USDA

Environmental Assessment

Galena Recreation Facilities

Carson Ranger District, Humboldt-Toiyabe National Forest

Washoe County, Nevada

United States
Department of
Agriculture

Forest
Service

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SUMMARY

The Humboldt Toiyabe National Forest, in cooperation with Washoe County proposes to enhance recreation opportunities and reduce the risk of wildfire in the Galena Creek area through development of day use facilities and a closure to overnight use and campfires on about 3100 acres of National Forest System Lands. The project includes a new trailhead, picnic sites, a new entrance of the Mount Rose Highway, and potential sites for an environmental education/visitor center. The project area is located adjacent to Washoe County's Galena Creek Park, southwest of Reno, Nevada and is within the Carson Ranger District, Humboldt-Toiyabe National Forest. This action is needed to enhance hiking, mountain biking, environmental education, and picnicking recreation opportunities in the Galena Creek area.

The proposed action would improve the quality and amount of recreation in the Galena Creek area and reduce the risk of wildfire from dispersed overnight recreation use.

In addition to the proposed action, the Forest Service also evaluated the No Action and Expanded Use alternatives. Under no action the area would remain open to overnight use and no recreation facilities would be developed. Under the Expanded Use alternative, group camping and rustic cabins would be constructed in addition to the day use facilities in the proposed action.

Based upon the effects of the alternatives, the responsible official will decide whether or not to develop recreation facilities in the Galena Creek area and whether or not to close the area to overnight use.

INTRODUCTION

Document Structure

The Forest Service has prepared this Environmental Assessment in compliance with the National Environmental Policy Act and other relevant Federal and State laws and regulations. This Environmental Assessment discloses the direct, indirect, and cumulative environmental impacts that would result from the proposed action and alternatives.

Additional documentation may be found in the project planning record located at the Carson Ranger District Office in Carson City, Nevada.

Background

The Galena Creek area is located at the base of 10,800 foot Mount Rose, southwest of Reno, Nevada. The Galena Creek area is a highly valued feature of the Reno and Washoe County landscape and a popular destination for locals. The land for Galena Creek park was donated to the people of Washoe County in 1921 and it has been a popular picnicking and snow play area ever since. It is the most accessible forested area to the urban neighborhoods of Reno, Sparks, and the Truckee Meadows, home to some 400,000 residents. In recent years the area east of the park has seen a significant increase in suburban housing development.

In 1991 Washoe County completed a Master Plan for Galena Creek Park. The Master Plan included expansion of recreation facilities onto National Forest System lands north of the Park. However, funding for the project did not become available until passage of a bond by the voters of Washoe County in 2000.

Purpose and Need for Action

The purposes of this initiative are to provide for additional recreation opportunities for local community residents and visitors to the Reno area and to reduce the threat of wildfire.

The proposal is needed in the Galena Creek area due to the strong demand for outdoor recreation in the Reno area. The proposed site is adjacent to Washoe County's day use facilities and offers opportunities for efficient management in partnership with the County.

Wildfire risk reduction is needed due to the potential for wildfire starts from dispersed recreation use in the area. Major fires in the region have started from dispersed recreation use outside of developed facilities, including the Martis fire of 2001 and the Waterfall fire of 2004.

Assessments that identified the need for the action include the Master Plan for the Galena Creek Park. It was completed by Washoe County in consultation with the Forest Service. It included improvements to the County's day use facility and establishment of recreation facilities on

adjacent National Forest lands. A Draft Environmental Assessment was completed for the Recreation Facilities in 1992 that further confirmed the need for the project. The Environmental Assessment was not finished due to lack of funding.

The Master Plan and Draft Environmental Assessment examined alternatives to the proposed location based on public involvement as well as USFS and Washoe County staff analyses. Consideration was given to other locations within the project vicinity as well as an evaluation of the potential for expansion with the County owned lands of the adjacent existing park. No other feasible locations were found and the existing park does not have enough area for all of the proposed recreation facilities. Consequently none of these alternatives were considered reasonable. This rationale remains sound today.

The proposal provides opportunities to meet desired conditions as directed in the Toiyabe Forest Plan of 1986. The first recreation related goal identified in the plan included increasing the quality and quantity of developed recreation opportunities in the Sierra Nevada portion of the Forest as well as conducting recreation management in concert and coordination with other agencies.

Management direction for the Carson Front Management area, which includes the proposed sites, includes providing for a diversity of recreation opportunities, with intensive management emphasis on National Forest System lands along the Mount Rose Highway (Forest Plan IV-79). The proposed action is needed to meet this direction by providing more diverse, intensively managed recreation opportunities along the Mount Rose Highway.

Direction for the Carson Front also includes coordination with other agencies to achieve recreation objectives, with the forest emphasis generally on dispersed recreation and other agencies and the private sector managing developed sites. The proposed action is needed to meet this direction through its emphasis on partnerships with Washoe County.

Other relevant environmental analyses include the Sierra Forest Plan Amendment Environmental Impact Statement, which analyzed the effects of implementing amendments to 11 National Forest Plan across the Sierra Nevada, including the Toiyabe Forest Plan. The amendments addressed a variety of measures to protect long-term ecosystem sustainability and reduce the risk of wildfire in the urban wildland interface. The proposal has been developed in compliance to that amendment and the analysis is tiered to the EIS.

The Proposed Action

The proposed action was developed in consultation with Washoe County. It includes day use facilities only, including the development of:

- Individual Picnicking
- Group Picnicking
- Trailhead Parking
- Trails
- Restrooms

- Environmental Education/Welcome Center
- New Entrance Road

This alternative will include approximately 10 individual picnic sites near the proposed visitor center, approximately 6 individual picnic sites near the trailhead and approximately 15 individual picnic sites located in a cluster. The individual sites would not have fire pits or barbecues.

The group picnic area would be for approximately 80 persons and be similar to the existing group area on the north side of Galena Creek Regional Park. It would contain either a gas grill or a charcoal grill. The trailhead parking would consist of parking for approximately 25 cars and 8-10 horse trailers.

The new trail segments would link from the trailhead parking to the existing Jones Creek Trail to the south and to the Whites Creek Trail to the northwest.

Restrooms would be provided in the picnic & trailhead areas. The Environmental Education/Welcome Center would be approximately 3,000 to 5,000 square feet. It would also be linked to an interpretive loop trail. It would be located on either the subject site or on adjacent county park land.

A new entrance road from the Mount Rose Highway would be constructed in coordination with the Nevada Department of Transportation. It would provide access to both the new recreation facilities and to the existing Galena Creek Park, replacing the current north entrance. The new entrance would have acceleration/deceleration lanes and a left turn bay and would have improved line of sight compared to the existing entrance.

In addition to these facilities, the proposed action includes reducing fuels to protect the facilities, the adjacent County Park, and nearby homes from the risk of wildfire. It also includes closing the area and nearby Thomas Creek Canyon to overnight campfires and use, also to reduce the risk of wildfire.

Public Involvement _

The proposal to develop recreation facilities in the Galen area was listed in the Humboldt-Toiyabe National Forest Schedule of Proposed Actions in October, 2003, January, 2004, April, 2004 and July, 2004. A public scoping period was held in March and April of 2004. A Forest Service public meeting was held on March 22, 2004. The project was also the subject of a Galena Citizens Advisory Board meeting on April 8, Washoe County Parks and Recreation Committee on June 16, and the Washoe County Commission on July 13. Between 100 and 200 individuals attended each meeting. Ten to twenty spoke at each meeting.

The proposal was provided to the public and other agencies for comment from July 22, 2004 to August 23, 2004. The proposed action was mailed to 130 interested individuals, organizations, and agencies for comment on July 22, 2004. Legal notice was posted in the Reno Gazette Journal on July 22, 2004. The project received extensive coverage in the in the Reno Gazette Journal, including the editions of March 21; May 9, 18 and 19; and July 13 and 14, 2004.

About 130 individual and form letters, emails and faxes were submitted during the scoping period. A petition with about 400 signatures was also submitted. Most of the comments were from residents of nearby subdivisions who expressed opposition to overnight camping at the site, primarily due to concerns about fire risk and traffic safety. Most of these supported day use facilities. Comments were also received from other areas of Washoe County, mostly expressing support for overnight camping as a means of enhancing recreation opportunities for the residents of the County.

About 40 individual and form letters, emails, and faxes were submitted during the proposed action comment period. Most of the comments expressed strong support for the proposed action and opposed the construction of group overnight camping facilities and cabins. Other commenters requested clarification of fuel break activities; analysis of the potential for illegal cooking fires; potential impacts to water rights, plants and animals, old growth trees, weeds, rehabilitation of disturbed areas, and energy efficiency. All of these concerns have been addressed in this document through clarifications of the proposed action or through the impact analysis.

Issues

The following is a summary of issues developed to guide the impact analysis for the environmental assessment:

- Public Safety: What are the impacts of the proposed action and alternatives to the risk of wildfire starts, evacuation, traffic, and crime in the Galena Creek area?
- Recreation: What changes in recreation opportunities would occur?
- Aesthetics: Would there be changes to the noise level, amount of smoke, and visual quality of the Galena Creek area?
- Natural and Cultual Resources: Would there be any impacts to wildlife habitat, cultural resources, sensitive plants, invasive weeds, roadless area characteristics or watershed conditions?

ALTERNATIVES, INCLUDING THE PROPOSED ACTION

This section describes and compares the alternatives considered for the Galena Recreation Facilities project. It includes a description of the proposed action, expanded use and no action alternatives.

During the formulation of alternatives, the following proposal was considered, but not carried forward for detailed analysis:

- Include a 100 unit campground to expand tent and RV camping opportunities. This alternative was not carried forward because there are no opportunities for Washoe County funding or operation of such a facility.

Alternatives

No Action

Under the No Action alternative, no new decision would be implemented. No new recreation facilities would be provided and no permanent closures to dispersed overnight use would be implemented.

Proposed Action

The proposed action was developed in consultation with Washoe County. It includes day use facilities only, including the development of:

- Individual Picnicking
- Group Picnicking
- Trailhead Parking
- Trails
- Restrooms
- Environmental Education/Welcome Center
- New Entrance Road

This proposal includes ten individual picnic sites near the proposed visitor center, six individual picnic sites near the trailhead and approximately 15 individual picnic sites located in a cluster (Map 1). The individual sites would not have fire pits or barbecues.

The Group Picnic Area would be for approximately 80 persons and be similar to the existing Group area on the North side of Galena Creek Regional Park. It would contain either a gas grill or a charcoal grill.

The Trailhead Parking would consist of parking for approximately 25 cars and 8-10 horse trailers. The size of the lot is based on the experience of Washoe County and the Forest Service in providing parking in nearby areas, including Galena Creek Park and the trailheads at Whites and Thomas Creeks. Educational materials regarding proper trail etiquette and use would be provided at the trailhead.

The new Trail segments would link from the trailhead parking to the existing Jones Creek Trail to the south and to the Whites Creek Trail to the Northwest. All trails would be located away from sensitive riparian areas.

Restrooms would be provided in central locations to serve the picnic & trailhead areas. A fire hydrant would be installed to enhance fire fighting capabilities.

The Environmental Education/Welcome Center would be approximately 3,000 to 5,000 square feet. The structure would be designed for energy efficiency. The Center would not only provide visitor information, but would include education displays on urban interface issues such as wildfire risks, living with bears and on the research currently going on in the Sierra Nevada, as well as displays on local historic resources and flora and fauna. It would also be linked to a one mile interpretive loop trail that would include a walking bridge across Jones Creek. A parking lot for the center would include space for about 25 cars and 8-10 school busses or RVs. The building would be designed with energy efficiency guidelines.

A new entrance road from the Mount Rose Highway would be constructed. It would provide access to both the new recreation facilities and to the existing Galena Creek Park, replacing the current north entrance. The new entrance would have acceleration/deceleration lanes and a left turn bay and would have improved line of sight compared to the existing entrance.

In addition to these facilities, the proposed action includes a fuels reduction project to protect the facilities, the adjacent County Park, and nearby homes from the risk of wildfire. The fuels treatment would be located along the northwestern boundary of the project and include about 70 acres of brush and other ladder fuel treatments. No clearcutting would occur and no trees over 8" in diameter would be removed as part of this fuels treatment.

All facilities would be constructed with best management practices to minimize run off and abate dust problems.

The project also includes closing the area and nearby Thomas Creek Canyon to overnight campfires and use, also to reduce the risk of wildfire. This would include removal and rehabilitation of user created campsites along the creek. The existing road network north of Jones Creek would be closed and rehabilitated.

The construction contract documents would include a provision prohibiting early or late hours of operation, including holidays and or weekends if equipment noise results in complaints from local residents or users.

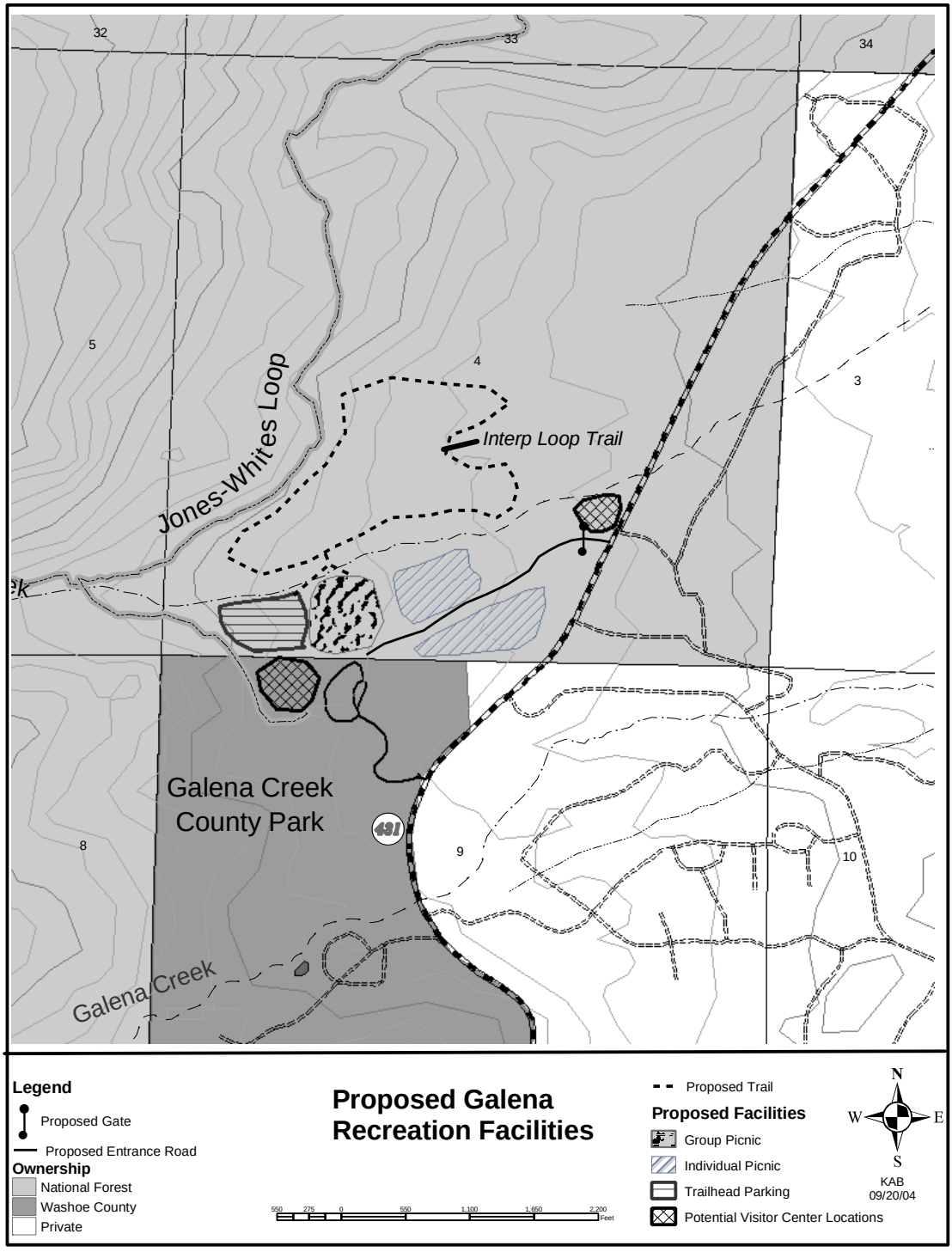
Routine park quiet hours would be established and enforced. Ranger patrols would monitor and enforce noise regulations.

Project facilities would be located to avoid heritage resource sites and locations of Washoe tall rockcress. All known locations of Washoe tall rockcress will be flagged and avoided during implementation. To avoid future excessive trampling and allow for expansion of the species into suitable habitat, a sufficient buffer between plant locations and high impact areas will be retained. While removal of smaller trees and shrubs will be necessary for road and other facility construction, facilities will be located to minimize the removal of larger trees, particularly those over 30" in diameter.

Construction processes and rehab efforts would be designed to prevent the spread of noxious weeds. Rehab efforts would include the use of native seeds only.

Expanded Use Alternative

This alternative would include all of the above plus construction of a group overnight camping facility and 18 cabins, all located north of Jones Creek. The cabins could be a log cabin style that sleeps 4 persons. It would be optional to have outdoor gas barbecues either individually or in a group setting. It would be optional to have one or two group campfire areas located within the inner circle of the driving loop. The two group tent camping areas would serve up to 50 people per area. The group cooking area would be either gas or charcoal barbeque area. The group campfire area would be located in a large cleared area. Picnic tables would be provided.


32
33
34
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8
9
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Jones-Whites Loop
Interp Loop Trail
Galena Creek
County Park
491
Galena Creek
Legend
Proposed Gate
Proposed Entrance Road
Ownership
National Forest
Washoe County
Private
Proposed Galena
Recreation Facilities
550 275 0 550 1,100 1,650 2,200
Feet
Proposed Trail
Proposed Facilities
Group Picnic
Individual Picnic
Trailhead Parking
Potential Visitor Center Locations
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Comparison of Alternatives

This section provides a summary of the effects of implementing each alternative. Information in the table is focused on activities and effects where different levels of effects or outputs can be distinguished quantitatively or qualitatively among alternatives.

Activity/Effect	No Action	Proposed Action	Expanded Use
Wildfire Risk	High	Reduced	Reduced
Roadless/Wilderness Characteristics	Current Low quality characteristics would continue to decline in quality.	Current low quality characteristics would decline further due to construction of facilities.	Current low quality characteristics would decline further due to construction of facilities.
Wildlife/Plants	No Threatened, Endangered or Sensitive (TES) Species	No impacts to TES, no measurable impacts to other species.	No impacts to TES, no measurable impacts to other species.
Recreation	Dispersed overnight recreation would continue along Jones and Thomas Creeks	Developed recreation and environmental education would be enhanced, fewer areas available for dispersed overnight use.	Developed recreation, including overnight use and environmental education would be enhanced, fewer areas available for dispersed overnight use.
Heritage Resources	Continued potential for vandalism	Sites would be protected and interpretation opportunities increased	Sites would be protected and interpretation opportunities increased
Noise levels as heard in nearby neighborhoods	51.6 dba	51.6 dba	51.6 dba
Watershed	0 acres of new soil compaction & impervious surfaces	7 acres of new soil compaction & impervious surfaces	9 acres of new soil compaction & impervious surfaces

ENVIRONMENTAL CONSEQUENCES

This section summarizes the physical, biological, social and economic environments of the affected project area and the potential changes to those environments due to implementation of the alternatives. It also presents the scientific and analytical basis for comparison of alternatives presented in the chart above.

Public Safety

Landowners in Southwest Reno are very concerned about the risk of wildfire that could start from the current dispersed overnight use and proposed recreation facilities. Traffic is also a major concern along the Mount Rose Highway. Many nearby residents were afraid that in the event of a wildfire, evacuation from their neighborhoods would be slowed by those using the proposed recreation facilities. Others felt that the recreation facilities could attract criminals to their neighborhoods.

Affected Environment

Several large fires have burned in this area. Recently, the Martis Fire of started near Truckee and threatened this area but did not burn across Mount Rose. Lightning was the cause for the Zolezzi Lane Fire (1981) and Arrow Creek Fire (2000).

Average winds blow out of the west to the southwest during the fire season (see table 1). Due to the local down canyon (west) wind pattern most fires will burn to the east during the day then push north and west in the evenings as winds die down and topography plays a more significant role. This pattern of fire behavior was clearly evident in the nearby Waterfall fire of 2004.

Table 1. Galena Station Weather observations

MONTH (2003)	AVERAGE WIND DIRECTION
May	241^{o} (southwest)
June	298^{o} (west-northwest)
July	261^{o} (west)
August	259^{o} (west-southwest)
September	245^{o} (southwest)

No fires have escaped from any picnic, group use or developed campgrounds in the area. Washoe County has over 200 barbeques in its park system. No reports of fires escaping from any of the barbeques have been documented. No reports of fires escaping from any campfire pits or group use facilities have been documented (Washoe County, 2004).

Traffic issues in the area are dominated by the Mount Rose highway with an average daily traffic volume of 6500 vehicles (KKC, 2002). Currently, the primary location for entrance to Galena Creek Park north unit is on a curve of the highway with limited site distances, creating a safety problem when vehicles enter or exit the park.

Emergency evacuation routes through the area have been identified by the Nevada

Division of Forestry and the Washoe County Sheriffs Office (Nevada Division of Forestry, 2004). The Washoe County Public Works Department reviews fire evacuation routes when new developments are proposed. The Department considers the Mount Rose Highway as a major arterial sufficient to carry neighborhood traffic during an evacuation. It is standard operating procedure for fire operations to close the area to all except local residents. This would include closing the area to any picnickers or campers (Washoe County, 2004).

The Galena/Thomas Creek area is not a high crime area, although the subject property has been the site of a methamphetamine lab, illegal refuse and car body dumping, and firewood theft. Thomas Creek was the site of a murder victim dump in 2003.

Environmental Consequences:

No action

Dispersed camping and day-use would continue in Jones Creek area and in Thomas Creek. Campfires are not allowed in Whites Creek and during fire restrictions vehicles are allowed day use access only.

There are several trails in the Jones Creek area with a county park to the south. This provides a possible human ignition source that could threaten nearby homes. There are many dirt roads near Jones Creek west of the Mount Rose Highway, however, they are not maintained and access is limited to a high clearance 4-wheel drive engine. Drought induced dead and dying trees and dense vegetation presents a high fire risk at the mouth of Jones Creek. A fire in the dense fuels would quickly grow, limiting firefighter effectiveness and threatening their safety.

A source of ignition for a fire starting in the upper reaches of Jones Creek would likely be human or lightning caused. A fire starting in the upper reaches of Jones Creek would generally burn east, down canyon, growing in size as it moved towards the Mount Rose Highway. Firefighters would likely fight this fire at Mount Rose Highway due to heavy continuous fuels and firefighter safety issues.

The risk of traffic accidents involving vehicles entering and exiting Galena Creek Park would continue to increase as traffic loading on the Mount Rose highway continues to increase. The current entrance to the north part of the park is located on a curve with short sight distances, exacerbating current safety problems.

Evacuation of homes from the area during a wildfire would not likely be hindered by recreationists at the Park because the Nevada Division of Forestry has coordinated evacuation routes with the Washoe County Sheriffs Office and travel on the Mount Rose Highway would be restricted to residents only (Nevada Division of Forestry, 2004 and Washoe County, 2004).

With continued growth in the region, illegal meth labs, refuse and car body dumping, firewood theft, and murder victim dumping would likely increase in the future.

Proposed Action

The construction of the recreation facility would reduce fuel loading. Engineered recreation sites would mitigate the potential for human caused fires by removing heavy needle cast in and around the recreation site as well as thinning small trees and brush that would act as ladder fuels. Around the recreation area, ladder fuels under mature conifers would be cut (mostly mountain mahogany) and some dead and dying conifers would be removed. This would reduce the intensity of a fire and keep a ground fire from burning into the crowns of the trees.

The proposed installation of a fire hydrant in the recreation site would assist fire fighters greatly in controlling a fire. The recreation facility could provide logical staging area for fire fighters. An improved road system would assist fire fighters to quickly respond to a fire start in the lower canyon, thereby assisting them to control a fire before it can grow in size. The fuels treatments (including the recreation site) would greatly facilitate fire fighting capability and effectiveness in controlling a fire starting in the recreation site as well as providing a safe defense zone should a fire spread toward the recreation site from up canyon.

The barbeque area at the group picnic facilities would be constructed to minimize the risk of escaped fire. No fires have ever escaped such a facility in Washoe County and none would be expected from this facility.

The risk of traffic accidents involving vehicles entering and exiting Galena Creek Park would be reduced because continue to increase as traffic loading on the Mount Rose highway continues to increase. The current entrance to the north part of the park is located on a curve with short sight distances, exacerbating current safety problems. Evacuation of homes from the area during a wildfire would not likely be hindered by recreationists at the Park because the Nevada Division of Forestry has coordinated evacuation routes with the Washoe County Sheriffs Office and travel on the Mount Rose Highway would be restricted to residents only (Nevada Division of Forestry, 2004 and Washoe County, 2004).

The development of facilities, closures to dispersed overnight camping outside of campgrounds, and presence of picnickers, park rangers, and school children should reduce the potential for future meth labs, refuse and car body dumping, firewood theft, and murder victim dumping. No changes to the crime rate in nearby neighborhoods would likely occur. The Washoe County Sheriffs Office does not have any documentation of crimes in the area around Davis Creek County Park, which has facilities similar to the proposed action. The Ranger Staff at Davis Creek Park does not know of nor have they ever been alerted to crime in the neighborhood of the Park (Washoe County Department of Parks and Recreation, 2004).

Expanded Use

The development of the recreation facility would have the same fire risk affects as above. However, the additional construction would further reduce the fuel loading in the project area. Fewer acres

would be treated for fuels due to the expansion of the recreation facility. The addition of overnight campers may shorten the reporting time of a fire and therefore the response time of firefighters.

Impacts would be similar to the proposed action, except that the presence of overnight use of the proposed cabins and group camping areas would further deter the types of crimes that have occurred in the project area in the past by having eyes and ears on site day and night.

Recreation

Affected Environment

Galena Creek Regional Park provides day use facilities in two separate adjoining areas for vehicle parking, the Camp We-chi-me group day and overnight facilities, picnicking for individuals and groups with barbeque grills, an interpretive trail focused on biological/botanical features in the area, a trailhead for the Jones-Whites Creek Loop Trail, connecting trail between the north and south park areas, restrooms (not hooked to municipal sewage), small park office, a grassy meadow & small stage for outdoor programs, a visitor/interpretive display center, snowplay hill, and a staff residence. These facilities provide recreational opportunities for hiking, picnicking, fishing, group gatherings, mountain biking, equestrians, and environmental education. During the winter, Washoe County plows the parking areas (snowshoeing, cross-country skiing, and snowboarding access) and supervises a popular snowplay hill.

The Park conducts environmental education programs in conjunction with school groups and other groups. The main group area is the only gathering location for accommodating groups for presentations and/or eating facilities. It is limited to 50 person groups. The Bitterbrush Nature Trail is self-guiding using a pamphlet developed by the staff. Events such as National Trails Day in June provide public education and participation in using and maintaining the trail system. . Interpretation of natural and heritage resources is done by Park employees and at the “Stone House” visitor/interpretation display center. Summer weekend evening programs at the grassy meadow site have grown from audience attendance of less than 50 people to overflowing crowds of over 300 people making parking a challenge and safety issue during such events.

The Park’s trailhead provides linkages to the Jones-Whites Creek Loop Trail, Whites Creek Canyon Trail, Dry Pond Trail, Thomas Creek Canyon Trail, and Mount Rose Wilderness. The existing trailhead in the North Area sometimes overflows due to increasing use, and its design makes it difficult for equestrian users and their vehicles. The portions of these trails outside the Mt. Rose Wilderness are used by mountain bikes but prohibited in the Wilderness. Although the Park itself does not provide panoramic views, portions of the aforementioned trails do and attract recreationists seeking the views and cooler elevations.

The national forest area adjacent to the Park, including the Thomas Creek Canyon, is being used for dispersed recreation i.e.

activities that do not involve developed recreational facilities. These activities include, off-highway vehicle travel on dirt roads, mountain biking on user created paths, horseback riding, overnight camping, hiking, backpacking, fishing, and dog walking. The only developed campgrounds near Reno are Davis Creek County Park, Washoe Lake State Park, Lookout, and Mount Rose campgrounds. No fires have ever escaped from any of these campgrounds (Washoe County, 2004: USDA, Forest Service, 2004). Rapid urban population growth and recreational use of the Mt. Rose highway, Galena Creek Regional Park, trail system, interpretive program attendance, and national forest system lands are steadily increasing in step with each other. A pine tree plantation was established after a fire in the early 1960's north of Jones Creek. There are numerous vehicle impacted parking/camping clearings that over the years have damaged the riparian area next to Thomas Creek.

Heritage resources in the area date back to the Comstock era (1800's) and centuries of Native American occupation. Some of these resources are being impacted by dispersed recreation users both intentionally and unintentionally.

Environmental Consequences

No action

The public would continue to participate in various types of recreational activities. The amount of use would continue to grow at fast rate tied to the rapid urbanization of the Reno metropolitan area nearby. Demand by large groups for group use of the Park would continue and likely increase beyond the design capabilities of the group areas and parking facilities. Trail use would continue to increase and trailhead parking capacity would be exceeded more frequently. The potential for user conflicts on the trail system may increase as hikers, dog walkers, mountain bikers, and equestrians share the same trail network. Evening program audiences may increase with their popularity. Dispersed recreational use of the national forest would increase. Impacts to the affected area include more user created paths and OHV roads, trash, abandoned fire pits, illegal fuelwood removal, increased use in the Mt. Rose Wilderness including illegal mountain bikes, and adjacent landowner trespass.

Proposed Action

The new recreational facilities would provide additional opportunities for picnicking, large groups gatherings, environmental education (both indoors and outdoors. The restrooms would be connected to the new sewer line to allow for flush facilities and reduced odor and maintenance.

The new Environmental Education/Welcome Center would provide visitors to the area a central place to get information about recreational opportunities. It would also provide interpretive items (guidebooks, maps, history books, etc) for sale. Park staff would have a more effective and centralized operational location to work out of for conducting educational programs and monitoring pubic use and safety.

The interpretive trail would allow visitors and organized groups to learn about the heritage resources (e.g. Comstock, Native

Americans, emigrants), natural resources, and nearby Wilderness. Together the interpretive trail and Environmental Education/Welcome Center would encourage better understanding, appreciation, care, and custodianship of public lands. They would also allow the park staff to be more effective in their efforts to operate a safe and enjoyable park experience for visitors.

The closure of Thomas Creek Canyon to overnight use would help reduce the risk of wildfire and abandoned campfire rings and trash. It would also reduce the impact to the Thomas Creek riparian area from creek side campers.

Expanded Use

The effects from the proposed action would carry over into this alternative. In addition, the cabins and group camping areas would help satisfy the growing recreational demand by family gatherings and large groups for overnight camping facilities, especially near urban areas. Cabins provide non-traditional campers a chance to visit and/ or be introduced to a forested park setting that might otherwise not venture out. Groups that otherwise would use the Park only during daylight hours would stay and have the opportunity to experience the area overnight including programming offered by Park staff. Cabins extend the season (and potential revenue for the County) visitors would stay overnight by providing reliable shelter and increasing their comfort level during inclement weather. Individual barbeques for the day use picnic sites would be consistent with the established use of existing barbeques that are in place in both areas of the Park at individual and group sites.

Visual Resources

Affected Environment

The area is adjacent to the north end of Washoe County's Galena Creek Regional Park and west of the Mt. Rose Highway. The proposed developments are concentrated south of the Jones Creek drainage. There are national forest system lands to the north and west of the Park extending into the Mt. Rose Wilderness, Whites Creek canyon and Thomas Creek Canyon.

The area exhibits non-distinct landscape character whose landforms, vegetation, rocks, and cultural features have common indistinctive lines, forms, colors, textures, and composition. Vegetation consists primarily of indistinctive desert shrubs, grasses, and pine trees with occasional linear riparian areas.

Scenic integrity is not wholly intact due to new residential home development along Timberline Road, firebreaks and roads from the Martis Fire, powerlines, new subdivisions, and water tanks. The pine plantation that was established after the early 1960's fire is apparent amongst the taller forest surrounding the burn area. Jones and Galena Creek support creek side vegetation but periodically dry up. Thomas Creek is a perennial stream and supports a lush riparian area amidst the surrounding manzanita, mountain mahogany, and sagebrush desert. This area

extends more than 3 miles from Timberline Road west into the Mt. Rose Wilderness.

At various locations throughout the area, views in the background include the Mt. Rose Wilderness, Washoe Valley, Truckee Meadows, and urban Washoe County. Recreationists enjoy the shaded riparian areas.

Environmental Consequences

No action

Continued development on private land would continue with additional visual impacts from the Mt. Rose Highway. Increased dispersed recreational use will proliferate user created roads and trails and evidence of human use from overnight camping, campfire rings, and trash dumping. Impacts to the Park would occur from lack of sufficient facilities to accommodate the increasing recreational demand from the rapidly growing population.

Proposed Action

Scenic integrity would improve as the multiple user created dirt roads leading off the Mt. Rose Highway would be closed and replaced with one well designed, safer paved entrance. The existing entrance to the north Park would no longer be used to enter the Park. Only the new entrance road, the appropriate accelleration and decellaration lanes on Mt. Rose Highway, and the information kiosk pulloff at the entrance would be visible to through travelers. Once inside the Park, visitors would find developed facilities that blend in with the existing Park facilities in the north Park in the forested area. Damage to vegetation from overuse would be reduced due to additional facilities both helping to accommodate the growing demand for them as well as spreading out the users and their impact.

Continued development on private land would continue with additional visual impacts from the Mt. Rose Highway. Visual evidence of dispersed recreational use would be reduced by removing overnight camping from the area. Less vehicular traffic and lack of campsites would be visibly reduced. Closing Thomas Creek canyon to overnight use would displace dispersed after dark and overnight camping users. Visual impacts to the Park from overuse would be reduced by additional facilities that expand the types of popular facilities/activities the public is doing.

The fire break adjacent to the proposed recreational facilities would create a reduced vegetative component both within the developed area and along the trail system.

Expanded Use

Scenic integrity would be impacted similar to the Proposed Action. The addition of cabins and large group camping areas would result in additional areas being cleared of vegetation for these developments. The additional space required for these improvements would mean more people, vehicles, and facilities visible throughout the Park.

Noise

Affected Environment

A noise study was conducted as part of the 1991 County Galena Creek Park Master Planning process. It has been reviewed and determined to be applicable to the current proposal (Washoe County, 2004). The study was done with an acoustic dosimeter as selected locations in the Galena area with a nuisance noise generation of 88.7 dba. None of sites recorded any measurable noise above the ambient level of 51.6 dba. Ambient noise is influenced by traffic on the Mount Rose Highway. These levels are consistent with quiet suburban norms of 48 to 52 dba (SEA Consulting Engineers, 1992, Washoe County, 2004).

Environmental Consequences

No Action

There are no known noise pollution related impacts from the current uses in the projects area.

Proposed Action:

During construction, heavy equipment operation would create noise intrusion into the surrounding environment. Based on field simulation tests and analysis referenced above, long term operational noise pollution appears to be virtually totally mitigated by the natural screening effect of the forest (SEA Consulting Engineers, 1992; Washoe County, 2004).

Expanded Use

The group camping area and cabins would be located well within the project area and, with enforcement of quit hours, would not contribute to noise pollution.

Smoke / Air Quality

Smoke generated from campfires adds particulates to the air and can contribute to the degradation of local air quality.

Affected Environment

The project is located in the Truckee Meadows Air Quality Basin. The area is currently ranked as a non-attainment area for particulates, carbon monoxide, and ozone. Campfire or barbeque fires would be managed under the Washoe County Health Department burn program. In the event of a Stage 1 alert all burning at the facilities would be eliminated (Washoe County District Board of Health, 1994).

In the event of a smoke nuisance complaint, on site rangers would take action to eliminate the nuisance. At nearby Davis Creek Park, an area with residences located closer to barbecue facilities than Galena, there have never been any documented occurrences of complaints about smoke.

Environmental Consequences

No action

There are no known occurrences of smoke nuisance or air quality impacts from the current use of the project area or from the adjacent Galena Creek County Park. The greatest risk to air quality would be from a wildfire started by humans participating in

dispersed uses along Jones and Thomas Creeks.

Proposed Action

Due to the minute contribution of campfires and picnic barbeques to air quality problems, the Washoe County Health Department exempts them from most of its regulations, however in the event of a Stage 1 alert, any such fires would be shut down, eliminating any contributions towards air quality problems, therefore there would be no long term impact to overall air quality from implementation of the proposed action. In the short term, some emissions from construction activities would be expected, but they would be short term and minimal in comparison to traffic on the Mount Rose Highway. No measurable short term impact would be expected.

The reduced risk of wildfire associated with the proposed action would also reduce the risk of smoke annoyance and air quality impairment from wildfire.

No smoke annoyance from the proposed group use barbeque pit would be expected because no complaints from such use have been documented at nearby Davis Creek Park.

Expanded Use

Impacts to air quality would be the same as for the proposed action.

Watershed Condition

Affected Environment

The proposed Galena recreation facility lies within the Jones Creek watershed. Jones Creek, an ephemeral tributary to Galena Creek, drains an area of approximately 910 acres west of Highway 28. Throughout the project area the channel is narrow and incised, with banks up to five feet. The stream supports a corridor of riparian vegetation, including willow, woods rose, dogwood and aspen.

Soils in the area are stony coarse sand on slopes of less than ten percent. This soil type is deep and well drained, runoff is slow, and the hazard of water and wind erosion is slight.

There are several miles of dirt, OHV roads and trails within the project site. Although none of these roads crosses Jones Creek, there are trails that lead down into the stream. This road and trail network has likely accelerated erosion and runoff into Jones Creek.

There are numerous dispersed camping areas along Thomas Creek characterized by compacted soil, loss of ground cover and riparian vegetation, and stream bank erosion.

Environmental Consequences

No action

Under this alternative use would continue as it presently is. Use of the existing road and trail network near Jones Creek would continue, as would camping along Thomas

Creek. No major soil compaction or impervious surfaces would be created.

Proposed Action

Development of the picnic areas, visitor center and parking would increase soil compaction and impervious cover. The total area covered by recreation facilities is about seven acres. Roads and parking sites in the recreation site would be surfaced and designed so that water runs off the surface to infiltrate and is not concentrated. Soil compaction within the picnic areas may increase runoff from storm events. Because this area is fairly flat with porous soils the risk of this increased runoff causing erosion and increased sedimentation to the creek is small. During construction temporary BMP measures, such as silt fences, would be used to minimize erosion and sedimentation.

A footbridge would be built over Jones Creek for visitors to access the interpretive trail and cross the creek without damaging the stream banks or riparian vegetation. A trail would also be built from the visitor center to the footbridge. Since streams tend to be attractive to visitors it is likely that some visitors using the recreation facility would walk down the stream banks into Jones Creek. Over time this type of activity could result in stream bank erosion, sediment delivery to the creek and the loss of riparian vegetation. It is likely that this type of impact would occur in a few isolated spots and not along the entire stream corridor. Washoe County and the Forest Service would monitor development of these social trails and take steps to eliminate them if they result in resource damage. Roads and trails on the north side of Jones Creek would be decommissioned, eliminating a source of potential erosion and sedimentation to the stream.

Roads and trails on the north side of Jones Creek would be decommissioned, eliminating a source of potential erosion and sedimentation to the stream.

The recreation facility would not use water from Jones Creek. Flows in Jones Creek should not be impacted by this project. Existing water rights from Galena Creek would be used for the water supply.

The fuels treatment on the north side of Jones Creek be implemented using a brush masticator to remove mountain mahogany. The equipment would make only one pass over the ground, limiting compaction, and ground cover is not removed. It is unlikely that this treatment would result in increased runoff or erosion. The fuels reduction would result in a reduced risk of wildfire and the loss of vegetation, including riparian vegetation, and ground cover.

Thomas Creek Canyon would be closed to overnight use and the camping areas along the creek rehabilitated by decompacting the soil and seeding the sites. Restoration of the riparian area would have a beneficial effect on the Thomas Creek.

Expanded Use

Impacts to watershed conditions would be the same as for the proposed action, except that soil compaction and impervious cover would increase by about two acres.

Wildlife and Plants

Affected Environment

The proposed Galena Creek Recreation Facilities project occurs at approximately 6,200 feet elevation and lies within a transition area between foothill and montane habitat types. The project area is primarily flat with slopes ranging from 0-5 percent becoming slightly steeper west and outside of the project boundary. Soil types range from a deep loamy sand to a more shallow sandy loam and are generally well drained. The dominate plant community is relatively open stands (10-40% canopy cover) of Jeffrey pine and white fir. Mountain mahogany is also well represented on south and east facing slopes and occurs with a variety of other shrub species including wild rose, snowberry, manzanita, tobacco brush and currant. Bitterbrush and sagebrush occur in a patchy distribution throughout the project area, becoming increasingly dense north of Jones Creek and outside of the project site. Riparian corridors are lined with well established willow and alder shrubs, as well as a variety of semi-aquatic forbs. Small patches of aspen are also present along the upper portions of Jones Creek.

Federally Listed Threatened or Endangered Species

No Federally listed species occur within the project area (USFWS Letter on file at the Carson Ranger District: File No. 1-5-04-SP-134)

Forest Sensitive Species

The combination of forested, shrub and riparian communities provides potential habitat for the following wildlife and plant species listed as sensitive in Region Four: Northern goshawk, flammulated owl, white-headed woodpecker, mountain quail, Galena Creek rockcress, upswept, slender, and dainty moonwort, Tahoe draba, Lavin's eggvetch, and William's combleaf. Surveys for goshawks were conducted during the breeding season of 2002 and 2003 and goshawks were detected. Plant surveys were also conducted during June of 2002 and resulted in no detections of Forest Sensitive Species. A population of Washoe tall rockcress, which has been proposed for listing in Region 4, but is currently not on the sensitive species list, was located within the project area.

Management Indicator Species

Management indicator species (MIS) are identified in the Toiyabe National Forest Land and Resource Management Plan as representing a group of species having similar habitat requirements. MIS are not federally listed as threatened, endangered, or Forest Sensitive but have the potential to be affected by project activities. A review was conducted to determine: 1) if the project is within the range of any MIS, 2) if habitat is present within the proposed project area, and 3) if there are potential direct, indirect or cumulative effects on habitat components or if the project will contribute to a downward or upward population trend.

The following MIS were selected for analysis for the Galena Creek Recreation

Facilities project due to the presence of suitable habitat that may be impacted by the project: Mule Deer, Yellow Warbler, Yellow-Rumped Warbler, Hairy Woodpecker, Williamson's Sapsucker, and Northern Goshawk.

These MIS species were not selected for further analysis due to absence of habitat or because the project will not directly or indirectly affect the habitat: American Marten, Palmer's Chipmunk, Sage Grouse, Lahontan Cutthroat Trout, Paiute Cutthroat Trout, and Macroinvertebrates.

Mule Deer – The Verdi sub unit of the Loyalton-Truckee Interstate deer herd occupies portions of Washoe County, including the proposed project area. The proposed day use site is used by mule deer as transitional habitat between critical winter range near Thomas Creek and Timberline Road and critical summer range in the Mt. Rose area. Range for mule deer is generally considered critical when habitat components meet or exceed the biological requirements necessary to sustain a viable population of mule deer. For example, critical summer habitat is typically at higher elevations where temperatures are cool and adequate stands of brush and trees provide thermal and protective cover for newborn fawns (NDOW 2004). Critical winter range is typically found at lower elevations where brush stands remain snow free and readily accessible for browsing and cover. Important forage and cover species for mule deer in both summer and winter ranges include bitterbrush, sagebrush, mountain mahogany, and aspen. Mule deer breeding season begins in the fall and ends in June or July when fawns are born.

According to NDOW, mule deer populations in Nevada dropped from about 149,000 in 1993 to 109,000 in 2003. Along the Carson Front Range, populations have been steadily declining for the last several decades. For example, the Verdi sub-unit of the Loyalton-Truckee herd has declined from approximately 4,200 hundred animals in 1980 to approximately 1,400 deer currently (Lidberg 2004). A 2003/2004 status report from the Nevada Division of Wildlife concluded that the decline in the herd is likely due to considerable critical winter range lost in western Washoe County due to wildfires, urban development, and increased recreation use (NDOW 2004).

Yellow Warbler –Yellow warblers breed in the Sierra Nevada and are uncommon to common summer residents on the Toiyabe National Forest (Finch 1991). Yellow warblers are closely tied to riparian habitats that contain willow, alder, and elderberry components. Characteristics of yellow warbler habitat include adequate cover for nesting, tall singing posts, and feeding areas in trees. Diet of the yellow warbler consists primarily of insects and arthropods (spiders) (Ryser 1985). The USGS Breeding Bird Survey reports that yellow warbler populations in the Sierra Nevada have declined between 1966 and 2003 (Sauer et al. 2003). However, during the same time frame in the in the state of Nevada, yellow warbler populations have been on the increase (Ibid). Habitat destruction and brown-headed cowbird parasitism are the biggest threats to yellow warblers (Erlich et al. 1988). Suitable habitat for yellow warblers is present along Jones and Galena Creek within the project area.

Yellow Rumped Warbler- The yellow-rumped warbler is considered to be highly adapatable and can be found in a variety of habitats including coniferous forest, mixed woodlands, deciduous forest, pine plantations, bogs, forest edges, and openings (Sibley 2000). Yellow-rumped warblers are primarily insectivores but also depend on berries in the winter. The Audubon race of yellow-rumped warbler breeds from southern British Columbia through the mountains and coastal coniferous forests of including the Sierra Nevada (Cornell 2000). According to USGS Breeding Bird Survey information, populations of yellow-rumped warblers in the Sierra Nevada have increased between 1996 and 2003 (Sauer 2003).

Hairy Woodpecker - Hairy woodpeckers are associated with deciduous and coniferous woodlands found throughout North America (Ryser 1985, Erlich et. al 1988). In the Sierra Nevada, hairy woodpeckers nest in low to moderate canopy closure (< 70%) containing trees with a minimum dbh of 25 cm and minimum height of 4.6 meters (Sousa 1987). The hairy woodpecker requires cavities for nesting and foraging and feeds primarily on wood boring insects and insect larvae. Hairy woodpeckers are considered opportunistic foragers and will feed from a variety of substrates including snags and downed logs (Sousa 1987). The USGS Breeding Bird survey reports a slight decline in populations of hairy woodpeckers in the Sierra Nevada from 1966 to 2003 (Sauer et al., 2003). Specific trend data for the state of Nevada was not available. Decline in populations may be attributed to loss of habitat from activities such as logging that remove large diameter trees and snags (Siegel and DeSante 1999). Suitable habitat is present within the project area for hairy woodpeckers.

Williamson's Sapsucker - Williamson's sapsuckers are found along the entire length of the Sierra Nevada and are considered a year-round resident on the Toiyabe National Forest (Finch 1991). This sapsucker breeds at middle to high elevations, generally from 4,900–10,500 feet in montane mixed deciduous-coniferous forest with quaking aspen as an important nesting substrate (Finch 1991). Availability of dead trees or live trees with heartwood rot is a critical component of breeding habitat (Finch 1991). Specific trend data was not available for Williamson's sapsucker (Sauer et al 2003) in the Sierra Nevada or the state of Nevada. Any activity that removes large diameter trees and snags can have a negative effect on Williamson's sapsuckers by reducing nesting availability (Siegel and DeSante 1999). Williamson's sapsuckers appear to be tolerant of human disturbance outside of the fledgling period (Finch 1991). Suitable habitat exists within the project area for Williamson's sapsuckers.

Other Species Considered

Washoe tall rockcress-Washoe tall rockcress (*Arabis rectissima var. simulans*) is a rare plant species which is endemic to the north half of the Carson Range in Douglas and Washoe counties. Washoe tall rockcress is proposed for listing as a sensitive species in Region 4 and is ranked as "1" (most vulnerable) by the Nevada Natural Heritage Program (Morefield 2001). Currently this plant is only known to occur in eight locations, totaling 29 acres

of Federal, county, state, and private lands (Morefield 2002). Many of the known populations occur within or adjacent to high-use recreation or other disturbance areas. Washoe tall rockcress occurs on relatively flat dry, sandy soils between 6,000 and 7,500 feet elevation. Populations have been found in thinly-littered openings among mid- to late-seral stands of Jeffrey pine and white fir (Ibid). Some preference for inhabitating mildly disturbed sites such as old picnic and camping areas and recovering road banks has also been observed. However, plants which occur in these disturbed locations appear to often be hybridized with *Arabis holboelli* (Morefield 2002).

Plant surveys were conducted by the Nevada Natural Heritage Program in 1996 within Galena Creek County Park and adjacent Forest Service lands, including a portion of the project area (Morefield 2002). Approximately 18 acres of occupied habitat were detected, most of which occurred on county lands. During 2002, project specific surveys were also conducted within the project area and resulted in 12 new detections (approximately 5 acres) of Washoe tall rockcress (USDA 2002-on file at the Carson Ranger District). The greatest threats to Washoe tall rockcress are recreational development and use, road construction, fire suppression activities, timber harvest and off-road vehicle use.

Neotropical Migratory Birds-The migratory songbirds found in North America include roughly 350 species, of which about 250 are known as "neotropical migrants". Migratory birds spend their winters in the tropics of southern Mexico, Central and South America, and the West Indies. Migratory songbirds can be found in virtually every habitat on the continent, and usually half or more of the breeding birds in any sampled area are migratory (Robinson 1997).

The two largest threats to NTMB are habitat fragmentation on breeding grounds and deforestation of wintering habitat (Finch 1991). Compared to other birds, migratory species are the most negatively affected by fragmentation, and are usually absent from small or highly isolated forests (SERC 2003). Species such as yellow warbler, MacGillivray's warbler, Wilson's warbler, and common yellowthroat are considered high priority species and require heavy shrub or herbaceous cover for nesting and foraging (Sedgwick and Knopf 1987). Human disturbance can also have an effect on songbirds. Birds may habituate to predictable disturbances such as driving, or hiking, but disturbance during certain times of the year may have an impact on bird behavior (Marzluff 1997). For example, repeated intrusions during the nesting season may cause birds to minimize or stop singing, decrease defensive behavior at nests, and possibly cause birds to abandon nest sites leading to an overall decline in nesting productivity (Knight and Tempel 1986). Along the Eastern Sierra, the critical breeding season is generally between March 1st and August 30th (Heath and Ballard 1999).

Environmental Consequences

No Action

Under the no action alternative, habitat conditions would remain unchanged for all of the above mentioned wildlife and plant

species. Recreational users would continue to traverse through the area to access Jones Creek Trail and county park lands. Current activities in the area, including dispersed camping and illegal campfires, would continue to increase the risk of catastrophic wildfire, thereby eliminating or greatly reducing existing wildlife habitat.

Proposed Action

Mule Deer- Approximately 145,000 acres have been identified as critical winter and summer range within Washoe County (CDFG 2004). Habitat within the project area has some components of winter range but it is not considered critical due to the higher amount of snowfall and lack of dense brush compared to lower sites. The project also lacks critical summer habitat components due to its relatively low elevation (compared to Mt. Rose) and lack of dense tree and brush cover for fawning. The project area does provide an important corridor of food and cover for deer migrating between the two critical areas. Deer will often "stop-over" in these transitional areas feeding and resting for several days before moving on to their winter and summer ranges.

Direct effects to mule deer from project activities include temporary disruptions in foraging and/or resting activity during construction recreation facilities and fuels treatment. Construction projects are expected to take two years to complete and require the use of heavy equipment, as well as chainsaws and other light equipment during portions of the project. Fuels treatments should be completed within one season using chainsaws and/or heavy equipment with a brush cutting attachment. Deer present in the project area may be temporarily displaced by the noise and human presence during project activities. However, it is expected that very few deer would be disturbed from these activities which would occur primarily during the summer months when deer activity in the area is normally low.

Indirect effects to mule deer include the permanent loss of foraging and cover habitat from development of recreational facilities and fuels reduction activities. Removal of vegetation for recreation sites would consist of clearing sites of brush, grass and some small diameter trees. Fuels reduction would occur primarily on the north side of Jones Creek and would consist of thinning decadent stands of mahogany and small diameter trees that are currently acting as ladder fuels. Removal of vegetation would limit some foraging ability for mule deer in the area and would likely displace some deer to adjacent areas of existing foraging and resting habitat. However, recreation facilities would be interspersed with existing vegetation and natural openings would be left between developments minimizing habitat fragmentation and allowing for the continued migration of deer through the area. Other indirect effects include year-round disturbance from increased human presence in the area. Year-round recreation activities may cause a shift in movement patterns for mule deer and cause some individuals to permanently avoid the area. However, visitor use would be concentrated in the developed areas and would be highest during the summer months when most mule deer have moved on to their summer range. Furthermore, the closure of roads north of the project area and the

closure of Thomas Creek Canyon to overnight use, would protect adjacent deer habitat my minimizing human disturbance through the area.

Cumulatively, the proposed project may affect mule deer by further reducing available habitat along the Carson Range. Although 145,000 acres have been identified as critical winter and summer range, it is not presently known how much of that area has recently been lost to disturbance. Over the last ten years, large scale development between the Mt. Rose Highway and the Truckee River has reduced critical winter range for mule deer and has contributed to the overall decline of the Loyalton-Truckee herd. Catastrophic wildland fires have also played a role in herd reduction by completely eliminating thousands of acres of critical winter and summer range. Many of these burned areas have been replaced by invasive species that out compete native vegetation and provide no forage value for mule deer.

Under the proposed action, approximately 120 acres of foraging and cover habitat would be impacted from the development of recreational facilities and fuels treatment. This accounts for approximately .0008 % of the identified mule deer habitat between Mt. Rose and the Truckee River (Cox 2004). This site is not considered critical habitat for mule deer and is generally only used as a transitional area between summer and winter ranges. Furthermore, recreation facilities would be interspersed with existing vegetation and natural openings would be left between developments minimizing habitat fragmentation and allowing for the migration of deer through the area. Effects to mule deer from construction activities and human disturbance would be minimal due to the low number of deer using the area during the summer months. Furthermore, closure of adjacent roads north of Jones Creek and the closure of Thomas Creek Canyon to overnight use, would minimize human disturbance in adjacent deer habitat areas. Under the proposed action, the threat of wildfire would be reduced in the Galena Creek area by reducing potential ignition sources from dispersed camping and illegal campfires Closure of Thomas Creek to overnight camping would also significantly minimize the risk of wildland fire and subsequent loss of critical winter range for mule deer.

Implementation of the proposed action will impact some mule deer habitat by reducing foraging and canopy cover. However, the amount of impacted habitat (less than .008% of available habitat in Washoe County) is expected to be insignificant to the herd. The design of the project will retain natural openings and existing vegetation between developments minimizing habitat fragmentation and allowing for the continued migration of deer through the area. Furthermore, the project area will not be impacting critical winter or summer range. Therefore, the proposed action may affect individual mule deer, but will not contribute to a downward trend in the population viability of the Verdi-sub-unit of the Loyalton-Truckee deer herd.

Yellow Warbler- Habitat destruction and brown-headed cowbird parasitism are the biggest threats to yellow warblers. Under the proposed action an interpretive loop trail would be constructed with a portion of

it paralleling Jones Creek. Development of this loop trail would include constructing a narrow foot path that follows Jones Creek for approximately .5 mile before turning north and west into the upland area. Trail construction would occur between 50 and 100 feet from the creek and would include natural openings to minimize vegetation removal. The increase in human activity along the trail may disturb some individual warblers. However, the location of the trail would be far enough away from potential nesting areas as to not disrupt nesting activity. Furthermore, the interpretive trail would provide a forum to educate the public about yellow warblers and other riparian associated species. All other developed recreation facilities would be in upland areas and away from riparian zones. Therefore implementation of the proposed action will not cause a downward trend in the yellow warbler population

Yellow-Rumped Warbler-Under the proposed action, some brush and small diameter trees would be removed. However, the project design includes utilizing natural openings and maintaining as much existing vegetation as feasible while constructing improvement facilities. Although some berry producing shrubs may removed (i.e. currant, manzanita), the amount would be insignificant to the warbler's diet. Insect populations will not be affected from project activities. Therefore, implementation of the proposed action will not cause a downward trend in the yellow-rumped warbler population.

Hairy Woodpecker-Removal of vegetation associated with the proposed action includes thinning small diameter trees and pruning and removing some brush. Large diameter trees and snags suitable for hairy woodpeckers nesting and foraging will not be removed. Hazardous snags located near picnic sites or other recreation areas may be removed in the future. However, given the small scale of this project, the number of snags potentially removed would be insignificant to hairy woodpeckers. Therefore, implementation of the proposed action will not contribute to a downward trend in hairy woodpecker populations.

Williamson's Sapsucker-The most significant threat to Williamson's sapsucker's is reduction in nesting habitat through the removal of large diameter trees and snags. Under the proposed action, only minimal vegetation will be removed and would not include any large diameter trees or snags. Therefore, the proposed action will not cause a downward trend in Williamson's sapsucker populations.

Washoe Tall Rockcress- Most of the project area is considered suitable habitat for Washoe tall rockcress with approximately five acres currently occupied by the plant (USDA 2002, Morefield 2002). Occupied habitat within the project area accounts for approximately 17% of the total known population of Washoe tall rockcress. Direct effects from the proposed action include incidental trampling from construction and fuels activities and from recreationists. Although Washoe tall rockcress is able to tolerate some level of disturbance, permanent loss of the plant has occurred in areas where disturbance is constant and/or severe (Morefield 2002). To minimize inadvertent trampling, all known locations would be flagged and avoided and species recognition training would be provided to all construction and

fuels personnel to further assure plants are avoided during implementation. Furthermore, the design of the project would allow for a sufficient buffer between plant locations and predictable high impact areas to avoid excessive trampling from recreational visitors.

Indirectly, Washoe tall rockcress can be affected from ground disturbance that occurs near plant locations by promoting hybridization with *Arabis holboellii*. Hybridization has most frequently been observed in areas of light disturbance such as picnic and campsite areas and roadsides. Given the small, relatively isolated populations of Washoe tall rockcress, an increase in hybridization could result in a permanent loss of the genetic integrity of the plant. To minimize the potential of hybridization, direct ground disturbance in known plant locations would not occur and all existing plants locations would be flagged and avoided. Removal of the surrounding vegetation could indirectly affect Washoe tall rockcress by altering canopy cover and reducing over all habitat quality for the plant. However, vegetation removal would maintain the current mid-seral habitat and would not significantly increase or decrease the current duff layer. Disturbance to adjacent potential habitat may also limit the distribution of the plant in some areas. However, buffers left between areas of impact and potential habitat would allow for expansion of the plant. Furthermore, closure of roads north of Jones Creek and adjacent to the project area will minimize disturbance to potential habitat by eliminating vehicle traffic and reducing pedestrian traffic through the area.

Cumulative effects: Approximately 29 acres of Forest Service, state, county and private lands are occupied by Washoe tall rockcress with the majority occurring partially or wholly on Forest Service lands. An additional 4,700 acres is considered potential habitat (Morefield 2004). Of these known and potential sites, several are subject to some level of existing or proposed human disturbance such as recreational development and use, road construction, timber harvest, and off-highway vehicle use. Sixty-two percent of the total known population occurs in Galena Creek County Park adjacent to the project area. Picnic, campsites, and other developed areas overlap with a portion of the existing Park population. In these areas, Washoe tall rockcress appears to be coexisting with some level of disturbance, although hybridization has been observed. The remainder of the park population occurs in a currently undeveloped area. Future development of this site is unknown. Washoe tall rockcress was also recently detected within the boundaries of the proposed North Washoe fuels project. The size of this population is currently not known. Locations of Washoe tall Creek rockcress within the North Washoe fuels area would be flagged and avoided during fuels treatment.

It is expected that implementation of the proposed action may affect individual plants but will not cause a downward trend in the population of Washoe tall rockcress or affect population viability because the project is designed to minimize disturbance to the species and improve public understanding of its importance.

Neotropical Migratory Birds (NTMB)-

Habitat fragmentation is considered the major factor for population declines in migratory bird species. Urbanization and other land management activities can have short term and long term impacts on foraging and nesting habitat of NTMB. Human disturbance can also impact NTMB by affecting behvior particularly during the nesting season. Removal of vegetation from project activities would disturb some songbird habitat. However, vegetation removal would be minimal and would

Expanded Use Alternative

Mule Deer-Under this alternative direct and indirect effects to mule deer would be similar as the proposed action with the following changes: Development of cabins and the group overnight camping area would reduce available habitat for mule deer by approximately 25 acres rather than 20 acres. Cabins and overnight camping would allow for approximately 150 additional daily visitors and disturbance periods would extend into evening and early morning hours when mule deer are most likely to be using the area for foraging. Also, the availability of cabins in the winter would increase the amount of disturbance to mule deer from human presence. However, concentrations of deer typically do not occupy the project area during the winter and summer months. Adjacent road closures and the closure of Thomas Creek Canyon to overnight use would reduce human disturbance in adjacent deer habitat. Cumulatively, the expanded use alternative would slightly increase the amount of habitat loss and human disturbance to mule deer, but the increase is considered to be insignificant and would not contribute to a downward trend in the population.

Yellow Warbler-Effects to the yellow warbler under this alternative would be the same as the proposed action. Although the inclusion of cabins and an overnight group campsite may increase the numbers of users on the Jones Creek Trail, it its not expected this increase will cause a downward trend in population.

Yellow-Rumped Warbler- Effects to the yellow-rumped warbler under this alternative will be similar as the proposed action. The inclusion of cabins and an overnight group campsite may require more pruning or complete removal of vegetation than the proposed action. However, this reduction in habitat potential will still be minimal and will not cause a downward trend in population

Hairy Woodpecker- Effects to the hairy woodpecker under this alternative will be similar as the proposed action. Although the expanded use alternative will potentially remove more vegetation than the proposed action, any large diameter trees and snags suitable for foraging and nesting will be not be removed. Therefore implementation of this alternative will not contribute to a decline in hairy woodpecker populations.

Williamson's Sapsucker- Effects to Williamson's sapsucker under this alternative will be similar as the proposed action. Although the expanded use alternative will potentially remove more vegetation than the proposed action, any large diameter trees and snags suitable for foraging and nesting will be not be

removed. Therefore implementation of this alternative will not contribute to a decline in Williamson's sapsucker populations.

Washoe Tall Rockcress- The effects to Washoe tall rockcress under this alternative will be similar to the proposed action. Development of cabins and the overnight use will occupy more of the identified potential habitat in the area and would lessen the potential for expansion of the population. However, all mitigations described for the proposed action will be implemented under this alternative including avoiding all known populations of the plant and protecting adjacent suitable habitat by closing roads. Therefore implementation of the expanded use alternative will not cause a downward trend in the population.

Heritage Resources

Affected Environment

Prehistoric use of the Galena Creek area dates back at least several thousand years. The Thomas and Whites Creek drainages, only two miles north of the proposed project, have a very high density of prehistoric archaeological sites. To the east the Steamboat area was also utilized as a winter camp and source of stone for the manufacture of tools. Other sites include collection and processing areas for plants and/or animals that supplied food, medicines and craft materials. The proposed project, and surroundings, lies within the traditional lands of the Washoe Tribe of Nevada and California.

When European settlement came to western Nevada with the discovery of gold in California in 1849 and silver in Virginia City in 1859, the Galena Mining District was formed. Although the district never produced an appreciable amount of mineral wealth it did figure importantly in supplying the Comstock with lumber, fuel wood, produce and fresh meat. The Callahan Ranch and several other area ranches were notable in the last regard. Logging in Sierra forests reached its zenith in the 1860-70s. The Virginia and Truckee Railroad linked Carson City, Virginia City and village of Reno in the 1870s.

Archaeological field surveys found four historic sites within the project area. They all date to the late 19th. Century and represent the legacy of Comstock Era logging efforts in the Jones Creek drainage. The largest site is apparently the remains of the Asa Persons water powered sawmill, identified on maps from the 1860s. Three other sites are the remains of cabins or homesteads. Taken together the sites have potential to provide information relevant to the early history of the area including land use patterns, logging technology and techniques, and domestic life. All four sites are significant and considered to be eligible for nomination to the National Register of Historic Places.

Environmental Consequences

No action

A no action decision for the proposed project area continues the exposure of significant archaeological values to vandalism, the impacts of wild fire, dispersed camping and off road vehicle use.

Proposed Action

The developments associated with the proposed action will be designed to avoid impacting the historic archaeological resources identified in the project area. Actively managing access by closing the north side of Jones Creek and the Thomas Creek corridor to vehicle traffic will enhance the preservation of archaeological resources. Vehicular traffic across site areas has potential to displace or damage surface artifact scatters, compromise subsurface deposits by compacting soils and creating erosion channels. Fuels treatment provides a measure of protection for combustible artifact classes subject to wild fire. The construction of a visitor center and interpretative trail provides an opportunity to share with the public some of the history and archaeology of the area. Educational venues increase public awareness of the significance of these fragile and nonrenewable resources, providing protection through knowledge and appreciation.

Expanded Use

This alternative will also be designed to avoid impacting the historic archaeological resources identified in the project area. There is more potential for impacts to archaeological sites under this alternative than under the Proposed Action but less than under a No Action decision. Expanded use of the north side of Jones Creek would bring a greater number of people into the area, and a greater potential for the unauthorized collection of surface artifacts and disturbance of surface assemblages. Impacts to surface deposits remove important archaeological information relevant to site chronology and function.

Roadless/Wilderness Character

Affected Environment

The project is located within the Rose-Whites Canyon roadless area. It includes 2572 acres of National Forest System lands. This area is adjacent to the Mount Rose wilderness. The roadless character of the area is limited. It includes portions of the Mount Rose Highway – a major state highway linking Reno and Lake Tahoe. Numerous two track user created and old logging roads are found in the area. Portions of the area are used as dump sites for neighborhood trash. Illegal firewood theft has been documented in the area. Several abandoned vehicles have been found on the site. In October 2003 the remains of a recently used methamphetamine cooking site were found on the subject property. In summary, while portions of the site are heavily treed and suitable for picnic sites and other recreation facilities, the roadless character has been compromised by extensive disturbance in the area. Roadless characteristics include:

- Soil, water, air: While most soils in the area are undisturbed, the existing road network has likely accelerated erosion into Jones Creek, an intermittent stream that flows through the site. Air quality in the area is high, but affected by traffic on the Mount Rose Highway.
- Public drinking water: Jones Creek is an intermittent stream that

contributes to drinking water mainly through infiltration to the groundwater aquifer. The current network of roads likely has little impact to the Creek or to drinking water supplies.

- Diversity of plant and animal communities: Plant and animal communities are common in the area. Refer to the Wildlife and Plants section for further description.
- Habitat for threatened, endangered, proposed, candidate, and sensitive species: Inventories were conducted for these species and none of these species have been found in the project area.
- Primitive and semi primitive recreation opportunities. The project area provides no opportunities for primitive recreation opportunities. Semi primitive recreation occurs on the project area, but has no outstanding qualities.
- Reference landscapes: This area has been subject to substantial human uses since European settlement occurred in the 1860s. Mining, logging, recreation and other activities over this period have compromised the ability of the project area to serve as a reference landscape.
- Landscape character and scenic integrity: The quality of the landscape character and scenic integrity has been compromised by the existing road network and dumping activities that have occurred on the property.
- Traditional cultural properties and sacred sites: None exist on the project site.

Figure 1: Abandoned Car in Roadless Area

- Other locally identified unique characteristics. None have been found on the site.

Since the area was identified in the roadless inventory, it has the potential for eventual designation as wilderness. These are areas where the "earth and community of life are untrammeled by man, where man himself is a visitor who does not remain." Wilderness values include:

- Remoteness. This quality is limited on the subject parcel. It is adjacent to the heavily used Mount Rose Highway and is easily accessible from nearby housing developments and Galena Creek Park.
- Solitude. The area has limited opportunities for solitude because it is not isolated from the sights, sounds, presence and developments of man. It has numerous dump sites

and abandoned vehicles and is subject to traffic noise from the Mount Rose Highway.

- Naturalness. The area does not appear natural to most people due to the presence of the user created road network and aforementioned dump sites and abandoned vehicles.
- Natural integrity. While long term ecological processes are somewhat intact on the parcel, overall integrity is compromised by the existing level of surface disturbance and dumping.

In conclusion, the area has compromised roadless and wilderness qualities and little potential for eventual designation as wilderness or management as a roadless area.

Environmental Consequences

No action

Under this alternative, continuing disturbance from dispersed use, dumping, illegal drug production, and other urban interface uses would further compromise the already limited roadless and wilderness character of the area.

Proposed Action

Under this alternative, roadless and wilderness characteristics would be affected as follows:

- Soil, Water Air: Since facilities will be designed pursuant to best management practices and Jones Creek is a minor, intermittent stream, little or no measurable increased in soil erosion or changes in water quality are projected. The project would increase traffic on the Mount Rose Highway by less than one percent consequently; changes in air quality will not be measurable. Based on experience at Davis Creek Park, smoke from the group picnic grill will not be noticeable or be measurable in terms of air quality impacts.
- Public drinking water: As noted above, the use of best management practices will prevent measurable changes in water quality to Jones Creek or to the groundwater aquifer.
- Diversity of plant and animal communities: Since the plant and animal communities on the site are common throughout the region and the project is designed to protect the Washoe Rockcress, there would be minimal, if any effect on the diversity of plant and animal communities in the region.
- Habitat for threatened, endangered, proposed, candidate, and sensitive species: Inventories were conducted for these species and none of these species have been found in the project area.
- Primitive and semi primitive recreation opportunities. Since the project area provides no opportunities for primitive recreation and only limited opportunities for semi primitive recreation, the proposed action

would cause no measurable changes in these opportunities.

- Reference landscapes: Since the project area does not have the capability to serve as a reference landscape, the proposed action would not cause any impacts to reference landscapes.
- Landscape character and scenic integrity: Since the quality of the landscape character and scenic integrity has been compromised by the existing road network and dumping activities that have occurred on the property, the proposed action would not result in any degradation of the landscape character and scenic integrity.
- Traditional cultural properties and sacred sites: Since no traditional cultural properties or sacred sites occur on the property, the proposed action would not result in any impacts to them
- Other locally identified unique characteristics. Since no locally identified unique characteristics have been identified, the proposed action would not result in any impacts to them.
- Remoteness. The limited level of existing remoteness would be further limited by the development of recreational facilities.
- Solitude. The limited level of existing solitude would be further limited by the development of recreational facilities.
- Naturalness. The area would become less natural overall, but its appearance would be improved by replacing the current dumps and abandoned vehicle with attractive picnic sites and environmental education center.
- Natural integrity. The limited level of existing natural integrity would be further limited by construction of the proposed facilities.

In conclusion, since current roadless and wilderness qualities are very low, there would be no substantive impacts to the roadless or wilderness characteristics of the subject area as a result of the proposed action.

Expanded Use

Since this alternative would result in only a minor increase in the footprint of the proposal, there would be no substantive difference between the impacts of the proposed action and the impacts of this alternative on the roadless or wilderness characteristics of the project area.

CONSULTATION AND COORDINATION

Consultation and coordination for the Galena Recreation Facilities project has included:

Washoe Tribe

Washoe County Department of Parks and Recreation

Washoe County Commission

Galena/Steamboat Citizen Advisory Board

Galena Forest Estates Homeowners Association

Nevada Department of Transportation

Nevada State Historic Preservation Office

U.S. Fish and Wildlife Service

LIST OF PREPARERS

Preparers and qualifications for those who developed the environmental assessment were:

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Linda Guy	Engineering		
Steve Hale	Recreation, Visual	Master of Science, Forestry (Recreation/Planning) Bachelor of Science, Environmental Biology	25 Years
Bob Jiron	Fire/Fuels	Bachelor of Science, Forestry	18 Years
David Loomis	Project Manager, Roadless, Wilderness	Master of Science, Land Use Planning Bachelor of Arts, Economics	26 Years
Larry Randall	Recreation	Bachelor of Science, Forestry	22 Years

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