# ENVIRONMENTAL ASSESSMENT

# BLUEBIRD FUELS TREATMENT
# EA-NV-030-08-027

U.S. Department of the Interior
Bureau of Land Management
Carson City Field Office
5665 Morgan Mill Road
Carson City, NV 89701
775-885-6000

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# I. INTRODUCTION/PURPOSE AND NEED

## *INTRODUCTION*

The Carson City Field Office of the Bureau of Land Management (BLM) is proposing a 246 acre fuels treatment project on BLM administered lands in the Fish Springs area east of Gardnerville, Nevada. The project is directly adjacent to private land containing numerous primary residences and associated outbuildings.

The project is part of a nation-wide initiative to protect communities that are considered at high risk from wildfire damage. Fish Springs is included on the list of at risk communities found in Federal Register and has been assigned a High Hazard category in the Douglas County Wildfire Risk/Hazard Assessment Project (2005).

## *PURPOSE & NEED*

The primary purpose of the proposed fuels treatment is to help protect homes in the area from wildfire damage, provide a safer access/evacuation route and provide fire fighters a safer area in which to conduct fire suppression operations. The proposed project would reduce the amount and continuity of fuel within the treatment area in order to reduce fire intensity.

Under the National Fire Plan (2000), governments, communities and fire professionals have been tasked with identifying communities at risk and proposing projects to reduce the potential for wildfire damage in the wildland urban interface.

Thousands of acres of land adjacent to residential developments and primary access/evacuation routes in the Bluebird Way/Bar J Road, Old Ranch Road and Lena Lane neighborhoods of Fish Springs are public land administered by the BLM. The vegetation in this area is highly flammable, continuous, and consists of a diverse mix of grasses, sagebrush, rabbitbrush, bitterbrush, and pinyon and juniper trees. Under warm, dry, and windy weather conditions, the risk of intense wildfires is high.

Bluebird Way/Bar J Road neighborhood

The BLM, the East Fork Fire and Paramedic Districts, the Nevada Fire Safe Council and local residents are concerned that in the event of an intense wildfire, residential areas would be difficult to defend, property damage could be substantial, access/evacuation could be dangerous, and the lives of the public and firefighters could be at risk.

## *LAND USE PLAN CONFORMANCE STATEMENT*

*Carson City Field Office Fire Management Plan, 2004.* *(CCFO FMP, 2004)* The proposed Bluebird Fuels Treatment Project is located in the Carson River Fire Management Unit (NV-030-04). Management direction applicable to this proposal includes the following:

FMU Fire Management Objectives Priority Statement *(CCFO FMP, 2004 pg. 84)*

- Firefighter and public safety is the first priority.
- Protection of communities and associated infrastructure.
- Promote a fire safe condition for Communities at Risk.

Non-Fire Fuels Treatment Strategies: *(CCFO FMP, 2004 pg. 88)*

- Priority will be given to fuel treatment projects in the wildland urban interface designed to protect life and private property. Techniques to accomplish this will include thinning, chipping, mowing, mastication, and seeding of fire resistant species.
- Hazardous fuels treatment may be considered in combination with resource driven vegetation modification projects to achieve mutually beneficial vegetation, habitat, watershed, cultural resource, and fuels objectives. Hazardous fuels loads would be treated in order to reduce rates of fire spread, and the threat of escaped fires.

*Carson City Field Office Consolidated Resource Management Plan, 2001. (CCFO CRMP 2001)*

Wildlife - Desired Outcomes (*CCFO CRMP 2001 pg. WLD-2*)

- Maintain and improve wildlife habitat, including riparian/stream habitats, and reduce habitat conflicts while providing for other appropriate uses.

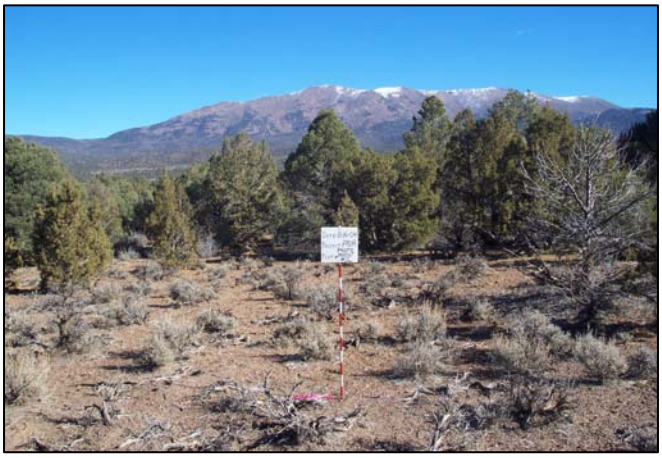
Forestry - Desired Outcomes *(CCFO CRMP 2001 pg. FOR-1)*

- Forest and woodland management will be based on the principles of multiple use, sustained yield, and ecosystem management.

# II. PROPOSED ACTION/ALTERNATIVES

## *PROPOSED ACTION*

The Proposed Action would implement thinning of trees, brush and grass through mechanical mastication in two discontinuous treatment areas on up to 246 acres in a manner that creates an area where wildfire would burn with reduced intensity (Maps 1 and 2).



Pine Nut Road Project, pre-treatment (2004) and post-treatment (2007). Example of anticipated results from Bluebird Project proposed action.

**Mechanical Mastication -** The proposed project would modify the structure, amount and continuity of flammable vegetation within two discontinuous treatment areas through mechanical mastication in order to reduce fire intensity. Tree spacing would be adjusted to prevent the spread of wildfire through tree crowns. Brush spacing would be adjusted to modify fuel structure and reduce horizontal continuity. Trees and shrubs would be severed on the stump, no higher than six inches above the ground and treated to lie within 12 inches of the ground. Patches of untreated vegetation would be left standing within the treatment areas to reduce visual impacts and discourage OHV use. The distribution and arrangement of untreated vegetation would be random and irregular to avoid long-lasting visual impacts to the project area. The tallest, most vigorous trees with the largest diameters, full crowns, and little evidence of insect and disease damage would be retained in untreated patches. The outside edges of the treatment areas and areas within the treatment areas adjacent to paved roads would be thinned less than the unit interiors and the outside edges of the treatment areas would be feathered into the untreated vegetation adjacent to minimize the creation of strong linear edges. Shredded vegetation would be left in place to stabilize soils and reduce dust generation in the treatment area.

**Maintenance** The project would require periodic maintenance to remain effective. Monitoring would be conducted periodically to assess changes in treatment effectiveness. When treatment effectiveness is compromised maintenance actions would be initiated.

**Post Treatment Management** The project would be managed to maintain an effective fuel break, prevent excessive generation of dust, soil erosion, and protect the project area from unnecessary disturbance. In order to achieve these objectives the following management actions will be enacted.

1. The project area will be closed to OHV use to prevent excessive erosion and protect vegetation recovery.
3. Signs indicating the closure and management restrictions will be installed at access points to the project area.
4. Existing roads and trails in the project area will generally remain open where they serve a legitimate public purpose.
5. If noxious weeds are detected in the project area, infestations will be identified for treatment in the Carson City Field Office Annual Weed Treatment Plan.

**Mitigation** Eligible cultural resources or plant species proposed for federal listing discovered prior to or during implementation of the project will be avoided. As always respect for all cultural resources would be maintained especially in the case of human remains that may be inadvertently discovered in the process of conducting the proposed project.

**Monitoring** Monitoring will be conducted throughout the project area both during and after project implementation. Monitoring will consist of periodic surveys to:

1. Ensure that the initial fuel treatment objectives are met,
2. Evaluate fuel load recovery,
3. Identify invasive species for subsequent treatment,
5. Ensure that motorized vehicle use is restricted to existing roads and trails in treated areas.
6. During implementation of the proposed action the treatment area will be monitored for the presence of cultural resources.

### *NO ACTION ALTERNATIVE*

Under the No Action Alternative the fuels treatment project identified in the proposed action would not be implemented and natural processes would continue.

## III. AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

### *SCOPING AND ISSUE IDENTIFICATION*

The Carson City Field Office fuels management program staff identified the proposed action.

Scoping letters were mailed out on March 11, 2008. Letters were sent to: 74 residents living in the area, the East Fork Fire and Paramedic Districts, and the Nevada Fire Safe Council.

A well attended public meeting was held March 20, 2008 at the Fish Springs volunteer fire station to provide an opportunity for local residents and representatives from the East Fork Fire and Paramedic Districts and the Nevada Fire Safe Council to share their concerns about wildfire, discuss strategies to reduce wildfire risk to private and public property and discuss the Bluebird Fuels Treatment Project proposal.

A follow up meeting with a group of residents was held May 30, 2008 on the proposed project site to further discuss and refine the proposed action.

There is some demand for fuel wood in the nearby communities, but there is also a large potential supply of fuel wood available on public land in the nearby surrounding area. While there could be some minor loss of salvaged firewood that the community could use in this project, to take the additional steps to manage that use would slow down the very urgent action needed to reduce the imminent threat that wildfire now poses to natural resources and community safety. Comments from initial scoping in the community were opposed to opening the project area to public woodcutting so close to private residences, and fuel wood harvest has not been identified as a viable alternative for further consideration.

On June 23, 2008 a letter of consultation was sent to the Chair of the Washoe Tribe of Nevada and California requesting their comments and concerns, if any, regarding the proposed action.

The environmental assessment was reviewed by the interdisciplinary team of BLM specialists in June and July 2008.

Scoping letters, including information where the preliminary environmental assessment could be found online for review, were mailed out on July 21, 2008 to 64 residents living in the area, the East Fork Fire and Paramedic Districts, and the Nevada Fire Safe Council.

The scoping letter and preliminary environmental assessment were sent to the Nevada State Clearinghouse on July 21, 2008.

## *PROPOSED ACTION*

### General Setting

The project area is located in Fish Springs, Douglas County, Nevada. Legal location T 12 N, R 21 E, S 9,10,13,14,15,16. Vegetation in the project area is typical of the western Great Basin and consists of a mix of grasses, sagebrush, rabbitbrush, bitterbrush, and pinyon and juniper trees. The pinyon and juniper trees in the treatment unit are generally small to medium size for the species. Elevation ranges between 5360 and 5650 feet. Aspect is west. Slope ranges between 0% and 12%. Average precipitation is 9 inches per year.

## *CRITICAL ELEMENTS OF THE HUMAN ENVIRONMENT*

Appendix 5 of BLM's NEPA Handbook (H-1740-1) identifies Critical Elements of the Human Environment that are subject to requirements specified by statute or executive order and must be considered in all BLM environmental documents. The table below lists the Critical Elements and their status in the project area:

| Critical Element | Not Present | Present/Not Affected | Present/May Be Affected | The following rationale was used to determine that Critical Elements present in the area would not be affected as a result of implementation of the Proposed Action |
|---|---|---|---|---|
| Air Quality | | | X | |
| Areas of Critical Environmental Concern | X | | | |
| Cultural Resources | | X | | A survey would be completed to determine if any cultural resources of concern are present. Based on the survey results and as stated in the Proposed Action mitigation, avoidance areas would be established to avoid impacting any cultural resources of concern. |
| Environmental Justice | X | | | |
| Farm Lands (prime or unique) | X | | | |
| Floodplains | X | | | |
| Invasive, Nonnative Species | | X | | Cheatgrass is sparsely present in the project area. The Proposed Action is not expected to increase cheatgrass coverage. |
| Migratory Birds | | | X | |
| Native American Religious Concerns | | X | | A letter of consultation including a description of the proposed action and a map were provided to the Washoe Tribe of Nevada and California on June 23, 2008. No concerns were identified. |
| Threatened or Endangered Species | | X | | The project areas fall within potential habitat for *Ivesia webberi* a plant species proposed for federal listing and *Astragalus oophorus* var. *lavinii*, a BLM sensitive plant species. A survey would be completed to determine if any of the two potential plant species of concern are present. Based on the survey results and as stated in the Proposed Action mitigation, avoidance areas would be established to avoid impacting any plant occurrences. There are no known federally listed animal species or habitats within the proposed project area. |
| Wastes, Hazardous or Solid | X | | | |
| Water Quality (Surface/Ground) | X | | | |
| Wetlands/Riparian Zones | X | | | |
| Wild and Scenic Rivers | X | | | |
| Wilderness | X | | | |

## ***RESOURCES PRESENT BUT NOT AFFECTED*** *(other than Critical Elements)*

The following resources, which are not Critical Elements of the Human Environment as defined by BLM's Handbook H-1740-1, are present in the area. The BLM has evaluated the potential impact of the Proposed Action on these resources and has determined that although the resources are present, they would not be affected by the Proposed Action or Alternatives. The table below lists the resources and the rationale that was used to determine that resources present in the area would not be affected as a result of implementation of the Proposed Action:

| Resource | **The following rationale was used to determine that resources present in the area would not be affected as a result of implementation of the Proposed Action** |
|---|---|
| Recreation | The Proposed Action post management criteria mitigates potential increased OHV use in the project area by closing the area, except for existing roads and trails, to vehicle use. Signs indicating the closure and management restrictions would be installed at access points to the project area. Signing of the closed areas would cause OHV use to shift away from the urban interface, reducing conflicts between homeowners and OHV users in the project area. |
| Soils | The soils present on the Bluebird project area vary considerably in depth and both surface and subsurface textures. Detailed descriptions can be found in the Douglas County Soil Survey, published in 1984 by the Soil Conservation Service (USDA). The proposed project should benefit surface soil stability by increasing surface litter and encouraging an increase in basal vegetative cover such as perennial bunchgrasses and forbs. |
| Visual Resources | The Proposed Action would meet the criteria of a Class IV area without undue impairment. Disruptions to the existing view would be minimal due to the location and slope of the proposed treatment area. The Proposed Action design criteria, feathering the edges of the treatment area and areas within the treatment areas adjacent to paved roads and leaving pockets of untreated vegetation within the treatment area, would reduce the impact to the linear element of the characteristic landscape. |

## ***RESOURCES PRESENT AND BROUGHT FORWARD FOR ANALYSIS*** *(Critical and non-Critical Elements)*

The following resources are present in the area and may be affected by the Proposed Action.

### ***AIR QUALITY***

#### AFFECTED ENVIRONMENT

Implementation of State and Federal air quality rules and regulations in the project area is the responsibility of the Nevada Bureau of Air Quality Planning (BAQP). The National Ambient Air Quality Standards (NAAQS) published by the Environmental Protection Agency in 40 CFR Part 50 define the levels of air quality necessary to protect human health and welfare. An area is considered to be in nonattainment for a pollutant if it has violated the NAAQS for that pollutant. BAQP operates an air-quality monitoring network to demonstrate compliance with meeting ambient air quality standards and to identify pollution trends. The current network includes 10 monitors, one of which is located near the

project area in Gardnerville. The existing air quality within the project area is generally excellent, in attainment, with some local emission sources and fairly consistent wind dispersion. Existing sources of emissions in the area include vehicles, construction equipment road dust and residential wood burning. Sensitive receptors to air quality impacts in the project area include residents in the Bluebird Way/Bar J Road, Old Ranch Road and Lena Lane neighborhoods.

### ENVIRONMENTAL CONSEQUENCES

*Proposed Action*

The potential effects on air quality of the Proposed Action are expected to be minor. The Proposed Action would result in a localized short-term affect on air quality in the project vicinity as a result of exhaust and fugitive dust emissions generated by equipment.

Exhaust - The Proposed Action would have minor adverse effects on air quality through the generation of exhaust emissions from equipment. Emissions generated during implementation are individually and cumulatively minor and short term, and would not result in adverse cumulative air quality effects.

Dust - The Proposed Action would have minor adverse effects on air quality through the generation of fugitive dust from equipment. Dust generation would be associated with equipment operation, would not remain airborne for any length of time and would not result in adverse cumulative air quality effects.

*No Action Alternative*

The No-Action Alternative would result in no exhaust or dust emissions being generated in the short term. Without disturbance the probability of a large severe fire in the project area would increase over time. Eventually a stand replacing fire would occur, resulting in potentially greater emissions that could create an adverse impact to the air quality.

## *FIRE MANAGEMENT / VEGETATION*

### AFFECTED ENVIRONMENT

The project area is included in the Carson River Fire Management Unit of the Carson City Field Office. Fish Springs is included on the list of at risk communities found in Federal Register and has been assigned a High Hazard category in the Douglas County Wildfire Risk/Hazard Assessment Project (2005).

Vegetation in the project area is typical of the western Great Basin and consists of a mix of grasses, sagebrush, rabbitbrush, bitterbrush, and pinyon and juniper trees.

Fire regime condition class (FRCC) describes the degree of fire regime departure from historical fire cycles due to fire exclusion and other influences (selective timber harvesting, grazing, insects and disease, the introduction and establishment of non-native plants). FRCC identifies changes to key ecosystem components such as species composition, structural stage, tree or shrub stand age, and canopy closure. It characterizes the landscape by five “Fire Regime Groups” and three “Fire Condition Classes”. Wildfire risk conditions are identified by the Fire Regime Groups and are measured by the Fire Condition Classes.

Specifically, the natural historical frequency and severity of fire within an ecosystem is the identified Fire Regime, and Fire Condition Class identifies the departure of current conditions from the historical reference condition. The National Fire Plan and Healthy Forest Restoration Act dictate that the federal agencies use FRCC as criteria for planning projects.

The project area can be characterized by Fire Regime Group III which has a natural historical fire frequency of 35-100 years and a mixed fire severity. The condition class in the project area can be characterized by primarily Condition Class 2, meaning the fire regime has been moderately altered from its historical range and a moderate risk of losing key ecosystem components exists. To restore the historical fire regime in Condition Class 2 some level of restoration treatment is required.

All the vegetation in the area is subject to fire. There is a logical relationship between frequency of fires and fire intensity. Each plant species has adaptive means to survive in a fire-adapted ecosystem. However, fires have not been allowed to burn freely, due to the ability of the managing agency to prevent fires that start from growing larger, out of control, and damaging natural resources and human improvement in a way that would not be beneficial in the public interest. That presents a quandary, though, because without fire's natural and prehistoric role of shaping plant communities and reducing fire hazard fuels, fuel levels build to levels so high that even modern, high-technology fire management would eventually not be able to suppress the fire that grows large on hot, windy days, especially when fire management resources might already be engaged in battling other concurrent fires in the area and around the country.

## ENVIRONMENTAL CONSEQUENCES

*Proposed Action*

The overall effect of the Proposed Action would result in the intended consequences of reducing the risks of catastrophic wildfire and its potential adverse impacts to life, property and natural resources. The structure, amount and continuity of flammable vegetation within the project area would be altered resulting in reduced fire intensity. The project area would be moved from high intensity wildfire fuel conditions to low intensity wildfire fuels conditions. Concentrations of trees would be thinned reducing the connection from the younger trees to the older trees. The openings between tree crowns would reduce the tree torching and crowning potential. The shrub component would be thinned reducing the surface fuel quantity and continuity and reducing ladder fuels that can carry fire from the surface into tree crowns.

The Proposed Action, which will reduce total canopy cover, could result in increased wind speeds, higher temperatures, and lower humidities for a given time and place, resulting in slightly lower fine fuel moisture in the fine surface fuels.

*No Action Alternative*

The No-Action Alternative would result in the continuation of current fire management practices. This alternative assumes that fuels in the Project area would continue to build up. At some future time, an ignition from a natural or human-caused source could result in an uncontrolled wildland fire. Under drought conditions and/or high winds, a running crown fire could put life, property and natural resources at risk.

## *FOREST RESOURCES*

### AFFECTED ENVIRONMENT

Trees in the area to be treated are a mix of singleleaf pinyon pine (*Pinus monophylla*) and Utah juniper (*Juniperus monosperma*) that have grown in recent decades into the lower elevation sagebrush steppe plant community. The trees became established during an earlier historic era (1860-1940 AD) of very intensive livestock grazing, which led to a loss of palatable species and dominance of unpalatable plants such as the trees and sagebrush. Earlier than that, the native plant community was a more balanced mix of trees, shrubs, forbs, and grasses kept in a dynamic balance largely by occasional wildfires. The earlier plant community of greater proportion of herbaceous plants supported more frequent wildfires than would the more continuous cover of trees, but the more frequent fires were of lesser duration and intensity. Then trees were present in smaller groves, not in the current rather continuous blanket of tree cover with few natural breaks. Effective wildfire suppression methods during the last few decades have also contributed to the continued growth of trees. However, the kind of woodland that is currently overgrowing the plant community is very unstable, due to the increasingly high risk of losing of the entire stand of trees to unpredictable wildfire that would be very difficult to stop under typically dry and windy fire weather conditions. The current risk of losing all the trees in a catastrophic wildfire is very great.
The value of the current tree population for both wildlife habitat and scenic quality is much reduced now from its potential, for both of those kinds of resource values benefit from a more balanced, stable, and diverse plant community than they do from the current composition of increasing tree cover with few breaks or variations.

### ENVIRONMENTAL CONSEQUENCES

*Proposed Action*

The proposed action, if it can be implemented before a devastating wildfire occurs on the project site, would result in a more balanced plant community with a more stable woodland component that is less susceptible to being totally destroyed by wildfire. The design of the treatment to retain clumps of the best trees would result in a woodland pattern that will be much more likely to endure into the long-term future and contribute far more for scenic quality and wildlife habitat values.

*No Action Alternative*

If no action is taken to restore the balance of vegetation components in the plant community and reduce the risk of intense wildfire that would be difficult to control, the possibility would remain very real that the whole woodland would be killed over a very large area along with most of the other plants and very possibly some residences. It would be very difficult and costly to reestablish the native plant community over a long time. The trees may not return in the foreseeable future, judging by results of wildfires in similar situations in the vicinity.

## *MIGRATORY BIRDS*

### AFFECTED ENVIRONMENT

On January 11, 2001, President Clinton signed Executive Order 13186 (Land Bird Strategic Project) placing emphasis on conservation and management of migratory birds. The species are not protected under the Endangered Species Act, but most are protected under the Migratory Bird Treaty Act of 1918. Management for these species is based on Instruction Memorandum – IM 2008-050 dated December 18. 2007. The Intermountain West is the center of distribution for many western birds. Over half of the biome's Species of Continental Importance have 75% or more of their population here. Many breeding species from this biome migrate to winter in central and western Mexico or in the Southwestern biome (Beidleman 2000). The species of concern that could occur in the general project area are shown in Appendix B (BLM 2007).

There are no Important Bird Areas (IBA) associated with the general project area. There are no identified important wintering areas within the general project area (McIvor 2005).

Some migratory birds use every habitat within the project area.

Historically this area was sage grouse habitat, however, do to encroachment of pinyon pine and juniper trees this area is no longer suitable for sage grouse. Because of the development in the area sage grouse would not be expected to use the area once the trees are removed, sage grouse avoid areas near human disturbances.

### ENVIRONMENTAL CONSEQUENCES

*Proposed Action*

The proposed project would result in more sagebrush habitat, benefiting migratory birds that utilize sagebrush communities, large expanses of pinyon pine and juniper would remain near the project area so that migratory birds that utilize pinyon pine or juniper would find plenty of suitable habitat nearby.

*No Action Alternative*

The No Action alternative would not create any disturbance in the project area and would have no affect on migratory birds.

## *WILDLIFE*

### AFFECTED ENVIRONMENT

General wildlife habitats in the project area include:

Wyoming big sagebrush and associated grasses and other brush species including rabbitbrush and bitterbrush. The dominate species are pinyon pine and Utah juniper which have encroached into the sagebrush habitats.

Wildlife species such as valley quail, short-horned lizards, gray fox and gray vireo can be found in this habitat type. Mule deer may pass through the area.

**ENVIRONMENTAL CONSEQUENCES**

*Proposed Action*

General Wildlife - The proposed project would improve habitat for species utilizing sagebrush communities. Species utilizing pinyon pine and juniper would lose a small amount of habitat. However, pinyon pine and juniper have expanded and encroached over vast areas of sagebrush communities in Nevada including the Pine Nut Mountains therefore the removal of trees within the project area would have negligible negative impacts on wildlife species that utilize pinyon pine and juniper habitats and have beneficial effects on species that utilize sagebrush communities.

Special Status Species - The proposed project would have minimal affect on BLM sensitive species. Most BLM sensitive species that utilize pinyon pine or juniper would not occur so close to residences, those that might utilize the area such as juniper titmice would have plenty of other trees nearby.

*No Action Alternative*

General Wildlife – General wildlife would not be affected.

Special Status Species - Special status species would not be affected.

## *CUMULATIVE IMPACTS*

The cumulative impacts of the Proposed Action are based on the direct and indirect effects of the project when considered in combination with the effects of past, present, and planned future actions in the Pine Nut Mountains. Past actions and their effects include all actions that have occurred from the time of European settlement in the late 1800s. Past, present, and planned future activities considered in the following analysis include:

- Fire suppression (since 1940s)
- Grazing (since 1880s)
- Historic woodland harvest (since 1880s)
- Vegetation/fuels treatments (since 1960s)
- Urban/recreational development (since 1880s)

Approximately 3,000 acres of the Pine Nut Mountains (415,000 acres) has been treated in the past decade to move vegetative conditions toward a more historic vegetative composition and structure which is more resistant to adverse effects of uncharacteristic wildfire. Present actions include those projects with currently approved environmental analysis. Currently approved environmental analysis exists for less than 1,500 acres of vegetation treatment per year. Reasonably foreseeable future actions include those projects that are in the planning stage and likely to be completed in the next 10 years. Reasonably foreseeable future actions include up to 1,500 acres of vegetation treatment per year. The Bluebird Fuels Treatment Project would affect a very small area, less than 1/10 of 1 % of the Pine Nut Mountains.

All resource values and issues affected by the proposed Bluebird Fuels Treatment Project have been evaluated for cumulative impacts. Examination of the affected environment and environmental consequences section of this environmental assessment reveals that the proposed action would not affect areas of critical environmental concern, cultural resources, environmental justice, floodplains, hazardous or solid wastes, invasive nonnative species, native American religious concerns, prime or unique farm lands, recreation, soils, threatened or endangered species, visual resources, water quality, wetlands/riparian zones, wild and scenic rivers, or wilderness and thus cannot contribute to cumulative impacts on these issues and resources. These issues and resources would not be considered further.

Further examination of the affected environment and environmental consequences section of this environmental assessment reveals that the proposed action may affect air quality, fire management/vegetation, forest resources, migratory birds and wildlife and therefore may contribute to cumulative impacts on these issues and resources. Thus these issues and resources would be considered in the cumulative impacts analysis.

Past actions such as fire suppression, grazing and woodland harvest have resulted in an ecosystem that has moved away from the historic range of variability in terms of stand densities, species composition and vegetative structure. General trends across the landscape as a result of past actions include denser vegetation, species composition shifts, vegetative structure that is more dominated trees rather than shrubs and perennial grasses and increased accumulation of fuels. These trends have led to changes in habitat, uncharacteristic fuel profiles, increased fire hazard and increased potential for uncharacteristic severe wildfire that can lead to undesirable property and resource damage.. All present and reasonably foreseeable future actions are designed to reverse the trends of past actions that have resulted in a shift away from the historic range of variability. Present vegetation management projects and reasonably foreseeable future vegetation management projects in the Pine Nut Mountains, under the current management paradigm, have or will be designed to move vegetative conditions toward a more historic vegetative composition and structure which is more resistant to adverse effects of uncharacteristic wildfire.

There are no anticipated negative cumulative effects, but rather beneficial effects when considered with other vegetative treatments in the Pine Nut Mountains designed to move vegetative conditions toward a more historic vegetative composition and structure.

## *MONITORING*

The monitoring described in the Proposed Action is sufficient for this action.

# IV. PERSONS, GROUPS, AND AGENCIES CONSULTED

## *LIST OF PREPARERS*

**Bureau of Land Management**

| NAME | TITLE | PROJECT EXPERTISE |
|---|---|---|
| Tim Roide | Fuels Specialist | Air Quality, Fire Management/Vegetation, Proposed Action |
| Jim Schroeder | Hydrologist | Floodplains, Water Quality, Wetlands/Riparian |
| Arthur Callan | Recreation Planner | Recreation, Visual Resources |
| Susan McCabe | Archeologist | Cultural Resources, Native American Religious Concerns |
| Dean Tonenna | Botanist | Threatened or Endangered Plants |
| John Axtell | Wildlife Biologist | Migratory Birds, Threatened or Endangered Animals, Wildlife |
| Steep Weiss | Forester | Forest Resources |
| Jim DeLaureal | Soil Scientist | Invasive Nonnative Species, Soils |
| Terri Knutson | Planning and Environmental Coordinator | Planning |

## *PERSONS, GROUPS, OR AGENCIES CONSULTED*

| NAME | AGENCY | PROJECT EXPERTISE |
|---|---|---|
| Steve Eisele | East Fork Fire and Paramedic Districts | Public Safety |
| Pat Murphy | Nevada Fire Safe Council | Public Safety/Resource Management |
| Terri Clark/Sharon Douglas | Fish Springs/Bluebird Fire Safe Council Chapter | Public Representation |
| | Washoe Tribe of Nevada and California | Cultural Resources |
| | Nevada State Agency Clearinghouse | Resource Management/Other |

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# V. APPENDICES AND MAPS

## APPENDIX A - BLM Sensitive Wildlife Species Associated With The Sunrise Pass Allotment

| | |
|---|---|
| Golden Eagle | *Aquila chrysaetos* |
| Ferruginous Hawk | *Buteo regalis* |
| Northern Goshawk | *Accipiter gentilis* |
| Burrowing owl | *Athene cunicularia* |
| Juniper Titmouse | *Baeolophus griseus* |
| Pinyon Jay | *Gymnorhinus cyanocephalus* |
| Greater sage-grouse | *Centrocercus urophasianus* |
| Mountain quail | *Oreortyx pictus* |
| Cooper's Hawk | *Accipiter cooperii* |
| Sharp-shinned Hawk | *Accipiter striatus* |
| Prairie Falcon | *Falco mexicanus* |
| Peregrine Falcon | *Falco peregrinus* |
| Swainson's Hawk | *Buteo swainsoni* |
| Loggerhead shrike | *Lanius ludovicianus* |
| Gray vireo | *Vireo vicinior* |
| Long-eared owl | *Asio otus* |
| Bendire's Thrasher | *Toxostoma bendirei* |
| Black Rosy Finch | *Leucosticte atrata* |
| Pallid bat | *Antrozous pallidus* |
| Spotted bat | *Euderma maculatum* |
| Long-eared myotis | *Myotis evotis* |
| Fringed myotis | *Myotis thysanodes* |
| Yuma myotis | *Myotis yumanensis* |
| Silver-haired bat | *Lasionycteris noctivagans* |
| California myotis | *Myotis californicus* |
| Small-footed myotis | *Myotis ciliolabrum* |
| Long-eared myotis | *Myotis evotis* |
| Little brown myotis | *Myotis lucifugus* |
| Long-legged myotis | *Myotis volans* |
| Townsend's big-eared bat | *Corynorhinus townsendii* |
| Hoary bat | *Lasiurus cinereus* |
| Western pipistrelle bat | *Pipistrellus hesperus* |
| Brazilian free-tailed bat | *Tadarida braziliensis* |

## APPENDIX B - Neo-Tropical Migratory Birds, Species of Continental Importance Near The Project Area

**Western Shrublands** (Beidleman 2000)

**Shrubsteppe** (Beidleman 2000), **Sagebrush** (Neel 1999)

| | |
|---|---|
| Sage Sparrow | *Amphispiza belli* |
| Sage grouse | *Centrocercus urophasianus* |
| Brewer's sparrow | *Spizella breweri* |
| Ferruginous Hawk - | *Buteo regalis* |

This bird uses flat topped juniper strings in sagebrush for nesting. East & SE slopes especially used if strings present.

| | | |
|---|---|---|
| Prairie Falcon | *Falco mexicanus* | (cliffs critical for nesting) |
| Mourning Dove | *Zenaida macroura* | |

**Woodland** (Beidleman 2000

| | |
|---|---|
| Gray Vireo | *Vireo vicinior* |
| Pinyon Jay | *Gymnorhinus cyanocephalus* |
| Swainson's Hawk | *Buteo swainsoni* |

## APPENDIX C - Best Management Practices To Protect Soils And Water Quality

The following best management practices (BMPs) are to be used to minimize soil erosion and protect water quality when completing forestry or hazardous fuel reduction projects. The management objectives of these projects are achieved by altering vegetation communities. Implementing the BMPs would minimize unnecessary surface disturbance and damage to residual vegetation that protects soils from erosion.

BMP 1: Schedule projects during low-impact period

Definition: Projects would be scheduled to avoid wet soil conditions.

Purpose: Timber and fuels projects can cause soil disturbance and damage non-target plants that provide ground cover. BMP 1 restricts projects to periods that would minimize the likelihood of these impacts.

Applicability: This practice would apply to any project site when significant soil surface disturbance could occur, but is especially important on fine-textured soils and soils with well developed structure, such as loams. These soils are especially prone to compaction, rutting, and similar impacts.

Planning Criteria: If contracting or scheduling in-house labor, plan to complete work during periods when soils are typically dry. Fall and winter are the preferred seasons for fuels projects due to the low risk of wildfire, BLM budget cycles, and greater availability of fire personnel. Regional precipitation primarily occurs in winter, however, so flexibility should be provided in the work schedule to avoid wet conditions.

BMP 2: Minimize and mitigate surface disturbances

Definition: Methods that avoid unnecessary surface disturbance would be chosen.

Purpose: These management practices would reduce or mitigate surface disturbances which can lead to soil erosion in many ways, including (1) directly detaching and transporting soil, (2) exposing soil to erosion by reducing non-target vegetative ground cover, (3) compacting soils and reducing infiltration, and (4) rutting that concentrates overland flow.

Applicability: BMP 2 would apply to any project site where significant surface disturbance could occur, but is especially important on fine-textured soils and soils with well developed structure, such as loams. These soils are especially prone to compaction, rutting, and similar impacts.

Planning Criteria: Site access should minimize the amount and intensity of disturbance associated with vehicle traffic and off-road travel. Choose appropriate treatment methods to minimize surface disturbance and to avoid impacts to non-target plants when felling trees, operating machinery, and performing other tasks.

Methods:
1. Minimize the area and intensity of disturbance. For example, a road that switchbacks up a slope would disturb a greater area, but have less impact than one directed up and down a slope.
2. Avoid repeated vehicle and equipment traffic on areas that are prone to soil and vegetation impacts.
3. Plan vehicle routes where they would do the least damage, such as rock outcrops or coarse-textured soils that resist compaction.
4. Travel and conduct treatment operations along the contour of the slope to the extent possible to avoid channelizing overland flow.
5. When leaving slash or wood chips onsite, scatter over disturbed areas to protect exposed soils from raindrop impact.

BMP 3: Avoid sensitive riparian areas, wetlands, and drainages

Definition: Exclude treatment from sensitive riparian areas, wetlands, and drainages, including an adequate buffer where appropriate. The presence of water in these areas could be ephemeral, so BMP 3 might be necessary where no surface water is present during project planning and implementation. Note that BMP 3 could be modified or limited for projects that target plants in these areas (e.g., removing juniper near a spring to reduce competition with riparian species).

Purpose: BMP 3 is designed to protect sensitive riparian and wetland areas, and to prevent sediment deposition in drainages where the sediment could be transported to other water bodies.

Applicability: This practice could apply to any project where an identifiable drainage exists, but is especially important for perennial waters, riparian and wetland areas, and where a drainage leads from the project area to a water body.

Planning Criteria: Survey the project area to identify riparian and wetland areas, and drainages. Evaluate the potential for sediment to be generated by the project and delivered to offsite water bodies. Determine what areas would be left untreated to protect these resources. Size of buffers would depend on project objectives and site conditions, such as soil type, vegetative cover, slope, and aspect.

Methods:
1. Mark buffer areas to be left untreated or where treatment would be limited.
2. Be sure work crews have clear instructions on the meaning of any markers.
3. Map avoidance areas in GIS to facilitate planning and communication with work crews.
4. When necessary, have a project inspector onsite during operations to instruct crews on avoidance areas.
5. If avoidance is unfeasible, use portable bridges or other devices to prevent impacts.
6. Do not perform equipment maintenance onsite where fuel, lubricants, or other contaminants could enter water bodies.

R 21 E

T 12 N

Jacobsen Lane

Monarch Mine

Out-R-Way

Bluebird Unit
(218 Acres)

Pine Nut
Extension Unit
(28 Acres)

Pine

Nut

Lena Lane

Pine Nut Road

Pine Nut Road

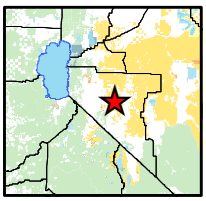
troth Well

## Legend

- Proposed Project Area (246 Acres)
- 2005 Pine Nut Road Fuels Treatment

Land Status

- Bureau of Land Management
- Private



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Miles

**Bureau of Land Management**
**Carson City District**
**Fuels Management**
**Bluebird**
**2008**

United States Department of the Interior
Bureau of Land Management (BLM)
Carson City District
5665 Morgan Mill Road
Carson City, NV 89701

No warranty is made by the BLM as to the accuracy, reliability or completeness of these data for individual or aggregate use with other data.

**Map 1 - Proposed Treatment Area**

6/2/08

R 21 E

T 12 N

Jacobsen Lane

Monarch Mine

Out-R-Way

Bluebird Unit
(218 Acres)

Pine Nut
Extension Unit
(28 Acres)

Pine Nut

Lena Lane

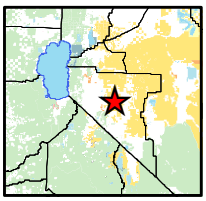
Pine Nut Road

Pine Nut Road

Troth Well

## Legend

- Proposed Project Area (246 Acres)
- 2005 Pine Nut Road Fuels Treatment



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Miles

**Bureau of Land Management**
**Carson City District**
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**Bluebird**
**2008**

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Carson City, NV 89701

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**Map 2 - Proposed Treatment Area**

6/2/08