

Decision Memorandum on Action and for Application of:**Categorical Exclusion 1.12****Evaluation of Pinyon Removal Effects
Typical of a Wildland-Urban Interface (WUI) Fuels Reduction Project
Mono Basin, CA****CER Number: CA-170-05-35**

U.S. Department of Interior
Bureau of Land Management
Bishop Field Office
Mono County, California

Purpose and Need for the Action

The BLM Bishop Field Office has identified a critical resource management need to develop ecologically sound and cost-effective fuel treatment prescriptions for areas where pinyon-juniper woodlands have expanded into sagebrush steppe during the 1900s (Miller et al. 1999, Miller 2000). The vegetative fuels of such areas, including the Mono Basin, are now well outside their natural range of variability for the current climate conditions, thus making these areas highly susceptible to large, high-intensity wildland fires. Many of these encroaching pinyon stands are also within designated Wildland/Urban Interface (WUI) areas, placing residents, homesites, and other structures at significant risk. In just the past five years, several large, high-intensity wildland fires have burned through pinyon – juniper areas of the eastern Sierra, most notably in the Walker – Coleville area of northern Mono County. The fuels conditions (Fire Regime/Condition Class 2 and 3) associated with this proposed project are similar to those that existed in the Walker – Coleville area and other areas of the eastern Sierra prior to these recent large, high-intensity wildland fires.

The management of these pinyon-juniper fuels, especially where communities and homesites are threatened, is one of the top priorities for the BLM and other agencies in the southwestern Great Basin and the eastern Sierra Nevada mountains. The recently completed Bishop Field Office Fire Management Plan directly identifies the need to treat pinyon-juniper stands within WUI areas and non-WUI lands, to protect both structures and natural resources.

Staff from the BLM Bishop Field Office and United States Geological Survey (USGS), have identified two potentially desirable pinyon-juniper thinning options that represent contrasting application costs and potential ecological effects: (1) masticate-mulch; and (2) cut-remove-burn slash (Attachment 1). Although these two treatments target the same size categories and numbers of pinyon and juniper trees, having similar immediate effects on live woody fuels, their longer term effects on fuel bed characteristics, and thus fire behavior and fire regimes, are potentially very different.

One important difference is the relative ability of these treatments to suppress the post-treatment dominance of cheatgrass (*Bromus tectorum*). This invasive grass typically increases after landscape disturbances and has been identified as a significant fire hazard in the Bishop Field Office Fire Management Plan (2004). Another potential difference is the effect of these treatments on plant community composition and diversity. Various wildlife species could benefit from pinyon-juniper thinning treatments if they promote high diversity native sagebrush-steppe, achieving both fuels management and resource management goals and objectives as outlined in the Bishop Resource Management Plan for Pinyon/Juniper Desired Plant Community Objectives (Appendix 1-7, Bishop RMP 2003). Because the responses to these proposed thinning treatments have not been adequately described, and their short and long-term effects are mostly unknown, there is a need to evaluate them experimentally to determine how they influence fuel-bed structure, fire behavior, cheatgrass dominance, and native plant community composition and diversity before they are applied in other areas.

Proposed Action: The Proposed Action is to apply two experimental removal treatments to selected Pinyon/Juniper sites where trees are encroaching into sagebrush steppe habitats in the Mono Basin. The current tree densities present an increased wildland fire risk to adjacent communities as well as to sagebrush steppe habitat. After tree removal, one of the sites in the Trench Canyon area would receive a fire treatment to identify which tree removal technique minimizes fire intensity and spread.

The Proposed Action would take place in and near the WUI area north of Highway 167, at the southern edge of the Bodie Hills. Private property and homes exist to the east of the proposed project area. The communities of Mono City and Conway Ranch are to the southwest of the proposed project area. In 2003, a large, wind-driven wildland fire occurred to the west of this proposed project area. The communities of Mono City and Conway ranch were immediately threatened by this fire. Fire history records and aerial photography also indicate the general area surrounding the proposed project area has a decades-old history of wildland fire, including large, wind-driven fire events.

Since the Proposed Action is designed to compare various pinyon treatments to untreated control areas, Bishop Field Office personnel and other interested parties would gain valuable insight and understanding on the effects of pinyon treatments on wildland fire behavior, invasive weeds, and native sagebrush-steppe plant community response.

An additional benefit from the Proposed Action would be the small-scale, breaking-up of large and continuous stands of pinyon pine. In the event of a wildland fire, the treated areas would be more difficult for fire to pass through, and thus would act to slow down a fire and give firefighting resources more opportunity to suppress the fire. A slower-moving, less-intense wildland fire is less dangerous to firefighters and the general public, and generally results in less damage to natural resources.

The proposed thinning treatment units are located in T3N, R26E and T2N, R26E in Sections 4, 29, 28 and 33 (Rancheria Gulch) and the thinning/burn treatments are

located in T4N, R27E in Sections 35 and 36 (northwest of Trench Canyon). 7.5 minute quadrangles covering these areas include Negit Island and Kirkwood Springs (please refer to attached maps). The total area treated would be 273 acres – 80 acres (minus the control plots) in the Rancheria Gulch area and 193 acres (including the prescribed fire buffer) in the Trench Canyon area (please refer to attached maps).

Description of Thinning Treatments

Masticate-Mulch

- All pinyon trees encountered in the treatment plot would be treated.
- Treatment would be accomplished by a tractor-mounted masticating head, grinding Class 1, 2, and 3 trees to ground level.
- The shredded tree and shrub material would be left on-site as a form of mulch material.

Cut-Remove-Burn Slash

- All pinyon trees encountered in the treatment plot would be treated.
- Treatment would be accomplished by cutting selected Class 1 (youngest) trees at ground level using lopping shears or chainsaws, and cutting Class 2 and 3 trees at ground level using a chainsaw.
- Limbs and boles would be hand-piled. Hand piles would be burned when safe conditions permit. Where practicable, bole material may be left un-piled for local residents to hand-collect for use as firewood for home heating.

Untreated Control

- No removal of pinyon trees would occur.

Total proposed treatment area for the above mentioned treatments would be 120 acres including the control plots.

Access to all sites would be from existing roads. No new roads would be created. The mastication equipment would pass once through the designated treatment plots and masticate and mulch each individual tree encountered. The tire pressure (PSI) for this type of equipment is 3 PSI/tire of which there are four tires. No mastication of shrubs adjacent to the trees or in other portions of the plot would occur.

Description of Fire Behavior Response Treatment

Three replicate blocks of the three thinning treatments (120m X 90m) – 193 acres, including the fire buffer would be placed in each of the six fire behavior plots (see Fire Behavior Plot map). A controlled burn following BLM fire prescriptions would be ignited in each of the plots to measure the response of fire when it encounters the different vegetation treatments. Prescribed fire would take place in 2006 or later, depending on fuel and weather conditions.

Plan Conformance

I have determined that this Proposed Action is consistent with the Bishop Field Office Resource Management Plan, approved on March 25, 1993. The Proposed Action has been designed in conformance with all BLM standards and incorporates appropriate guidelines for specific required and desired conditions relevant to project activities.

Compliance with the National Environmental Policy Act

The Proposed Action is categorically excluded from further documentation under the National Environmental Policy Act (NEPA) in accordance with 516 DM 2, Appendix 1, 1.12. Accordingly, the Proposed Action would:

- Mechanically treat less than 1,000 acres
- Occur within the Wildland-Urban Interface (WUI) or in areas in Condition Class 2 or 3 in Fire Regime Groups I, II, or III outside the WUI
- Follow the collaborative framework
- Be consistent with agency and Departmental procedures and plans
- Not be within any designated wilderness area or impair the suitability of areas under study for possible future wilderness designation
- Not include any pesticide use or new, permanent road construction

The application of this categorical exclusion is appropriate in this situation because there are no extraordinary circumstances potentially having effects which may significantly affect the environment. The list of extraordinary circumstances is contained in 516 DM 2, Appendix 2.

Internal findings included the following:

The BLM archeologist contracted a Class III resources inventory of the proposed treatment areas and recorded sites have and would continue to be avoided by moving treatment locations and or moving entire plots.

One population of *Cusickiella quadricostata* (Bodie Hills Draba) was recently located within the study area after a plot was moved and treatment changed due to Archaeological concerns. The population is in an open area without trees. Provisions would be made to not locate any burn piles on the small population. No other BLM Special Status plant species (those species that are listed by the California Native Plant Society as 1B) were located within the project area during surveys this May through June.

The Visual Resource Management (VRM) objective for the proposed treatment area is VRM Class II, which is to retain the existing character of the landscape, Granite Mountain Management Area, Bishop Field Office Resource Management Plan (RMP) 1993. While management activities may be seen from key observation points, they typically do not attract the attention of the casual observer. Changes must repeat the

basic elements of form, line, color and texture found in the predominant natural features of the characteristic landscape.

The proposed treatment area is outside the Mono Basin Scenic Area (MBSA), which is administered by the Inyo National Forest. The Bishop Field Office manages the area around Mono Basin to enhance recreation opportunities and protect visual resources in the Granite Mountain Management Area, but there is no existing management buffer surrounding the MBSA.

Thirteen observation points were located on site of the proposed project(s). Using a systematic process to analyze potential visual impacts (a visual contrast rating to determine key observation points) many of the observation points were found to have little value as the project could not be seen from the observation point (Hwy 395 Conway Summit – Mono Basin Overlook) or no visual contrast rating was possible due to screening from trees or topography (multiple sites along dirt roads near treatments). Of those observations points remaining, three key observation points (KOP's) were found to be pertinent to the project and were assessed for visual contrast to ensure that no potential visual effects of the proposed project would be outside of the VRM Class II standards:

KOP1 – Southwest corner of private property parcel, east of treatment plots. Visuals from this observation point would remain unaffected as the only plot visible is a control plot with no treatment (no cutting of pinyon). The existing dense pinyon forest blocks any views of planned treatment plots to the southwest and northwest of the property.

KOP2 – Junction of Hwy 167 and Conway Road. Small portions of treatment plots could be viewed from this KOP by a casual observer/visitor to the area. The existing landscape consists of pinyon forest interspersed with open sagebrush glades. These naturally occurring glades are as much as 3.5 acres in size (larger than proposed treatment plots) and can only be partially viewed from KOP2 due to the slope of the land and height of the pinyon forest. The glades are screened by topography. The scale of the project relative to the visible expanse of the landscape is quite small and would not be a prominent feature of the view shed.

KOP3 – Mono Basin Visitor Center Overlook. The visual contrast rating was too small to measure, the only discernable features from this viewpoint being gross landforms such as Mono Lake, Hwy 395 road cuts and the Bodie Mountains.

The Trench Canyon fire behavior plots are located far away from easily traveled roads or viewpoints (Highway 167) and are partially hidden topographically. A visual contrast rating was not a useful measure due to the large landscape scale. Burned plots would be noticeable after implementation and typically take longer to recover, at least a season, before the visual contrast (blackened ground) would not be a predominant feature when standing nearby or on-site. Visual resources from a distance, for the typical casual observer, would not be affected.

Contrasts in vegetation, color, line or form that would be created by the thinning treatment(s) is such that the contrast would not be strong enough to violate the VRM for the sites from any of the 3 key observation points. Isolated site specific treatment plots

would have short term contrast depending on treatment; mastication and mulching would have the shortest recovery time visually, mimicking natural colors found in the area. Plots to be cut, then burned would have small areas of blackened ground within each treatment plot. These would not be a predominant feature on a landscape scale, but may be noticeable to a person walking or driving next to a plot. Burned areas typically take longer to recover, at least a season, before the visual contrast subsides.

Proposed treatments would create additional open areas which mimic the naturally occurring glades that are interspersed throughout the existing untreated pinyon pine forest. Sagebrush would be retained in all treatment plots which mitigate the effects of any contrast in color, as no bare ground would be exposed. The treatment areas would generally look similar to naturally occurring glades: openings in the canopy that are covered in sage.

As proposed treatment plots call for 100% cutting of pinyon pine within a plot, feathering (irregular cutting of edges of plots) where possible and where opportunities exist, would reduce visual edge effects, e.g. square/rectangular appearing openings. Additionally, because of the slope of the treatment area, many plots will be completely hidden from view.

All prescribed fire activities (burning of slash piles or fire behavior plots) implemented by the BLM must follow Air Pollution Control District requirements for burn/no-burn days in order to meet air quality standards. Burn-days are typically when a less stable air mass is in the area which ensures that smoke will exit the basin. The burning of slash piles would take place during the late fall or winter months (November- February). This would be outside of the main tourist season for the Mono Basin/Lee Vining area. Burning of slash piles is not expected to generate large quantities of smoke. For the Trench Canyon fire behavior plots the goal would be to burn with some wind in order to facilitate carrying the low intensity fire through the plots and dispersing the smoke as well. The effects of smoke generated by either project would be temporary.

Project as designed meets visual resource management objectives for the Granite Mountain Management Area as prescribed in Bishop Field Office RMP.

Persons and Agencies Consulted

BLM personnel collaborated with the following local governments and groups concerning this Proposed Action:

- Mono County Board of Supervisors
- Mono Basin Regional Planning Advisory Committee
- Bodie Coordinated Resource Management Planning Committee
- USGS
- Inyo National Forest
- Mono Lake Indian Tribe
- Point Reyes Bird Observatory
- Press releases sent to the Mammoth Times and KMMT radio stations and adjacent landowners

The following BLM staff members were consulted concerning this Proposed Action:

- Anne Halford, Botanist
- Dale Johnson, Fuels Planner
- Kirk Halford, Archeologist
- Terry Russi, Wildlife Biologist
- Matt Kingsley, Interagency Fire Management Officer
- Diana Pietrasanta, Outdoor Recreation Specialist
- Joe Pollini Environmental Coordinator

Issues Raised and Response to Issues

To facilitate the public scoping process we distributed information about this project through media releases to local newspapers, radio stations and interested individuals, e.g. Native American tribes and others who had voiced interest in such projects in the past and were on active mailing lists.

Through this process the BLM Bishop Field Office received 25 comment letters and/or email correspondences regarding this project. The following highlights the major issues that focus on the scope of this specific project and the BLM response to these issues.

Issue: What are the reasons behind pinyon expansion and why is this an issue?

Response: Pinyon and juniper expansion throughout the Great Basin and in the eastern Sierra has increased significantly since the 1860's (Miller and Tausch 2001, Burwell 1999). In the eastern Sierra there has been twice the rate of pinyon expansion on dry versus wet sites with mean tree ages on dry sites being 64 versus 57 years on wet sites (Burwell, 1999). The replacement of sagebrush shrub steppe, riparian and aspen communities by pinyon and juniper has been attributed to various factors including reductions in fire, grazing, climate and increased levels of atmospheric CO₂.

With the 10 fold increase in pinyon juniper expansion during the past 130 years, declines in sagebrush community under-story biomass, cover and diversity has been documented and attributed to decreases in water and nutrient availability (Miller et al. 2000). To compound the reduction of under-story plant diversity and vigor, increased tree densities have created conditions that produce high-intensity crown fires. These high-intensity fires are capable of causing shifts from woodlands to introduced annual communities (cheat grass and other non-native plant species) (Tausch 1999a, b), by increasing fire frequency and shifting the seasonality of fires to the more active growing period of native perennials.

Ecological changes brought on by pinyon expansion as well as large and intense wildfires affect many keystone sagebrush obligate species including sage-grouse. Type conversion to cheat grass and loss of sagebrush community structure and composition are already occurring Great Basin wide and have been identified as significant risks in the Greater Sage-Grouse Bi-State Conservation Plan (2004) as well as in Department of Interior, BLM National Directives.

Issue: Perception that pinyon stands are not dense in the Mono Basin and that there is confusion regarding what makes these stands outside their natural range of fuel and fire regime conditions.

Response: Within the Granite Mountain Management Area which includes the Mono Basin there are over 17,000 acres of pinyon/juniper identified in the BLM Bishop Resource Plan (2003). This project would only affect 80 acres in the vicinity of Rancheria Gulch and 193 acres (including the prescribed fire buffer) in the Trench Canyon area. In addition, within the highest density pinyon plots within the Rancheria Gulch area, USGS has documented an average of 60 seedlings/plot which demonstrates that active pinyon expansion is occurring just within this small geographic location.

The majority of pinyon stands in the Mono Basin have shifted from fire regime condition class 1 (FRCC1) which represents pre-settlement “natural conditions” to FRCC2 (moderate), and to a high (FRCC3) departures from historical density conditions (Hann and Bunnell 2001). The BLM, under the National Fire Plan (2000), has direction to address via management prescriptions those pinyon/juniper stands that are within FRCC2 and FRCC3 condition classes.

In FRCC 2 stands where invading woodlands are relatively young, having established since the middle of the 1900s, tree cover is low and comprised of age class 1 and 2 trees (Bradshaw and Reveal, 1943), and cover and seedbank densities of shrubs, grasses, and forbs are likely to be similar to the adjacent shrub steppe vegetation. These open woodlands possess surface fuels that may still carry low to moderate intensity surface to passive crown fires. These early successional invading woodlands are generally classified as FRCC 2 landscapes, deviating slightly from historic natural fuel and fire regimes characteristics. The potential is relatively high for FRCC 2 areas to recover back to their pre-invasion state following pinyon-juniper thinning and low intensity fires.

In FRCC 3 stands where invading woodlands are relatively old and are comprised of age class 1 through 4 trees (Bradshaw and Reveal, 1943), having established before or soon after the beginning of the 1900s, tree cover is high, whereas cover and seedbank densities of shrubs, grasses, and herbs are low, differing significantly from adjacent shrub-steppe vegetation. In these closed-canopy woodlands fire does not propagate easily except under extreme fire weather conditions, which typically results in intense crown fires that endanger rural communities and have undesirable effects on soils and plants (Miller et al. 2000). The potential may be lower for FRCC 3 landscapes to recover to their pre-invasion conditions following woodland thinning and/or fire.

The key management objective is to concentrate on FRCC 2 stands that have the greatest potential for understory recovery following a thinning treatment.

Issue: Pinyon movement is part of the natural restoration of Mono Basin post Bodie cutting.

Response: Pinyon encroachment and densities have already far exceeded the amount harvested during cutting activity associated with Bodie. Actually, more removal of Jeffrey Pine occurred than pinyon due to the superior construction grade wood of Jeffrey – most of the pinyon cutting was for fuel-wood, and occurred in much closer proximity to Bodie than the Rancheria Gulch site or even the Trench Canyon site, even though those areas were referenced as containing pinyon, the extent of pinyon was significantly less as referenced by historic and current photos. In addition, there is no evidence of historic old stump cuts within the proposed treatment plots, suggesting that pinyon was much less dense in the late 1800's to early 1900's, and that no cutting occurred within the specific project area this document focuses on. Currently, there is also vigorous recruitment of pinyon seedlings throughout the project area, and in the Basin in general - current statistic pinyon movement within the Great Basin has been calculated to be over 6 trees/ha per year (Robin Tausch, Pers. Comm. 2004). The proposed project would not stop the continued movement of pinyon into sagebrush steppe systems throughout the Basin.

Issue: Concerns regarding the visual impact of this project.

Response: The Visual Resource Management (VRM) objective for the proposed treatment area is VRM Class II, which is to retain the existing character of the landscape - Bishop Field Office Resource Management Plan (RMP) 1993. Management activities may be seen, but should not attract the attention of the casual observer. The management goal of VRM class II is that changes must repeat the basic elements of form, line, color and texture found in the predominant natural features of the characteristic landscape.

The proposed treatment area is outside the Mono Basin Scenic Area. It should be noted that there is no management buffer between the boundary of the Mono Basin Scenic Area (administered by the Inyo National Forest) and BLM public land.

BLM uses a systematic process in analyzing potential visual impacts of proposed projects by viewing project areas from Key Observation Points (KOP) and assessing the visual contrast. Results are used as a guide (tempered by common sense) to ensure that every attempt is made to minimize potential visual effects if they exist and to ensure conformance with the prescribed VRM Class for the area if the project is to proceed.

The existing landscape consists of pinyon forest interspersed with natural open sagebrush glades, some well over 3 acres in size, which are larger than the proposed treatment plots. The scale of the project plots relative to the visible expanse of the landscape is quite small. Treatments would not be a prominent feature of the viewshed. The project area can not be viewed from the scenic overlook near Conway Summit due to topography. At KOP1, the SW corner of private property parcel, there will be no visible change in the visuals as a control plot is located next to the property.

At KOP2, the intersection of Highway 167 and Conway Road, where most casual observers would view the project, the density of distribution of open glades within the landscape, as well as color and textures found predominant in the existing landscape will be repeated with project implementation. Management activities may be noticeable, but they will not permanently alter the visual resources from the key observation point. At the Mono Basin Visitor Center Overlook (KOP3) one can only discern the gross landscape features of the mountains, of Mono Lake and of Highway 395 road cuts, not individual glades that occur on the landscape.

Both Masticate-Mulch and Cut-Remove-Burn treatments would form glades repeating the mosaic pattern of the vegetation already in the landscape; sagebrush will be retained in all treatment plots; there will be no bare ground. Plots will retain their natural color. The slope of the project area would screen many of the plots so that they would appear much smaller or may be completely hidden by terrain in some cases.

Mitigation built into the project to ensure visual integrity includes the relocating of several control plots to areas which are located next to private property and feathering of plots where possible to create natural glades that blend in with topographic forms in shape and placement.

The Trench Canyon fire behavior plots are located far away from easily traveled roads or viewpoints (Highway 167) and are partially hidden topographically. A visual contrast rating was not a useful measure due to the large landscape scale. Burned plots will be noticeable after implementation and typically take longer to recover, at least a season, before the visual contrast (blackened ground) will not be a predominant feature when standing nearby or on-site. Visual resources from a distance would not be affected.

Lastly, it is important to note that any changes are temporary. The pinyon will regenerate into the treatment plots and fire behavior plots over time. The anticipated final landform appearance will not draw the eye to the specific location of treatment plots or fire behavior plots. The magnitude of change should not be noticeable to the casual observer and the project does not violate the VRM Class II Standards for the Granite Mountain Management Area as prescribed by the Bishop RMP.

Issue: Concern about the location of the project.

Response: The location of the project was chosen because the site provided the availability of, 1) a distinct pinyon density gradient, from high density to low density to test treatment affects on the recovery of sagebrush-steppe based on these different pinyon densities, 2) level to gently rolling topography, 3) good accessibility to plots from existing roads, and 4) it is one of the few extensive pinyon areas managed by the Bishop Field Office that is not within a Wilderness Study Area. No other locations met these research criteria.

Issue: Concern regarding what pinyon areas are within a Wildland/Urban Interface and that this boundary is not important to consider in context of this project.

Response: The vegetative fuels, topography, and climate in the proposed project area are conducive to high-intensity, fast-moving wildland fires, which are both difficult and dangerous to control. A wildland fire such as this could easily burn several miles in a single day, threatening the scattered home sites off Highway 167. For this reason, the Bishop Field Office considers the WUI for these home sites to include the pinyon – juniper belt from east of Conway Ranch area, eastward to just east of the Kirkwood Springs area, as well as scrublands in the same general vicinity.

Where the actual WUI boundaries are located may not be of great importance to this proposed project, as its primary purpose is research-oriented, to increase our understanding of the effects of various vegetative fuels reduction options. These options are typical of options currently available and in use to the Bishop Field Office for vegetative fuels reduction in the WUI. Additionally, the Bishop Field Office, and other land management agencies in general, also conduct fuels reduction projects outside the WUI. Often, similar treatment methods are considered, with the primary difference being that the driving force for the project is ecological, and not protection of homes and human life.

Issue: There have been other fires in the Mono Basin that were not considered catastrophic and burned in a mosaic pattern.

Response: The fire in the vicinity of the Mobil Mart was an early summer fire of moderate intensity in sagebrush steppe and pinyon on lands administered by the Inyo National Forest. Although no post-fire assessment has been done by the USFS, general observations along portions of U.S. Highway 395 by the BLM botanist and wildlife biologists have been that three years post-fire, little re-sprouting of bitterbrush has occurred which is an important forage species for mule deer, and that slopes have high percentages of non-native cheat grass as well as tansy mustard. In contrast, the Lundy Fire which burned on portions of BLM land within riparian, mesic sagebrush/steppe and dry meadow plant communities in early spring of 2003 allowed vigorous re-sprouting of bitterbrush as well as native perennial bunch grasses such as Great Basin wild rye.

In the Walker and Coleville area 50 miles north of the Mono Basin four major high-intensity pinyon wildfires totaling approximately 30,000 acres and occurring between 2002 and 2004 have caused a well-documented shift from native plant to cheat grass dominated landscapes (Morhardt, 2003-2005). 33% of the pre-fire pinyon stands in this area were documented to be closed-canopy stands making them at high risk for intense crown-fires (Miller and Tausch, 2001). In addition, the 900 acre Vittori Fire of 2004, immediately adjacent to a subdivision, was a re-burn of a formerly high density pinyon site that burned in 1996 and had type-converted to cheat grass.

The Mono Basin contains similar risk factors including topography, geology and high density pinyon stands as the Walker/Coleville area which was one of the main reasons

there is an interest in testing methods that would allow the breaking up of this type of fuel continuity.

Issue: Concern regarding what will constitute post-treatment monitoring and desire to ensure post-treatment monitoring into fall, during critical pinyon pine nut crop and juniper berry utilization by birds and other wildlife.

Response: The Point Reyes Bird Observatory (PRBO) is currently contracted to perform pre and post project monitoring of the avian community in relation to this project. Monitoring design and frequency has been established by PRBO with assistance from BLM wildlife biologists. BLM will suggest the inclusion of fall avian monitoring if funding becomes available.

All plant community pre and post monitoring is very inclusive and is clearly outlined in the Joint Fire Science Project Proposal (Attachment I). Key vegetation attributes include plant cover, density and diversity. Fire vegetation attributes include fuel bed characteristics and fire behavior.

Issue: Old-growth pinyon/juniper stands also benefit various wildlife species.

Response: The majority of the pinyon that would be treated under this project is 65 years or younger as evidenced by aerial photography comparisons from 1940 and 2001 that were presented at the Lee Vining RPAC meeting on 7/13/05. This project is not targeting "old-growth" pinyon because those stands are confined to rockier outcrops that would not be appropriate to use these thinning treatments on, nor is that the focus.

We acknowledge that diverse wildlife guilds do occupy pinyon/juniper stands, and baseline inventories have been conducted, but this project as mentioned previously would only affect a very small percentage of available pinyon/juniper habitat that occurs in the Mono Basin, and that this change would not be permanent with regard to the active pinyon recruitment that is occurring. In addition, we are actively working with PRBO to identify stands where for-instance Black-Throated Gray Warblers nest.

Issue: How would these treatments reduce the proliferation of cheatgrass.

The treatments are designed to test if there are differences in the amount of cheatgrass pre and post treatment so that we can gauge which treatments are least likely to encourage cheatgrass. We are interested in testing whether, not well documented claims of increased mulch densities, reduce cheatgrass densities on a small-scale. The project on a larger scale would break-up a currently dense fuel continuity which would help reduce high intensity fires. The post fire proliferation of cheat grass following such fires has been well documented in the eastern Sierra and throughout the Great Basin.

Issue: Concern that there should be other ways to improve sagebrush-steppe habitat besides removing some pinyon.

Response: Although breaking-up dense canopied stands of pinyon is the most effective way of reducing the risk of fire and commensurate ecological deterioration of sagebrush communities, the Bishop Field Office Resource Management Plan does identify several management decisions that would affect sagebrush obligate species such as sage-grouse and general sagebrush habitat quality. These Best Management Practices (BMPs) include; the prohibition of salting and supplemental livestock feeding within ¼ mile of strutting grounds, requiring that fences are not located on strutting grounds and that escape ramps are installed in livestock water troughs. Other decisions establish plant community goals for sage-grouse forage and cover requirements and prohibit camping within 1/3 mile of strutting grounds during breeding periods. While sage-grouse are not a main focus in this project, an essential characteristic of suitable sage-grouse habitat is a near absence of standing trees. In this case, while the BMP's are beneficial in habitat already suitable for sage-grouse occupation, the application of the stated BMP's where trees are present would be for naught. Other BMPs beneficial to sage grouse include leaving 4-6" of residual herbaceous stubble height on meadows and riparian sites at the end of a grazing period; locating any new livestock handling or management facilities outside riparian/wetland areas; developing water sources that maintain ecologic and hydrologic function and processes of the source; and setting maximum utilization of perennial key forage species at 40%.

In the consideration of sage-grouse and other sagebrush obligate species and species predominantly utilizing the mixed pinyon community, and from the standpoint of an agency saddled with the responsibility, in part, of doing what is feasibly possible to offset large catastrophic wildfires resulting in long-term vegetation community type conversion in pinyon and non-pinyon areas, it is prudent management to understand the relationship between these vegetation communities, as they currently exist, and their ability to be resilient to the dynamic forces of their local environment. In that setting, projects of this type are one of the few tools land management agencies have at their disposal to provide some clarity on how to best respond to unforeseen natural and man-caused disturbances in these vegetation communities. Without an attempt at gaining those insights, the public and its lands are at the random whim of environmental circumstances.

Issue: Clarification on how the project would benefit sage-grouse and other sagebrush obligate species.

Response: The project would benefit sage-grouse and other sagebrush obligate species on a small-scale, e.g. within a limited geographic location by, 1) breaking-up the fuel continuity, that would help reduce the risk of high intensity fires, 2) providing more open sagebrush habitat that is important for foraging and roosting habitat, 3) removing predator perch sites, e.g. pinyon within suitable sage-grouser habitat and, 4) restoring sagebrush and other native perennial plant species within areas where pinyon has reduced the cover, diversity and density of those plant species used by sage-grouse.

Sage-grouse were not the main focus of this project nor are they mentioned in the environmental document. Sage-grouse were mentioned in the press release issued in

the Mammoth Times on June 9th, 2005 in one sentence; “As an additional benefit, the project would be designed and timed to enhance the habitat of the sage-grouse, which are known to use the area”.

Finally, the sage-grouse is a California BLM Sensitive Species pursuant to Information Bulletin No. CA-99-86. It is BLM policy under Manual No. 6840.06(D) to provide sensitive species with the same level of protection that is given to “candidate” species under the Endangered Species Act (P.L. 97-304, as amended). In that regard, the proposed project would enable this office to more clearly address the future actions necessary to potentially alleviate a catastrophic type conversion of public land to cheat grass (or some other weed species) within the pinyon dominated areas and loss of surrounding suitable sagebrush habitat occupied by sage-grouse and a host of other sagebrush obligate species from a wildfire event.

Issue: Concern about additional roads being created if fuelwood gathering is allowed by the general public as well as that the “Masticator” would create new access tracks inviting OHV use.

Response: Access to hand piles for fuel wood gathering would only be allowed from piles directly along existing road edges. No vehicles would be permitted off existing roads. This would be regulated by BLM patrol personnel during specific dates when fuel wood would become available as well as by the distribution of maps showing locations of these plots/piles. With regard to the “Masticator” making new tracks this is unlikely because of its low pressure rubber tires, no repeated access and only trees would be removed which would make access ill-defined because no bare ground would be exposed.

Issue: Clarification on why more traditional prescribed burns aren’t used in less dense pinyon stands and why “thinning” versus removal of all trees within the 2.5 acre cut-mulch and cut treatment plots is planned.

Response: Prescribed fire is a less desirable technique to use in WUI areas due to the risk and consequences of escaped fires. Prescribed fires are a desired treatment in less dense pinyon areas if other criteria are met, e.g. that elevation, soil type, aspect and proximity to invasive weed populations are taken into account to ensure that burned areas will not become invaded by cheat grass and/or other non-native species. USGS has recently completed a project examining the affects of spring prescribed fire at two locations in the Mono Basin within two different substrate types to examine vegetation response including cheat grass. One of the sites is just west of the project area and is within at a pinyon/sagebrush ecotone. Spring burns could be a beneficial time to implement a prescribed burn treatment given the positive vegetative response noted in other sites within the area.

The treatments proposed for this project are thinning treatments even though each 2.5 acre plot would have all trees removed within it, because these plots would exist as openings within a more contiguous pinyon forest. This would not be a thinning

treatment if we were to remove all trees within in the entire designated project areas. Each plot is juxtaposed between untreated controls and other extant stands of pinyon and sagebrush steppe that occur within the project areas.

Following further consultations with USGS and their previous research with pinyon/juniper communities on the Colorado Plateau, it was determined that only removing of 80% of the trees (Attachment 1) would not yield as discernable treatment effects as 100% tree removal within the 2.5 acre plots in our project area, because of site differences between the study locations (Matt Brooks, pers. comm. 2005).

Issue: Desire to preserve all pinyon trees in the Eastern Sierra for intrinsic values, because they provide habitat, shade, beauty and spirituality as well as increased real estate values.

Response: Pinyon trees are important for all the reasons listed above and this project should provide BLM with well-documented methods to assist in ensuring that Public Lands don't lose pinyon and other important plant communities to large, intense wildfires. In addition, the small acreage of pinyon trees that would be removed during this project are being rapidly replaced by young seedlings. This project is not a permanent alteration of the pinyon community, but rather creates a mosaic of sagebrush openings within pinyon stands.

Issue: Non-tribal entity concern about how project would affect pinyon pine nut gathering by local Native American tribes.

After speaking with Mono Lake Indian Tribe members, no concern was expressed about the effect of this project on traditional pine nut gathering areas because they usually collect east of the proposed project area.

Issue: Too much experimentation in the project.

Response: The project is designed to address via the scientific method, e.g. hypothesis testing, what the ecological affects of pinyon thinning treatments are on vegetation response and fire behavior. By incorporating science into resource management related projects, less time, financial expenditures, and chances of repeated negative ecological consequences occur.

Issue: Effects of smoke from the burning of slash piles.

Any prescribed fire activities (burning of slash piles or fire behavior plots) implemented by the BLM must follow Air Pollution Control District requirements for burn/no-burn days in order to meet air quality standards. Burn-days are typically when a less stable air mass is in the area which ensures that smoke will exit the basin. The burning of hand piles would take place during the late fall or winter months (November- February). This is outside of the main tourist season for the Mono Basin/Lee Vining area. Burning of hand piles is not expected to generate large quantities of smoke. For the Trench

Canyon fire behavior plots the goal would be to burn with some wind in order to facilitate carrying the low intensity fire through the plots and dispersing the smoke as well. The effects of smoke generated by either project would be temporary.

Issue: Preference for hand versus mechanical approach to treatments.

Response: The use of mechanical and manual means to implement the treatments of this project incorporate the current methods used to remove pinyon. There is a balance of both methods in this project to ameliorate the costs of project implementation. Implementation of the treatment of these projects would be significantly less than those associated with fire suppression or even a small to medium-sized fire. Use of non fossil-fuel dependent means to accomplish this project would be cost prohibitive.

Issue: High number of burn piles would create an unintended mosaic of sterile sites.

Response: To reduce the risk of creating soil sterility in the denser stands of pinyon, we will incorporate a method to slowly hand feed pinyon into a burning pile which would help displace the heat.

Issue: Brush is just as volatile a fuel source as pinyon – why are we focusing on pinyon.

Although brush can be a volatile fuel source, it does not burn as hot or as intensely as pinyon. Pinyons contain high levels of turpenes which are extremely volatile compounds. A fire that occurs in pinyon is therefore much more difficult to control than in brush, especially when the fire is wind driven which is what constitutes many of the fires that have occurred within the Mono Basin.

We do manage for fire in shrub-dominated sites by hedging and breaking-up the fuel continuity, as can be seen near Mono City, Conway Ranch, and other areas in the eastern Sierra.

Issue: Desire to have this project covered under an EIS because of perception that this project is going to lead to thousands of acres of similar treatments within the Mono Basin.

Response: On June 5, 2003, the Department of the Interior adopted a new categorical exclusion for hazardous fuels reduction from documentation in an EA or EIS. This proposed action meets the requirements necessary for use of the specific hazardous fuels reduction categorical exclusion (1.12). Additionally, all actions proposed for categorical exclusion must be examined for exceptions. The deciding official, in this case the Bishop Field Manager, is required to review the list of exceptions to determine if any exist.

At present, no specific additional acreage in the Mono Basin has been identified for hazardous fuels reduction treatment. The 2004 Bishop Fire Management Plan does

identify a need for future fuels reduction actions, with two emphasis areas being the Wild land-Urban Interface (WUI) and areas of pinyon – juniper encroachment into scrublands. Any future proposed actions would be subject to appropriate environmental analysis and public involvement.

Issue: Concerns that public notice and involvement was inadequate.

Response: The Bishop Field Office provided public notice and involvement by issuing radio and newspaper press releases, presentations to local interest groups and meeting with individuals such as Native Americans. We also extended the comment deadline under this Categorical Exclusion by six weeks.

Issue: Taxpayers should not pay for fuels treatments adjacent to private property

Response: Since 2001, Congress has, through yearly appropriations legislation, directed federal land management agencies such as the BLM, U.S. Forest Service, National Park Service, etc... to implement the direction put forth in the National Fire Plan and accompanying 10-Year Comprehensive Strategy and Implementation Plan. This direction specifically addresses the need for hazardous fuels reduction on federally managed lands, with special emphasis on areas in and around homes and communities.

Decision and Rationale on Action

I have decided to implement the Evaluation of Pinyon Removal Effects Typical of a Wildland-Urban Interface (WUI) Fuels Reduction Project (CER# CA-170-05-35) as described with reference to Attachment I and associated maps and the mitigation measures listed below. This project meets the need for action described. In addition, I have reviewed the plan conformance statement and have determined that the proposed action is in conformance with the approved land use plan and the National Fire Plan and 10-Year Comprehensive Strategy and Implementation Plan (2000, 2001, 2002) and that no further environmental analysis is required.

Mitigation Measures

- Clean and inspect all equipment to ensure it is weed-free prior to entering BLM land.
- Do not treat any vegetation within cultural resource sites or rare plant sites unless working under the direction of the BLM archeologist or botanist.
- To the extent possible, and without reducing the Proposed Action's ability to achieve the Purpose and Need for Action, as described above, feather the cutting on the treatment area's outer edges.
- Apply treatments post songbird breeding and nesting periods.

Implementation Date

This project will be implemented as soon as practicable.

_____ **Date:** _____

Bill Dunkelberger
Bishop Field Manager

Administrative Review or Appeal Opportunities

This wildfire management decision is issued under 43 CFR Part 5003.1 and is effective August 15, 2005. The BLM has made the determination that vegetation, soil, or other resources on the public lands are at substantial risk of wildfire due to drought, fuels build up, or other reasons, or at immediate risk of erosion or other damage due to wildfire. Additionally, the knowledge gained as a result of the research component of this decision will inform similar important wildfire management decisions in the future. Thus, notwithstanding the provisions of 43 CFR 4.21(a) (1), filing a notice of appeal under 43 CFR Part 4 does not automatically suspend the effect of the decision.

If any party with standing is adversely affected by this action, there is a right of appeal to the Interior Board of Land Appeals (IBLA), Office of the Secretary, in accordance with the regulations in 43 CFR Part 4, Subpart E. If an appeal is taken, the notice of appeal must be filed in the Bishop Field Office of the Bureau of Land Management, 351 Pacu Lane, Suite 100, Bishop, California 93514 within thirty (30) days from the receipt of this decision. **The appellant has the burden of showing that the decision appealed from is in error.** Do not send the appeal directly to the Board. A copy of the notice of appeal and of any statement of reasons, written arguments, or briefs must be served upon any adverse parties, and in addition to the Regional Solicitor, Pacific Southwest Region, U.S. Department of the Interior, 2800 Cottage Way, Room E-2753, Sacramento, California, 95825-1890, within fifteen (15) days of the filing of any specific document. The Interior Board of Land Appeals must decide an appeal of this decision within 60 days after all pleadings have been filed, and within 180 days after the appeal was filed as contained in 43 CFR 4.416.

If the procedures set forth in the regulations are not followed, an appeal is subject to dismissal. Form 1842-1 is enclosed for additional information.

If you wish to file a petition pursuant to regulation 43 CFR 4.21 (58 FR 4939, January 19, 1993) or 43 CFR 2804.1 for a stay of the effectiveness of this decision during the time that your appeal is being reviewed by the Board, the petition for a stay must accompany your notice of appeal. A petition for a stay is required to show sufficient justification based on the standards listed below. Copies of the notice of appeal and petition for a stay must also be submitted to each party named in this decision and to the Interior Board of Land Appeals and to the Regional Solicitor, Pacific Southwest Region, U.S. Department of the Interior, 2800 Cottage Way, Room E-2753, Sacramento, California, 95825-1890 at the same time the original documents are filed with this office. If you request a stay, you have the burden of proof to demonstrate that a stay should be granted.

Standards for Obtaining a Stay

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

For further information on appeal opportunities and procedures, see the 43 CFR parts and subparts listed above, or contact the individual listed below.

Contact Person

For additional information concerning this decision, contact Anne Halford, Botanist, Bishop Field Office, 351 Pacu Lane, Suite 100, Bishop, CA 93514. Telephone number is (760) 872-5022.

References

- Albini 1976. Estimating wildfire behavior and effects. USDA, Forest Service, Intermountain Range Experimental Station, General Technical Report INT-30. Ogden, UT. 74pp.
- Anderson, Hal E. 1982. Aids to determining fuel models for estimating fire behavior. USDA, Forest Service, Intermountain Range Experimental Station, General Technical Report INT-122. Ogden, UT. 22pp.
- Bishop Fire Management Plan. 2004. Bureau of Land Management, Bishop Field Office. Address: 351 Pacu Lane, Suite 100, Bishop, CA 93514
- Bradshaw, K.E. and J.L. Reveal. 1943. Tree classification of *Pinus monophylla* and *Juniperus utahensis*. Journal of Forestry. 41:100-104.
- Brooks, M.L. C.M. D'Antonio, D.M. Richardson, J. Grace, J. J. Keeley, DiTomaso, R. Hobbs, M. Pellant, and D. Pyke. 2004. Effects of invasive alien plants on fire regimes. BioScience 54:677-688.
- Brooks, M.L. and J.R. Matchett. 2003. Plant community patterns in unburned and burned blackbrush (*Coleogyne ramosissima*) shrublands in the Mojave Desert. Western North American Naturalist. 63:283-298.
- Brooks, M.L. and D. Pyke. 2001. Invasive plants and fire in the deserts of North America. Pp.1-14 In K. Galley and T. Wilson (eds.), Fire Conference 2000: The First National Congress on Fire, Ecology, Prevention and Management. Invasive Species Workshop: The Role of Fire In the Control and Spread of Invasive Species. Tallahassee: Tall Timbers Research Station.
- Brown, J.K., R.D. Oberheu and C.M. Johnston. 1982. Handbook for inventorying surface fuels and biomass in the interior west. INT-GTR-129, U.S. Department of Agriculture, Forest Service, Intermountain Forest and Range Experiment Station, Ogden, UT, 48 p.
- Burwell, T.A. 1999. Environmental history of the lower montane pinyon (*Pinus monophylla*) treeline, eastern California. Unpublished dissertation. University of Wisconsin-Madison. Madison, WI.
- D'Antonio, C.M. and P. M. Vitousek. 1992. Biological invasions by exotic grasses, the grass/fire cycle, and global change. Annual Review of Ecology and Systematics 23:63-87.
- Davenport, D.W. D.D. Breshears, B.P. Wilcox, and C.D. Allen. 1998. Viewpoint – sustainability of pinyon-juniper ecosystems – a unifying perspective of soil erosion thresholds. Journal of Range Management 51:229-238.
- Hann, W.J. and D.L. Bunnell. 2001. Fire and land management planning and implementation across multiple scales. International Journal of Wildland Fire. 10:389-403.
- Koniak, S. and R.L. Everett. 1982. Seed reserves in soils of successional stages of pinyon woodlands. The American Midland Naturalist 108:295-303.
- Miller, R.F. and J.A. Rose. 1999. Fire history and western juniper encroachment in sagebrush steppe. Journal of Range Management. 52:550-559.
- Miller, R.F., T.J. Svejcar, and J.A. Rose. 2000. Impacts of western juniper on plant community composition and structure. Journal of Range Management. 53:574-585.

- Miller, R.F., R.J. Tausch. 2001. The role of fire in pinyon and juniper woodlands: a descriptive analysis. Pages 15-30 in K.E.M. Galley and T.P. Wilson (eds.). Proceeding of the Invasive Species Workshop: The Role of Fire in the Control and Spread of Invasive Species. Fire Conference 2000: the First National Congress on Fire Ecology, Prevention, and Management. Miscellaneous Publication No. 11, Tall Timbers Research Station; Tallahassee, FL.
- Miller, R.F., R.J. Tausch, and W. Waichler. 1999. Old-growth juniper and pinyon woodlands. Pg. 101-146 in S.B. Monsen and R. Stevens (compilers).
- Morhardt, E. 2004. Cannon and Slinkard Fire Reseeding Study. Claremont McKenna College, Claremont, CA. Unpublished Monitoring Report to the BLM Bishop Field Office. 300 pgs.
- National Fire Plan and 10-Year Comprehensive Strategy and Implementation Plan. 2000, 2001, 2002. <http://www.fireplan.gov/>
- Proceedings: ecology and management of pinyon-juniper communities within the Interior West. RMRS-P-9, U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Ogden, UT.
- Stohlgren, T.J., M.B. Falkner, and L.D. Schell. 1995. A Modified-Whittaker nested vegetation sampling method. *Vegetatio* 117:113–121.
- Stohlgren, T.J., L.D. Schell, and B. Vanden Heuvel. 1999. How grazing and soil quality affect native and exotic plant diversity in Rocky Mountain grasslands. *Ecological Applications* 9:45–64.
- Tausch, R.J. 1999a. Historic woodland development. Pages 12-19 in S.B. Monsen, R. Stevens, R.J. Tausch, R. Miller and S. Goodrich (eds.). Proceedings: ecology and management of pinyon-juniper communities within the Interior West. Proceedings RMRS-P-9, U.S. Department of Agriculture. Forest Service, Rocky Mountain Research Station, Ogden, UT.
- Tausch, R.J. 1999b. Transitions and thresholds: influences and implications for management in pinyon and Utah juniper woodlands. Pages 61-65 in S.B. Monsen, R. Stevens, R.J. Tausch, R. Miller and S. Goodrich (eds.). Proceedings: ecology and management of pinyon-juniper communities within the Interior West. Proceedings RMRS-P-9, U.S. Department of Agriculture. Forest Service, Rocky Mountain Research Station, Ogden, UT.
- Tausch, R.J. In Prep. An allometric model for determining biomass and fuel loads for singleleaf pinyon. *Ecological Monographs*.
- USDI Bureau of Land Management. 2003. Bishop Resource Management Plan. California State Office
- USDI National Park Service. 2001. Fire monitoring handbook. Boise (ID): National Interagency Fire Center. 288pp. Available online at www.nps.gov/fire/fmh/FEMHandbook.pdf.
- West, N.E. 1999. Juniper-pinyon savannas and woodlands of western North America. Pp. 288-308 in R.C. Anderson, J.S. Fralish, and J.M. Baskin (eds.) *Savannas, barrens, and rock outcrop plant communities of North America*. Cambridge University Press, London UK.
- Wilcox, B.P. and D.D. Breshears. 1994. Hydrology and ecology of pinyon-juniper woodlands: conceptual framework and field studies. Pp. 109-119 in D.W. Shaw, E.F. Aldon, and C. LoSapiro (eds.) Proceedings: desired future conditions for

pinyon-juniper ecosystems. GTR-RM-258, US Department of Agriculture, Rocky Mountain Forest and Range Experiment Station, Fort Collins, CO.

Young, J.A., R.R. Blank, and W.S. Longland. 1995. Nitrogen enrichment-immobilization to control succession in arid land plant communities. *Journal of Arid Land Studies*, 5:57-60.