USDI, Bureau of Land Management
Burns District
Three Rivers Field Office
Hines, Oregon 97738

FINDING OF NO SIGNIFICANT IMPACT

for

Five Creeks Rangeland Restoration Project
Environmental Assessment
OR-06-027-022

INTRODUCTION:

The attached Environmental Assessment (EA) was completed to analyze the effects of prescribed fire and mechanical treatments in the Five Creeks Rangeland Restoration Project Area (Project Area) to manage encroaching juniper and reduce hazardous fuels accumulations.

The Project Area is located in Harney County approximately 50 air miles southeast of Burns, Oregon. It includes portions of the Smyth-Kiger (#5331), Happy Valley (#5309), Riddle Mountain (#5310), Riddle/Coyote (#5329), Burnt Flat (#5604), Stonehouse (#6040), Jenkins Burnt Flat Fenced Federal Range (FFR) (#5327), Clemens FFR (#5323), and Riddle FFR (#5324) grazing allotments (T. 29 S., R. 33 E., T. 28 S., R. 34 E., T. 29 S., R. 34 E., T. 29 S., R. 35 E., T. 30 S., R. 33 E., T. 30 S., R. 34 E., T. 30 S., R. 35 E., T. 30.5 S., R. 34 E., T. 31 S., R. 35 E., T. 31 S., R. 34 E.) in the Three Rivers Resource Area. The Project Area covers 73,386 acres (53,738 acres public land, 19,648 acres private land). Approximately 26,075 acres of the area lies in the north end of the Steens Mountain Cooperative Management and Protection Area (CMPA) and encompasses approximately 32,592 acres of the Riddle Mountain and Kiger Herd Management Areas/Areas of Critical Environmental Concern (ACECs). There are no Wilderness or Wilderness Study Areas (WSAs) within the Project Area. Approximately 70 percent of the Project Area has been encroached by juniper.

Primary purposes of the Five Creeks Rangeland Restoration Project are to reduce hazardous fuels and restore and/or increase system functionality (i.e., capture and storage of water, soil nutrient retention) through the restoration of shrub-steppe, aspen, and riparian communities. Associated benefits of enhancing ecosystem functionality include improvement of sage-grouse, big game, and other Special Status and locally important species habitat, and improved forage for livestock, wild horses, and wildlife.

SUMMARY OF PROPOSED ACTION

The proposal is to utilize various forms of prescribed fire and mechanical treatments within the Project Area to: 1) reintroduce fire to restore and/or maintain natural fire regimes;[1] 2) reduce hazardous fuels within the Project Area, especially within previously treated juniper cuts; 3) move the species composition and structure of big sagebrush-bunchgrass, low sagebrush-bunchgrass, aspen and riparian communities toward pre Euro-American settlement conditions; 4) improve big game, sage-grouse, and other locally important species habitat within the Project Area; 5) increase wild horse and livestock forage; and 6) improve watershed health.

Proposed landscape treatments in the Project Area are based upon the stage of transition to juniper woodlands that six of the dominant plant communities; (low sagebrush-bunchgrass, mountain big sagebrush-bunchgrass, Wyoming big sagebrush-bunchgrass, basin big sagebrush, aspen, and riparian) are in. Proposed treatments are also based upon potential ecological impacts. Hazardous fuels from 3,428 acres of previously cut juniper are also proposed for treatment. Within the CMPA boundary, wildland fire use[2] may be utilized. Designation of woodland harvest areas throughout the Project Area would also be considered yearly, on a site-by-site basis.

The proposed action includes project design elements and a monitoring program that would protect or enhance wildlife habitat, protect cultural resources, prevent the spread of noxious weeds, protect air quality, maintain water quality, protect Special Status plant species, protect old growth juniper, and protect recreational and/or cultural uses of the planning area. Project implementation would be completed over a 7 to 15-year period.

Specific objectives/treatments are as follows:

<u>Low sagebrush–bunchgrass community</u>

The proposal is to treat up to 70 to 90 percent of the low sagebrush communities affected by juniper encroachment. Encroaching juniper would be cut, and in some cases, left.

[1] ***Natural Fire Regime:*** A general classification of the role fire would play across a landscape in the absence of modern human mechanical intervention, but including the influence of aboriginal burning.
[2] ***Wildland Fire Use:*** The application of the appropriate management response to naturally-ignited wildland fires to accomplish specific resource management objectives in predefined designated areas outlined in fire management plans.

Leaving downed juniper with no follow-up treatment would only be considered when such an activity would not contribute appreciably to hazardous fuel loading. If, however, the downed juniper would create a hazardous fuel load, it would be jackpot burned[3] to reduce the hazard of a wildfire occurrence. Single-tree burning[4] may occur on a limited basis as an alternative method to cutting. Many sites within the low sagebrush-bunchgrass communities are not currently invaded by juniper and would not be targeted for treatment.

Low sagebrush-bunchgrass communities would not be targeted for broadcast burning.[5] However, low sagebrush-bunchgrass communities may be treated in a broadcast burn, as low sagebrush is sometimes intermingled with surrounding mountain big sagebrush communities.

Mountain big sagebrush-bunchgrass communities

The proposal is to treat up to 90 percent of mountain big sagebrush-bunchgrass communities displaying juniper encroachment.

The two principal treatments used to treat the majority of this community would be 1) cutting encroaching juniper followed by jackpot burning after juniper has cured or; 2) prescribed broadcast burning. In areas targeted for a broadcast burn, the objective is to burn 40 to 60 percent of the mountain big sagebrush-bunchgrass communities in early to mid-juniper woodland transition and 90 percent of mountain big sagebrush plant communities in mid to late transition. Remaining encroached juniper would then be cut and jackpot burned.

Mountain mahogany and bitterbrush stands greater than an acre in size would generally be pretreated prior to broadcast burning in order to reduce the possibility of excessive heat negatively affecting plant community recovery. Pretreatment options include cutting and jackpot burning, blacklining,[6] cutting juniper then pulling it away from bitterbrush and mahogany stands, and piling via hand or mechanized equipment prior to the broadcast burn.

[3] ***Jackpot Burning*****:** Prescribed burning of concentrations of woody fuels during the late fall, winter or spring, preferably when the ground is partially frozen or wet. This method would burn the fine fuels, limit the ability of the fire to spread and prevent soil sterilization from excessive heat. It is conducive to maintaining the herbaceous plant species growing under the downed junipers. (For more detail see Activity Descriptions.)

[4] ***Single-Tree Burning*****:** Prescribed burning of individual trees in late fall, winter, or spring, preferably when the ground is partially wet or frozen. This method would burn the fine fuels, limit the ability of the fire to spread and prevent soil sterilization from excessive heat. It is conducive to maintaining the herbaceous plant species growing under the junipers. (For more detail see Activity Descriptions.)

[5] ***Broadcast Burning*****:** Prescribed burning at a time when the fire would carry through the unit, burning most of the available fuels. This would be applied in the late summer or fall when the fire would be controlled by pre-established control lines with ignition patterns in concert with the terrain features and wind direction as well as using natural barriers, and or diurnal temperatures and humidity changes. (For more detail see Activity Descriptions.)

[6] ***Blacklining:*** Preburning of fuels adjacent to a control line before igniting a prescribed burn. Blacklining is usually done in heavy fuels adjacent to a control line during periods of low fire danger to reduce heat on holding crews and lessen chances for spotting across control line.

Wyoming big sagebrush and basin big sagebrush-bunchgrass communities

The proposal is to treat up to 90 percent of Wyoming and basin big sagebrush communities that are encroached by juniper. These communities are found primarily at lower elevations (below 5,000 feet) in the Project Area, and consequently, are more vulnerable to cheatgrass and noxious weed invasion. Treatments would be designed to limit ground disturbance and noxious weed/cheatgrass establishment. The primary treatment in these communities would be cutting and jackpot burning during the winter months. A limited amount of cutting and leaving the downed juniper in place may also occur. Leaving downed juniper with no follow-up treatment will only be considered when such an activity would not contribute appreciably to hazardous fuel loading.

Aspen Stands

The proposal is to treat all aspen stands greater than one-eighth acre in size that display juniper encroachment. Broadcast burning, juniper cutting followed by jackpot burning and juniper cutting with no follow-up burning are activities that may be utilized in this community type. Leaving downed juniper with no follow-up treatment would only be considered when such an activity would not contribute appreciably to hazardous fuel loading. This treatment may also include construction of woven wire exclosures 8 feet in height around stands of aspen following the application of prescribed fire to provide for and protect suckering and regrowth of aspen. The protection fences would be removed when the height of the terminal bud is above the reach of grazing animals. Timing of removal would be determined by rangeland monitoring.

Riparian Communities

The proposal is to treat all riparian communities displaying juniper encroachment. Riparian and wetland areas would generally receive some form of additional treatment before or after a broadcast burn to reduce the possibility of excessive heat from the broadcast burn slowing plant community recovery. Additional treatment options include cutting and jackpot burning before or after a broadcast burn, blacklining prior to the broadcast burn, and hand piling and burning prior to the broadcast burn. Cutting and jackpot burning and leaving cut juniper in place without broadcast burning are also options. Leaving downed juniper with no follow-up treatment would only be considered when such an activity would not contribute appreciably to hazardous fuel loading. This treatment may also include construction of woven wire exclosures around cottonwood stands and/or planting deciduous woody vegetation following the application of prescribed fire.

Hazardous Fuels

The proposal is to treat 100 percent of the sites that are a hazardous fuel threat. Sites containing downed juniper would be treated with various forms of prescribed fire to reduce hazardous fuels. Jackpot burning and broadcast burning would be the primary forms of prescribed fire utilized under this treatment. Due to a lack of fine fuels (e.g., needles), it may be necessary to machine pile and burn the cut units in order to accomplish this management objective.

FINDING OF NO SIGNIFICANT IMPACT

The proposed action satisfies resource management goals and objectives outlined in the Three Rivers Resource Management Plan/Final Environmental Impact Statement (RMP/FEIS) of 1992. In addition it conforms to the goals and objectives outlined in the Steens Mountain Cooperative Management and Protection Act of 2000 (Section 113(c)), and the Steens Mountain CMPA RMP of 2005 and FEIS of 2004.

This project is also consistent with Objectives and Desired Future Conditions for the Diamond Fire Management Unit set forth in the Burns Interagency Fire Zone Fire Management Plan (2004). This project is consistent with the Smyth-Kiger, Happy Valley, Riddle Mountain, Riddle/Coyote, and Burnt Flat Allotment Management Plans, Evaluations, and Assessments for Rangeland Health and Guidelines for Livestock Management, in conformance with State, Tribal, and local laws, regulations, and land use plans and is compliant with the Greater Sage-Grouse Conservation Assessment and Strategy for Oregon.

Based on the analysis of potential environmental impacts contained in the EA as well as comments received during the 30-day Notice and Comment period, I have determined that the proposed action does not constitute a major Federal action that would significantly impact the quality of the human environment. Therefore, an EIS is not necessary and will not be prepared.

Rationale:

This determination is based on the following:

1. Similar landscape treatments using prescribed fire and mechanical juniper cutting treatments have been conducted on and around Steens Mountain for approximately 15 years. These treatments have been successful at meeting project objectives similar to those described in the Five Creeks Rangeland Restoration EA. These past projects have demonstrated the Bureau of Land Management's ability to successfully treat juniper using prescribed burns and mechanical treatments to restore riparian, sagebrush, and aspen plant communities.

2. The following critical elements are present and were analyzed in the Five Creeks Rangeland Restoration EA: air quality, water quality, wetlands and riparian, migratory birds, Special Status Species (flora and fauna), noxious weeds, cultural heritage, American Indian Traditional Practices, ACECs/Wild Horses and Burros.

Noncritical elements which are present and are analyzed in this document are: soils, vegetation, wildlife, livestock grazing management, recreation, Visual Resource Management (VRM), social and economic values, fire management, transportation/roads and biological soil crusts. (The following critical and noncritical elements of the human environment have been analyzed in the Three Rivers RMP/FEIS and Steens Mountain CMPA RMP/FEIS, and are not known to be present in the Project Area or would not be affected in any way by implementation of the proposed action: Wilderness, WSAs, Wild and Scenic Rivers, Flood Plains, Paleontology, Prime or Unique Farmlands, Hazardous Materials, Forestry, Minerals, Reclamation. Environmental Justice is a critical element that is not discussed in the Three Rivers RMP/FEIS, but will not be affected by enacting the proposed action or no action alternative.)

Impacts to affected resources are considered nonsignificant (based on the definition of significance in 40 CFR 1508.27) for the following reasons:

Air Quality

The air quality currently meets or exceeds air quality standards outlined by the Oregon Department of Environmental Quality. The proposed action would have only minor impacts on air quality focused during the time of implementation to a few days post treatment. Particulates produced during the burn would be far below standards for the pollutant established in Federal and State laws. The prescribed burn plan would minimize the effects of smoke on the communities of Diamond, Burns, Hines, and Crane. Reductions in juniper would increase shrub and herbaceous vegetation. Smoke produced by fires in those post treatment stands would be less than in fully-developed woodlands.

Water Quality, Riparian, and Wetlands

The proposed action should facilitate the recovery of deciduous woody and herbaceous riparian communities where juniper is currently outcompeting riparian vegetation. This would improve watershed stability and function by reducing bare soil and sediment inputs, stabilizing banks, increasing infiltration, and maintaining or restoring proper storage and release of groundwater important for late season flows and temperatures. Water quality would improve with enhanced watershed function where erosion is minimized, sediment inputs are minimized, channel bank stability is reinforced, infiltration rates increase, and potential for groundwater recharge is restored.

Prescribed fire treatments would result in mosaic burn patterns that include patches of unburned living vegetation following treatment. These unburned areas would reduce immediate risks of increased water turbidity and stream sedimentation by providing cover and roots that stabilize sediments and serve as sediment traps. No more than 15 percent of a given watershed would be burned (actual blackened acres) within the Project Area in any given year. This would limit the amount of ground disturbance within each watershed and should further minimize effects on water quality. In the burned areas, most of the herbaceous and root spouting shrubs would retain their live rooting systems intact and hold the soil in place. It is typically only during the first season after the burn and before vegetation begins growing that burned sites are vulnerable to accelerated erosion from direct raindrop impact.

Migratory Birds

The overall net effect of the proposed action would likely be an increase in habitat and avian species diversity as grasses, forbs, sagebrush, and other shrubs are regenerated by the reintroduction of fire in rangeland ecosystems and a mosaic of habitat types is created. Enhancing stands of aspen and riparian communities would also benefit migratory birds.

Impacts to migratory birds nesting and brood rearing would be minimized by broadcast burning in the fall, and cutting and piling where determined necessary.

Threatened, Endangered, and Special Status Species – Flora

There would be no detrimental effect on Special Status flora provided that the established project design elements are observed. By reducing the influence of encroached juniper, the proposed action would have positive effects on Special Status plant populations.

Special Status Species – Fauna: Wildlife

There are no known Federally listed Threatened or Endangered wildlife species found within or adjacent to the Project Area. The proposed action is in compliance with the Greater Sage-Grouse Conservation Assessment and Strategy for Oregon. Overall, the mountain big sagebrush and low sagebrush sites that are currently considered unsuitable for sage-grouse due to juniper encroachment would likely again become functional habitat as a result of the proposed action.

Currently, there are no known goshawk nest sites within the Project Area. Should a nest site be discovered, mitigating measures would be taken to protect both birds and nesting habitat. The proposed action would protect and enhance current aspen stands within the Project Area. This should improve and expand potential nesting habitat within the Project Area.

Currently, there are no known Swainson's hawk nest sites within the Project Area. Should a nest site be discovered, mitigating measures would be taken to protect both the birds and the nesting habitat. The proposed action generally would not target the areas within the Project Area that would be considered preferred habitat for Swainson's hawk. If any treatments occur in these areas they would likely improve Swainson's hawk habitat by making it more open. In addition, the proposed action would create more habitat in areas that are in a latter transitional stage toward juniper woodlands. These areas would likely become suitable and maybe even preferred habitat for Swainson's hawks after the treatments.

Overall, the removal of juniper from riparian areas and the restoration of riparian habitat would benefit Preble's shrew habitat. Initially, Preble's shrew habitat may be negatively affected in some areas through the loss of sagebrush cover. This habitat will return with the reestablishment of sagebrush.

Roosting habitat for bats in cliffs, rock crevices, and abandoned mines would not be affected by this alternative. The cutting and burning of young juniper would increase foraging habitat for some species of bats that use more open areas for foraging.

Special Status Species – Fauna: Fish

The proposed action would reduce chronic sediment delivery to streams from juniper-dominated uplands thus improving fish habitat. Treatment of juniper in riparian areas would lead to greater bank stability, sediment capture, stream shading, nutrient input, and water storage and release. Prescribed burning would stimulate regeneration of some riparian species (e.g., aspen willow, alder, dogwood, and other root sprouting shrubs) that have become decadent due to fire exclusion, further contributing to stream shading and thermal buffering. Maintaining or improving riparian function and restoring or rejuvenating riparian vegetation would maintain or improve aquatic habitat and conditions for fish.

Prescribed burns would be initiated when conditions are conducive to lower intensity burns. A low intensity burn into the riparian zone would most likely result in a patchy burn pattern and leave shade-providing riparian vegetation. A patchy burn would also minimize the chance of excessive sediment delivery to the streams because sediment trapping vegetation would still remain. In the event of a higher intensity burn, expected impacts would be short term. No more than 15 percent of a given watershed would be burned in any given year. This would limit the amount of ground disturbance within each watershed and should, therefore, minimize effects on water quality/fish habitat.

Noxious Weeds

The proposed action, including mitigations for preventing noxious weed spread, should enhance the overall health of the plant communities in the Project Area. Healthy plant communities would help minimize the potential for noxious weed introduction and spread. Follow-up treatments on noxious weeds identified during project monitoring would be performed as described in the Burns District Noxious Weed Program Management EA OR-020-98-05.

Cultural Heritage

There would be no detrimental effect on cultural resources provided that the established project design elements are observed. Prescribed fire treatments that could diminish the data potential of archaeological sites would not be utilized within site boundaries. Cultural resources in the Project Area would benefit from the proposed action as archaeological and built resources would become less likely to sustain damage from a severe wildfire event and fire suppression activities.

American Indian Traditional Practices

Implementation of the proposed action may increase the distribution and density of riparian vegetation stands important for the practice of Burns Paiute Tribal traditions. The proposed action would have no effect on culturally important root crops in the Project Area. The Burns Paiute Tribe was consulted regarding the proposed action and no concerns were identified.

Areas of Critical Environmental Concern/Wild Horses and Burros

The proposed action would increase habitat values for wild horses. Creating a mosaic of unburned and burned areas would improve the forage/cover ratio and wild horse habitat.

Soils

Based on the results of similar landscape projects completed on Steens Mountain, an increase in soil erosion following project implementation is expected to be minimal. Any increases in surface erosion from prescribed fire and mechanical treatments would be short lived and would decrease within the first growing season after ignition of the prescribed burn. No more than 15 percent of a given watershed would be burned within the Project Area per year.

This would further limit the amount of surface erosion within each watershed. The risk of surface erosion associated with a bare ground understory in juniper woodlands would be reduced as the density and diversity of understory shrubs and grasses increases.

Vegetation

Application of prescribed fire to juniper woodlands developed on historic sagebrush/bunchgrass communities would make more resources available to understory shrubs, grasses, and forbs. The proposed action would create a mosaic of multiple successional stages. The mosaic would increase diversity and plant community structure across all scales and increase the resilience of the plant communities to disturbance.

Wildlife

Overall, there is likely to be an increase in wildlife species diversity as a result of implementing the proposed action. The mosaic of vegetative communities resulting from the prescribed fires and mechanical treatments would increase habitat diversity. Species utilizing more open habitats would be favored as a result of the proposed action. Foraging opportunities for big game and other herbivores would increase as understory grasses, forbs, and shrubs reestablish. The proposed action would increase the health, vigor, and palatability of winter forage for both deer and elk. The plant communities that wildlife relies upon would likely persist in the event of a wildfire. Sufficient thermal and hiding cover would be retained in the Project Area through project design elements.

Livestock Grazing Management

The overall ability to provide periodic rest, to change timing of grazing, and to control duration of grazing within the allotments would increase under the proposed action, thereby providing opportunities to improve grazing management and all aspects of rangeland management. The proposed action may alter grazing rotations, require rest of certain pastures, and could require the permittees to use offsite forage for three or more growing seasons (dependant upon plant community recovery).

Recreation

There may be impacts to recreational activities in the vicinity of the Project Area. Smoke and noise generated during project implementation would disrupt recreational activities in the spring or fall seasons.

Overall, recreational activities related to big game hunting and wildlife viewing would be enhanced as habitat function improves over time.

Visual Resource Management

The Project Area falls within the VRM Class III and Class IV. The proposed action meets management direction outlined in the Three Rivers RMP and the Steens Mountain CMPA/RMP for VRM Classes III and IV. The aesthetic character of the Project Area would improve as views and scenic diversity increase.

Social and Economic Values

Juniper treatment and increased rangeland health would increase forage production for wildlife, livestock, and wild horses. This may increase economic opportunities and foster more desirable recreation opportunities. The purchase of supplies and equipment necessary for implementation of the proposed action from community merchants would constitute an additional economic effect. Service contracts to treat juniper woodlands would be utilized and may also contribute to the local economy.

Fire Management

Treatments would reduce the intensity and severity of wildfires and the risk to firefighters by altering the continuity of fuels. Suppression actions would be able to employ more direct attack strategies minimizing acres burned in wildfires. Firefighters may rely more on natural fuel breaks and changes in fuels. Less fireline may need to be constructed to suppress wildfires. Treatment of previously cut areas would help to increase firefighter and public safety. Mop-up following wildfire would also be decreased by reduction of cut juniper.

Transportation/Roads

After completion of all project activities within a specific area, roads damaged by project vehicles would be maintained and brought back to their previous conditions.

Biological Soil Crusts

Biological soil crusts in the Project Area may benefit from increased light and moisture as a result of decreased interception from juniper. Prescribed burning in the form of broadcast, jackpot or individual tree burning could have an initial effect on biological soil crusts. The overall seral stage representation of biological soil crusts should be a mosaic that mirrors to some extent the mosaic of vascular plant community seral stages.

Eventually, the total biological soil crust cover may increase in the Project Area as treated areas with proper site-specific soil chemistry are restored to pre-juniper expansion conditions.

Signature on file October 16, 2006

Joan M. Suther Date

Three Rivers Resource Area Field Manager