PROGRAMMATIC ENVIRONMENTAL ASSESSMENT
BODIE HILLS UPLAND VEGETATION RESTORATION

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INTRODUCTION

Summary

This Environmental Assessment (EA) was prepared to analyze and disclose the environmental consequences of conducting an upland vegetation restoration program on public lands managed by the Bureau of Land Management (BLM) Bishop Field Office in the Bodie Hills of Mono County, California. This EA provides a programmatic level analysis of potential impacts that could result from implementation of the proposed program or one of the alternatives. It does not identify the exact location of potential restoration treatment units, but it does describe the criteria for selecting restoration treatment units and the treatment methods that could be used for restoration. The EA assists the BLM in project planning and in ensuring compliance with the National Environmental Policy Act (NEPA) and other applicable laws and policies affecting the proposed program and alternatives. If the Bishop Field Manager determines that this action would have "significant" impacts based on the analysis in the EA, then an Environmental Impact Statement (EIS) would be prepared for the action. If not, a Decision will be issued along with a Finding of No Significant Impact (FONSI) statement, documenting the reasons why implementation of the selected alternative would not result in "significant" environmental impacts. If one of the action alternatives is selected, subsequent decisions on individual restoration treatments would be made when they are designed and would be tiered to this analysis.

Background

This proposed project is a program of upland vegetation restoration treatments for BLM administered public lands in the Bodie Hills. The primary purpose of the proposed project is to maintain and improve the overall ecological condition and resiliency of upland vegetation systems in the project area. The Bodie Hills are a distinct mountain range located at the western edge of the Great Basin, just east of the Sierra Nevada and spanning the California-Nevada state line. The area is characterized by large expanses of sagebrush steppe typical of the Great Basin. These ecological systems are threatened by processes that have already degraded much of the Great Basin, including interrelated factors such as changing fire regimes, expansion and infilling of pinyon-juniper (*Pinus monophylla* and *Juniperus osteosperma* and *J. occidentalis* spp. *australis*), and the introduction of non-native invasive plants such as cheatgrass (*Bromus tectorum*). In contrast to substantial portions of the region, the ecological systems of the Bodie Hills have not undergone large scale conversion to uncharacteristic vegetation. However, a recent evaluation of ecological conditions in the Bodie Hills has documented that active management is needed to maintain and improve the ecological condition and resiliency of upland vegetation systems in the area (Provencher, Low et al. 2009).

Project Area:

The Bodie Hills are mostly public and national forest system lands managed by the BLM and the Humboldt-Toiyabe National Forest with private inholdings typically centered on meadows and water sources. The core of the range and all the lands to the west and east are managed by the BLM. The project area includes all BLM administered public lands in the Bodie Hills and is located entirely within Mono County, California (See Figure 1). The perimeter includes

approximately 191,750 acres in all ownerships, but the proposed project is limited to the 167,100 acres of BLM administered public land. The southern boundary runs north of Mono Lake along the BLM and Inyo National Forest boundary and California State Highway 167. The eastern boundary is the California-Nevada state line. The northern and western boundaries are the BLM and Humboldt-Toiyabe National Forest boundary line.

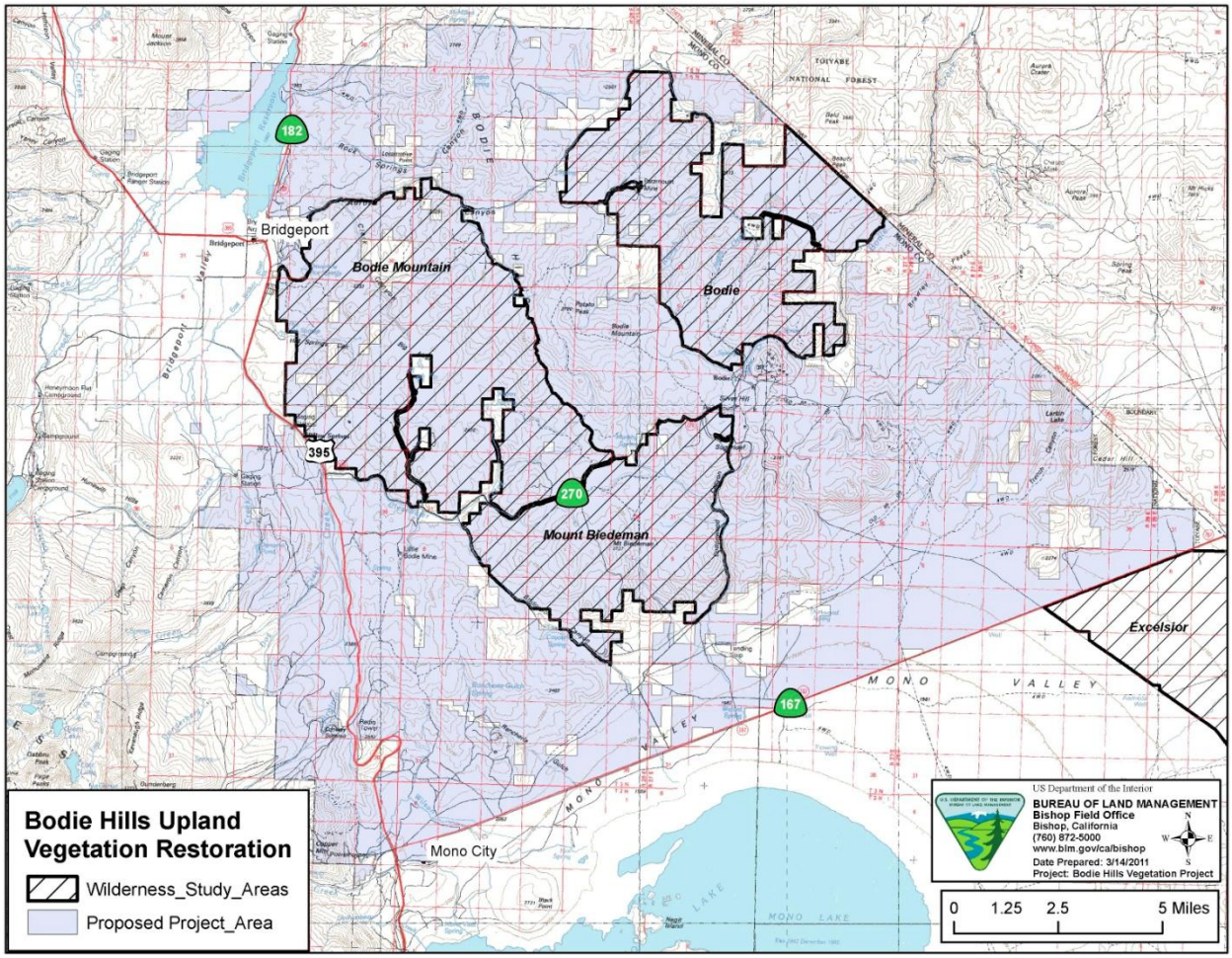

Figure 1. Proposed Project Area. Includes all the BLM managed lands in the Bodie Hills and the adjacent landscape west of Highway 395.

The elevation range is between 6,500 feet along the southern boundary near Mono Lake and 10,236 feet at the summit of Potato Peak. In general, vegetation is dominated by a mix of sagebrush and mountain shrub associated ecological systems interspersed with pinyon-juniper woodlands at the mid elevations.

Regional Setting - Ecological Conditions in the Great Basin:
Dramatic ecological change has affected large areas of the Great Basin in recent times, largely due to a set of interacting dynamics with their roots in land management that began more than 100 years ago. The rate of pinyon-juniper expansion over the last 130 years is greater than any similar period of time in the last 5,000 years (Miller and Tausch 2001). Invasive annual grasses have been introduced across the region, resulting in a changed fire regime and the conversion of many sites to non-native annual grasslands.

Effects to the fire regime are one of the most important factors causing vegetation change (Miller and Tausch 2001). The fire regime began to change in the Great Basin in the 1800s in response to several dynamics including changing climate after the end of the Little Ice Age (650 to 150 years before present), changes in Native American land use practices due to the arrival of Euroamerican settlers, and the introduction of widespread domestic livestock grazing (Tausch, Nowak et al. 2004). The drying and warming climate after the Little Ice Age reduced the growth of fine fuels resulting in less frequent and less widespread fires. Similarly, the introduction of domestic livestock at high stocking rates removed much of the grasses and fine fuels that carry fire from shrub to shrub in the sparse vegetation typical of the Great Basin steppe. Grazing levels at the turn of the century were unregulated and much higher than those permitted today (Tausch, Nowak et al. 2004). Active fire suppression has since further contributed to decreased fire frequency throughout the region.

Historically, pinyon woodlands typically occupied fire safe sites with shallow, rocky soils and sparse understories. Pinyon-juniper extent outside fire safe sites was primarily controlled by frequent fire consuming the smaller trees before the understory fuels were outcompeted by trees. As the fire frequency rapidly declined, pinyon-juniper began expanding and infilling shrubland sites characterized by deeper soils.

In addition to changes mediated through the fire regime, there are several other factors that may have increased the competitive advantage of pinyon-juniper over understory species. Heavy grazing at the turn of the century reduced competition by understory species and increased shrub densities leading to more establishment microsites for pinyon seedling under shrubs. Atmospheric change due to industrial activity has increased nitrogen (N) deposition and ambient carbon-dioxide (CO_2) levels which has been shown to potentially fertilize woody species giving them a competitive advantage (Romme, Allen et al. 2009).

The introduction of non-native invasive annual grasses, primarily cheatgrass, has affected lower elevation sites by altering the fire regime in the opposite direction (D'Antonio and Vitousek 1992, Brooks, D'Antonio et al. 2004). Great Basin ecological systems typically have a large spacing between plants and there is no annual grass native to the system. Introduced annual grasses fill in the spaces between the shrubs and create a continuous fine flashy fuel bed. This leads to more frequent and larger fires. Annual grasses respond positively to fire and compete very aggressively with the native species. After multiple fire cycles, ecological systems can be completely converted to non-native annual species.

Commensurate with sagebrush steppe habitat degradation throughout the Great Basin due to these ecological dynamics, as well as the active destruction of sagebrush steppe to convert it to other uses, species dependent upon these habitats have also been in decline. The most high profile species suffering from impacts to sagebrush steppe is the greater sage-grouse (*Centrocercus urophasianus*), which is currently a candidate for federal protection under the Endangered Species Act (ESA).

Project Area Setting - Ecological Conditions in the Bodie Hills:
In general, the ecological conditions of upland vegetation systems in the Bodie Hills are

characterized as being in relatively good condition when compared to much of the Great Basin. The area has not been converted to other vegetation types for agricultural purposes and it is still dominated by native species. Cheatgrass is present in some sites, especially at the lower elevations, but to date no type conversions to non-native annual grasslands have occurred. However, some recent fires on the western edge of the area have revegetated with increased cheatgrass cover. Similar to other parts of the Great Basin, there has also been widespread expansion and infilling of pinyon and juniper. Cheatgrass presence, increased woodland extent and density, and the potential for large scale fire currently pose a substantial threat to many sagebrush associated upland vegetation sites in the area.

The Bodie Hills are one of the important strongholds for sagebrush steppe dependent species. The US Fish and Wildlife Service (FWS) have determined that greater sage-grouse in the Bodie Hills are part of a distinct population segment (DPS) (USDI 2010b). This DPS, called the Bi-State population, was given a higher priority for listing than the greater sage-grouse range wide primarily due to the relatively small and isolated nature of this population and the magnitude and immediacy of habitat based threats facing the DPS (USDI 2010b). The breeding complex in the Bodie Hills is one of the largest in the Bi-State area.

Over the past decade, the BLM has implemented several small-scale, site-specific projects that address some of these issues primarily to improve sage-grouse habitat and to reduce fuel loads near communities. The BLM has also recognized that these issues are large scale and likely need to be addressed at a landscape level in order to increase their overall effectiveness. In response, the Bishop Field Office undertook several partnerships to gather the necessary information about prevailing conditions, to identify the best methods of treatment, and to involve the community in a landscape level conservation planning process. One study, completed in partnership with United States Geological Survey (USGS), looked at the best methods for treatment. A second study, completed in partnership with The Nature Conservancy (TNC) and interested stakeholders, looked at the ecological conditions across the landscape and how much treatment would be necessary to be effective.

In 2006, the BLM partnered with the USGS to implement a study of the effectiveness of methods for treatment of expanding pinyon in the Rancheria Gulch area of the Bodie Hills. The study involved treatments in three different stages of pinyon expansion and infilling ranging from early low density (Stage I) to late high density stands (Stage III). Treatments evaluated were hand cutting with piling and burning, mastication, and a control (areas of no treatment identified as equivalent sites for comparison). The first few years of vegetation response data have been analyzed and show that after treatment there was an increase in shrubs, perennial grasses, and native forbs in all treatments except the control. The best native species response generally occurred in the cut/pile/burn treatment and in sites with the lowest tree cover. Cheatgrass abundance and response was highly variable among plots (both treatments and controls) and no statistically significant effect of treatments on cheatgrass was documented. The mastication treatments increased the fine fuel bed due to the layer of chips left on the surface (Matchett, Brooks et al. 2010). Because the cut/pile/burn treatments had the best native species response, did not leave a continuous layer of fine fuels on the surface, and appear to be much more acceptable to the local community, it is the primary tree encroachment treatment method proposed in this EA. Mastication is not a proposed tree encroachment treatment method in any of

the alternatives. Restoration treatments being analyzed in this EA would be implemented very differently from this study. They would be in the most optimum sites using the most optimum methods and in natural patterns rather than small randomized blocks.

In September 2007, the BLM entered into a cooperative agreement with TNC to analyze the current condition of the Bodie Hills ecological systems and to predict their future condition under several different management scenarios developed with public input from stakeholders. The study's purpose was to inform and guide the formulation of future vegetation management projects to protect and enhance the ecological integrity of the area. The analysis used satellite imagery, vegetation condition mapping, predictive ecological models, and cost benefit assessments. Three workshops were held with a diverse group of stakeholders during 2008 to review and refine ecological models, to review findings, and to identify potential vegetation management scenarios. At a landscape scale, the results of this cooperative effort with TNC found that without proactive management several upland vegetation systems in the Bodie Hills have sites that are at high risk of converting to undesirable states in the future (Provencher, Low et al. 2009).

In the public workshops, the stakeholders agreed on the use of two measures to summarize the ecological condition of the Bodie Hills: Ecological Departure and High Risk Vegetation Classes.

Ecological Departure is an index of how the current mix of vegetation states within an ecological system differs from the best available information on its Natural Range of Variability[1]. TNC identified 15 ecological systems in the Bodie Hills for evaluation with input from the public workshops. The study found some level of Ecological Departure in most Bodie Hills ecological systems. Five are slightly departed, five are moderately departed, and five are highly departed. The primary cause of high departure is that the sagebrush associated systems are significantly lacking the earliest successional classes (stages of development after a disturbance). Montane sagebrush, the most abundant ecological system in the Bodie Hills, is a good example. Montane sagebrush comprises almost 120,000 acres, over 63% of the project area. It has very little vegetation in the early succession classes and is dominated by late succession classes. In addition, a portion is depleted of native grasses and forbs, a portion has some cheatgrass mixed in with the native perennial grasses, and a portion has experienced extensive pinyon and juniper expansion and infilling particular middle elevations (Provencher, Low et al. 2009). The study also predicted that in the absence of active management, several ecological systems will become increasingly ecologically departed over the next 20 years and several systems will have substantial increases in vegetation classes at high risk of conversion to undesirable unnatural states such as invasive weeds (Provencher, Low et al. 2009).

Ecological departure also increases agency and public concern about the risk of wildfire to communities, structures, and historic resources such as Bodie State Historic Park. Fire suppression and reduced fire frequencies have led to relatively uniform late seral vegetation conditions and high fuel loads across the landscape. This increases the risk for a larger and more severe fire. Pinyon-juniper expansion and infilling has created a nearly continuous tree belt in the mid elevations. Once pinyon-juniper becomes continuous and excludes the shrub and herbaceous

[1] Natural range of variability (NRV) describes the variation of vegetation states across the landscape due to the natural biotic or abiotic processes without intervention from industrial societies.

species low intensity fires are rare, but a crown fire can become established under extreme weather conditions and result in very large and high intensity fires atypical of these ecological systems. At the lower elevations, annual grasses facilitate rapid fire spread and flashier fire conditions. Fires can establish and spread very quickly under conditions that in the past would not have supported a wildland fire. Several recent fires in adjacent landscapes are examples of this novel fire behavior (Dana Fire 2004, John Fire 2011).

Stakeholders who participated in the BLM-TNC analysis of the Bodie Hills identified key ecological systems for management action based on their current condition, likely future ecological departure and/or potential for increased high risk classes, as well as feasibility for successful management action. The analysis modeled the predicted landscape level effects of several management scenarios on these key ecological systems over a 20 year period and reported on their predicted success in terms of ecological departure, high risk vegetation classes, and return on investment.

Scope of the Proposal:
Ecological systems identified as priorities for restoration in the TNC analysis included both upland (arid systems away from water sources) and riparian systems (moist to wet systems that depend on springs and creeks). The key upland systems identified for management action based on the TNC analysis and public input are montane sagebrush, Wyoming big sagebrush (both sandy and loamy systems), low sagebrush, and basin wildrye big sagebrush. One additional upland system, mountain shrub, was found to be not as highly departed from the natural range of variability but could also benefit from management to increase the proportion of early seral states due to the lack of recent fire (Provencher, Low et al. 2009). The likelihood of success in using prescribed burning to introduce early seral stages is very high due to the mesic nature of these sites and the ecology of this system, so it was also included in this proposal. The key riparian systems identified for management action based on the analysis are montane riparian, stable aspen, and wet meadows.

In general the restoration needs and strategies for upland and riparian systems differ greatly, but there are a few instances where the main concern is a lack of early seral vegetation stages. In addition, measureable restoration of the upland systems will not occur absent a landscape level strategy and action by the BLM, which manages the vast majority of the upland area. In contrast, the majority of riparian systems in the Bodie Hills are privately owned and site-specific management action is the best and most efficient approach for improving their ecological condition. Therefore, this project focuses on the restoration of upland ecological systems but includes some strategies that are common between upland and riparian areas. Examples include prescribed burning where embedded and adjacent riparian systems could benefit from the treatment applied to the surrounding upland system.

The TNC analysis was based on management scenarios that modeled 20 years of treatments, but this NEPA analysis has been limited to 10 years of treatment as a reasonable timeframe for a management decision. After 10 years, the results of the program can be evaluated to allow for changes if necessary to achieve the desired goals.

Purpose and Need for the Action

The purpose of the proposed project is to improve the overall ecological condition and resiliency of the most ecologically departed and at risk upland vegetation systems in the Bodie Hills by preventing or limiting future increases in ecological departure and high risk vegetation classes and where possible by restoring some of the natural range of variability. This purpose will accomplish multiple important objectives for management of the natural resources of the Bodie Hills. It will make at risk upland ecological systems more resistant to conversion to non-native species, increase the potential for a natural disturbance regime to be reintroduced, benefit wildlife such as greater sage-grouse, and reduce the risk of damage to adjacent communities, historic and cultural resources, and other ecosystem dependent values (wilderness characteristics, watershed, visual quality, recreation, etc.).

The need for action is based on the current and predicted future condition of key upland ecological systems in the Bodie Hills. Currently, multiple upland vegetation systems are highly ecologically departed from their natural range of variability. There are also multiple upland ecological systems that have sites that are at risk of future conversion to undesirable states outside the natural range of variability, such as transition to non-native annual grasslands or sagebrush associated shrublands encroached by pinyon and juniper. The ecological departure of the upland vegetation systems in the Bodie Hills is due largely to the fact that reduced fire frequencies have resulted in a landscape dominated by late seral developmental stages. This limits the availability of early and mid seral vegetation conditions, especially in sagebrush associated shrublands, required for long-term maintenance of these systems and for use by sagebrush dependent wildlife species. It also results in relatively uniform, continuous fuel loads which increases the risk of large scale wildfire with potential negative consequences for wildlife habitat, adjacent communities, historical and cultural resources, and other ecosystem dependent values (wilderness characteristics, watershed, visual quality, recreation, etc.).

The Bodie Hills are in relatively good condition compared to the Great Basin as a whole and provide important habitat for wildlife and native plants. Major ecological changes in the Great Basin over the last century provide a clear example of why active management is needed to protect the Bodie Hills from those threats.

Programmatic Scope

Public land management needs to address ecological issues at a landscape scale rather piecemeal in small project units and planning efforts (Hobbs 1998, Wisdom and Chambers 2009, Pyke 2011). This issue has also been raised by the public in previous planning efforts for projects in the Bodie Hills. In response, the BLM conducted a landscape scale, all ownership analysis of ecological conditions in cooperation with TNC and interested stakeholders. The resulting analysis documented the need for a landscape level, long-term program of upland vegetation treatments to maintain and improve the overall ecological condition and resiliency of the area.

The BLM has determined that the appropriate level of NEPA analysis required to make a decision to implement a landscape level, multi-year program of upland vegetation restoration treatments in the Bodie Hills is a programmatic EA instead of considering each potential treatment unit individually as it is identified. Where federal programs involve many individual actions, the Council on Environmental Quality (CEQ) has endorsed the concept of performing

tiered analysis from a larger programmatic analysis to site specific actions (40 CFR 1502.20 and 1508.28). The CEQ NEPA regulations encourage agencies to prepare "tiered" environmental analyses to assist in the evaluation of a large-scale program or project involving a series of related decisions. Programmatic environmental reviews, such as this EA, may cover basic issues and environmental effects so that these issues do not need to be repeated in subsequent NEPA analyses prepared for the individual actions within a program. Also, programmatic environmental reviews promote consideration of cumulative environmental impacts that might be missed in individual assessments prepared on a case-by-case basis.

The intent of this programmatic environmental review is to:

- Evaluate and determine the appropriate methods and the amount of treatment to be conducted in the Bodie Hills;
- Identify common design features to assure that vegetation treatments can be completed without adversely impacting values and resources in the Bodie Hills;
- Allow restoration treatments to meet multiple objectives by being placed strategically in the landscape and being analyzed together;
- More effectively analyze the combined environmental and cultural effects of the entire upland vegetation restoration program and the cumulative effects when combined with other actions;
- Establish program-wide monitoring and adaptive management strategies to better respond to changes as individual projects are implemented; and
- Streamline and expedite the environmental review and assessment process for individual treatment units.

Decision to be Made

This EA will identify and disclose the environmental impacts that could result from implementation of a proposed landscape level upland vegetation restoration program on BLM administered public lands in the Bodie Hills. Based on the analysis in the EA, the Bishop Field Manager will decide whether to implement the restoration program as proposed, to implement an alternative to the proposed restoration program, or to take no action.

Analysis Process for Subsequent Tiered Decisions on Treatment Units

The individual treatment units for a long-term program of restoration cannot be practically identified in advance, so this programmatic EA analyzes the criteria for identifying those locations and treatment methods in subsequent decisions.

If the Bishop Field Manager selects one of the action alternatives evaluated in this EA, subsequent environmental review will follow the policies and procedures in the BLM National Environmental Policy Handbook (H-1790-1) to determine the appropriate level of public input and analysis to be conducted for subsequent decisions on individual treatment units. At a minimum, a Determination of NEPA Adequacy (DNA) will be conducted for each individual treatment to determine if the effects of the action are adequately analyzed in this document. The BLM will also consult with the appropriate tribes as treatment locations are being selected consistent with Section 106 of the National Historic Preservation Act (NHPA).

The BLM has the discretion to do public scoping during a DNA review to identify potential additional issues to be considered if the Bishop Field Manager determines that public input opportunities completed as a part of this programmatic EA were not adequate for the attributes of specific proposed treatment units (H-1790-1). Where a DNA finds that all issues have already been adequately analyzed in this EA, a decision will be made without further analysis. Any such decision will be subject to appeal pursuant to 43 CFR Part 4.

Where site-specific concerns are identified which were not considered in this EA, such as for a site with unique environmental or cultural considerations, a separate site-specific NEPA analysis that is tiered to this EA will be conducted to ensure all potential effects to environmental and cultural resources are thoroughly evaluated. Public input opportunities associated with that NEPA analysis will be offered. Any decision based on that NEPA analysis would also be subject to appeal pursuant to 43 CFR Part 4.

Public Involvement

This project is the result of an on-going public process. It started with the BLM initiating a landscape scale analysis of ecological conditions and potential management options for the Bodie Hills in 2007 in cooperation with TNC and interested stakeholders. The BLM clearly recognized the need for science-based management at the landscape level as well as the public concern that several small projects would not address the needs of the entire ecosystem. Public input and participation was solicited throughout the process and has helped to define the scope and measures proposed. From the results of this analysis, a proposal was developed and the formal NEPA process was initiated in March 2011 with public scoping. Public participation and input opportunities are summarized below:

- 2007-2009: BLM invited all interested parties to 3 workshops to assess the ecological condition of the Bodie Hills and to identify potential management strategies. These workshops were facilitated by The Nature Conservancy (TNC) and open to anyone interested. Multiple announcements were mailed to a broad mailing list.
- March 15, 2010: A public meeting was held in Bridgeport to present the results of the TNC assessment. Twenty-one people attended.
- August 17, 2010: BLM sent a letter to interested parties announcing the development of a proposal based on the TNC assessment and inviting the public to participate in the process.
- March 2011: Public scoping of the Bodie Hills Upland Restoration Project began. Scoping letters were mailed on March 3, 2011 to a broad mailing list including anyone who had expressed an interest in the previous assessment. The project was also listed on the BLM public web site. Input was requested by April 4, 2011, but the scoping period was extended allowing anyone who expressed an interest to have input. Fifteen individuals and groups commented.
- Aug 1, 2011, Sept 21, 2011 and November 1, 2012: BLM offered three separate field trips to the project area. The field trips were attended by 16, 13, and 6 individuals respectively.
- On-going since March 2011: Tribal consultation with affected and interested tribes has been on-going since the proposal was scoped. Tribal consultation included a field trip to the project area with tribal representatives

Issues

The following issues were identified in comments received during public scoping which began on March 3, 2011. A table listing all comments and how issues were identified or dealt with in the EA is available in the project record at the Bishop BLM Office. Each issue is analyzed individually in the Environmental Analysis (Chapter 3).

Ecological Departure

1. How effective will the treatments be at reducing the departure from the Natural Range of Variability (NRV)?
2. How does the use of the NRV as a metric affect the analysis of effects and how is past and future variability accounted for?
3. Do the VDDT model and FRC metric accurately describe the vegetation conditions and the predicted effects of the proposed treatments?

Fragmentation

4. Will the treatments lead to increased fragmentation of ecosystems in the Bodie Hills?

Fire Regime

5. What will the effect of the treatments be on the fire regime?

Vegetation

6. What are the long term past and potential future trends (including climate change) in vegetation, especially pinyon distribution, in the Bodie Hills and how will the project affect future dynamics? (Consider time frames as long as the Holocene, i.e. the last 12,000 years, and both natural and human induced trends.)
7. How do special status plant species respond to disturbance and how will they be affected by excluding them from the treatment units?
8. What are the potential effects of the project on the distribution and abundance of cheatgrass and other non-native invasive species and are the control measures included enough? What kinds of sites would be at risk of increases in non-native invasive species, especially cheatgrass?
9. How does vegetation recovery after pinyon removal depend on the pre-treatment cover?
10. What will the effects of burning be on the soil and vegetation regrowth?
11. What will the effects of pile burning be on the remaining pinyon pine trees?

Wildlife

12. What will the project effects be on wildlife populations especially sage-grouse, mule deer migration, pika, and pygmy rabbit? (Includes effects of altering cover of sagebrush and pinyon, treatments within 2 miles of leks, the use of prescribed fire, and implementation disturbance.)
13. How will treatment of late successional habitats affect species that use them? (see also effects to pinyon ecological services).
14. What will be the cumulative effect of the project combined with the hunting of sage-grouse authorized by CA DFG?

Watershed

15. What will the effects of the project be on watershed processes?

Ecosystem Services

16. Will the project affect the values and services offered by pinyon woodlands in the Bodie Hills including wildlife habitat and corridors, fall and winter food source, carbon sequestration, and genetic pool?

Air Quality

17. How will the project affect air quality in the Mono Basin and Bodie State Historic Park?

Recreation

18. What would the effects of the treatments, especially wood gathering, be on route proliferation and off-road vehicle use and what site types would be susceptible?

Visual Quality

19. What will the effect of the treatments (especially mowing, cutting trees, chipping, and seeding with a rangeland drill) and the rate of vegetation regrowth be on the visual appearance of the Bodie Hills especially critical viewsheds like the Bodie State Historic Park?

Wilderness Values

20. Will the effects of the project on naturalness of the WSAs affect their eligibility for designation as wilderness?

21. What will the effects of the project be on wilderness characteristics outside of WSAs?

Land Status

22. What is the status of the land transfer to State Parks and what will the effects be on those lands?

Analysis Process

23. How can the effects to specific resources be predicted if the treatment units with prescriptions are not yet identified?

24. How does the adaptive management plan take into account long term effects?

Tiering to Existing Land Use Plan(s)/Environmental Impact Statement(s)

The Bishop Resource Management Plan (USDI 1993) provides a comprehensive framework for managing public lands administered by the Bishop Field Office. This EA is tiered to the Final Bishop Resource Management Plan and Environmental Impact Statement (USDI 1991, USDI 1993) including the Fire Management Plan amendment (USDI 2004). Tiering helps focus this EA more sharply on the significant issues related to the proposed upland vegetation restoration program while relying on the Final Bishop Resource Management Plan and Environmental Impact Statement and the Fire Management Plan and Environmental Assessment for analysis and decisions on how the area will be managed including desired vegetation conditions and landscape wide acceptable levels of prescribed fire and non-fire vegetation treatments.

Plan Conformance

Determination

The proposed action and all action alternatives are in conformance with the Bishop Resource Management Plan (RMP) approved on March 23, 1993, as amended by the Fire Management Plan in December 2004.

Rationale

The proposed action and all action alternatives analyzed in detail were designed and developed to be consistent with the General Policies, Area Manager's Guidelines, Valid Existing Management, Standard Operating Procedures, Decisions, and Support Needs prescribed in the Bishop RMP. A summary of key RMP prescriptions specific to the proposed upland vegetation restoration program include:

- ***Area Manager's Guidelines (pg. 9):*** "4. Vegetation will be a key element in the plan and management will be directed toward the achievement of desired plant community goals" The project is designed to improve and maintain the ecological condition and the natural disturbance regime of the native vegetation of the Bodie Hills. The proposal implements this guideline.
- ***Standard Operating Procedures: Wildlife (pg. 12):*** "3. Manage candidate species, sensitive species and other species of management concern in a manner to avoid the need for listing as state or federal endangered or threatened species." The project is designed to improve wildlife habitat and wildlife habitat diversity throughout the landscape. Greater sage-grouse are a species of particular concern and treatments to benefit sage-grouse habitat are prioritized. See the analysis of the effects on wildlife under Issue 12.
- ***Area-Wide Decisions (pg. 17):***
    - "Manage all activities to conform with Visual Resource Management (VRM) standards" Design features are included in the proposed action and all action alternatives to conform to VRM standards. See the analysis of Issue 19.
    - "Protect and enhance unique or important vegetation communities and wildlife habitats. – Increase to 60% the amount of sagebrush habitat within 2 miles of leks that has optimum characteristics for sage-grouse. (Presently only 30% of sagebrush habitat has optimum characteristics for sage-grouse). – Manage sagebrush-bitterbrush areas within 2 miles of sage-grouse leks to meet desired plant community goals." As described above, treatments to improve sage-grouse habitat are a priority in the proposed action and all action alternatives including removal of expanding pinyon and juniper that adversely affects near lek sagebrush habitat quality.

The Bishop Field Office is divided into nine geographically delineated Management Areas (MAs). The proposed treatments analyzed in this EA would be implemented in the Bodie Hills and Bridgeport Valley MAs and a small portion of the Granite Mountain MA. The following are some of the key Management Area Decisions related to the proposed action and other action alternatives:

- ***Bridgeport Valley MA (pgs. 27-30):*** The proposed action and other action alternatives conform to the VRM standards, help to meet Desired Plant Community prescriptions, and conform to direction for the Conway Summit Area of Critical Environmental Concern (ACEC) and the Travertine Hot Springs ACEC. Design features are included to protect visual resources in the Conway Summit ACEC.
- ***Bodie Hills MA (pgs. 30-34):*** The proposed action and other action alternatives conform to the VRM standards, include limited operating periods to provide seasonal protection in sage-grouse wintering areas, help to meet Desired Plant Community prescriptions, and conform to direction for the Bodie Bowl ACEC including VRM standards and protection of the National Historic Landmark from wildfire. The action alternatives do not include any surface disturbing activities that would adversely affect the National Historic Landmark (see analysis of Cultural Resources on pg. **Error! Bookmark not defined.**).
- ***Granite Mountain MA (pgs. 34-37):*** The proposed action and other action alternatives conform to the VRM standards, enhance habitat for sage-grouse, mule deer and pronghorn ("Use selective removal of decadent vegetation to improve migratory habitat for the Mono Lake deer herd."), and help to meet Desired Plant Community

prescriptions.

The project area does not occur within any designated Wilderness Area. There is no designated critical habitat for any federally listed species where treatment will occur. Eleven acres of designated critical habitat for Sierra Nevada bighorn sheep (*Ovis canadensis sierrae*) occurs in the far western corner of the project area, but no treatment will occur there and no treatment is proposed that will impact critical habitat. No federally threatened, endangered or proposed species area known to occur in the project area. However, two BLM designated sensitive wildlife species do occur within the project area: greater sage-grouse (*Centrocercus urophasianus*) and pygmy rabbit (*Brachylagus idahoensis*). The proposed upland vegetation restoration program is expected to have an overall beneficial effect on these species (See the analysis of Issue 12).

The project area does not occur within any BLM designated wild horse Herd Management Area. However, there is occasional wild horse drift from the Powell Mountain Wild Horse Territory in Nevada into the eastern portions of the project area. The program of treatments is not expected to have any adverse effects on these wild horses.

The Fire Management Plan Amendment to the Bishop RMP sets limits on the amount of prescribed fire and non-fire vegetation management treatments by vegetation community and in each Fire Management Unit (FMU) and identifies goals for the amount of wildfire each decade. The project area includes the entire Bridgeport Valley-Bodie Hills FMU. The proposed action and each of the action alternatives analyzed in detail are consistent with the limit set for this FMU of no more than 15% of the landscape treated in a 10 year period (23,899 acres).

Due to the programmatic landscape scale of this project there are multiple other decisions in the Bishop RMP to protect specific resources that cannot all be listed here. The proposal is consistent with these decisions and they are incorporated as necessary as Design Features applicable to the proposed action and other action alternative.