

Environmental Assessment #OR-014-99-10
for
Harpold West Juniper Treatment
Klamath Falls Resource Area - Lakeview District
Klamath Falls, Oregon

PROJECT NAME: Harpold West Juniper Treatment

PROPOSED LOCATIONS

- BLM-administered lands encompassing approximately 600 acres in T. 39 S., R. 11 E., Sections 29, 30, 31, and 32 (see Map 1).
- Adjacent private lands may be included if cooperative agreements are reached.

NEED FOR ACTION

Western juniper (*Juniperus Occidentalis*) has been actively invading shrub steppe communities in the Pacific Northwest during the past 120 years (Miller, et al.1999). Past and present fire suppression has resulted in juniper encroachment to the point of reducing suitable forage for ungulates. The reduction in forage is of concern because the proposed area is critical winter range and transitional range (spring and fall) for mule deer (*Odocoileus hemionus hemionus*). Juniper has replaced or diminished the shrub and grass community due to competition for sunlight, water, and nutrients. Juniper removal, along with reintroduction of fire to the vegetative community, is being planned to release and rejuvenate the shrub and grass communities to their historical form and function. Juniper removals on Harpold Ridge(T39S, R11E, Sec. 32) and North Harpold(T39S, R11E, Sec. 29) in the early 1960's have been considered successful in re-establishing shrub communities. Recent (1997-1999) removal projects of encroaching juniper in Lorella(101 acres), Swan Lake Rim(97 acres), and Horse Camp Rim(45 acres) have also been considered successful in the changing of communities from overstocked juniper woodlands back to shrub and grassland communities.

DESCRIPTION OF ALTERNATIVES

Alternative A - Proposed Action: This alternative proposes a combination of treatments including mechanical removal, hand felling, piling, and prescribed burning. Juniper trees would be removed by mechanical methods such as a shearer in areas of accessibility, and by hand-felling measures in areas where access for mechanical equipment and operation is not feasible. The cut juniper would be piled and /or left to be burned at a later date to reduce excess fuels. Burning of the cut/piled juniper would be done at appropriate times considering the weather, fuel loading, and other site-specific factors. Fire would be introduced by prescribing burns in areas

where juniper has been removed, as well as other areas having potential juniper encroachment problems, with the objective of restoring form and function to the shrub/grassland communities. In some areas, shrubs may be planted and the broadcast seeding of native grasses may be applied to help re-establish the native plant communities.

Alternative B (Hand-Falling Only): Under this alternative, the method of juniper removal would be limited to hand-falling only. The cut juniper would be cut and piled and/or left to be burned at a later date to remove excess fuel from the project area. Treated areas may be replanted with native plants and seeded with native grasses to assist with revegetation.

Alternative C (Mechanical Shear Only): Under Alternative C, the method of juniper removal and piling of cut juniper would be limited to mechanical shear only. The piled juniper would be burned at a later date per prescribed fire guidance to remove excess fuel from the project area. Treated areas may be replanted with native plants and seeded with native grasses to assist with revegetation. Only those areas accessible to a mechanical shear would be treated.

Alternative D (Fire Only): This alternative would reintroduce fire only to selected areas within the project boundaries. The objective in selecting areas and implementing the prescribed fires would be to mimic the natural occurrence of fire, creating a mosaic of burned and unburned areas. Treated areas may be replanted with native plants and seeded with native grasses to assist with revegetation.

Alternative E (No Action): No juniper would be removed and no burning would be prescribed within the proposed project area.

Project Design Features Applicable to All Action Alternatives (A-D)

- All juniper considered “old growth” would be retained.
- Some selected juniper would be retained for wildlife.
- The area is critical winter range for mule deer. No activities (including juniper cutting, piling, or burning; and vegetative planting or seeding specific to the alternative) will occur between November 15 and April 15.
- The use of mechanical harvesters will be restricted to dry conditions to minimize soil compaction and soil disturbance, per the Klamath Falls Resource Area RMP and FEIS, Appendix F, pp. 23-24.
- Burning of juniper will be subject to KFRA Programmatic EA#O14-94-9 addressing the use of prescribed fire.
- The contractor will be required to rinse machinery used in mechanical methods prior to moving onto the project area to prevent potential infestation with noxious weeds and non-native species.
- Cultural sites requiring protection will be buffered according to guidance provided by the resource area’s archaeologist, and the area within these buffers will not be treated.

- If any cultural sites are located during project implementation, activities will be temporarily suspended until appropriate mitigating measures are developed and the resource area archaeologist has provided clearance to proceed.
- Adjacent landowners and residents will be notified at least 30 days prior to burning.
- Cut juniper may be utilized (fence posts, firewood, lumber, etc.) if economically and logistically feasible.
- We would request that the permittee rest the allotment for at least one year and preferably two years after burning.
- An ephemeral drainage would be buffered to minimize the risk of erosion.
- An ephemeral/intermittent drainage would need up to a fifty foot buffer on both sides in which only selected juniper would be cut.

AFFECTED ENVIRONMENT

Vegetation: The primary vegetative community within the area is a juniper sagebrush scrub with bunch grass. Juniper is well distributed and over abundant within the project area, except for areas of previous juniper removal. The area under and around the denser stands of juniper is almost devoid of vegetation. Decadent bitterbrush and sagebrush remain in these denser stands of juniper with little regeneration taking place. The treatment area is part of the Harpold Ridge grazing allotment #0851. Season of use is from 05/01-05/31 with a total of 108 AUM's (animal unit month). The allotment has been in non-use status for the following years; 1991-1994, 1996-1997, and 1999. See the KFRA ROD/RMP page-H-40 for complete details of the Harpold Ridge allotment.

Special Status species: Botanical surveys were conducted in June and July 1999. No Special Status plant or noxious weed sites were located within the proposed treatment area.

Wildlife: The proposed project area is within critical wintering range for mule deer, which translates to their reliance on this area for habitat between November 15 and April 1. Various bird species, including the red-tailed hawk (*Buteo jamaicensis*), great horned owl (*Bubo virginianus*), American kestrel (*Falco sparverius*), and several song birds species are known to use the area during their spring and fall migration with some summer residents. A Bat species has been seen roosting in old growth juniper within the project area. For a list of other common species that may occur within the proposed area, reference the Draft KFRA RMP/ROD Appendix 3C for a description of their habitat in the KFRA RMP & EIS (pp. 3-37 through 3-1).

Water Resources: There are a few small ephemeral and an ephemeral/ intermittent drainage within the project boundaries. No riparian vegetation is associated with these areas. These drainages predominately flow only during periods of snow melt.

Cultural Resources: BLM administered lands within the proposed treatment area were surveyed for cultural resources in 1999. A private firm was employed to perform a BLM Class III cultural resources inventory. Native American and historic era cultural sites were encountered and

recorded in the field. A copy of the survey report and accompanying inventory forms documenting the fieldwork were forwarded to the Oregon State Historic Preservation Office. Cultural sites will be protected/avoided during project activities. Should adjacent private lands later be included within the proposed projects, cultural resources inventory would need to be performed prior to treatments. Cultural resources encountered on private lands would also need to be protected from potential project impacts.

ENVIRONMENTAL CONSEQUENCES

Prescribed burning effects are analyzed in the KFRA's Programmatic EA on Prescribed Burning #OR014-94-9. Effects to other resource values are described below.

Vegetation: All four treatments alternatives (A-D) would alter the current vegetative communities, but to varying degrees dependent on the type of juniper removal and the use of prescribed fire. The mechanical shear would have the greatest disturbance and impact on vegetative change. Increased soil disturbance would increase forb production but with the increased potential for weedy species to occur. In addition, an increase in soil compaction is likely to occur in some areas as a result of the mechanical shear. Both Alternatives B and D would have less soil disturbance. Hand felling would remove the juniper and allow shrubs, forbs, and grasses to compete. Prescribed burning would in the short term remove some of the browse and grazing habitat, but the rejuvenation of the shrubs and forbs would be beneficial in the long term. Cheat grass, a frequently present weed species, could invade areas where prescribed burning is utilized. The broadcast seeding of native grasses and shrub species would accelerate the revegetation process, helping to restore the shrub and grassland communities. Although elevating soil disturbance may increase the abundance of early successional and weedy species, in the long term Alternatives A-D would affect the current vegetative communities by helping to restore the shrub and grassland communities to their past form and function. The increased forage that would result from any of the four action Alternatives A-D would be beneficial for the grazing allotment. It would be necessary to coordinate the grazing management to lessen the impacts on recently disturbed areas. The impacts to the cut areas would be evaluated individually and grazing management recommendations would be decided at that time. Alternative E (No Action) would not benefit grazing or browse habitat and would further reduce suitable forage.

Special Status Plant Species and Noxious Weeds: The area was surveyed for Special Status plant species and noxious weeds. No Special Status plant species were located within the treatment area.

Water Resources: All alternatives should have a low impact on these drainage areas as a result of the proposed project design features.

Wildlife: The removal of juniper is expected to help return vegetation in the project area to its historical form and function, which would improve foraging habitat for mule deer. The

reintroduction of fire through prescribed burns would also assist in restoration of the area's shrub/grassland communities. Alternative E (No Action) would have a negative impact on mule deer and other wildlife species. The juniper would continue to encroach and further reduce foraging habitat. Song bird species, such as, the gray flycatcher, loggerhead shrike, and Brewer's sparrow, would all benefit from the removal of juniper and the restoration of the sage community. Retaining "old growth" and other selected larger junipers would provide potential nesting and roosting habitat for cavity-nesting birds and bats, as well as providing some thermal cover for ungulates.

Cultural Resources: As indicated above, BLM administered lands were surveyed for cultural resources. Cultural sites have been identified in the field and would be protected from project activities. It is anticipated that all alternatives should have no effect upon known sites. The potential exists for project activities to impact subsurface archaeological remains/sites not discovered during pedestrian/surface cultural resources survey. Alternatives A and C both include the use of a mechanical shearer and would present the greatest potential to impact subsurface archaeological materials within areas not currently known to contain sites. Alternatives B, D, and E do not include mechanical treatments and should have little to no impact on subsurface cultural materials.

Environmental Justice: No disproportionately high or adverse human health or environmental effects are expected to result from implementation of the juniper treatment and prescribed burns.

Consultations

Klamath Falls Resource Area Interdisciplinary Team

Conformance With Other Land Use Plans

The proposed juniper treatment conforms with the following land use plans:
Klamath Falls Resource Area Management Plan/Record of Decision (June 2, 1995)(RMP)
Klamath Falls Resource Area Fire Management EA#OR-014-94-9 (June 10, 1994)

Literature Cited

Miller, R.F., T. Svejcar, and J. Rose. 1999. The Impacts of Juniper Encroachment on Understory Cover and Diversity. Range Field Day 1999 Progress Report. Juniper Woodlands: History, Ecology, and Mangement. Agricultural Experimental Station, Oregon State University. Special Report 1002.

**FINDING OF NO SIGNIFICANT IMPACT (FONSI)
for the
Harpold West Juniper Treatment
Klamath Falls Resource Area - Lakeview District
Environmental Assessment #OR014-99-10**

The Bureau of Land Management, Lakeview District, Klamath Falls Resource Area, has analyzed the Harpold West Juniper Treatment Environmental Assessment containing the following proposal and their alternatives related to:

Juniper thinning and removal treatments
Use of prescribed fire

Based on the information within the Environmental Assessment, it is my determination that none of the alternatives analyzed constitutes a significant impact affecting the quality of the human environment greater than those addressed in the:

Final-Klamath Falls Resource Area Management Plan and EIS (FEIS) (Sept. 1994), and its Record of Decision and Resource Management Plan (June 2, 1995) (KFRA ROD/RMP).

Klamath Falls Resource Area Fire Management EA#OR-014-94-09 (June 10, 1994).

Klamath Falls Integrated Weed Control Plan EA (July 21, 1993).

Range Reform FEIS (August 1995).

Standards for Rangeland Health and Guidelines For Livestock Management For Public Lands Administered By The Bureau of Land Management In the State of Oregon and Washington (August 12, 1997).

Final Environmental Impact Statement, Vegetation Treatment On BLM Lands in Thirteen Western States.

Interior Columbia Basin Ecosystem Management Project/Eastside Draft Environmental Impact Statement/May 1997 (ICBEMP). We have reviewed the direction of the preferred alternative in ICBEMP and feel that the proposed action meets the intent/general direction of that alternative. The final decision for ICBEMP could amend direction in this EA at some future date

The Klamath Falls Resource Area recently completed their fiscal year 1998 Annual Program Summary and Monitoring Report for the Klamath Falls Resource Area" (Feb. 1999). Results from the first three years indicates that impacts are within those analyzed in the Klamath Falls Resource Area Final Environmental Impact Statement.

Impacts to the environment would be similar to or less than those disclosed in the above mentioned documents. Therefore, it is my

decision that an Environmental Impact Statement is not necessary and will not be prepared.

Signed: Teresa A. Raml _____ Date: 8/30/99 _____
Manager, Klamath Falls Resource Area

Decision Record
for
Harpold West Juniper Treatment
EA# 014-99-10

The Harpold Ridge area is designated as critical winter range for mule deer. It is my determination that juniper removal, along with the reintroduction of fire to the vegetative community will assist in restoring the shrub and grass communities and enhance mule deer habitat.

Therefore, it is my decision to implement the Proposed Alternative(A) which may include the following:

- Mechanical juniper removal
- Hand felling of juniper
- Piling of juniper
- Prescribed burns
- Planting native shrubs and grasses

Signed: Teresa A. Raml Date: 10/7/99
Manager, Klamath Falls Resource Area _____