



DECISION MEMO

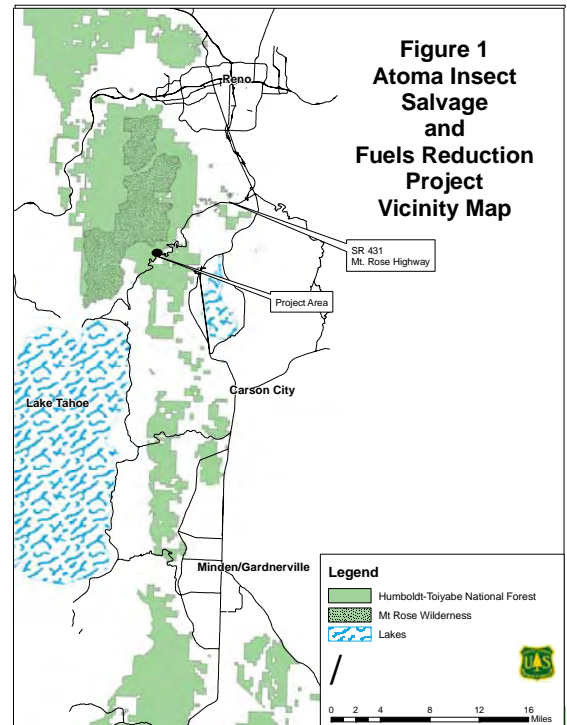
Atoma Insect Salvage and Fuels Reduction Project

USDA Forest Service
Humboldt-Toiyabe National Forest, Carson Ranger District
Washoe County, Nevada

I. PROJECT BACKGROUND AND DECISION TO BE IMPLEMENTED

A. PROJECT LOCATION

The project is located within Washoe County, Nevada, approximately 15 miles south of Reno, across from the Mt. Rose Ski Resort. Access to the project area is via State Route 431 (Mt. Rose Highway). The legal description is T.17N., R.19E., sections 18 and 19, Mount Diablo Meridian. Figure 1 is a vicinity map of the project area.



B. BACKGROUND/PURPOSE AND NEED FOR ACTION

The mountain pine beetle (MPB) is native to the forests of western North America from Mexico to central British Columbia. The MPB will attack all western species of

Figure 2 – Mountain pine beetle egg galleries under the bark of a lodgepole pine.



Figure 2 – Mountain pine beetle egg galleries under the bark of a lodgepole pine. The MPB will attack all western species of pines, native and introduced, though the principle hosts are lodgepole, ponderosa, western white, sugar and whitebark pine (Amman *et al* 1990). The MPB kills trees by boring through the bark into the phloem layer on which they feed and in which eggs are laid (figure 2). The phloem is a layer of cells just inside the bark of plants that conducts food from the leaves to the stem and roots (Helms, 1998). Pioneer female beetles initiate attacks, and produce pheromones which attract other beetles and results in a mass-attack event. The trees respond to attack by increasing their resin output to the source of the injury. This increased resin output is evidenced by pitch tubes at the site of the attacks. Pitch tubes are either reddish colored masses of resin mixed with bark and wood boring dust or cream colored in appearance. Depending on bark beetle population densities, healthy trees can successfully smother or pitch out the attacking adult beetles. Signs of pitch tubes on attacked trees may or may not indicate successful attacks. When beetles are active, successfully infested trees generally have dry boring dust, similar to fine sawdust, in bark crevices and around the base of the tree (figure 3). Particularly during prolonged periods of



drought, infested trees will have signs of boring dust and no pitch tubes. These trees, referred to as “blind attacks”, are not uncommon in lodgepole pine or during drought years when trees produce little pitch (Amman *et al* 1990). Over time, the trees are overwhelmed as the phloem layer is damaged enough to cut off the flow of water and nutrients eventually killing the tree. The first sign of beetle-caused mortality is boring dust found encircling the base of the tree. Later, needles on successfully attacked trees begin fading and changing color several months to one year after the trees have been attacked (Amman *et al* 1990). Lodgepole pine stand

Figure 3 – Pitch tubes on the trunk and boring dust around the base of a successfully attacked tree.



susceptibility to MPB infestations increases as stands reach approximately 80 years of age and tree diameters average 8 inches diameter at breast height (DBH) or greater (Amman *et al* 1990). Stands with basal areas above 120 square feet per acre are also more likely to be attacked by MPB (McGregor *et al* 1987). In areas where MPB populations reach epidemic proportions, it is not uncommon to see 5-8 inch DBH lodgepole pines attacked. In large susceptible landscapes, tree mortality can be extensive. Warming temperatures (especially winter minimum temperatures), longer growing seasons, and growing season drought may be playing major roles in the current widespread bark beetle outbreaks (Kaufmann *et al* 2008).

This project area contains dense stands of lodgepole pine with scattered red fir, western white pine and a minor amount of mountain hemlock. The average DBH of the stand is 15 inches, the average age is 73 years and the basal area is 192 square feet per acre. This stand is currently rated as having a moderate risk of MPB outbreak. According to data collected from aerial insect and disease detection surveys, lodgepole pine mortality due to MPB was first identified in this area in 2004. The MPB infestations are composed of large areas of infested, dead lodgepole pine and scattered single tree mortality occurring in western white pine (figure 4).

Figure 4 – Photograph of some of the project area, indicating the tree mortality.



McGregor *et al* (1987) reported that based on a five year study, thinning to 80 to 100 square feet of basal area per acre will reduce MPB related tree losses. Recommendations to reduce MPB related mortality include a mix of partial cuts (*thinning*) and regeneration harvests (*patch cuts*),



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(McGregor *et al* 1987). Patch cutting and thinning will create a mosaic of age and size classes that will increase species and age class diversity ultimately improving tree and stand vigor while reducing the risk of MPB related mortality. Lodgepole pine tends to easily wind-throw and seedlings are highly shade-intolerant, meaning that don't grow well in shade. Over time, species and age class diversity will occur as a result of the created openings on treated landscapes. Limiting the size of the created openings and single tree thinning practices in stages will reduce the risk of residual tree wind-throw.

Patches of dead trees, both standing and down, increase the fire risk and diminish public and firefighter safety. Removing the dead wood will reduce fire risk and the risk to firefighters by reducing fire intensity, rate of spread and crown fire potential. Removing the dead trees will also improve public safety by removing dead standing trees.

There are also western white pine “plus” trees located in this area. These plus trees have been identified as exhibiting signs associated with resistance to white pine blister rust. Seeds from these trees have been collected for testing for resistance to this disease. Improving the vigor of these trees and the stands around these trees will reduce the risk of successful mountain pine beetle attack on the plus trees.

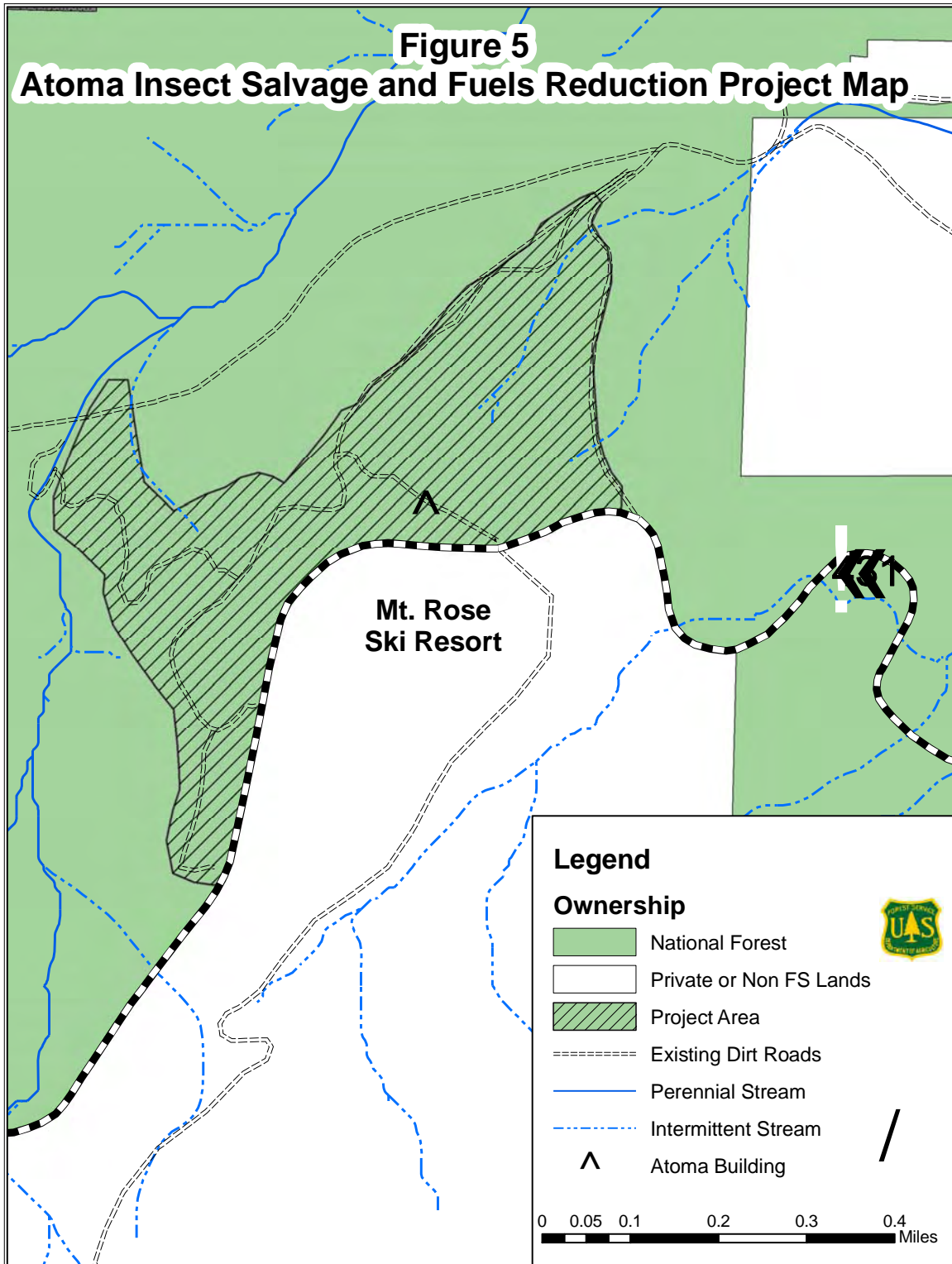
The Forest Service is working with the Nevada Division of Forestry and the Mt Rose Ski Resort in an effort to achieve a more integrated and effective treatments that extend throughout the area.

The purpose of this project is to improve tree and stand vigor and diversity, reduce bark beetle related tree mortality and MPB risk rating, protect western white pine plus trees, protect public and fire fighter safety, reduce fuels and fire risk and remove some dead trees to recover their economic value within a 70 acre project area.

C. DECISION

I have decided to proceed with the Atoma insect salvage and fuels reduction project located on approximately 70 acres as indicated in figure 5. I am authorizing the following treatments within the project area:

Removal of dead and infested MPB trees. These trees will either be dead (fading or no foliage) or have signs indicating successful MPB attack. Signs of successful MPB attack include boring dust around $\geq 50\%$ of the circumference of the base of the tree and/or pitch tubes with boring dust and frass in the resin.





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Removal of small patches of live trees, up to one acre in size. Trees less than 30" DBH will be removed in these patches and up to 20 patches will be placed within the project area. These patches will generally be focused around dead or MPB infested trees or western white pine trees that exhibit resistance to white pine blister rust.

Thinning trees outside the one acre patches, lodgepole pine will be the favored species for removal. In dense areas where access allows, trees less than 30 inches DBH will be thinned to approximately 80 to 100 square feet of basal area per acre. This thinning will be completed in two stages to allow residual trees to become more wind-firm. The first thinning will occur in 2008 and thinning from below to approximately 120 to 140 square feet of basal area per acre will occur. The MPB risk rating will remain at moderate, but species and age class diversity will increase, ultimately improving tree and stand vigor, while reducing the risk for wind-throw. Because the densities will be reduced and ladder fuels removed, the risk of an uncharacteristic wildland fire will also be reduced. The second thinning will occur within five years; trees less than 30 inches DBH will be thinned from below to approximately 80 to 100 square feet of basal area per acre. This will reduce the MPB risk rating to low and also reduce the risk of wind-throw because the residual trees will be more wind-firm. This second entry will also further reduce the risk of an uncharacteristic wildland fire.

In some dense areas around meadows, immature trees less than 4" DBH that are encroaching upon the meadows will be removed. This will occur on approximately 15 to 20 acres. This will maintain the meadows; reduce ladder fuels and the risk of an uncharacteristic wildland fire.

Where available, the three largest snags per acre greater than 15 inches DBH will be retained. Where possible, snags will be clumped around meadows and the edges of the project. There may be situations where public safety considerations do not allow three snags to be retained on every acre. This situation would occur in the dense mortality pockets where retention of snags would pose a safety threat during felling of dead trees. Forest Service personnel will designate snags prior to project activities.

All live trees will be identified for removal by Forest Service personnel prior to felling. Dead trees that are not identified retention snags will be designated by description in the fuelwood removal permit.

Trees will not be identified for removal in known sensitive plant and archeological sites. Felling and removal of identified trees will be accomplished by the public through the sale of personal use fuelwood permits. No roads will be constructed or reconstructed, but vehicles will be allowed off of existing roads to access the area. Stumps will be flush cut to the ground to provide paths for private vehicles; these paths will be blocked after project activities are completed. No vehicles will be allowed in any meadow areas.

Activity slash will be treated utilizing prescribed fire and/or chipping. If chipping occurs, chipped material will be spread on site to dry or removed off site to reduce the risk of attracting more MPB to the area.



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Monitoring will occur before, during and after project activities. Monitoring prior to project activities will include collection of stand data and identification of archeological and sensitive plants sites. During project activities, a Forest Service administrator will monitor the public cutting activities and compliance with fuelwood removal permits. An archeologist will periodically monitor the cultural sites and a wildlife biologist will monitor any identified sensitive plant sites to ensure they are not damaged. After project activities are completed, monitoring will occur for invasive weeds and if present, provisions will be made for eradication. In the patch openings, monitoring for regeneration will occur. A Forest Service entomologist or forester will periodically monitor the project area for additional MPB activity.

Maintenance of the project area is also included in my decision. Maintenance will include continued removal of additional dead or insect infested trees, removal of immature trees around meadow areas and treatment of slash. Maintenance activities will occur when monitoring indicates and may occur on a yearly basis within the next 10 years.

My decision is based on several factors including the contents of this Decision Memo, site-specific resource information, and supporting documentation. My conclusion is based on a review of the record that demonstrates consideration of relevant scientific information, a consideration of responsible opposing views, and the acknowledgment of incomplete or unavailable information, scientific uncertainty, and “risk”. Relevant scientific information includes site visits and recommendations from entomologists, archeologists, wildlife biologists, fuels specialists, hydrologists and foresters. A literature review of lodgepole pine and MPB management, and fuels reduction in lodgepole pine was also completed, as well utilization of computer programs to model MPB risk rating and fire risk of various treatments.

II. REASONS FOR CATEGORICALLY EXCLUDING THE DECISION

Decisions may be categorically excluded from documentation in an environmental impact statement (EIS) or an environmental assessment (EA) when conditions of one of the categories identified by the U.S. Department of Agriculture are met. These categories can be found in 7CFR par 1b, or as identified in the Forest Service Handbook (FSH) 1909.15, section 31. To be categorically excluded there must not be extraordinary circumstances related to the decision that may result in a significant individual or cumulative effect on the quality of the human environment.

I have concluded that this decision is appropriately categorically excluded from documentation in an EIS or EA as it is a routine activity with a category of exclusion and there are no extraordinary circumstances related to the decision that may result in a significant individual or cumulative effect on the quality of the human environment.



A. CATEGORY OF EXCLUSION

This decision qualifies for the following exclusion under FSH 1909.15, Chapter 31.2, Category 14: *Commercial and non-commercial sanitation harvest of trees to control insects or disease not to exceed 250 acres, requiring no more than ½ mile of temporary road construction, including removal of infested/infected trees and adjacent live uninfested/uninfected trees as determined necessary to control the spread of insects or disease.*

B. FINDING OF NO EXTRAORDINARY CIRCUMSTANCES

The mere presence of one or more of the following extraordinary circumstances does not preclude the use of a categorical exclusion. It is the degree of the potential effect of a proposed action on these resource conditions that determines whether extraordinary circumstances exist (FSH 1909.15 Chapter 30.3).

The categorical exclusion is appropriate in this situation because there are no extraordinary circumstances which would be affected by this decision. I have determined this based on the following analysis:

A. Federally listed threatened or endangered species or designated critical habitat, species proposed for Federal listing or proposed critical habitat, or Forest Service sensitive species.

The Endangered Species Act (ESA) requires that federal activities do not jeopardize the continued existence of any species federally listed and candidate, proposed, threatened, or endangered, or result in adverse modification to such species' designated critical habitat. In accordance with this Act, the district wildlife biologist analyzed and documented the potential effects of this project on species and critical habitat listed under the ESA. The information indicated that there is no critical habitat for any federally listed species in the project area. As required by this Act, potential effects of this decision on listed species have been analyzed and documented in a Biological Evaluation (available in the project record). A biological evaluation was also completed for Forest Service Sensitive Species.

B. Flood plains, wetlands, or municipal watersheds.

Floodplains: Executive Order 11988 is to avoid adverse impacts associated with occupancy and modification of floodplains. Floodplains are identified by this order as, "...the lowland and relatively flat areas adjoining inland and coastal waters including flood prone areas of offshore islands, including at a minimum, that area subject to a one percent (100-year recurrence) or greater chance of flooding in any one year."

Not Present, No Effect – Due to the location of the project areas, there are no floodplains present or involved with the proposed treatment area. This decision will not affect floodplains.

Wetlands: Executive Order 11990 is to avoid adverse impacts associated with destruction or modification of wetlands. Wetlands are defined by this order as, "...areas inundated by surface or ground water with a frequency sufficient to support and under normal circumstances does or would support a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated condition for growth and reproduction. Wetlands generally include swamps, marshes, bogs, and similar areas such as sloughs, potholes, wet meadows, river overflows, mud flats, and natural ponds.



Not Present, No Effect – The project area does not have wetlands and the decision will have no affect on wetlands.

Municipal Watersheds: Municipal watersheds are managed under multiple use prescription in land and resource management plans.

Not Present, No Effect – The project area is not located within a municipal watershed and the decision will have no affect on municipal watersheds.

C. Congressionally designated areas, such as wilderness, wilderness study areas, or national recreation areas.

Wilderness:

Not Present, No Effect – This project is not within and the decision will not affect Wilderness areas, specifically, the Mt Rose Wilderness area.

Wilderness Study Areas

Not Present, No Effect – This project is not within and the decision will not affect any wilderness study areas.

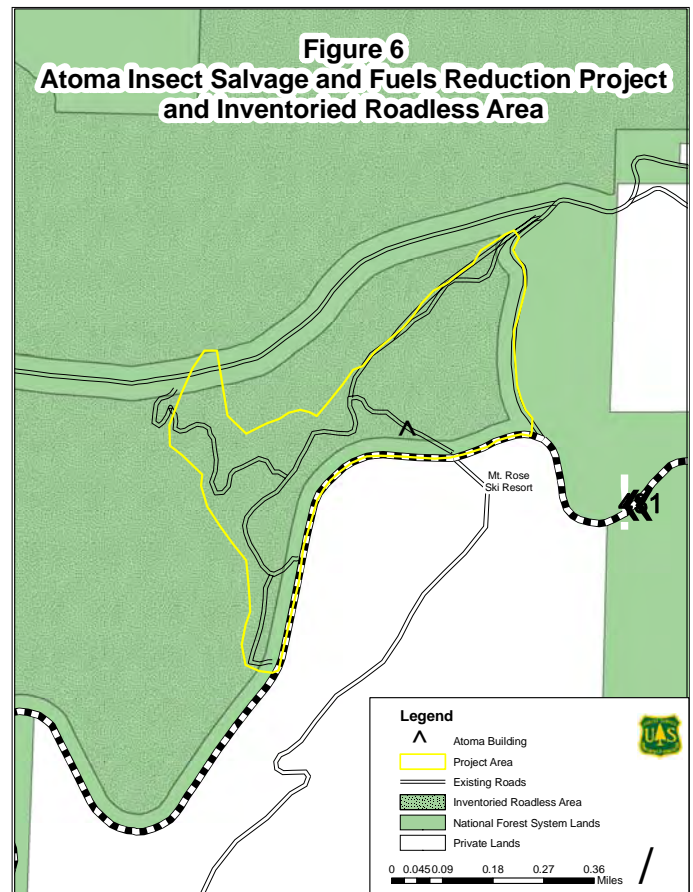
National Recreation Areas

Not Present, No Effect – There are no National Recreation Areas on the district. This decision will not affect National Recreation Areas.

D. Inventoried roadless areas.

Present, Not Significant –Most of the project area lies within an inventoried roadless area (IRA). Figure 6 is a map of the project area and the inventoried roadless area. No new roads will be constructed or reconstructed. In compliance with the 2001 Roadless Rule, I have determined that timber cutting, sale or removal in an inventoried roadless area is appropriate because the following circumstances exist:

- This project will reduce the risk of an uncharacteristic wildland fire (36 CFR 294.13(b)[1]{ii}).
- The cutting sale and removal of timber is needed and appropriate for personal use (36 CFR 294.13(b)[3]).
- Roadless area characteristics have been substantially altered in this portion of the roadless area due to construction of roads and subsequent timber harvest prior to 2001 (36 CFR 294.13(b)[4]).





E. Research natural areas.

Not Present, No Effect – This decision does not affect Research Natural Areas (RNA's). The project is not in or adjacent to the one designated RNA on the district. The closest RNA, the Babbitt Peak RNA is located over 25 miles north of the project area. This decision, with impacts limited to the immediate area of activity, will not affect RNA's.

F. American Indians and Alaska Native religious or cultural sites, Archaeological sites, or historic properties or areas.

Section 106 of the National Historic Preservation Act requires federal agencies to take into account the effect of a project on any district, site, building, structure, or object this is included in, or eligible for inclusion in the National Register. Section 106 of the National Preservation Act also requires federal agencies to afford the Advisory Council on Historic Preservation a reasonable opportunity to comment. The Archaeological Resources Protection Act covers the discovery and protection of historic properties (prehistoric and historic) that are excavated or discovered on federal lands. It affords lawful protection of archaeological resources and sites that are on public and Indian lands. The Native American Graves Protection and Repatriation Act covers the discovery and protection of Native American human remains and objects that are excavated or discovered in federal lands. It encourages avoidance of archaeological sites that contain burials or portions of sites that contain graves through "in situ" preservation, but may encompass other actions to preserve these remains and items. This decision complies with the cited Acts. Surveys were conducted for Native American religious or cultural sites, archaeological sites, and historic properties or areas that may be affected by this decision. A "no properties affect" determination was made. Consultation on this finding occurred with the Nevada State Historic Preservation Office. Cultural sites will be flagged and avoided and dead and insect infested trees will be felled away from sites by Forest Service employees.

Additionally, the Federal government has trust responsibilities to Tribes under a government-to-government relationship to insure that the Tribes reserved rights are protected. Consultation with tribes helps insure that these trust responsibilities are met. Potentially affected tribes were consulted with and also mailed the scoping and request for comments letter.

III. PUBLIC INVOLVEMENT

The proposal for this project was provided to the public and other agencies for comment during scoping. A scoping letter was mailed on June 25, 2007 and a request for comments letter was mailed on August 6, 2007. The scoping and request for comments letters were mailed to 21 interested persons and organization. A legal notice was published in the *Reno Gazette Journal* on August 1, 2007. The project was also included in the July 1 to September 30, October 1 to December 31, 2007, January 1 to March 31 and April 1 to June 30, 2008 Schedule of Proposed Actions (SOPA).

In response to public comment requests, two written and one verbal comment were received. All comments were in support of the project and can be found in the project file at the Carson District office.



IV. FINDINGS REQUIRED BY OTHER LAWS

This decision is consistent with management direction, including standards and guidelines, in the Amendment to the Humboldt-Toiyabe National Forest Land and Resource Management Plan (USDA 1986), as amended by the Sierra Nevada Forest Plan Amendment Record of Decision (USDA 2004), which were developed in accordance with the National Forest Management Act of 1976, 16 USC 1604(i) and with the National Environmental Policy Act.

V. ADMINISTRATIVE REVIEW OR APPEAL OPPORTUNITIES

This decision is not subject to appeal pursuant to 36 CFR 215.12. Only supportive comments were received during the comment period (36 CFR 215.6).

VI. IMPLEMENTATION DATE

This decision may be implemented immediately upon publication in the Reno Gazette Journal (36 CFR 215.9[c][1]).

VII. CONTACT PERSON

For further information concerning this decision, please contact: Amanda Brinnand, Carson Ranger District, 1536 So. Carson Street, Carson City, NV 89701, 775-882-2766.

 /s/ Genny Wilson
GENNY WILSON
District Ranger

 6/17/08
Date



REFERENCES

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