

Pine Nut Land Health Project

Decision Record

DOI-BLM-NV-C020-2013-0017-EA

April 2014



Introduction

The Bureau of Land Management (BLM) Carson City District, Sierra Front Field Office is proposing a 24,564 acre land health project in the Pine Nut Mountains, located in Douglas, Lyon and Carson City Counties, Nevada. The Pine Nut Land Health Project (Project), would be implemented over a 10 to 15 year period to protect, maintain and restore ecologically diverse, properly functioning and resilient native plant communities.

Vegetation management treatments are needed in the Pine Nut Mountains to restore ecological balance, diversity and resilience to plant communities and reduce hazardous fuels to protect people, property, infrastructure and resources from severe wildfire. Wildlife habitat quality is diminishing due to woodland expansion and is threatened by heavy accumulations of fuels that greatly increase the potential for large, high-intensity wildfires. Historically, wildfires maintained a healthy balance of vegetation types and prevented fuels from accumulating; however, the existing patterns of vegetation are not conducive to favorable effects from fire without the intervention of proposed treatments. Hazardous fuels currently need to be managed to protect vegetation from uncharacteristic, severe wildfire.

Altered disturbance regimes and climate change have resulted in major changes in plant community compositions. Since the 1860's, many bunchgrass and sagebrush-bunchgrass (*Artemisia sp.-Poaceae sp.*) communities, which dominated the Intermountain West, have shifted to pinyon-juniper woodland (*Pinus monophylla-Juniperus osteosperma*) or introduced annual dominated communities. Studies show that the expansion of pinyon-juniper has more than tripled in the areas dominated by pinyon-juniper woodlands within the last 150 years. Although pinyon-juniper woodlands have increased dramatically in the last 150 years, they currently occupy far less than they are capable of under current climatic conditions. The increasing dominance of pinyon-juniper within portions of the Pine Nut Mountains is apparent from aerial photography and presence of young pinyon-juniper expanding into sagebrush communities where soil type indicates no or very few trees should exist. Woodland expansion affects soils, vegetation structure and composition, water, nutrient and fire cycles, forage production, and plant and wildlife biodiversity.

Studies conclude that barring some major environmental change or management action, trees will continue to dominate most of the sites favorable to their expansion. This continued tree dominance could result in a stand replacement wildfire with catastrophic consequences because of continuous tree canopy. Studies show that in dense pinyon-juniper woodlands, the ability of the understory to respond after a fire is dramatically reduced and potentially opens the site to invasion by exotics. Any treatments or rehabilitation of these areas could be difficult and costly.

An increase in tree dominance results in a loss of understory vegetation, and fires in dense pinyon-juniper can be extremely difficult to control and very damaging to healthy woodlands, sagebrush, and herbaceous vegetation. Goals of pinyon-juniper management include an attempt to restore ecosystem function and a more balanced plant community that includes shrubs, grasses, and forbs, and to increase ecosystem resilience to disturbances. Mule deer (*Odocoileus hemionus*), pinyon jays (*Gymnorhinus cyanocephalus*), mountain chickadees (*Poecile gambeli*), and scrub jays (*Aphelocoma californica*) depend on woodland landscapes that have a more open

canopy and park-like structure with a robust understory of forbs, grasses, and shrubs. In highly dense pinyon-juniper stands, the understory is eliminated and is in decline.

The spread of pinyon-juniper may also be a contributing factor in decreasing water availability (both limiting streamflow and shallow groundwater). Riparian vegetation communities would respond to increase water availability by expanding their distribution and improved health. The health of riparian areas is important to maintaining quality wildlife habitat on the landscape. Riparian hardwoods such as aspens (*Populus tremuloides*) and cottonwoods (*P. balsamifera ssp. Trichocarpa*) are vulnerable to intense fire, although they can survive lower-intensity fires, and reducing heavy fuel loads in riparian areas can significantly lower the risk of wildfire. Management guidelines recommend removal of conifers within and adjacent to aspen and cottonwood stands. Control and/or reduction in the density and extent of pinyon-juniper in the watershed would benefit the riparian community. Healthy springs/wet meadows support abundant and diverse forbs and insect populations that Bi-State sage-grouse¹ (*Centrocercus urophasianus*) chicks are critically dependent on.

The BLM has determined that this Project does not constitute a major federal action having a significant effect on the human environment. Therefore an environmental impact statement (EIS) will not be required. The approved Finding of No Significant Impact (FONSI) is hereby incorporated by reference.

Public Involvement

On April 3, 2013, the BLM initiated a 30-day public scoping period. Letters were sent out to the Project mailing list (approximately 96 residents, other organizations and agencies) and notification was provided to the regional media. Notification to State agencies was provided through the Nevada State Clearinghouse. Information including Project maps were made available on the Project's website. An article appeared in the *Nevada Appeal* on April 4, 2013, April 9, 2013 and April 13, 2013, and in *The Record-Courier* on April 5, 2013. On April 11, 2013 the BLM hosted a workshop at the Carson City District Office. A Project overview was provided to participants; maps were available for review and specialists were available for questions. Fourteen people attended the two-hour workshop. The public scoping period closed on May 2, 2013. The BLM received 12 comments on the Project from the public and other agencies. A presentation on the Project was made to the Washoe Tribe of Nevada and California Council meeting on June 14, 2013, and to the Yerington Paiute Tribal Council meeting on July 8, 2013.

On October 22, 2013, the BLM provided 30-days public review and comment of the draft EA. Notification letters were sent to 97 individuals, organizations or agencies on the Project mailing list. A press release on the draft EA's availability was issued on October 21, 2013. Articles appeared in *The Record Courier* on October 21, 2013, and the *Reno Gazette-Journal* on October 22, 2013. On October 28, 2013 the BLM issued a press release announcing the extension of the comment period. On November 11, 2013 the press release extending the comment period appeared in the *Las Vegas Sun* and News Daily (web version). On November 12, 2013 the press release extending the comment period appeared in *Carson Now* (web version) and the *Reno*

¹ In this document the terms "sage-grouse" and "Bi-State sage-grouse" are used synonymously. The U.S. Fish and Wildlife Service has determined that the Bi-State sage-grouse, known to occur in the planning area, is a distinct population segment (DPS) of the greater sage-grouse.

Gazette-Journal. On November 6, 2013 the BLM hosted a workshop at the East Fork Fire Station in Fish Springs. Staff were available to answer questions and maps of the Project area were provided. A presentation on the Project was provided by the BLM. Thirteen people attended the workshop. The extended comment period closed on November 29, 2013. The BLM received 17 comments to consider (for responses to comments, see Appendix D of the final EA).

The BLM provided a 30-day public comment period on the draft Programmatic Agreement, for compliance under the National Historic Preservation Act, on February 4, 2014. An article on the comment period appeared in the *Reno Gazette-Journal* on February 5, 2014 and the *Nevada Appeal* on February 6, 2014. The comment period closed on March 5, 2014. The BLM received five comments to consider. None of the comments resulted in a substantive revision to an alternative or the analysis of an alternative in the final EA.

Land Use Conformance

The Proposed Action and Alternatives described below are in conformance with the Carson City Field Office Consolidated Resource Management Plan (2001):

- FIR-2.1 Restore fire as an integral part of the ecosystem, improve the diversity of vegetation and to reduce fire hazard fuels;
- FOR-1.1 Forest and woodland management will be based on the principles of multiple use, sustained yield, and ecosystem management;
- RIP-2.1 Protect and maintain existing and potential fisheries and riparian areas in good or better condition (proper functioning condition);
- WLD-2.4 Maintain and improve wildlife habitat, including riparian/stream habitats, and reduce habitat conflicts while providing for other appropriate uses; and
- WLD-6.4 Wildlife habitat improvement projects will be guided, in the most part, by provisions in activity level plans such as habitat management plans, or interdisciplinary activity plans. These plans will be developed through consultation with interested parties and will be coordinated with livestock, wild horse, and wilderness plans. These plans will be focused on rehabilitation and improvement of wildlife habitat through protective fencing, water developments, grazing management, and vegetation treatments.

The final EA is in conformance with the 1991 Record of Decision *Vegetation Treatment on BLM Lands in Thirteen Western States, and the Final Environmental Impact Statement Vegetation Treatment on BLM Lands in Thirteen Western States*, which is hereby incorporated by reference.

Authority

Implementation of the Proposed Action is under the authority of the Federal Land Policy and Management Act of 1976.

Rationale

Proposed Action (Selected Alternative)

The Proposed Action is to implement vegetation treatments on approximately 24,564 acres in strategically located treatment units in the Pine Nut Mountains as described below to meet land health objectives. The proposed vegetation treatments may be implemented individually or in combination depending on site conditions within the treatment units; if it is determined that a type of treatment is not appropriate for a specific site within a treatment unit it would not be implemented on that site. It is anticipated that the Project would be implemented over a 10 to 15 year period; however, the time to complete the Project would ultimately depend on funding and environmental conditions. Most treatments are anticipated to be implemented in late summer and fall.

Table 1 Approximate Number of Acres to be Treated.

Treatment Method	Acres	% of Project Area
Hand Thinning (Selective and Non-Selective Cutting)	19,942	81
Mechanical Mastication	4,622	19
Pile Burning	2,000	8
Seeding	3,000	12

The following is a summary of explanations as to why and where each treatment method has been proposed and a description of what each treatment method entails.

- Hand Thinning (Selective Cutting): Hand thinning of pinyon-juniper trees would occur on forestland ecological sites that range from pinyon-juniper woodlands with little desired understory vegetation to woodlands with remnant desirable understory vegetation that is at risk of being depleted from the site.

Shrubs (brush) may be thinned at selected sites where deemed necessary to reduce fuel continuity and fire intensity potential. These sites are generally within the wildland urban interface in the Pine Nut Road and Ruhenstroth areas and along the Sunrise Pass Road. Where deemed necessary, brush spacing would be adjusted by treating up to 60 percent of the brush in a mosaic pattern. No brush would be cut in the Mill Canyon area or along the crest of the Pine Nut Mountains.

This treatment method would be conducted using hand tools and chainsaws. Some trees would be cut, while others would be left standing. Thinning trees in dense stands reduces fuel continuity and vegetative competition. Tree health would be promoted by reducing competition for water and nutrients. The size and overall health of the remaining trees would increase. The thinning treatment would target primarily smaller trees, but age class distribution would be taken into consideration to ensure the long term viability of the population. Typically under this treatment the larger older trees would be retained. Where applicable trees would be retained in small groups with openings between the groups. Areas with healthy understory vegetation would be the target locations for openings. Trees cut could include dead, diseased or healthy trees depending on site evaluation and treatment objectives. It may be necessary to cut healthy trees where there are no dead or

diseased trees to meet resource objectives. Cut trees may be removed by non-mechanical methods, chipped with a mechanical chipper working on an existing road, lopped and scattered and/or piled and burned, based on site evaluation and objectives. Stump height would be less than six inches and any residual biomass would not exceed two feet in depth.

- Hand Cutting (Non-Selective Cutting): Hand cutting of pinyon-juniper trees would occur on rangeland ecological sites where trees are encroaching into landscapes once dominated by shrubs and herbaceous vegetation and into riparian areas. These sites range from open sagebrush sites with scattered young pinyon-juniper trees to sagebrush sites where young pinyon-juniper woodlands are threatening to deplete desirable understory vegetation to riparian sites with pinyon-juniper trees encroaching into riparian vegetation such as aspen, cottonwood and willow.

This treatment method would be conducted using hand tools and chainsaws. All trees would be cut regardless of size. Cut trees may be removed by non-mechanical methods, chipped with a mechanical chipper working on an existing road, lopped and scattered and/or piled and burned, based on site evaluation and objectives. Stump height would be less than six inches and any residual biomass would not exceed two feet in depth.

- Mechanical Mastication: Pinyon-juniper trees and shrubs (brush) would be removed from both woodland and rangeland ecological site types by a mastication process which grinds up woody plant material. Due to mechanical limitations of the equipment, mastication treatments are limited to areas with less than a 30 percent slope. Mastication treatments are typically used to restore ecological balance in plant communities, provide for increased plant diversity by reducing a dominant species, stimulate new plant growth and/or reduce fuel continuity and potential fire intensity. The pre-treatment condition of the plant community would be considered relative to the management goals. Plant communities in any condition (no understory to intact understory) may be treated.

Trees/brush would be ground with an attachment mounted on machinery such as front-end loaders, tractors, excavators, skidders etc., the machine may have rubber tires, rubber tracks or metal tracks. Trees could be thinned or all cut depending on objectives. Thinning specifications would be similar to Hand Thinning specifications above. Stump height would be less than six inches and the products of grinding would not exceed two feet in depth.

Mechanical equipment would be parked and serviced daily on three to four small (less than ¼ acre) road accessible staging areas located on BLM land on the units designated for mechanical treatment. It can be expected that the vegetation and soils in the staging areas would be effected more than the general Project area due to the frequency of equipment activity on the sites.

A general overview of masticating equipment can be found in the Understory Biomass Reduction Methods and Equipment Catalog.

- Mechanical Thinning/Removal: Mechanical thinning/removal of pinyon-juniper trees would occur on forestland ecological sites that range from pinyon-juniper woodlands with little desired understory vegetation to woodlands with remnant desirable understory vegetation that is at risk of being depleted from the site. Mechanical thinning/removal would only occur in units designated for the treatment and may not occur on entire units designated for treatment.

Treatment includes the mechanical thinning and/or removal of entire trees or portions of trees for personal use or commercial sale. See Hand Thinning (Selective Cutting) above for description of thinning treatment. Rubber tired/tracked or metal tracked mechanized equipment would be used to cut, either skid or above ground haul, and remove entire trees or portions of trees. Shearing would include separating the tree from the stump, less than six inches from the ground. Once the trees are sheared, they would be skidded or hauled to a designated landing or processing area and be hauled off site.

Mechanical equipment would be parked and serviced daily on (less than ¼ acre) road accessible landings or processing areas located on BLM land on the units designated for mechanical removal. It can be expected that the vegetation and soils on any skid/haul roads or landings or processing areas would be effected more than the general Project area due to the frequency of equipment activity on the sites.

- Pile Burning: Pile burning would be considered as a follow up treatment to hand thinning and hand cutting to treat residual biomass.

The treatment includes the burning of hand constructed piles of residual biomass (e.g. branches, twigs), typically no larger than six feet tall and six feet in diameter, scattered within a treatment area. The number of piles per acre would vary depending on tree density and the treatment prescription. Pile burns would be conducted under a burn plan, a site-specific implementation document which is a legal document that provides the agency administrator the information needed to approve the plan and the burn boss with all the information needed to safely and effectively implement the burn. Pile burns would only be conducted in the late fall, winter and spring under low spread potential conditions (e.g. following precipitation, with snow on ground). The objective of pile burning would be to consume 80-100 percent of the piled biomass.

- Seeding: Limited seeding of native species may be conducted as a follow up in any treatment unit(s) where existing herbaceous understory has been compromised and is not sufficient for natural establishment. Seeding treatment includes ground-based or aerial broadcast application of seed. Seeding method to be determined based on terrain, soil type, soil moisture, and seed species.

Specific treatment units have been evaluated to determine the most appropriate treatment method and resource protection measures based on slope, aspect, terrain, soil, vegetation composition, vegetation condition, amount of fuel/biomass needed to be removed, overall access on site, visual disturbance, and proximity to major roads. As depicted in Table 1 and Figure 5 of the final EA, multiple treatment methods may be used in individual units (e.g. Lyon, Sunrise, Ruhestroth

Well). Unit slope and terrain may limit use of mechanized equipment through the entire unit. In areas where use of mechanized equipment is not practical or necessary for treatment objectives, hand thinning would occur. All riparian units would be treated by hand (e.g. Eldorado Canyon, Illinois Canyon). The largest units, ones with the greatest quality habitat for sage-grouse, and on the Pine Nut Mountain crest would be treated by hand (e.g. Crest, Mt. Siegel). The final EA includes analysis of all treatment methods, and considered worst-case impacts in units with multiple treatment methods.

No Action Alternative (Not Selected)

Under the No Action Alternative, the BLM would not implement the vegetative treatments described in the Proposed Action. The purpose of the No Action Alternative is to provide the baseline conditions under the current management of the Project area. On the basis of the No Action Alternative, the BLM is able to evaluate the degree of change from the current situation to what would occur under implementation of any other alternative. The Proposed Action would represent a change in BLM's current management of the Project area.

The current trends in vegetation would continue. Pinyon pine and juniper trees would continue to increase in density and expand into sagebrush communities and the health of shrub and understory plants would continue to decline. Conifers would continue to invade riparian areas and cause them to decline in health. Hazardous fuel conditions would continue to accumulate beyond levels representative of the natural (historic) fire regime and threaten to damage the sagebrush, woodland, and riparian habitats through the high risk of intense wildfires difficult to control. Overall, land health in the Pine Nut Mountains would continue to decline.

Mitigation Measures

The following measures would occur to minimize or avoid adverse impacts during Project implementation:

- Any treatment implemented during the nesting season for migratory birds (May 15 – July 15) or raptors (March 1 – August 31) would be surveyed by a qualified biologist prior to any treatment occurring in a specific unit to identify active nests. Surveys would be conducted in the treatment unit plus a 300 foot buffer for migratory birds and a ¼ mile buffer for raptors. If an active nest is discovered/observed, treatment activities should not occur (or resume) until after young birds have fledged or nests are abandoned unless a 300 foot buffer can be provided around active migratory bird nests and a ¼ mile buffer can be provided around active raptor nests;
- There are no known active leks within Project area; however active leks may be present adjacent to or in the planning area during the life of this project. If an active lek is located within 3.2 miles of a treatment unit, no treatment activities would occur during the breeding season (March 1 to May 15);
- No treatment activities would occur within known nesting and early brood-rearing habitat (generally within 3.2 miles of an active lek) between March 15 and June 30;
- No treatment activities would occur within the Pine Nut Herd Management Area from March 1 until July 1, generally considered the foaling season;
- Surveys for sensitive plant species would be conducted in mechanical treatment units that have high potential for their occurrence based on soil types; when occupied habitat is

located, implementation may be delayed, hand thinning of trees may replace use of mechanized equipment, or the occupied habitat may be delineated as an avoidance/exclusion area;

- Cultural resources evaluated as eligible for the National Register of Historic Places (NRHP) and unevaluated cultural resources identified during implementation of the Project would be avoided. Respect for all cultural resources would be maintained;
- All live aspen, cottonwood and mountain mahogany would be retained;
- Old-growth trees² and trees with obvious signs of wildlife use, such as nest cavities or raptor nests, would be retained;
- Individual old-growth trees would be retained within younger stands unless other resource objectives such as forest health, fuels reduction, and sage-grouse habitat require their removal to meet treatment goals;
- No new roads would be constructed;
- Existing maintained (graded) roads may be improved to facilitate movement of vehicles, equipment or wood products;
- Areas of public/private property boundaries would be clearly signed during public firewood removal activity;
- Following public firewood removal, any off-road travel routes would be obliterated, all stumps would be cut to a height than of up to six inches, all slash lopped to a height not to exceed two feet in depth and all trash picked up;
- Mechanical treatments would be scheduled to avoid wet soil conditions;
- Staging areas/landings would be minimized by utilizing existing/natural landings where practicable;
- After use any skid trails and staging areas/landings would be restored by restoring the contour and applying mulch and/or seeding where necessary;
- Shredded or cut vegetation would generally be left in place to reduce dust generation, contribute organic matter, obliterate vehicle tracks, stabilize the soil surface, and protect vegetation;
- All equipment moved on and off public land would be free of soil, seeds, and vegetative matter or other debris that could contain or hold seeds;
- The Nevada Energy System Control Supervisor would be notified when treatment activities are occurring in an Nevada Energy right-of-way; and
- All State and federal regulations would be followed.

Proposed Listings

As described in Sections 3.6 and 3.9 of the final EA, the U.S. Fish and Wildlife Service has proposed to list as threatened, the Webber's Ivesia and Bi-State sage-grouse, and proposed to designate critical habitat. The BLM has determined that effects from the Proposed Action would result in "no effect" or "not likely to adversely affect" determinations for these proposed species and their proposed critical habitat. Therefore no conferencing is required.

² Old-growth characteristics include rounded or flat crowns, tree ring analysis indicating age >150 years, and a diameter at root collar >21 inches.

Decision

It is my Decision to select the Proposed Action and authorize the vegetative treatments as described in the Proposed Action. Implementing the Proposed Action over a 10 to 15 year period is the best means to improve the land health conditions in the Pine Nut Mountains and increase ecological resiliency in case of large-scale, wildland fire.



Leon Thomas
Field Manager
Sierra Front Field Office

4-29-14
date

APPEAL PROCEDURES

This decision may be appealed to the Interior Board of Land Appeals, Office of the Secretary, in accordance with 43 CFR Part 4. If you appeal, your appeal must also be filed with the Bureau of Land Management at the following address:

Leon Thomas
Field Manager
BLM, Sierra Front Field Office
5665 Morgan Mill Road
Carson City, NV 89701

Your appeal must be filed within thirty (30) days from receipt or issuance of this decision. The appellant has the burden of showing that the decision appealed from is in error.

If you wish to file a petition pursuant to regulation 43 CFR 4.21 (58 FR 4942, January 19, 1993) for a stay (suspension) of the decision during the time that your appeal is being reviewed by the Board, the petition for stay must accompany your notice of appeal. Copies of the notice of appeal and petition for a stay must also be submitted to:

Board of Land Appeals
Dockets Attorney
801 N. Quincy Street, Suite 300
Arlington, VA 22203

A copy must also be sent to the appropriate Office of the Solicitor at the same time the original documents are filed with the above office.

U.S. Department of the Interior
Office of the Regional Solicitor
Pacific Southwest Region
2800 Cottage Way, Room E-1712
Sacramento, CA 95825

If you request a stay, you have the burden of proof to demonstrate that a stay should be granted. A petition for a stay is required to show sufficient justification based on the following standards:

1. The relative harm to the parties if the stay is granted or denied.
2. The likelihood of the appellants' success on the merits.
3. The likelihood of immediate and irreparable harm if the stay is not granted.
4. Whether the public interest favors granting the stay.

The Office of Hearings and Appeals regulations do not provide for electronic filing of appeals. Electronically filed appeals will therefore not be accepted.