fuel loading and arrangement would be reduced to a level where the susceptibility to stand replacement type fires would be greatly reduced on 1,240 acres. The risk of fire spreading from public land onto land of other ownership would also be reduced.

5. Rangeland Management

There would be minimal impacts on livestock or livestock grazing management systems. Some increased forage and palatability would result from the proposed treatments.

6. Nonnative Invasive Species

There is a risk for spread of invasive species from established weed populations on adjacent land and contaminated equipment prior to revegetation of bare ground. However, the Burns District Weed Management Plan would be implemented which should prevent the spread of undesirable plant species.

7. Recreation

There would be no impacts on any recreational activities.

8. Visual Resources

The visual character of the various locations proposed for treatment, as seen from major travel routes, would not be noticeably different. Immediately following treatments the created slash may be unsightly until it is treated. Smoke from the proposed burning would create a short-term visual detraction (approximately 2 days).

C. Cumulative Impacts

The effects of tree thinning that has taken place in the past on private land and other Federal ownerships within the subwatersheds in which the project acres are located, are resulting in a cumulative impact. The cumulative impact has been the gradual reduction in the continuity and expanse of high hazard fuels that are susceptible to stand replacement type fires. Because this impact has taken place over a 10 to 15-year period, no other cumulative impacts such as soil erosion or a reduction in water quality were identified.

D. No Action Alternative - Critical Elements

1. Water Quality

There would be no impacts to water quality. However, water quality impacts could be severe if the area was impacted by a major wildfire event. A major wildfire would negatively affect water quality by increased turbidity from increased erosion.

2. Special Status Plant and Animal Species

There would be no impacts to any Special Status plant or animal species.

3. Air Quality

There would be no impacts to air quality.

4. Cultural

There would be no impacts to any cultural resources.

E. Noncritical Elements

1. Soils

There would be no impacts to soils.

2. Vegetation

Without thinning the ponderosa pine stands, mortality would continue in all tree sizes especially in the large overstory trees. The understory would remain stagnant and be very slow to replace the dying overstory trees.

Without a major disturbance the aspen stands would continue to decline and could ultimately die out altogether. The aspen would continue to be crowded out and replaced by ponderosa pine.

3. Wildlife

In the ponderosa pine stands, cavity-nesting species would initially have high populations during the peak periods of mortality. As the number of snags decline, especially in the large trees, cavity-nesting species will decline. Hiding and thermal cover would be reduced as mortality moves through the stands. A major change in habitat quality and characteristics could occur suddenly if the areas experienced a major wildfire event.

Wildlife diversity would be reduced as the aspen stands decline.

4. Fire

Fuel loading and arrangement would remain above natural levels. Surface fuel loadings would increase as snags fall to the ground. This would increase wildland fire intensity. The areas would continue to be at risk to major wildfire events.

5. Rangeland Management

There would be no impacts to cattle grazing.

6. Nonnative Invasive Species

There would be no change in the risk for introduction of new weed populations or the expansion of existing populations.

7. Recreation

There would be no impacts to any ongoing recreational activities.

8. Visual Resources

There would be no affect to the areas visual character. The visual character for any one of the areas could be changed greatly if a major wildfire event occurred.

F. Cumulative Impacts

There would be no additional reduction or modification of the fuel continuity in the various subwatersheds as identified in the proposed action.

CHAPTER V. CONSULTATION AND COORDINATION

A. Agencies and Individuals Consulted

Burns Paiute Tribe
Harney County Court
Oregon Department of Fish and Wildlife
U.S. Forest Service: Malheur National Forest, Emigrant Creek Ranger District

B. Participating BLM Employees

Bill Andersen - Range Management Specialist
Gary Foulkes - Planning and Environmental Coordinator
Rudy Hefter - Supervisory Natural Resource Specialist
Tim Kramer - Watershed Specialist
Brian McCabe - Archaeologist
Fred McDonald - Natural Resource Specialist
Jon Reponen - Natural Resource Specialist, Project Leader
Lesley Richman - Range Management Specialist
Jeff Rose - Fire Ecologist
Willie Street - Range Management Specialist

Fred Taylor - Wildlife Biologist
Nora Taylor - Botanist