



*Autumn in the South Jackson Mountains looking towards King Lear Peak*

# Chapter 4: Environmental Consequences



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## 4.1 INTRODUCTION

This chapter analyzes the environmental impacts and effects of implementing each alternative described in Chapter 2. The baseline used for projecting impacts is the current condition or situation described in Chapter 3, Affected Environment. Each program or management action that could impact resources or resource uses has been analyzed, and the conclusions of that analysis are described under the resource consequence sections (Section 4.2) below.

There are many actions that are common to all alternatives or are the same for two or more alternatives. Impacts are discussed under each alternative section, by resource. Actions that are common to all alternatives are considered within each alternative section. Some management actions may affect only certain resources and alternatives. If an activity is not addressed in a given section, it is because no impact is expected.

Within the text of Chapter 4, impacts from actions common to all alternatives are discussed under the No Action Alternative, however, those statements and decisions would apply to all alternatives (No Action, A, B, C).  The reader

will encounter icons similar to those at the beginning and end of this sentence to assist in identifying actions and associated impacts that are common to all alternatives. 

### 4.1.1 ANALYTICAL ASSUMPTIONS

The following assumptions and guidelines were used to guide the analysis of environmental consequences:

- Funding will be available to implement the alternatives as described in Chapter 2.
- This document assesses the management actions proposed for implementing the legislation creating the Black Rock Desert—High Rock Canyon Emigrant Trails National Conservation Area (NCA). The analysis does not include the effects of resource management decisions identified within the NCA legislation, such as—
  - Land area included in or excluded from the NCA or Wilderness Areas
  - Uses restricted or limited by the NCA Act or Wilderness Areas
  - Providing ongoing reasonable access to privately owned land or interests

- Continued grazing where currently permitted
- Regulation of hunting, fishing, and trapping by the State of Nevada.
- Bureau of Land Management (BLM) policies, including Standards of Rangeland Health and Guidelines for Livestock Grazing Management, will be applied as appropriate across all alternatives.
- Recreation use of the planning area will continue to increase.
- Short-term impacts (where noted) are those impacts anticipated to occur within 1 to 5 years of implementation of the activity. Long-term impacts are those that would occur after the first 5 years of implementation but within the life of the Resource Management Plan (RMP) (projected to be 20 years).
- Appendix A lists the regulatory direction with which all activities must comply, which limits the range of actions.

### 4.1.2 TYPES OF IMPACTS

This chapter describes the anticipated direct, indirect, and cumulative impacts of implementing the No Action Alternative and each of the three additional alternatives.

The analysis of impacts describes the possible impacts, both beneficial and adverse, that a land use allocation or management action would have on the resource being analyzed. The impacts or change is as compared with the current conditions.

Because of the widely varying user expectations and requirements, many of the actions associated with the different management alternatives have the potential to affect the quantity or quality of each resource.

This impact analysis identifies both enhancing and improving effects to a resource from a management action as well as those that have the potential to degrade a resource. However, the evaluations are confined to the actions that have direct, immediate, and more important effects on the planning area, instead of identifying and evaluating *all* possible, including minor, interactions and cause-effect relationships.

Cumulative impacts are described at the end of the chapter (Section 4.3). This section describes

impacts that the alternatives could have in interrelation with other past, current, and reasonably foreseeable future actions in and adjacent to the planning area. The period of potential cumulative impact is defined as the life of the RMP, or 20 years.

### 4.1.3 SUMMARIZED CRITICAL ELEMENTS

Analysis and experience with similar management plans indicate that there would be no known adverse impacts on certain critical elements of the human environment: prime or unique farmlands, floodplains, hazardous or solid waste, and environmental justice. These critical elements have not been addressed in the plan because they either are not present in the planning area or would not be affected by the management activities within the alternatives. These critical elements will be considered, as appropriate, in site-specific project design and implementation processes. Discussion of each of these excluded critical elements is provided below.

**Prime and Unique Farmlands:** There are no prime or unique farmlands, or farmland of statewide or local importance, on public lands within the planning area. None of the actions associated with the alternatives, analyzed in detail, would disturb farmlands. Therefore, impacts on prime and unique farmlands are not analyzed further.

**Floodplains:** There are floodplains in the planning area, but no projects or activities resulting in permanent fills or diversions in, or placement of permanent facilities on, active floodplains of major rivers are projected to occur with implementation of any of the alternatives proposed. Therefore, impacts on floodplains are not analyzed in detail.

**Hazardous or Solid Waste:** No hazardous, toxic, or unapproved solid waste sites are known to occur on public lands within the planning area. None of the actions, activities, and uses projected to occur with implementation of the plan alternatives would require the handling, storage, or release of large quantities of these wastes. Therefore, impacts on or

from hazardous and solid wastes are not analyzed in detail.

**Environmental Justice:** Executive Order 12898, Federal Actions to Address Environmental Justice in Minority and Low-Income Populations, focuses federal attention on the environmental and human health condition in minority and low-income communities, promotes nondiscrimination in federal programs, and provides access to public information and an opportunity to participate in matters that may affect these populations.

No disproportionate adverse human health or environmental effects on minority and/or low-income populations would result from this plan. Although implementation of any of the plan alternatives would have a greater effect on the well being of the local low-income populations than on the more affluent populations in other areas of the State and country, because the affected local communities are homogeneous and would be uniformly affected, there would not be an unequal distribution of risks and benefits in those communities from implementation of any of the alternatives.

#### 4.1.4 INCOMPLETE OR UNAVAILABLE INFORMATION

The Code of Federal Regulations (CFR) at 43 CFR 1502.22 mandates that agencies evaluating reasonably foreseeable significant adverse effects on the human environment in an environmental impact statement must identify incomplete or unavailable information, if that information is essential to a reasoned choice among alternatives. This RMP/Environmental Impact Statement (EIS) is based on the best available data for each resource. However, sufficient data does not exist at this time for many resource areas. The resources listed below have incomplete or unavailable information.

**Cultural Resources:** Most of the planning area has not been surveyed for cultural resources. Estimates of the number, type, and significance of archaeological and historic sites were based on

cultural resource inventories for approximately 2 percent of the planning area.

**Paleontological Resources:** Most of the planning area has not been surveyed for paleontological resources.

**Upland and Riparian Vegetation:** Complete data on vegetation composition and condition is not available.

**Fish and Wildlife:** Complete data on wildlife species occurrence and habitat use and condition is not available.

**Water Quality:** Limited data is available on water quality.

**Noxious Weeds:** Most of the planning area has not been surveyed for noxious weeds.

**Visitor Use Data:** Limited data is available on visitor use, including recreation use, of the planning area.

**Socio-Economic Data:** Specific information on localized economic and social conditions is unavailable.

#### 4.2 CONSEQUENCES FOR RESOURCES FROM ALTERNATIVES

RMPs provide broad guidance and are generally not intended to be site or project specific. Therefore, most impacts discussed in this section are general in nature. Implementation of the RMP occurs through site-specific projects and activity plans, which would require a further detailed, separate NEPA analysis.

This chapter analyzes the impacts of implementing the resource management actions under each alternative contained in this plan. Impacts that the NCA and Wilderness legislation and constraints (presented in Appendix A) would

have on resources are not analyzed as part of this document because they are mandated, would not differ between alternatives, and are beyond the scope of analysis for this plan, even though they might result in impacts on resources.

Current conditions would be maintained where resources might interact but management actions would not have a substantial effect on the resource conditions described in Chapter 3. No impacts are anticipated when a resource management action would not influence the resource being analyzed. Where impacts are provided, a change in current condition is anticipated.

## 4.2.1 NO ACTION ALTERNATIVE

(Continuation of Present Management)

### 4.2.1.1 Impacts on Transportation and OHV

#### From Land Health Standards

No impacts are anticipated.

#### From Transportation and OHV Management

**ALL** Improving three access roads with railroad crossings to the playa to meet railroad crossing safety standards would decrease rutting, washboards, dust or mud holes. Resulting effects would include improved drivability, increased rail crossing safety for drivers, and increased public use to the playa from these three short segments of roads (approximately 4 miles). Increased access to the playa could result increased degradation of the portions of the playa surface associated with the primary vehicle tracks. **ALL**

**ALL** If cooperative agreements with Humboldt, Pershing, and Washoe Counties regarding road maintenance are implemented, drivability of 70 miles of county roads could be improved. The occurrence of rutting, washboards, and dust, or mud holes would be reduced, which could create safer roads for drivers. An increase in traffic could also occur due to the improved road conditions. **ALL**

**ALL** Potentially, upgrading the Pershing County portion of Soldier Meadows Road to an all-weather standard would increase public access to the northern part of the NCA. Improved conditions on this road section could decrease use on the playa track between 12-Mile and Mormon Dan, and lead to decreased rutting and track depression on the playa surface. Bringing approximately 16 miles of this low-standard road up to all-weather standard, and continued maintenance to the higher standard, would increase costs for BLM or Pershing County.

**ALL**

Maintaining the existing BLM system roads at their designated maintenance levels would improve the drivability of 182 miles of BLM roads due to decreased rutting, washboards, and dust, or mud holes. Indirectly, safety for drivers and public access could also be improved. The result would be an increase in traffic on BLM, State, and county roads and, consequently, increased costs to BLM and, to a lesser degree, to the State and counties. Although designated road maintenance levels would not change under this alternative, because of increased public use of roads within the planning area, the actual maintenance of BLM roads, including directional signs, would need to be increased to prevent resource damage.

#### From Cultural Resource Management

**ALL** Retaining the primitive setting along the emigrant trail viewsheds could diminish drivability, slightly decrease safety for drivers, and decrease public access along short segments of BLM roads (approximately 30 miles) due to increased rutting, washboards, and dust, or mud holes associated with increased traffic on road segments visible from the emigrant trail, primarily in High Rock Canyon and in the southeastern tail of the NCA.

**ALL** Closing Class B historic trail segments to all mechanized vehicles would have no impact because these segments are currently not used by vehicles. Implementing seasonal closures for vehicle traffic on some Class C historic trail segments would potentially increase safety for drivers on a few short segments (about 17 miles) of vehicle routes (e.g., by reducing rutting and mud holes) and reduce incidences of vehicles getting stuck in mud. Seasonal closures on vehicle routes would reduce public access during short periods of the year when visitor use is normally low. Providing opportunities to construct new parallel routes outside of the immediate viewshed of the historic trails could provide alternate means of access. The permanent and seasonal closures would increase BLM costs (e.g., requiring signage to mark closures). **ALL**

#### From Native American Values Management

No impacts are anticipated.

### From Paleontological Resource Management

No impacts are anticipated.

### From Wilderness Management

No impacts are anticipated.

### From Special Designation Management

Maintaining seasonal closure of the High Rock Canyon Road to vehicles from February 15 through March 31 each year would maintain existing conditions along the High Rock Canyon road.

### From Vegetation Management

No impacts are anticipated.

### From Livestock Grazing Management

No impacts are anticipated.

### From Wild Horse and Burro Management

No impacts are anticipated.

### From Fire Management

No impacts are anticipated.

### From Fish and Wildlife Management

**ALL** Sustaining or improving sage-grouse winter, breeding, nesting, and brooding habitats; limiting activities that have a high risk of disturbing breeding or brooding sage-grouse; and conducting other habitat rehabilitation and restoration projects in the planning area could limit road upgrades and maintenance on road segments near these areas. This could lead to increased rutting, washboards, and dust or mud holes along short segments of BLM roads, potentially diminishing drivability, safety, and public access in these limited areas.

**ALL**

### From Visual Resource Management

Current conditions would be maintained.

### From Water Resource Management

**ALL** Managing streams to meet the life history requirements of the Lahontan cutthroat trout and desert dace, bring nongeothermal water resources to Class A standards, and managing geothermal

sources for existing populations of native fish or other aquatic organisms could limit road upgrades and maintenance on road segments near Lahontan cutthroat trout or desert dace habitats or other water resources. This could lead to increased rutting, washboards, and dust or mud holes along, at most, a few miles of BLM roads, potentially diminishing drivability, safety, and public access in these limited areas. **ALL**

### From Lands and Realty Management

**ALL** Continuing to acquire private lands within the planning area from willing landowners could lead to improved road conditions on or adjacent to acquired lands by increasing the ability to maintain or increase public access. This could lead to decreased rutting, washboards, dust, and mud holes in these areas, which would improve drivability, safety, and public access. It could also lead to increased traffic in these areas. New road conditions would increase costs to BLM to maintain access around private lands. **ALL**

### From Minerals and Energy Management

**ALL** Exercising valid existing rights or developing mining operations associated with the gold claims in the South Jackson Mountains Wilderness would increase road usage and associated resource damage and maintenance costs.

**ALL**

### From Recreation Management

Potential playa closures during large special recreation permitted events would continue to cause temporary decreases in public access to the playa.

### From Public Outreach and Visitor Service Management

**ALL** Implementing and supporting programs to increase public appreciation could lead to increased visitation and associated traffic. The traffic volume associated with increased visitation could increase rutting, washboards, and dust or mud holes and cause roads to wear more rapidly. This would potentially diminish the drivability of BLM roads, decrease safety for drivers, and increase maintenance frequency and costs for BLM and, to a lesser degree for the State and counties. **ALL**

### 4.2.1.2 Impacts on Cultural Resources

All projects that affect Cultural Resources would be subject to the requirements of Section 106 of the National Historic Preservation Act. This process requires that Cultural Resources are inventoried prior to project implementation and mitigation measures are applied to protect on-site resources or to recover the information associated with the cultural values. The result is to reduce adverse impacts to cultural resources.

#### From Land Health Standards

Where measures are implemented that improve soil stability and vegetation cover, cultural resources would be expected be better protected from damage associated with soil erosion.

#### From Transportation and OHV Management

**ALL** Improving three access roads with railroad crossings to the playa to meet railroad crossing safety standards could decrease integrity of cultural resources, since these improvements could impact prehistoric and historic sites at the three locations. However, activities undertaken to comply with Section 106 should minimize this potential impact. **ALL**

Managing BLM system roads to their functional and maintenance class could decrease the integrity of cultural resources in areas where maintenance results in new disturbance. Maintenance where road braiding, erosion, and other problems associated with unmaintained roads would locally decrease surface disturbance and reduce erosion resulting in increased stability of cultural resources.

Limiting off-highway vehicle (OHV) use in High Rock Canyon and the Lahontan cutthroat trout Wilderness Study Area (WSA) to existing routes would have no impact on cultural resources because there is minimal off-road vehicle use.

Continuing to designate the remainder of the planning area outside Wilderness as open to OHV use could result in unknown levels of artifact theft, breakage and displacement, vandalism, alteration, and erosion of cultural sites as new vehicle routes are established over time. The new routes and their associated disturbance would locally reduce the

visual setting of the emigrant trail. It is anticipated that there would be impacts to the integrity of other National register-eligible cultural resource sites throughout the open OHV areas.

#### From Cultural Resource Management

**ALL** Inventorying the emigrant trail in coordination with Oregon-California Trails Association, prioritizing and conducting additional cultural resource inventories, and conducting inventories and site mitigation as needed for specific projects in the planning area would increase opportunities for collection of data useful to cultural resource management, increase opportunities for historic preservation awareness and site preservation, enhance opportunities for scientific study and public use of cultural resources, and increase the knowledge of the prehistory and history of the region. Indirectly, inventorying the emigrant trail could lead to future protection, decreased inadvertent damage and disturbance, protection from vandalism and looting, and maintenance of the integrity of the emigrant trail's setting. **ALL**

**ALL** Closing Class B historic trail segments to all mechanized vehicles would have no impact because vehicles do not use these segments. Closure of a few segments of Class A and C trail segments and implementing seasonal closures for vehicle traffic on some Class C historic trail segments would minimally increase trail protection, decrease inadvertent damage to or disturbance of cultural sites, decrease opportunity for vandalism and looting, increase opportunities for historic preservation awareness and site preservation, and maintain the integrity of the emigrant trail's setting.

**ALL** **ALL** Nominating any outstanding eligible resources that are identified and recorded as a result of these inventories for inclusion in the National Register of Historic Places would ensure better protection for these sites, increase opportunities for historic preservation awareness, and increase the public's knowledge of the prehistory and history of the region. **ALL**

#### From Native American Values Management

Current conditions would be maintained.

### From Paleontological Resource Management

No impacts are anticipated.

### From Wilderness Management

Current conditions would be maintained.

### From Special Designation Management

Current conditions would be maintained.

### From Vegetation Management

**ALL** Conducting rehabilitation and restoration efforts on areas burned by wildland fires could lead to inadvertent damage to or disturbance of cultural resources not discovered during inventories. **ALL**

Maintenance of natural vegetation would maintain the current conditions of cultural resources, including the integrity of the landscape setting.

### From Livestock Grazing Management

**ALL** Continuing to graze lands within the planning area would maintain existing but unknown levels of inadvertent damage to or disturbance of cultural resources. **ALL**

**ALL** Site-specific activities at springs, including modifying spring developments to provide water for wildlife at ground level adjacent to the spring source or removing and restoring projects no longer needed, could cause inadvertent damage to or disturbance of cultural sites. However, improvement of vegetation and soil stability associated with the actions could increase cultural resource stability. However, activities undertaken to comply with Section 106 should minimize this potential impact. **ALL ALL**

### From Wild Horse and Burro Management

**ALL** The continued presence of wild horses and burros would maintain horse presence on cultural resources and could lead to inadvertent damage to or disturbance of cultural sites. **ALL**

### From Fire Management

**ALL** Implementation of reduced levels of fire suppression associated with appropriate management response and limiting use of heavy surface disturbing equipment could lead to decreased inadvertent disturbance of cultural

resources. The occasional use of prescribed fire and mechanical treatment of vegetation emulating the effect of wild fire could lead to inadvertent loss of integrity of cultural resources. However, activities undertaken to comply with Section 106 should minimize this potential impact. **ALL ALL**

From Fish and Wildlife Management

**ALL** Conducting habitat rehabilitation and restoration projects and activities in the planning area could lead to inadvertent loss of integrity of cultural resources. However, activities undertaken to comply with Section 106 should minimize this potential impact. **ALL**

### From Visual Resource Management

Designating the playa of the Black Rock Desert, an area along the west side of the Black Rock Range, and the High Rock Canyon corridor, as Visual Resource Management (VRM) Class II could maintain the integrity of the setting of the emigrant trails. However, designating the remaining portions of the planning area as VRM Class IV could lead to projects that could impact the setting of the emigrant trails.

### From Water Resource Management

Current conditions would be maintained.

### From Lands and Realty Management

**ALL** Not establishing new utility corridors in Wilderness Areas, the Lahontan cutthroat trout Area, High Rock Canyon, the Black Rock Desert Playa, and along the emigrant trail corridor would result in no impacts to cultural resources in these areas. **ALL**

**ALL** Granting utility rights-of-way outside of Wilderness in support of valid existing rights could lead to inadvertent damage to or disturbance of cultural sites, increase opportunities for vandalism and looting, or impair the integrity of the setting of important cultural resources. However, activities undertaken to comply with Section 106 should minimize this potential impact. **ALL**

### From Minerals and Energy Management

Allowing location, entry, and patent on federal lands in the South Playa Area and routes outside of the NCA, and allowing mineral leasing within the South Playa Area (other than for sodium and

potassium) could lead to inadvertent damage to cultural resources and increased opportunities for vandalism and looting. However, activities undertaken to comply with Section 106 should minimize this potential impact.

#### **From Recreation Management**

Allowing overnight camping throughout the planning area could lead to inadvertent damage to cultural sites and increase opportunities for vandalism and looting.

#### **From Public Outreach and Visitor Service Management**

 Implementing and supporting programs that increase public appreciation of the values of the planning area would increase the knowledge of the prehistory and history of the region, increase opportunities for historic preservation awareness and site preservation, and enhance opportunities for scientific study and public use of cultural resources. Indirectly, increasing public appreciation of planning area resources could lead to increased protection or site stability, decreased inadvertent damage to or disturbance of cultural sites, decreased vandalism and looting, and improved integrity of cultural resources. 

### **4.2.1.3 Impacts on Native American Values**

Native American values are represented as a desire to preserve certain plant and animal species for traditional uses and to preserve Properties of Cultural and Religious Importance (PCRI) for continued use. Some site types often considered to be PCRI are hot springs, unique geographic features, and burials. To date, no specific PCRI have been identified in the planning area.

#### **From Land Health Standards**

Where measures are implemented that improve soil stability and vegetation cover, the values associated with PCRI would be expected to be better protected from damage associated with soil erosion.

#### **From Transportation and OHV Management**

Managing BLM system roads to their functional and maintenance class could lead to conflicts between Native American values and recreation users, decrease the integrity of PCRI, or impair the visual setting of important Native American locations.

Continuing to leave the planning area outside of Wilderness, High Rock Canyon, and the Lahontan Cutthroat Trout WSA open to OHV use could affect fish and wildlife habitat and populations, due to damage to vegetation, increased erosion, and harassment of animals. This would result in reduced availability for Tribal sustenance hunting and fishing.

#### **From Cultural Resource Management**

 Prioritizing and conducting additional cultural resource inventories could lead to the identification of PCRI. Conducting site mitigation as needed for specific projects could lead to conflicts between Native Americans and archaeologists over the removal of sensitive artifacts and features. 

#### **From Native American Values Management**

Current conditions would be maintained.

#### **From Paleontological Resource Management**

No impacts are anticipated.

#### **From Wilderness Management**

Current conditions would be maintained.

#### **From Special Designation Management**

Maintaining the existing 24,006-acre High Rock Canyon ACEC and 307-acre Soldier Meadows ACEC would continue to provide protection to PCRI and preserve the opportunity to pursue traditional uses.

#### **From Vegetation Management**

 Protecting native rangeland vegetation and supporting restoration of native plant communities would preserve the opportunity to pursue traditional uses associated with native vegetation. 

### From Livestock Grazing Management

**ALL** Continuing to graze lands within the planning area could decrease native vegetation on localized areas and provide fewer opportunities to pursue traditional uses associated with native vegetation. Where Rangeland Health measures are implemented that improve soil stability and vegetation cover, PRCIs would be expected to be better protected from damage associated with soil erosion. **ALL**

**ALL** Site-specific activities at springs, including modifying spring developments could increase the integrity of Native American values and preserve the opportunity to pursue traditional uses. However, springs have a high potential to be PRCIs, and projects could also lead to conflicts with Native American traditionalists. **ALL**

### From Wild Horse and Burro Management

Current conditions would be maintained.

### From Fire Management

Current conditions would be maintained.

### From Fish and Wildlife Management

**ALL** Allowing trap and transplant activities in Wilderness Areas for native wildlife species and sustaining or improving sage-grouse winter, breeding, nesting, and brooding habitats could preserve the opportunity to pursue traditional uses associated with native wildlife. **ALL**

### From Visual Resource Management

Designating the playa of the Black Rock Desert, an area along the west side of the Black Rock Range and the High Rock Canyon corridor, as VRM Class II would preserve the natural viewshed and the opportunity to pursue traditional uses. However, designating the remaining portions of the planning area as VRM Class IV could lead to projects that would conflict with Native American values.

### From Water Resource Management

**ALL** Managing streams and water resources to meet the life history requirements of the Lahontan cutthroat trout and desert dace, and Class A

standards, would increase the populations of native fishes important to Native Americans. **ALL**

### From Lands and Realty Management

The granting of future Rights-of-Way for access or other purposes could degrade the values associated with PRCIs.

### From Minerals and Energy Management

**ALL** If development of valid existing rights occurs near PCRI, the integrity of PRCIs may be diminished and the visual setting of important Native American locations could be impaired. **ALL**

### From Recreation Management

Allowing overnight camping throughout the planning area and maintaining current restrictions on recreational uses could lead to conflicts between recreationists and Native Americans pursuing traditional practices.

Unrestricted camping along Mahogany Creek could impact water quality and affect Lahontan cutthroat trout populations, which are important to the Summit Lake Tribe.

### From Public Outreach and Visitor Service Management

**ALL** Implementing and supporting programs that increase public appreciation of the values of the planning area could lead to increased appreciation of Native American values, decreased inadvertent impacts on sites and resources important to Native Americans, reduced user conflicts, and increased opportunities for Native Americans to pursue traditional uses. **ALL**

## 4.2.1.4 Impacts on Paleontological Resources

### From Land Health Standards

Where measures are implemented that improve soil stability and vegetation cover, paleontological resources would be expected to be better protected from damage associated with soil erosion.

### From Transportation and OHV Management

Managing BLM system roads to their functional and maintenance class could decrease the integrity of paleontological resources in areas where maintenance results in new disturbance. Maintenance where road braiding, erosion, and other problems associated with unmaintained roads would locally decrease surface disturbance and reduce erosion resulting in increased stability of fossil resources.

Continuing to designate the remainder of the planning area outside Wilderness as open to OHV use could lead to fossil theft, breakage, and displacement; vandalism, alteration, and erosion of sites; and inadvertent damage to important sites.

### From Cultural Resource Management

No impacts are anticipated.

### From Native American Values Management

No impacts are anticipated.

### From Paleontological Resource Management

 Focusing paleontological inventories on the west Arm of the Black Rock Desert, Soldier Meadows, and the Black Rock Desert Wilderness would enhance scientific inquiry and knowledge of the resources. Consequently, paleontological inventories in these areas could also decrease fossil theft, breakage, and displacement; vandalism, alteration, and erosion of sites; and the risk of inadvertent damage to important sites increasing awareness of the resource during project planning.



### From Wilderness Management

Current conditions would be maintained.

### From Special Designation Management

No impacts are anticipated.

### From Vegetation Management

No impacts are anticipated.

### From Livestock Grazing Management

No impacts are anticipated.

### From Wild Horse and Burro Management

No impacts are anticipated.

### From Fire Management

 Limiting the use of heavy surface disturbing equipment could decrease the risk of inadvertent damage to important sites. 

### From Fish and Wildlife Management

No impacts are anticipated.

### From Visual Resource Management

No impacts are anticipated.

### From Water Resource Management

No impacts are anticipated.

### From Lands and Realty Management

The granting of future Rights-of-Way for access or other uses could lead to inadvertent damage to important sites and increase the potential for fossil theft, breakage, or displacement, and vandalism, alteration, or erosion of sites.

### From Minerals and Energy Management

Current conditions would be maintained.

### From Recreation Management

Allowing legal and noncommercial collection using nonmotorized hand tools without permit and petrified wood collection with limits could result in inadvertent damage to important sites; fossil, theft, breakage, or displacement; and vandalism, alteration, or erosion of sites. However, collection could lead to increased knowledge of the resource when collectors seek the help of professionals in identifying their finds.

### From Public Outreach and Visitor Service Management

 Implementing and supporting programs that increase public appreciation of the values of the planning area could lead to increased appreciation of paleontological resources, which in turn could lead to decreased conflicts and risk of inadvertent damage to important sites, enhanced scientific inquiry and/or public use, and decreased fossil theft

and vandalism due to increased knowledge of the resource. 

### 4.2.1.5 Impacts on Wilderness

Wilderness characteristics may be directly or indirectly impacted by various management actions from recreation, wilderness, special designations, vegetation, grazing, wild horses and burros, fire, fish and wildlife, water, minerals, and outreach. Management decisions in the plan may have beneficial or adverse impacts on such wilderness characteristics as naturalness, opportunities for solitude, or opportunities for primitive and unconfined recreation.

#### From Land Health Standards

Applying Rangeland Health Standards to grazing activities would maintain or improve naturalness when actions are taken to meet the standards for soil, vegetation or biodiversity.

#### From Transportation and OHV Management

No impacts are anticipated.

#### From Cultural Resource Management

 Focusing cultural inventories on Wilderness Areas would improve knowledge related to cultural resources, one of the supplemental values found in Wilderness Areas. 

#### From Native American Values Management

No impacts are anticipated.

#### From Paleontological Resource Management

 Focusing paleontological inventories on the Black Rock Desert Wilderness would improve knowledge of paleontological features within Wilderness Areas. 

#### From Wilderness Management

 Managing closed ways inside Wilderness Areas to maintain natural conditions, and occasionally installing barriers and gates on the closed ways would enhance naturalness by decreasing inadvertent vehicle trespass inside Wilderness Areas. 

Signing the Wilderness Area boundaries at approximately 1-mile intervals, along appropriate boundary roads or as needed, would maintain the naturalness, solitude, and primitive recreation values inside Wilderness by decreasing inadvertent vehicle trespass.

#### From Special Designation Management

Current conditions would be maintained.

#### From Vegetation Management

 Using rehabilitation and restoration efforts on areas burned by wildland fires and emphasizing native shrub and herbaceous species would maintain the naturalness of the areas. Use of nonnative seeds for rehabilitation in Wilderness could minimally decrease the naturalness of the area. However, this impact would be less than that associated with allowing undesirable exotic grasses, such as cheatgrass, to establish themselves in the disturbed areas. 

 Controlling weed infestations in Wilderness Areas and the Lahontan cutthroat trout Area by methods consistent with minimum tool requirements would improve native vegetation conditions and consequently enhance or maintain naturalness. 

#### From Livestock Grazing Management

 Continuing not to graze portions of the Massacre Mountain Allotment associated with High Rock Canyon and the Little High Rock portion of the Bare Allotment on a regular basis would maintain naturalness over a large portion of the East Fork High Rock, High Rock, and Little High Rock Canyon Wilderness Areas. 

 Excluding the Mahogany Creek Enclosure portion of the Soldier Meadows Allotment from grazing would maintain naturalness on 2,562 acres of the Lahontan Cutthroat Trout Wilderness Study Area. 

#### From Wild Horse and Burro Management

 Gathering wild horses and burros from the herd management areas to achieve the appropriate management level would enhance or maintain naturalness by reducing the impacts these animals could have on the area. Impacts from excess wild horses and burros could include

competition with the areas' native populations of wildlife, overgrazing of riparian areas, and trampling of springs. Gather actions could also temporarily decrease the opportunities for solitude of the area during the actual gather. **ALL**

### From Fire Management

**ALL** Using “minimum impact suppression techniques” for all fire suppression activities would maintain naturalness and solitude. **ALL**

Continuing to manage fire under the existing fire plan would impact naturalness at higher elevations by not allowing the natural disturbance of fire to operate and shape vegetation communities within Wilderness. Naturalness in the Jackson Mountains Wilderness Areas would be maintained because fire would continue to be allowed to burn under certain prescriptions. Unnatural conditions associated with full fire suppression would likely continue at these higher elevation sites under the current fire plan. Naturalness of the lower elevation portions of the Wilderness Areas would probably be maintained because the threats associated with exotic annual grass invasion after a fire event would be minimized under the existing fire plan.

### From Fish and Wildlife Management

**ALL** Allowing trap and transplant activities associated with native wildlife species in Wilderness, if necessary to meet minimum requirements for Wilderness Areas, could maintain or enhance the naturalness and primitive recreation in the areas. Transplant actions could also temporarily decrease opportunities for solitude in the area during the actual transplant. **ALL**

**ALL** Continuing to schedule use of aircraft survey and monitor wildlife populations to avoid high visitor use periods would minimize the flights' impacts on solitude and primitive recreation. **ALL**

**ALL** Allowing use of aircraft or mechanized equipment to conduct emergency wildlife-related actions and to distribute mineral or medicated blocks for wildlife would decrease the opportunities for solitude and primitive recreation in the areas during the use of the equipment. **ALL**

**ALL** Conducting habitat rehabilitation and restoration projects and activities could maintain or enhance the naturalness of the areas. During the implementation of the projects, opportunities for

solitude and primitive recreation could be decreased. **ALL**

**ALL** Not constructing additional wildlife water developments or performing other habitat manipulations to manage naturalized game bird populations in Wilderness would maintain the naturalness and solitude of the areas. **ALL**

Continuing to maintain existing wildlife water developments in Wilderness Areas (five in High Rock Lake, one in Calico Mountains, five in North Black Rock Range, one in the North Jackson Mountains, and three in the Pahute Peak Wilderness Areas) would maintain manmade structures locally impacting naturalness on a small portion of the areas.

### From Visual Resource Management

Current conditions would be maintained.

### From Water Resource Management

**ALL** Managing the potential recovery of streams to meet the life history requirements of the Lahontan cutthroat trout would maintain or enhance naturalness in the North Black Rock Range Wilderness, North and South Jackson Mountains Wildernesses, the High Rock Lake Wilderness, the Calico Mountain Wilderness, and the Lahontan cutthroat trout WSA. **ALL**

### From Lands and Realty Management

Current conditions would be maintained.

### From Minerals and Energy Management

**ALL** Potential mining operations associated with the gold claims in the South Jackson Mountains Wilderness could impact the wilderness values of the area. Although the potential footprint of mining disturbance would affect only 500 acres, the sights and sounds of an open pit gold mine would reduce the wilderness values over half of the Wilderness Area. Wilderness values in the direct vicinity of the 500-acre open pit mine would no longer exist. However, the probability of this development occurring is estimated by BLM at less than 10 percent. **ALL**

**ALL** Continuing to withdraw a major portion of the Lahontan Cutthroat Trout Area to location, entry, and patent would maintain naturalness and the special features associated with the WSA. **ALL**

Continuing to leave the routes and boundary roads outside the NCA, but adjacent to the Wilderness Areas, open to location, entry, and patent could decrease naturalness and solitude if mineral development occurs adjacent to the Wilderness Area. The likelihood of such development is considered low.

### From Recreation Management

**ALL** Applying restrictions on recreational activities, if resource impacts occur as a result of the recreation activities, would maintain naturalness. **ALL**

**ALL** Allowing only use of dead and down wood or imported firewood for campfires would maintain naturalness by reducing the cutting of live trees. **ALL**

**ALL** Requiring all outfitters and guides to adhere to Leave No Trace® principles would maintain the naturalness of the areas. **ALL**

Continuing to allow legal and noncommercial collection of rocks, minerals, and invertebrate fossils without a permit and collection of petrified wood with limits could decrease naturalness.

### From Public Outreach and Visitor Service Management

**ALL** Implementing and supporting programs that increase public appreciation of the values of the planning area would indirectly increase naturalness, and opportunities for solitude and primitive recreation, by raising awareness of important and sensitive values. Visitors also would be less likely to inadvertently engage in activities that would disturb wilderness values. **ALL**

## 4.2.1.6 Impacts on Special Designations

### 4.2.1.6.1 ACECs

The High Rock Canyon and Soldier Meadows ACECs were designated because of their important values and identified needs for special management of those values. This section identifies consequences for those identified values. The special values identified for High Rock Canyon relate to the emigrant trail and associated cultural

resources, important wildlife and riparian resources, and the primitive character of the area. The special values identified for Soldier Meadows are associated with a unique hot springs complex and the rare plant and animal species, and cultural resources that are found within the ACEC.

### From Land Health Standards

No impacts on the High Rock Canyon ACEC would be anticipated; almost none of the ACEC is currently grazed by livestock.

Continuing to apply Rangeland Health Standards to livestock grazing activities would support efforts to maintain and improve habitat for the desert dace, springsnails, and basalt cinquefoil. When actions are taken to meet one or more standard related to the important ACEC values, those actions would result in improved resource conditions within the ACEC.

### From Transportation and OHV Management

Managing BLM system roads to their designated functional and maintenance class would lead to increased visitation to both the High Rock Canyon and the Soldier Meadows ACECs. During the short term, little change in the current conditions of the two ACECs would be expected. However, increased numbers of recreational users would continue to use the High Rock Canyon ACEC at times and in locations that would result in long-term impacts on the important values. Specifically, increased visitor use during the month of April each year could result in disturbance of lambing bighorn ewes, leading to abandonment of important lambing sites near the High Rock Canyon Road. Increased visitor use of the Soldier Meadows ACEC would lead to increased disturbance of habitats for the desert dace, springsnails, and basalt cinquefoil.

Limiting OHV use in the High Rock Canyon and allowing open OHV use in the remainder of the planning area would maintain existing disturbance of habitat for bighorn sheep, raptors, riparian systems, and segments of the Applegate Emigrant Trail associated with the use of roads. Vehicle use of several segments of vehicle routes, totaling several hundred yards in length, would continue to directly disturb basalt cinquefoil habitat.

### From Cultural Resource Management

No impacts are anticipated.

### From Native American Values Management

No impacts are anticipated.

### From Paleontological Resource Management

No impacts are anticipated.

### From Wilderness Management

Current conditions would be maintained.

### From Special Designation Management

**ALL** Acquiring lands adjacent to an existing ACEC if they contain relevant and important resources could decrease disturbance of important habitat for the desert dace, springsnails, and basalt cinquefoil within the Soldier Meadows ACEC and of wildlife habitat and scenic quality in the High Rock Canyon ACEC. This action would also have a potential to slightly increase visitor appreciation of the values for which the ACEC was created.

**ALL** Maintaining a seasonal closure of the High Rock Canyon Road to vehicles, from February 15 through March 31 each year, would continue to protect the primitive character of the canyon and the associated emigrant trail segment by limiting vehicle use during portions of raptor nesting, bighorn lambing, and periods when roads are most likely to be rutted by vehicle use.

### From Vegetation Management

**ALL** Control of noxious weeds using the best combination of treatment practices developed specifically for the target species and the infested site could aid in maintaining habitats for the desert dace, springsnails, and basalt cinquefoil in a natural condition and would protect the primitive character of the High Rock Area and the associated emigrant trail segments if noxious weeds would be controlled. **ALL**

### From Livestock Grazing Management

Current conditions would be maintained.

### From Wild Horse and Burro Management

**ALL** Gathering horses and burros from herd management areas to achieve the appropriate management level would maintain the relatively natural disturbance regime of important habitat for the desert dace, springsnails, and basalt cinquefoil and would protect the primitive character of the High Rock Area and the associated emigrant trail segments by limiting wild horse—related disturbance to levels that allow achievement of a thriving ecological balance between horses and other resources. **ALL**

### From Fire Management

Current conditions would be maintained.

### From Fish and Wildlife Management

**ALL** Maintaining the High Rock Canyon as a Watchable Wildlife Site could increase visitor appreciation of the values for which the High Rock Canyon ACEC was established, by developing a better understanding of the important wildlife and habitat. However, it also could potentially decrease the primitive character of the canyon and the associated emigrant trail segments if visitor use associated with wildlife viewing increases. **ALL**

### From Visual Resource Management

Current conditions would be maintained.

### From Water Resource Management

**ALL** Managing all nongeothermal water resources to Class A or other site-specific objectives and managing geothermal spring sources to meet the needs of the resident wildlife species could decrease disturbance of important habitat for the desert dace and springsnails. If specific restrictions on activities are implemented to meet water quality objectives, improvements in natural resource values would be anticipated. **ALL**

### From Lands and Realty Management

No impacts are anticipated.

### From Minerals and Energy Management

No impacts are anticipated.

### From Recreation Management

Current conditions would be maintained.

### From Public Outreach and Visitor Service Management

**ALL** Implementing and supporting programs that increase public appreciation of the values of the planning area could increase visitor appreciation of the values for which the two ACECs were established and minimize future conflicts with those values. Increasing public appreciation of the ACEC values could minimize resource damage from camping in sensitive areas, decrease disturbance of important sensitive habitat, and protect the primitive character of the canyon and the associated emigrant trail segment. **ALL**

#### 4.2.1.6.2 Wild and Scenic Rivers

Sixteen streams were found to be eligible for designation as Wild and Scenic Rivers because of the outstandingly remarkable values associated with them. Outstandingly remarkable values vary among the stream segments. Specific values for the stream segments can be found in Chapter 3. This section identifies consequences for those identified values. Outstandingly remarkable values may include scenic, geologic, historic and prehistoric, and recreational values, and occurrence of special status species.

Because of NCA, Wilderness, and WSA designations, and existing management, these stream segments already have some level of protection; however, other management actions under each alternative may affect outstandingly remarkable values.

### From Land Health Standards

Applying Rangeland Health Standards to livestock grazing would continue to alleviate damage from grazing activities, maintain or improve riparian conditions, and maintain the values associated with the stream segments.

### From Transportation and OHV Management

Managing BLM system roads to their functional and maintenance class could decrease soil erosion from vehicular traffic and sedimentation in streams over the long term. These

road improvements would occur along 25.25 miles of BLM system roads near eligible stream segments, including High Rock Canyon Trail (#37002), Donnelly Creek Road (#2088), Jackson Creek Road (#217), Bartlett Butte Road (#2052), Franks Road (#37005), and High Rock Lake Road (#2054). Other routes also cross or run near eligible stream segments.

Improving access could lead to increased visitation and associated activities that might degrade outstandingly remarkable values.

### From Cultural Resource Management

No impacts are anticipated.

### From Native American Values Management

No impacts are anticipated.

### From Paleontological Resource Management

No impacts are anticipated.

### From Wilderness Management

Current conditions would be maintained.

### From Special Designation Management

Current conditions would be maintained.

### From Vegetation Management

**ALL** Rehabilitation and restoration efforts in areas burned by wildland fires could decrease soil erosion and subsequent runoff into eligible stream segments. **ALL**

### From Livestock Grazing Management

**ALL** Continuing to allow grazing in the Massacre Mountain, Bare, Soldier Meadows, Paiute Meadows, Pine Forest, Jackson Mountains, Happy Creek, and Buffalo Hills Allotments, in accordance with current multiple use decisions and allotment plans, could impact eligible stream segments. **ALL**

**ALL** Continuing to exclude portions of the Massacre Mountain Allotment and the Bare Allotment from regular grazing would continue to protect the values associated with High Rock Canyon, Mahogany, East Fork High Rock Canyon, and Little High Rock Canyon Creeks. **ALL**

**ALL** Continuing to exclude the Mahogany Creek Enclosure of the Soldier Meadows Allotment

from grazing would maintain the values of Mahogany and Summer Camp Creeks. 

#### **From Wild Horse and Burro Management**

 Gathering horses and burros from the herd management areas to achieve an appropriate management level would reduce impacts from overpopulation of wild horses and burros and maintain the values associated with eligible streams. 

#### **From Fire Management**

No impacts are anticipated.

#### **From Fish and Wildlife Management**

Current conditions would be maintained.

#### **From Visual Resource Management**

Current conditions would be maintained.

#### **From Water Resource Management**

 Managing streams to meet the life history requirements of the Lahontan cutthroat trout would enhance the fisheries values of Mahogany, Summer Camp, Snow, North Fork of Battle, Colman, Donnelly, Happy, Mary Sloan, and Jackson Creeks. These streams were all found to be eligible for wild and scenic river designation because of their existing or potential Lahontan cutthroat trout populations. 

 Managing non-geothermal water resources to Class A standards or site-specific objectives and managing geothermal springs for existing populations of native fish or other aquatic organisms could decrease disturbance near riparian areas and enhance outstandingly remarkable values. 

#### **From Lands and Realty Management**

No impacts are anticipated.

#### **From Minerals and Energy Management**

Continuing the segregation of the Lahontan cutthroat trout Area would maintain the values of Mahogany, Summer Camp, and Snow Creeks.

#### **From Recreation Management**

 Restricting recreational activities where resource impacts occur and restricting camping to areas more than 300 feet from springs, unless otherwise designated, could decrease disturbance of values associated with eligible stream segments.

 Continuing to allow overnight camping throughout the planning area would continue to disturb sensitive resources and visual quality, which would affect outstandingly remarkable values as visitation increases.

#### **From Public Outreach and Visitor Service Management**

 Implementing and supporting programs that increase public appreciation of the values of the planning area could indirectly protect outstandingly remarkable values by decreasing recreational disturbance. 

### **4.2.1.7 Impacts on Vegetation**

Because decisions related to vegetation management in all alternatives are constrained by the Rangeland Health Standards, few additional, specific decisions related to such management are contained in the alternatives of this plan. The objectives and actions related to vegetation in all alternatives are considered the minimum necessary to meet Rangeland Health Standards for those resources.

#### **From Land Health Standards**

Continuing to apply Rangeland Health Standards to livestock grazing could lead to improved species composition, productivity, and structure of upland and riparian plant communities when actions are taken to meet one or more of the standards.

#### **From Transportation and OHV Management**

Managing BLM system roads to their current maintenance class would increase disturbance vegetation immediately adjacent to these roads, on a few acres per year when existing roads are improved to include drainage ditches. Decreased surface disturbance associated with the elimination

of braided or parallel alignments would increase vegetation cover in a few areas.

Continuing to leave the planning area outside of Wilderness, High Rock Canyon, and the Lahontan cutthroat trout WSA open to OHV use would locally increase disturbance to vegetation where users pioneer new vehicle tracks in vegetated areas.

#### **From Cultural Resource Management**

**ALL** Closing Class B historic trail segments to all mechanized vehicles would have no impacts because generally these segments are not being used by motorized vehicles. Implementing seasonal closures for vehicle traffic on 17 miles of Class C historic trail in High Rock Canyon would maintain existing vegetation. **ALL**

#### **From Native American Values Management**

Current conditions would be maintained.

#### **From Paleontological Resource Management**

No impacts are anticipated.

#### **From Wilderness Management**

**ALL** The restoration of approximately 300 miles of vehicle ways within Wilderness Areas would decrease the risk of weed infestation along those ways and lead to improved conditions of native vegetation communities on about 300 acres. **ALL**

#### **From Special Designation Management**

Current conditions would be maintained.

#### **From Vegetation Management**

**ALL** Conducting rehabilitation and restoration efforts native seed in areas burned by wildland fires, establishing green stripping to protect rangeland vegetation communities at risk of stand conversion, and allowing seed collection to support restoration of native plant communities would reduce the likelihood that burned areas would become dominated by invasive annual species. **ALL**

**ALL** Efforts to control noxious weeds would enhance vegetation communities by reducing noxious weed. **ALL**

#### **From Livestock Grazing Management**

**ALL** Maintaining the current livestock grazing use authorizations would generally lead to the maintenance of species composition, productivity, and structure of upland and riparian plant communities. **ALL**

**ALL** Continuing not to graze the currently ungrazed portions of the Massacre Mountain Allotment, the Little High Rock portion of the Bare Allotment, and the Mahogany Creek Enclosure and the Stanley Camp Pasture of the Soldier Meadows Allotment would allow improvement or maintenance of species composition, productivity, and structure of upland and riparian plant communities. **ALL**

#### **From Wild Horse and Burro Management**

**ALL** Maintaining the current herd management units and appropriate management levels of wild horses and burros would improve or maintain species composition, productivity, and structure of upland and riparian plant communities. **ALL**

#### **From Fire Management**

Maintaining the existing fire management zones would improve or maintain vegetation conditions for upland and riparian plant communities by providing opportunities for use of fire where beneficial to vegetation and reducing fire occurrence where detrimental.

#### **From Fish and Wildlife Management**

**ALL** Implementing management actions to sustain or improve sage-grouse winter, breeding, nesting, and brooding habitats and implementing other habitat rehabilitation and restoration projects and activities would improve or maintain species composition, productivity, and structure of upland sagebrush and meadow plant communities, especially plant communities with mature sagebrush stands. **ALL**

#### **From Visual Resource Management**

Current conditions would be maintained.

#### **From Water Resource Management**

**ALL** Implementation of the water quality objectives for Lahontan cutthroat trout streams and

Class A designation or other site-specific objectives elsewhere could lead to actions that would improve or maintain species composition, productivity, and structure of riparian plant communities associated with streams with existing or potential populations of Lahontan cutthroat trout or other streams requiring management changes to meet water quality objectives. Vegetation damage associated with direct and indirect vehicle impacts would also be reduced where actions required for water quality result in closure or improvement of roads. **ALL**

#### From Lands and Realty Management

**ALL** Issuing rights-of-way that provide access to private lands outside of Wilderness could result in an increase or continuation of vegetation damage from vehicles on a limited area associated with the access rights-of-way. New access routes for vehicles could increase the spread of noxious weeds along these new routes. This would likely apply to a very small area, because few inholdings would require construction of new access routes, and most rights-of-way would be granted using existing access without increasing the existing disturbance.

**ALL** Granting rights-of-way outside of Wilderness in support of existing mining activities has the potential to degrade species composition, productivity, and structure of upland and riparian plant communities associated with minerals activity, including a low probability that two large mines would be developed in the South Jackson Mountains and near Rabbithole Spring. Rights-of-way could disturb less than 20 acres and slightly increase the spread of noxious weeds within the planning area. **ALL**

#### From Minerals and Energy Management

**ALL** Continuing to leave federal lands in the South Playa Area and routes outside the NCA open to location, entry, and patent would have almost no potential to cause loss of vegetation because the South Playa is unvegetated and the remainder of the open area has no projected minerals activity. **ALL**

**ALL** Potential minerals development on existing mining claims; geothermal development in the South Playa Area; and development of 12 gravel pits totaling up to 60 acres, for road maintenance could result in a loss of vegetation on lands associated with minerals activity, including several

hundred acres associated with a low probability that two large mines would be developed in the South Jackson Mountains and near Rabbithole Spring. This could also increase the risk of noxious weed establishment within the planning area. **ALL**

#### From Recreation Management

**ALL** Applying specific restrictions to recreational activities where these activities have resource impacts could improve vegetation cover, composition, and structure on the few acres where restrictions on visitor use are applied. **ALL**

#### From Public Outreach and Visitor Service Management

**ALL** Implementing and supporting programs that increase public appreciation of the values of the planning area could reduce impacts on vegetation on few acres associated with high public use. **ALL**

### 4.2.1.8 Impacts on Livestock Grazing

In all alternatives, decisions related to livestock grazing management are constrained by the Rangeland Health Standards and the NCA legislation. Management decisions are based on existing allotment management plans and related to decision documents.

#### From Land Health Standards

Applying the existing Rangeland Health Standards to livestock grazing could result in changes to livestock grazing practices, including timing, duration, frequency, intensity, and areas of grazing use, if an evaluation determines that livestock grazing is a major factor in not meeting one or more standards.

#### From Transportation and OHV Management

Improving the Pershing County portion of Soldier Meadows Road and maintaining BLM system roads at existing maintenance levels would decrease maintenance of ranch vehicles and decrease travel times on the maintained roads.

#### **From Cultural Resource Management**

Current conditions would be maintained.

#### **From Native American Values Management**

Current conditions would be maintained.

#### **From Paleontological Resource Management**

Current conditions would be maintained.

#### **From Wilderness Area Management**

Current conditions would be maintained.

#### **From Special Designation Management**

Current conditions would be maintained.

#### **From Vegetation Management**

There is, however, a potential for actions in support of the restoration of burned lands and the management of noxious weed and invasive species to decrease operator flexibility related to livestock grazing practices, including intensity, duration, frequency, timing, and areas of grazing use. 

#### **From Livestock Grazing Management**

 Maintaining the current livestock grazing use authorizations and the class of livestock in allotments would maintain operator flexibility related to livestock grazing practices, including intensity, duration, frequency, timing, and areas of grazing use. 

 Including Massacre Ranch in the Massacre Mountain Allotment and making it available for livestock grazing as part of a plan for the allotment could increase areas available for grazing and increase operator flexibility related to livestock grazing practices, including intensity, duration, frequency, timing, and areas of grazing use. 

 Maintaining or modifying existing authorized structural rangeland projects would increase operator flexibility related to livestock grazing practices by retaining existing water, fences, and other types of livestock-related projects. It could also increase areas available for livestock grazing. In addition, it might provide for continued vandalism of livestock-related projects and maintain similar levels of operational expenses for livestock operators. 

 Making adjustments in livestock and wild horse and burro forage and class of use based on monitoring data or on proportions of animal unit months of appropriate management levels could cause changes in operator flexibility related to livestock grazing practices, including intensity, duration, frequency, timing, and areas of grazing use. 

#### **From Wild Horse and Burro Management**

Impacts would be similar to those discussed in the preceding subsection (From Livestock Grazing Management).

#### **From Fire Management**

Current conditions would be maintained.

#### **From Fish and Wildlife Management**

 Allowing animal damage control activities to be conducted, as needed, within the planning area outside of Wilderness would preserve the opportunity to remove predators causing losses of livestock. 

#### **From Visual Resource Management**

Current conditions would be maintained.

#### **From Water Resource Management**

 Managing potential recovery streams to meet the life history requirements of Lahontan cutthroat trout and desert dace, managing all nongeothermal water resources to Class A standards, and managing geothermal sources for existing native species and other organisms could decrease operator flexibility related to livestock grazing practices. 

#### **From Lands and Realty Management**

No impacts are anticipated.

#### **From Minerals and Energy Management**

Current conditions would be maintained.

#### **From Recreation Management**

No impacts are anticipated.

## From Public Outreach and Visitor Service Management

Current conditions would be maintained.

### 4.2.1.9 Impacts on Wild Horses and Burros

Direct impacts on wild horses and burros by other resource management decisions in this plan would be minimal and consistent across all alternatives.

#### From Land Health Standards

Although Rangeland Health Standards do not apply to wild horses and burros, implementation of livestock grazing actions that improve land health on areas occupied by wild horses or burros should also benefit these animals by improving overall vegetation, soil, and water conditions.

#### From Transportation and OHV Management

 Improving the Pershing County portion of Soldier Meadows Road and maintaining BLM system roads to the designated maintenance levels would decrease travel times associated with wild horse and burro management including gathers. 

#### From Cultural Resource Management

Current conditions would be maintained.

#### From Native American Values Management

Current conditions would be maintained.

#### From Paleontological Resource Management

Current conditions would be maintained.

#### From Wilderness Area Management

Current conditions would be maintained.

#### From Special Designation Management

Current conditions would be maintained.

#### From Vegetation Management

 Specific actions to restore burned lands and manage noxious weed and invasive species are

required constraints and would therefore have no impact on wild horses or burros specific to adoption of this alternative. There is, however, a potential for actions taken under this constraint to change areas used by wild horses or burros to temporarily or permanently alter the appropriate management levels allow burned areas to recover. 

#### From Livestock Grazing Management

 Maintaining existing, authorized structural rangeland projects where beneficial to resource values could maintain portions of herd management areas for wild horse or burro use by retaining existing water sources. 

 Adjusting the available forage for wild horses and burros could require changes in appropriate management levels based on monitoring data that shows impacts on resources. 

#### From Wild Horse and Burro Management

 Retaining the current herd management areas and managing the wild horse and burro populations consistent with the Wild Horse and Burro Act of 1971 have the potential to maintain the genetic viability of these populations. 

 Managing contiguous herd management areas (with documented reproductive interaction) as complexes has the potential to enhance the genetic viability of horse and burro populations by managing desirable traits in large meta-populations of horses. 

 Gathering excess horses and burros from the herd management areas to achieve the appropriate management level could result in disruption of the social structure of these animals and increase the harassment and inadvertent mortality of individual animals. 

#### From Fire Management

Current conditions would be maintained.

#### From Fish and Wildlife Management

 Sustaining or improving sage-grouse winter, breeding, nesting, and brooding habitats; limiting activities that have a high risk of disturbing breeding or brooding sage-grouse; and performing other habitat rehabilitation and restoration projects in the planning area could require reductions in

appropriate management levels of horses or burros when monitoring data show impacts on these values. 

#### **From Visual Resource Management**

Current conditions would be maintained.

#### **From Water Resource Management**

 Managing all nongeothermal water resources to Class A standards, managing geothermal sources for existing species populations and other organisms, and managing potential recovery streams to meet the life history requirements of Lahontan cutthroat trout and desert dace could result in a decrease in appropriate management levels of wild horses or burros and could limit the use of herd management areas by wild horses or burros. 

#### **From Lands and Realty Management**

No impacts are anticipated.

#### **From Minerals and Energy Management**

Current conditions would be maintained.

#### **From Recreation Management**

No impacts are anticipated.

#### **From Public Outreach and Visitor Service Management**

Current conditions would be maintained.

### **4.2.1.10 Impacts on Fire Management**

#### **From Land Health Standards**

No impacts are anticipated.

#### **From Transportation and OHV Management**

Fire suppression costs could be reduced by providing a more effective road system. Maintaining BLM system roads to their designated maintenance levels could locally improve fire protection by decreasing access times to fires. The need to use aerial fire suppression instead of ground

suppression could be reduced by enabling ground forces to reach fires in a timely manner.

#### **From Cultural Resource Management**

Current conditions would be maintained.

#### **From Native American Values Management**

Current conditions would be maintained.

#### **From Paleontological Resource Management**

Current conditions would be maintained.

#### **From Wilderness Area Management**

Current conditions would be maintained.

#### **From Special Designation Management**

Current conditions would be maintained.

#### **From Vegetation Management**

 Restoring burned areas, applying green stripping in areas at risk of conversion to invasive annual species, and controlling noxious weeds could reduce the size of fires by creating barriers to fire spread and could decrease suppression costs. 

#### **From Livestock Grazing Management**

Not grazing areas, including the Mahogany Creek Enclosure, Stanley Camp Pasture, and portions of the High Rock area, would continue to maintain increased fuel loads and could indirectly increase the size of potential fires and fire suppression costs on a few thousand acres where fuel accumulations are likely to affect fire size.

#### **From Wild Horse and Burro Management**

No impacts are anticipated.

#### **From Fire Management**

Maintaining the existing fire management zones would maintain opportunities for use of fire where beneficial to vegetation and reduce fire occurrence where detrimental.

#### **From Fish and Wildlife Management**

Current conditions would be maintained.

**From Visual Resource Management**

Current conditions would be maintained.

**From Water Resource Management**

No impacts are anticipated.

**From Lands and Realty Management**

No impacts are anticipated.

**From Minerals and Energy Management**

No impacts are anticipated.

**From Recreation Management**

No impacts are anticipated.

**From Public Outreach and Visitor Service Management**

**ALL** Implementing and supporting programs that increase public appreciation of the values of the planning area would potentially improve effective fire protection, decrease suppression costs, and decrease the potential for human-caused fires by increasing public awareness of fire risks. **ALL**

**4.2.1.11 Impacts on Fish and Wildlife**

**From Land Health Standards**

Continuing to apply Rangeland Health Standards to livestock grazing and managing those activities to achieve the standards could lead to improvements in wildlife habitats when achievement of the biodiversity standard requires changes in management of livestock grazing.

**From Transportation and OHV Management**

Increased public access associated with improved road conditions could lead to direct loss of wildlife habitat and increased disturbance to wildlife populations. Continuing to leave the planning area outside of Wilderness, High Rock Canyon, and the Lahontan Cutthroat Trout WSA open to OHV use could affect fish and wildlife habitat and populations, due to damage to

vegetation, increased erosion, and harassment of animals when additional vehicle tracks are created.

**From Cultural Resource Management**

Current conditions would be maintained.

**From Native American Values Management**

Current conditions would be maintained.

**From Paleontological Resource Management**

No impacts are anticipated.

**From Wilderness Area Management**

Current conditions would be maintained.

**From Special Designation Management**

Closing the High Rock Canyon Road to vehicles from February 15 through March 31 each year would maintain a disturbance free period during a portion of the bighorn lambing and raptor nesting seasons.

**From Vegetation Management**

**ALL** Using rehabilitation and restoration efforts in areas burned by wildland fires, applying green stripping to protect rangeland vegetation communities at risk of stand conversion, and controlling weed infestations would protect wildlife habitat. Increasing opportunities to restore native vegetation communities could decrease erosion and sedimentation of aquatic habitat, maintain and enhance habitat, and enhance species viability. **ALL**

**From Livestock Grazing Management**

**ALL** Maintaining existing authorized structural rangeland projects and modifying all spring developments to provide water for wildlife at ground level adjacent to the spring source would continue to sustain wildlife populations in the vicinity of water projects constructed for livestock. **ALL**

**From Wild Horse and Burro Management**

**ALL** Gathering horses and burros to maintain the appropriate management levels would continue to allow wildlife and wild horses and burros to

coexist in a manner that allows achievement of a thriving ecological balance. **ALL**

### From Fire Management

Maintaining the existing fire management zones would improve or maintain the habitat conditions of upland and riparian plant communities by providing opportunities for use of fire where beneficial to vegetation and by reducing fire occurrence where detrimental. In the short term, erosion and sedimentation of aquatic habitat would occur on a few acres adjacent to burned areas and would increase the chance of wildlife's being disturbed on a few hundred acres. In the long term, increasing vegetation diversity and structure would enhance habitat and species viability on limited areas in the planning area.

### From Fish and Wildlife Management

**ALL** Allowing trap and transplant activities associated with native wildlife species in Wilderness, if necessary, would continue to support wildlife populations. **ALL**

**ALL** Improving sage-grouse winter, breeding, nesting, and brooding habitats and restricting activities that have a high risk of disturbing sage-grouse would decrease the chance of disturbance and would protect and enhance sage-grouse habitats. **ALL**

**ALL** Continuing to conduct habitat rehabilitation and restoration projects would continue to support wildlife populations. **ALL**

Allowing vegetation manipulation projects in accordance with the BLM Interagency Sage-grouse Guidelines and continuing to maintain the existing wildlife water developments in Wilderness Areas would continue to support the area's wildlife.

### From Visual Resource Management

Current conditions would be maintained.

### From Water Resource Management

**ALL** Managing potential recovery streams to meet the life history requirements of Lahontan cutthroat trout and managing all nongeothermal water resources to meet Class A or other site-specific water quality objectives would protect and enhance aquatic habitat and aquatic species viability by decreasing erosion and sedimentation, which could lead to increases in those populations when

management changes are implemented to meet the objectives. **ALL**

**ALL** Continuing to manage the geothermal springs to meet the needs of native aquatic species would continue to protect desert dace, springsnails, and other geothermal dependent wildlife. **ALL**

### From Lands and Realty Management

Current conditions would be maintained.

### From Minerals and Energy Management

Minerals-related development of the mineral leases, claims, and permits that existed at the time of the NCA legislation could increase erosion and sedimentation of aquatic habitat and the chance of wildlife's being disturbed or harassed. It could also reduce wildlife populations on several hundred acres. In addition, there would be a less than 10 percent chance of the development of two large mines on portions of the planning area in the South Jackson Mountains and near Rabbithole Spring. Mineral development activities could also decrease species viability through increased surface disturbance, noise, light, and dust and could degrade habitats.

### From Recreation Management

**ALL** Potential restrictions on recreational activities where resource impacts occur could decrease erosion and sedimentation of aquatic habitat and decrease the chance of wildlife's being disturbed or harassed. If restrictions were applied, inadvertent disturbance by visitors could be reduced and habitat could be protected or enhanced in the immediate vicinity of the restrictions. **ALL**

Enforcement of camping restrictions within areas less than 300 feet from springs would continue to protect aquatic wildlife and riparian habitat.

Continuing to allow overnight camping throughout the planning area would continue to minimally disturb habitat and wildlife near popular campsites, but the frequency of disturbance could increase as visitation increases.

### From Public Outreach and Visitor Service Management

**ALL** Implementing and supporting programs that increase public appreciation of the values of the

planning area would increase visitor appreciation of wildlife values and indirectly benefit those values by decreasing inadvertent disturbance of vegetation and waters and potential harassment of wildlife.

ALL

### 4.2.1.12 Impacts on Special Status Species

The presence of sensitive species requires that actions be implemented over the long term to recover the species, consistent with the requirements of the Endangered Species Act and BLM policy.

#### 4.2.1.12.1

#### Plants

Implementation of the No Action Alternative would have no impacts on special status plant species other than basalt cinquefoil. The populations of these species are generally restricted to specialized habitats related to a combination of unique geology or soil features, and the major risk is loss of that habitat due to minerals activities or other surface-disturbing activities. The mineral withdrawal and Wilderness designations associated with the NCA legislation eliminated the potential for these threats.

#### From Land Health Standards

Requiring livestock grazing to meet Rangeland Health Standards could lead to improved conditions for basalt cinquefoil if restrictions on grazing are applied within Basalt cinquefoil habitats.

#### From Transportation and OHV Management

Continued vehicle use of several segments of vehicle routes totaling several hundred yards in length would continue to directly disturb basalt cinquefoil habitat.

#### From Cultural Resource Management

No impacts are anticipated.

#### From Native American Values Management

No impacts are anticipated.

#### From Paleontological Resource Management

No impacts are anticipated.

#### From Wilderness Area Management

No impacts are anticipated.

#### From Special Designation Management

Maintaining the existing 307-acre Soldier Meadows ACEC would continue to focus management efforts on preserving and protecting basalt cinquefoil habitat.

#### From Vegetation Management

No impacts are anticipated.

#### From Livestock Grazing Management

ALL Maintaining existing structural rangeland projects (e.g., fencing) would indirectly protect basalt cinquefoil habitat and populations by providing seasonal control of existing wild horse and burro use. ALL

#### From Wild Horse and Burro Management

No impacts are anticipated.

#### From Fire Management

No impacts are anticipated.

#### From Fish and Wildlife Management

ALL Conducting habitat rehabilitation and restoration projects and activities in the planning area could improve basalt cinquefoil habitat, benefit individuals, and increase populations where projects target these species or displace potential disturbances to other areas. ALL

#### From Visual Resource Management

No impacts are anticipated.

#### From Water Resource Management

Current conditions would be maintained.

#### From Lands and Realty Management

Current conditions would be maintained.

### From Minerals and Energy Management

No impacts are anticipated.

### From Recreation Management

 Applying restrictions on recreational activities where resource impacts occur could improve basalt cinquefoil habitat, increase species populations, and decrease inadvertent disturbance by visitors where restrictions on recreation activities would be applied to the Soldier Meadows area.

  Restricting camping to areas more than 300 feet from springs would decrease inadvertent disturbance by visitors and potentially increase species populations and improve basalt cinquefoil habitat, because most basalt cinquefoil habitat is within 300 feet of springs. 

### From Public Outreach and Visitor Service Management

 Implementing and supporting programs that increase public appreciation of the values of the planning area could decrease inadvertent disturbance by increasing awareness of basalt cinquefoil. 

#### 4.2.1.12.2 Fish and Wildlife

There are no known impacts on the black tern, least bittern, and white-faced ibis because of the lack of wetlands and the lack of actions affecting those areas.

The eight sensitive bat species, pygmy rabbit, western burrowing owl, Preble's shrew, Nevada viceroy, northern goshawk, and eight known springsnail types would benefit from actions implementing water quality objectives and Land Health Standards.

### From Land Health Standards

Implementation of potential actions related to livestock grazing to meet the habitat requirements of special status species, which is one of the Rangeland Health Standards, would be expected to be one of the primary means of recovering special status species within the planning area.

### From Transportation and OHV Management

Increased maintenance of BLM system roads to meet the designated maintenance levels could lead to increased visitor use to habitats for sage-grouse, pygmy rabbit, Preble's shrew, and western burrowing owl. This could lead to increase disturbance to these species. Continuing to leave the planning area outside of Wilderness, High Rock Canyon, and the Lahontan Cutthroat Trout WSA open to OHV use could cause disturbance of special status species and their habitats when new vehicle tracks are created.

### From Cultural Resource Management

No impacts are anticipated.

### From Native American Values Management

Current conditions would be maintained.

### From Paleontological Resource Management

No impacts are anticipated.

### From Wilderness Area Management

Current conditions would be maintained.

### From Special Designation Management

 Acquiring lands adjacent to existing ACECs and incorporating those lands into the ACEC could decrease disturbance of habitat for bighorn sheep, desert dace, and several types of springsnail and potentially increase their populations. 

 Designating the Lahontan Cutthroat Trout WSA as an ACEC, if it were released from study area status, would continue to protect Lahontan cutthroat trout habitat by limiting human-related disturbances, which could lead to increased species populations by increasing the public awareness of the values within the LCT Area. 

Maintaining the existing High Rock ACEC would continue to protect bighorn sheep and their habitat. Closing the High Rock Canyon Road to vehicles from February 15 through March 31 each year would reduce human disturbance of lambing bighorn sheep and nesting.

Maintaining the existing 307-acre Soldier Meadows ACEC would continue to focus management efforts on the protection of desert dace

and four types of springsnails and the preservation of their habitats.

#### From Vegetation Management

**ALL** Using rehabilitation and restoration efforts on areas burned by wildland fires, applying green stripping to protect rangeland vegetation communities at risk of stand conversion, and controlling weed infestations would maintain habitat for special status species, including sage-grouse, pygmy rabbit, Preble's shrew, and western burrowing owl. **ALL**

#### From Livestock Grazing Management

**ALL** Continuing current livestock grazing use authorizations and excluding portions of the Massacre Mountain Allotment and the Bare Allotment would maintain habitat for special status species, including sage-grouse, pygmy rabbit, Preble's shrew, springsnails, bats, Lahontan cutthroat trout, and western burrowing owl. **ALL**

**ALL** Continuing to exclude the Mahogany Creek Enclosure of the Soldier Meadows Allotment from grazing would maintain water and vegetation that provide habitat for the Lahontan cutthroat trout. **ALL**

#### From Wild Horse and Burro Management

**ALL** Gathering horses to achieve appropriate management levels and managing horses to achieve a thriving ecological balance would maintain habitats for special status species, including sage-grouse, pygmy rabbit, Preble's shrew, springsnails, bats, Lahontan cutthroat trout, and western burrowing owl, which would maintain species populations at or above current levels. **ALL**

#### From Fire Management

Current conditions would be maintained.

#### From Fish and Wildlife Management

**ALL** Implementing actions to sustain or improve sage-grouse winter, breeding, nesting, and brooding habitats and restricting activities that have a high risk of disturbing sage-grouse would maintain or improve sage-grouse habitat. **ALL**

#### From Visual Resource Management

Current conditions would be maintained.

#### From Water Resource Management

**ALL** Managing potential recovery streams to meet the life history requirements of Lahontan cutthroat trout would improve habitat quality and potentially decrease habitat disturbance, which could increase populations where management changes would be implemented to meet the water quality objectives. Indirectly, improvements to Lahontan cutthroat trout habitat would improve adjacent aspen stands that northern goshawk use.

**ALL** Managing all nongeothermal water resources to Class A or to achieve other site-specific water quality objectives would potentially improve riparian habitats occupied by springsnails, Preble's shrew, sage-grouse, and bats. **ALL**

#### From Lands and Realty Management

No impacts are anticipated.

#### From Minerals and Energy Management

Current conditions would be maintained.

#### From Recreation Management

**ALL** Potentially restricting recreational activities where resource impacts occur and restricting camping to areas more than 300 feet from springs could improve sensitive habitats, increase special status species populations, and decrease inadvertent disturbance by visitors if such restrictions were applied to the habitats of special status species. **ALL**

**ALL** Managing geothermal springs to meet the needs of native aquatic species would improve springsnail and desert dace habitats in Soldier Meadows. **ALL**

#### From Public Outreach and Visitor Service Management

**ALL** Implementing and supporting programs that increase public appreciation of the values of the planning area would potentially decrease inadvertent disturbance by visitors. **ALL**

### 4.2.1.13 Impacts on Visual Resources

There are four VRM classes, which allow varying levels of visually intensive activities, as described in Appendix G. The VRM classes serve as a management guide for approval of future site-specific activities or placement of development. Designation of VRM Classes I and II would protect the primitive visitor experience from potential future actions or developments; whereas, VRM Classes III and IV would allow visually obtrusive or unaesthetic activities to occur in low-profile areas that are not visible from sensitive viewsheds.

#### From Land Health Standards

Implementing Rangeland Health Standards, where improvements in vegetation and soils are needed could lead to improved riparian and upland plant diversity and cover. This could locally improve visual quality.

#### From Transportation and OHV Management

Increased levels of maintenance to meet the designated maintenance levels would increase disturbance area associated with roads leading to locally decreased visual quality. Restoration of braided or unnecessary parallel road segments would locally decrease disturbance associated with roads leading to decreased visual impacts.

Limiting OHV use in the High Rock Canyon and the Lahontan Cutthroat Trout WSA to existing routes would maintain the primitive, undeveloped, natural quality of the areas; the sense of isolation in the areas; and the areas' Wilderness characteristics and would maintain the setting of the Applegate-Lassen Historic Trail in High Rock Canyon.

Designating the remainder of the planning area outside Wilderness Areas as open to OHV traffic would continue to impact visual resources through soil disturbance and loss of vegetation by allowing proliferation of ways. As visitation increases, visual quality could be further affected.

#### From Cultural Resource Management

Current conditions would be maintained.

#### From Native American Values Management

Current conditions would be maintained.

#### From Paleontological Resource Management

No impacts are anticipated.

#### From Wilderness Management

 Closing all ways in Wilderness to motorized and mechanized vehicles and installing gates or barriers to discourage continued motorized trespass would improve the undeveloped nature within Wilderness Areas and could locally enhance visual quality. However, the signage, gates, and barriers installed along the perimeters could be visually obtrusive unless they are designed to be aesthetically compatible with their surroundings.



#### From Special Designation Management

Current conditions would be maintained.

#### From Vegetation Management

 Establishing green breaks to limit the spread of noxious weeds would increase the number and size of areas of surface disturbance, which could locally diminish visual quality. Using rehabilitation and restoration efforts in areas burned by wildland fires and controlling weed infestations could locally improve native vegetation communities and indirectly enhance visual quality within those viewsheds. 

Continuing to conduct vegetation management activities to meet Land Health Standards leading to improved riparian and upland plant diversity and cover could locally improve visual quality.

#### From Livestock Grazing Management

Current conditions would be maintained.

#### From Wild Horse and Burro Management

Current conditions would be maintained.

#### From Fire Management

Current conditions would be maintained.

#### From Fish and Wildlife Management

Current conditions would be maintained.

### From Visual Resource Management

Managing the Lahontan Cutthroat Trout WSA as VRM Class I and managing the playa, an area along the west side of the Black Rock Range, and the High Rock Canyon as VRM Class II would help maintain the visual quality of the area. Designating the remaining portions of the planning area as VRM Class IV could lead to visually obtrusive activities that degrade visual quality.

### From Water Resource Management

No impacts are anticipated.

### From Lands and Realty Management

 Granting rights-of-way in support of valid existing rights and retaining the two existing utility corridors could introduce aesthetically incompatible or obtrusive materials, which could degrade the settings of historic trails and reduce the primitive, undeveloped naturalness within the immediate viewshed. 

### From Minerals and Energy Management

 Continued development, operation, and expansion of most locatable mineral mines on valid existing claims in the planning area would have minimal impacts on visual resources because of the low mineral reserves and the resulting small scale of these operations. However, there is a less than 10 percent probability that development of the higher potential gold-silver deposits in the South Jackson Wilderness and near the historic trail in the southeast tail of the NCA would impact the setting of the historic trails and reduce the area's primitive, undeveloped character; naturalness; sense of isolation; and visual quality. Infrastructure associated with development of geothermal resources in the South Playa would minimally reduce visual quality. Removal of salable minerals such as sand and gravel from existing pits and development of new pits, possibly resulting in as many as 12 pits disturbing 60 acres, would be restricted to use for the maintenance of roads. This would have minimal impacts on visual resources adjacent to roads in the planning area. 

### From Recreation Management

Current conditions would be maintained.

### From Public Outreach and Visitor Service Management

 Implementing and supporting programs that increase public appreciation of the values of the planning area could lead to decreased resource damage, which could improve visual quality throughout the planning area. 

## 4.2.1.14 Impacts on Water Resources

### From Land Health Standards

Applying Rangeland Health Standards to livestock grazing activities where standards are not being met would locally decrease soil erosion and stream sedimentation, leading to increased hydrologic function.

### From Transportation and OHV Management

Increased maintenance of BLM system roads to meet the designated maintenance levels would result in improved road conditions and decreased braiding leading to decreased runoff and surface erosion. This would lead to decreased soil erosion and sedimentation of streams.

Limiting vehicular use in High Rock Canyon and the Lahontan Cutthroat Trout WSA to existing routes maintain improve vegetative cover and therefore hydrologic function of water sources. However, maintaining OHV use in the remainder of the planning area outside of Wilderness could lead to increased erosion and subsequent sedimentation as visitor use increases and new vehicle tracks are developed.

### From Cultural Resource Management

No impacts are anticipated.

### From Native American Values Management

Current conditions would be maintained.

### From Paleontological Resource Management

No impacts are anticipated.

### From Wilderness Area Management

Current conditions would be maintained.

### From Special Designation Management

Current conditions would be maintained.

### From Vegetation Management

**ALL** Vegetation manipulation projects designed to rehabilitate and protect areas impacted by wildfires would increase the hydrologic function of water resources by enhancing vegetative cover. Although short-term impacts may occur due to ground disturbance, no long-term increases in erosion and sedimentation would be anticipated.

**ALL**

### From Livestock Grazing Management

Current conditions would be maintained unless requirements to meet Rangeland Health Standards or water quality objectives result in a change in livestock grazing practices. If such changes were made localized improvements in water quality would be anticipated.

### From Wild Horse and Burro Management

**ALL** Gathering excess horses and burros from the herd management areas to achieve the appropriate management level and managing the wild horse and burro populations consistent with the Wild Horse and Burro Act of 1971 could result in maintenance of erosion and stream sedimentation associated with this use. **ALL**

**ALL** Adjusting the available forage for wild horses and burros could result in reduced appropriate management levels and therefore reduced erosion and subsequent stream sedimentation, leading to increased hydrologic function. **ALL**

### From Fire Management

Current conditions would be maintained.

### From Fish and Wildlife Management

Current conditions would be maintained.

### From Visual Resource Management

Current conditions would be maintained.

### From Water Resource Management

**ALL** Managing all nongeothermal water resources to Class A standards, managing potential recovery streams to meet the life history requirements of Lahontan cutthroat trout and desert dace, and managing geothermal sources for existing populations of native fish or other aquatic organisms would improve vegetative cover and therefore contribute to enhanced water quality and hydrologic function of streams. **ALL**

### From Lands and Realty Management

**ALL** Granting Rights-of-Way for access to private lands would have minimal impact on water quality. Most of these ROWs would be expected to use the existing access disturbance. **ALL**

**ALL** Construction or development within utility corridors could result in short-term ground disturbance and increased soil erosion and subsequent stream sedimentation, possibly leading to decreased hydrologic function. However, due to the temporary nature of such disturbances, long-term changes to hydrologic function would not be likely. **ALL**

### From Minerals and Energy Management

**ALL** Mining operations associated with the gold claims in the South Jackson Mountains Wilderness would increase erosion and stream sedimentation, leading to increased hydrologic function from construction, vehicular traffic, and other development activities. However, the probability of this development is less than 10 percent due to low potential, would only affect approximately 500 acres and neither of these sites is near streams. Best Management Practices employed during these activities would reduce impacts on streams and water sources. **ALL**

### From Recreation Management

**ALL** Restricting camping activities within 300 feet of springs and managing the geothermal springs area for existing populations of native fish or other aquatic organisms would reduce the potential for human-related contamination and

therefore could result in enhanced water quality.

ALL

As visitation increases in the planning area, continuing to allow camping near riparian areas with no new signage or enforcement would result in greater vehicle and foot traffic that could increase soil erosion, stream sedimentation, and nutrient loading. This would lead to decreased hydrologic function.

#### **From Public Outreach and Visitor Service Management**

ALL Implementing and supporting programs that increase public appreciation of the values of the planning area could decrease the potential for human contamination and thereby enhance water quality. ALL

### **4.2.1.15 Impacts on Lands and Realty**

Management actions and decisions relating to land tenure adjustments and access to private lands could impact lands and realty. No impacts would result from management decisions in other resource areas.

#### **From Land Health Standards**

No impacts are anticipated.

#### **From Transportation and OHV Management**

Improvements in the transportation system associated with upgraded road conditions, improved rail crossings and an all weather road to Soldier Meadows would lead to better access and decreased travel times for land owners and mining claimants.

#### **From Cultural Resource Management**

Current conditions would be maintained.

#### **From Native American Values Management**

Current conditions would be maintained.

#### **From Paleontological Resource Management**

Current conditions would be maintained.

#### **From Wilderness Management**

Current conditions would be maintained.

#### **From Special Designation Management**

Current conditions would be maintained.

#### **From Vegetation Management**

No impacts are anticipated.

#### **From Livestock Grazing Management**

No impacts are anticipated.

#### **From Wild Horse and Burro Management**

No impacts are anticipated.

#### **From Fire Management**

No impacts are anticipated.

#### **From Fish and Wildlife Management**

Current conditions would be maintained.

#### **From Visual Resource Management**

Current conditions would be maintained. Where existing VRM Class II designations are retained granting of utility Rights-of-Way would be more costly than in areas designated as VRM Class IV.

#### **From Water Resource Management**

Current conditions would be maintained.

#### **From Lands and Realty Management**

ALL Impacts from not establishing new utility corridors in Wilderness Areas, the Lahontan Cutthroat Trout Area, High Rock Canyon, the Black Rock Desert Playa, and along the emigrant trail corridor would be minimal because no major utilities are planned for the subject areas and the remoteness of the subject areas does not lend itself to development. ALL

ALL The ability for BLM to grant utility rights-of-way in conformance with constraints would accommodate future unknown demand for development. ALL

ALL Considering the acquisition of private lands within the planning area would maintain the

ability of private property owners to dispose of private property with appropriate compensation and reduce the number of inholdings in the planning area, potentially improving the management of those areas.

**ALL** Discontinuing the issuance of recreation and public purposes leases and Section 302 leases would have no impact on community related development of public lands. There are no known demands for RPP leases in the Planning Area. **ALL**

Retaining the two existing utility corridors would maintain existing utilities and accommodate future utilities.

Denying rights-of-way for aboveground utilities on the Black Rock Desert Playa north of the Union Pacific Railroad track would have no impact on the development of future utilities because a 2.75 mile wide corridor would remain open south of the railroad track.

For portions of the planning area outside Wilderness Areas, considering and granting rights-of-way on a case-by-case basis could accommodate development on public lands while also maintaining opportunities for development on private lands.

#### **From Minerals and Energy Management**

Current conditions would be maintained.

#### **From Recreation Management**

Current conditions would be maintained.

#### **From Public Outreach and Visitor Service Management**

No impacts are anticipated.

### **4.2.1.16 Impacts on Minerals and Energy**

Management decisions could lead to effects on the development of minerals and energy resources that would affect the local economy.

The NCA Act of 2000, as amended, closed the NCA and the Wilderness Areas to mineral location, entry, and patent; to leasable mineral development; and to development of geothermal energy, subject to valid existing rights. Salable mineral

development in the NCA was restricted to road maintenance.

#### **From Land Health Standards**

No impacts are anticipated.

#### **From Transportation and OHV Management**

Improved road condition leading to improved access would facilitate the operation of existing and potential minerals operations.

#### **From Cultural Resource Management**

Current conditions would be maintained.

#### **From Native American Values Management**

Current conditions would be maintained.

#### **From Paleontological Resource Management**

Current conditions would be maintained.

#### **From Wilderness Area Management**

Current conditions would be maintained.

#### **From Special Designation Management**

No impacts are anticipated.

#### **From Vegetation Management**

No impacts are anticipated.

#### **From Livestock Grazing Management**

No impacts are anticipated.

#### **From Wild Horse and Burro Management**

No impacts are anticipated.

#### **From Fire Management**

No impacts are anticipated.

#### **From Fish and Wildlife Management**

Actions required to maintain or restore populations and habitats of special status species could lead to restrictions on the operations of mineral and energy activities.

### From Visual Resource Management

Designating the playa of the Black Rock Desert, an area along the west side of the Black Rock Range, and the High Rock Canyon corridor as VRM Class II would increase the costs of any potential developments.

### From Water Resource Management

Current conditions would be maintained.

### From Lands and Realty Management

**ALL** Not establishing utility corridors in Wilderness Areas, the Lahontan Cutthroat Trout Area, High Rock Canyon, the Black Rock Desert Playa, and along the emigrant trail corridor could increase the cost of potential developments. **ALL**

Denying right-of-way grants for aboveground utilities on the Black Rock Desert Playa north of the Union Pacific Railroad track could increase the cost of any potential development on public lands where powerlines would be required to cross the playa.

### From Minerals and Energy Management

**ALL** **ALL** There would be minimal impact on the potential to develop mineral or energy resources in the LCT area or lands associated with Wilderness Area access in the eastern part of the Planning Areas because the potential for minerals in these areas is considered low. **ALL**

Leaving federal lands within the South Playa Area open to development of all leasable minerals except sodium and potassium would preserve opportunities for development of resources.

**ALL** Potential for mineral development on valid existing claims inside the NCA and Wilderness Areas is low, but a <10 percent potential exists that a gold-silver deposit would be developed in the South Jackson Wilderness Area. Similar potential for gold-silver development exists in the southeast portion of the NCA near Rabbithole Springs. **ALL**

**ALL** **ALL** Opportunities to develop energy from wind-powered and solar-powered devices would be retained in the planning area outside Wilderness, but the area's long distance from population centers makes this a low potential. **ALL**

### From Recreation Management

No impacts are anticipated.

### From Public Outreach and Visitor Service Management

No impacts are anticipated.

## 4.2.1.17 Impacts on Air Quality

Management actions would result in only short-term increases in dust from vehicular use, visitation, or the localized mining activities that occur.

### From Land Health Standards

Current conditions would be maintained.

### From Transportation and OHV Management

Decreased fugitive dust would occur as a result of road improvements and maintenance that compact road surfaces and increase the particle size on the roadbed.

If visitation to the area increases as a result of improved road conditions, the fugitive dust associated with increased vehicular traffic would be expected to increase.

### From Cultural Resource Management

No impacts are anticipated.

### From Native American Values Management

No impacts are anticipated.

### From Paleontological Resource Management

No impacts are anticipated.

### From Wilderness Management

Current conditions would be maintained.

### From Special Designation Management

Current conditions would be maintained.

### From Vegetation Management

Current conditions would be maintained.

#### **From Livestock Grazing Management**

Current conditions would be maintained.

#### **From Wild Horse and Burro Management**

Current conditions would be maintained.

#### **From Fire Management**

 Use of prescribed fire and mechanical treatment of vegetation would result in short-term, localized episodes of smoke and reduced visibility.



#### **From Fish and Wildlife Management**

Current conditions would be maintained.

#### **From Visual Resource Management**

Current conditions would be maintained.

#### **From Water Resource Management**

Current conditions would be maintained.

#### **From Lands and Realty Management**

No impacts are anticipated.

#### **From Minerals and Energy Management**

 Mining operations associated with the gold claims in the South Jackson Mountains Wilderness and near Rabbithole Spring would create short-term and periodic increased fugitive dust from construction, vehicular traffic, and other development activities. However, the probability of this development is less than 10 percent due to low potential and would occur only on approximately 500 acres. 

Allowing federal lands outside the NCA to be open to location, entry, and patent would create short-term and periodic increased fugitive dust from construction, vehicular traffic, and other development activities.

In areas that would remain open to location, entry, and patent, long-term increases could also result from continued mining operations. However, these increases would likely be localized and are subject to federal and State emission regulations.

#### **From Recreation Management**

Continuing to allow overnight camping throughout the planning area and the authorization of large scale special recreation permits on a case-by-case basis would result in increased fugitive dust from dispersed recreation and organized events on the.

#### **From Public Outreach and Visitor Service Management**

No impacts are anticipated.

### **4.2.1.18 Impacts on Soils**

#### **From Land Health Standards**

Applying Rangeland Health Standards to livestock grazing activities would continue to decrease soil disturbance, compaction, and erosion from livestock grazing activities when management changes are implemented to meet standards.

#### **From Transportation and OHV Management**

Managing BLM system roads to their maintenance class would provide for improved road conditions due to set maintenance levels, thus decreasing soil disturbance associated with braided and parallel roads and erosion caused by vehicular traffic. Development of drainage ditches on Maintenance Level 2 roads where they do not currently exist would increase the area of soil disturbance.

As visitation increases in the area, allowing vehicular traffic would increase soil disturbance, compaction, and erosion. Maintaining a large portion of the Planning Area as open to OHV use would result in future increases in soil disturbance associated with the new vehicle tracks created by recreational users.

#### **From Cultural Resource Management**

Current conditions would be maintained.

#### **From Native American Values Management**

Current conditions would be maintained.

#### **From Paleontological Resource Management**

Current conditions would be maintained.

#### **From Wilderness Area Management**

Current conditions would be maintained.

#### **From Special Designation Management**

Current conditions would be maintained.

#### **From Vegetation Management**

**ALL** Soil stability would increase due to vegetation manipulation projects, although short-term increases in soil disturbance, compaction, and erosion could occur from ground activity. Long-term increases in soil productivity would be anticipated. **ALL**

#### **From Livestock Grazing Management**

Impacts would be the same as those under Land Health Standards.

#### **From Wild Horse and Burro Management**

Current conditions would be maintained.

#### **From Fire Management**

Current conditions would be maintained.

#### **From Fish and Wildlife Management**

Current conditions would be maintained.

#### **From Visual Resource Management**

Current conditions would be maintained.

#### **From Water Resource Management**

Current conditions would be maintained.

#### **From Lands and Realty Management**

Increased access through issuance of rights-of-way to inholdings (private lands surrounded by wilderness) could increase traffic and soil disturbance, compaction, and erosion.

Construction or development within utility corridors would result in short-term soil disturbance, compaction, and erosion.

#### **From Minerals and Energy Management**

**ALL** Potential mining activities on lands available for lease and development would disturb soils and potentially result in accelerated erosion and loss of soil productivity in those areas. **ALL**

#### **From Recreation Management**

Continuing minimal restrictions on camping within the entire planning area would result in greater vehicle and foot traffic. This would disturb soils and potentially decrease soil productivity because of soil disturbance, compaction, and erosion.

#### **From Public Outreach and Visitor Service Management**

**ALL** Long-term soil stability could be improved by outreach methods used to mitigate resource impacts. **ALL**

### **4.2.1.19 Impacts on Recreation**

The impacts of the planning decisions on the visitor experience depend on the expectations and values of the individual visitor. A particular action could benefit some users and have a negative effect on others. The degree of impact would also vary relative to user sensitivity. Sensitivity will vary among different user types and will be different between new users and traditional users. In this document we will provide analysis of potential impacts to both traditional users and new users that would be expected to visit the planning area, assuming that these different users groups would have different expectations and desires for recreation opportunities.

#### **From Land Health Standards**

Current conditions would be maintained.

#### **From Transportation and OHV Management**

**ALL** Improving those playa access roads with railroad crossings, and adding them to the BLM road system, would improve the drivability of three short segments of BLM roads. Improved drivability would enhance visitor safety and public access to NCA resources. Improved access could result in a loss of solitude and natural quiet that has

been traditionally available in small portions of the playa margins and Trego Hot Springs. 

Managing BLM system roads to their functional classifications would have impacts resulting from the completion of backlogged upgrades. Improved drivability of BLM roads which would provide recreation opportunities to a greater range of visitors, and has the potential to increase traffic throughout the planning area. There would also be an increased potential for crowding along BLM system corridors, with the potential of reducing opportunities for solitude and natural quiet associated with primitive recreation.

 Closing no additional areas to OHV use, other than required legislative closures to the wilderness areas, would have no additional impact on motorized vehicle access. The perception of recreating in an area free from human disturbance would be enhanced in these areas where OHV use is closed. Continued environmental degradation by OHV use to sensitive habitats, landmarks, cultural resources and other unique resources of the planning area would diminish the opportunities for enjoyment by future generations. 

#### **From Cultural Resource Management**

 Allowing only nonmechanized transportation on Class A and B trail segments and imposing seasonal restrictions on some Class C trail segments would restrict certain recreational activities in some desirable and traditionally used areas. Decreased vehicular access would impact a small population of OHV and mountain bike users. However, these restrictions would have the potential of increasing opportunities for solitude and reduce conflict among different user types.



#### **From Native American Values Management**

Current conditions would be maintained.

#### **From Paleontological Resource Management**

Current conditions would be maintained.

#### **From Wilderness Management**

 Providing signs specifying Wilderness boundaries would help to increase visitor awareness of sensitive areas. A long-term increase in primitive character would be expected because of

reduced motorized trespass and the creation of new ways in Wilderness Areas. These potential outcomes would enhance the perception of recreating in an area free from human development. A decrease in conflict between those using motorized vehicles and those not using motorized vehicles would also be expected. 

Excluding all 10 acquired parcels within the Lahontan Cutthroat Trout WSA from addition to the existing WSA would have long-term impacts on management and the visitor experience. The 1,092 acres within the WSA boundaries would remain as multiple-use land, which would lessen the ability to manage the existing WSA as Wilderness and reduce important values associated with primitive recreation. However, the exclusion from WSA status would retain opportunities associated with motorized travel, which would provide for a wider range of visitors.

#### **From Special Designation Management**

The implementation of the Soldier Meadows Activity Plan would have long-term impacts on visitor use and experiences. The visitor freedom of choice and feeling of recreating in an area free from human development would be impacted through the development of designated camp areas, barriers, and interpretive developments. There would be a localized decrease in solitude because of the potential for increased use as a result of additional developed facilities. However, some visitors would benefit from new recreational developments that would provide recreation opportunities to a greater range of visitors. Interpretive developments would have the potential of increasing visitor awareness of important and sensitive resources and would likely increase the visitor's sense of appreciation and understanding of those resources. These localized developments would reduce use-related impacts throughout the planning area, thereby enhancing the primitive character in undeveloped sites. However, interpretive developments would diminish the opportunities for learning thorough self-discovery by providing structured educational opportunities. Any additional restrictions to recreation activities would increase the potential of displacing traditional users to other areas inside and outside of the planning area.

### From Vegetation Management

**ALL** Actions taken to eradicate noxious weeds may include the use of work crews, which would have the potential for short-term loss of solitude. However, these impacts would be offset by the long-term increase in naturalness, which would enhance the perception of recreating in an environment free from human disturbance. A short-term decrease in public access could also be expected in localized areas during the rehabilitation periods. **ALL**

### From Livestock Grazing Management

Current conditions would be maintained.

### From Wild Horse and Burro Management

**ALL** The use of helicopters to gather wild horses and burros would have the potential of diminishing critical physical, social, and managerial settings of specified areas by decreasing natural quiet and solitude associated with primitive recreation. Reduced impacts on natural systems would enhance primitive recreation by maintaining or restoring the undisturbed character of the area. **ALL**

### From Fire Management

No impacts are anticipated.

### From Fish and Wildlife Management

**ALL** The use of motorized tools in trap and transplant activities, aerial wildlife population surveys, emergency wildlife actions, or to maintain water development would have the potential of diminishing critical physical, social, and managerial settings of specified areas by decreasing natural quiet and solitude associated with primitive recreation. Impacts from aerial surveillance would be localized and minimal because they would be scheduled outside of peak use seasons. Allowing wildlife enhancement activities would enhance the ability to manage wildlife populations, thereby indirectly increasing wildlife viewing and hunting opportunities throughout the planning area. **ALL**

**ALL** Maintaining the Watchable Wildlife Sites in High Rock Canyon, South Jackson Wilderness, and the Lahontan Cutthroat Trout Area would also enhance wildlife viewing opportunities. **ALL**

### From Visual Resource Management

Designating the playa of the Black Rock Desert, an area along the west side of the Black Rock Range and the High Rock Canyon as VRM Class II would retain the critical physical, social, and managerial settings of specified areas and enhance the perception of recreating in an area free from human development.

Retaining a VRM Class IV in portions of the planning area outside of High Rock Canyon, the west side of the Black Rock Range, and the Black Rock Desert Playa would have the potential to diminish the perception of recreating in an area free from human development. Certain critical settings of specified areas would be subject to impact relative to development.

### From Water Resource Management

**ALL** Managing potential recovery streams to meet the life history requirements of desert dace and Lahontan cutthroat trout, managing nongeothermal water to Class A standards, and managing geothermal sources for existing populations of native fish or other aquatic organisms would restrict certain recreational activities in desirable and traditionally used areas of riparian and spring complexes. The resulting loss of available recreation sites would have the potential of increasing visitor competition and would diminish opportunities for unconfined recreation. However, management actions taken to protect listed species would enhance the preservation of rare resources for enjoyment by future generations. **ALL**

### From Lands and Realty Management

Current conditions would be maintained.

### From Minerals and Energy Management

**ALL** Potential minerals and energy operations could directly impact the primitive and undeveloped character of areas in the immediate vicinity and viewsheds. Administering geothermal leases in the South Playa could result in construction-related activities associated with the extraction of resources, which could reduce public access to portions of the planning area. Impacts to SRP proponents and dispersed recreation users would be great, since the largest percentage of area users visit

the south playa at least some time during their trip. Mining operations associated with the gold claims in the South Jackson Mountains Wilderness, near Rabbit-hole Springs, and the potential in and along vehicle access routes could also impact the primitive and undeveloped character of the planning area. However, the probability of this development is less than 10 percent because of low potential.

◀ ALL

### From Recreation Management

▶ ALL Adopting the Nevada Revised Statute restricting camping within 300 foot of springs would have direct and long-term potential to diminish visitors' freedom of choice in campsite location and would enhance the preservation of rare resources for use by future generations. Eliminating camping in spring areas would minimize camping-related impacts and enhance or restore the undisturbed character of localized areas. There would likely be a reduction in competition for day use of springs and for other recreational activities. However, with an overall loss of recreation sites, there would be an increase in competition for desirable campsites. ▶ ALL

▶ ALL Allowing open fires only with the use of dead and down wood and requiring a surface protecting device on the playa would decrease visitor spontaneity and may cause inconvenience to users. However, by eliminating burn scars on the playa and increasing protection of wooded areas, there would likely be an enhanced perception of recreating in an area free from human disturbance.

◀ ALL

▶ ALL Requiring all facilities to be unobtrusive and aesthetically compatible with the area's setting would maintain the perception of recreating in an area free from human development. ▶ ALL

Absence of a permit system for casual use of the planning area would result in a long-term potential for an increase in visitor conflict and competition for favorite/desirable sites because of increased use. Opportunities for spontaneous unconfined recreation would be maintained.

Allowing unpermitted, unlimited collection of rock, minerals, and invertebrate fossils could lead to depletion of rare resources for enjoyment by future generations.

### From Public Outreach and Visitor Service Management

▶ ALL The development of an outreach plan would have indirect impacts on the primitive character and visitor experience of the area by raising awareness of important and sensitive values. Visitors would be less likely to inadvertently engage in activities that would disturb important resources and other visitors within the planning area. A reduction of use-related impacts would enhance the perception of recreating in an area free from human development. The proposed action would also be expected to reduce conflict between different user types. ▶ ALL

▶ ALL Expanding public awareness programs, continuing use of the visitor contact trailer, maintaining an information kiosk in Gerlach, and introducing low-impact recreation principles through volunteers and staff would provide long-term direct and indirect benefits to the visitor experience. These interpretive and educational actions would increase a visitor's sense of appreciation and understanding of area resources, as well as a visitor's awareness of important and sensitive values. Increased recreation opportunities would be available through on-the-ground programs and any additional interpretive exhibits. Indirect benefits would stem from a decrease in inadvertent impacts of visitor use, which would enhance the ability to retain critical physical, social, and managerial settings of specified areas. ▶ ALL

## 4.2.1.20 Impacts on Social and Economic Conditions

### Impacts on Recreation

The designation of an area as an NCA makes it "special" in the perceptions of recreationists, tourists, and general visitors. Ordinarily, this leads to what recreation professionals refer to as a "designation effect." A "designation effect" describes the sudden and often substantial increase in visitation that occurs as a result of the legislative or executive action that creates the special management area. Congress designated the Black Rock Desert-High Rock Canyon Emigrant Trails National Conservation Area in December 2000. To

date all observation indicates that little “designation effect” has occurred.

All available evidence indicates that recreation activity in the Black Rock-High Rock NCA is continuing as it always has, with no unusual visitation or activity. Therefore, under this alternative, which represents a continuation of present management, participation rates for both casual recreation use and Special Recreation Permit events may be expected to grow at a slow rate, unaffected, on balance, by management actions. Casual recreation participation would continue to increase as a result of growth in population and personal income, particularly in the Reno-Sparks metropolitan area. Participation in Special Recreation Permit events would grow in response to expanded publicity in the news media and communication on the Internet. More events and more participation may be expected as knowledge of the unique qualities of the Black Rock Desert Playa, and its particular suitability for specific types of recreation, become increasingly well known. The public has already demonstrated a growing interest as a result of publicity associated with the Burning Man event and the land-speed-record event. This publicity has been national and international in scope.

Based on an analysis of future outdoor recreation participation prepared for the U.S. Forest Service, according to *Projections of Outdoor Recreation Participation to 2050* (Bowker, English, & Cordell), visitor days for casual recreation may be expected to increase to about 76,028 visitor days by the year 2020. This analysis was prepared with specific application to Forest Service regions and embodies the established principle that “supply factors such as proximity and availability of recreation resources are important in determining whether and to what degree individuals recreate.” That observation is consistent with BLM data that indicated 68 percent of the NCA visitation is from northern Nevada, with 28 percent from the Sacramento and San Francisco/San Jose areas, and the remaining 4 percent from other States. The analysis employed here used the Forest Service Rocky Mountain Region, which includes Nevada, for resident recreation projections, and the Pacific Region, which includes California, to project non-resident visitation.

The total of 76,028 recreation visitor days comprises 50,764 resident visitor days and 25,264

nonresident visitor days. These totals result from individual activity estimates for resident days of 16,411 for camping; 914 for picnicking; 14,296 days spent driving for pleasure; 940 spent pursuing educational activities; 929 days for trail-related activities; 14 days in winter activities; 514 days fishing; 4,770 days hunting; and 11,976 days for all other recreation activities.

The 25,264 nonresident visitor days are estimated as follows: 9,159 for camping; 443 for picnicking; 6,435 driving for pleasure; 425 pursuing educational opportunities; 460 days for trail-related activities; 7 days for winter activities; 238 days fishing; 2,101 days hunting; and 5,996 days for all other recreation activities.

Following the procedure discussed in Chapter 3 and applying the expenditure estimates to the estimated number of days for each activity provides a total estimate of expenditures associated with recreation in the planning area of \$2,172,823 for the year 2020. Willingness-to-pay value, the value (or worth) of the experience to the recreationists, is estimated at \$2,134,292 (all estimates are in 2001 dollars).

It is not possible to project with any accuracy the total demand that might ensue for participation in Special Recreation Permit events. Publicity and the public’s interest and enthusiasm would have a greater effect on participation than that which might be attributable to the combined effects of an expanding population and increasing personal income. However, it is reasonable to assume that, except for Burning Man, a most conservative estimate of growth in these activities would be at least equal to the expected increase in participation rates for casual-use recreation, an average of 19 percent growth.

Implications for the Burning Man event are that maximum capacity may have been approached with the attendance of 29,083 persons in 2002. Informal observation and interviews indicate that this results from the limited availability of water for dust abatement and the difficulty of facilitating exit for this number of people with only a single one-lane road available for egress. While the event has been, and continues to be, exceedingly well managed, these limited resources do impose constraints.

Assuming that Burning Man may be constrained in the future (not by BLM requirements, but by limited facilities and

resources) to an attendance of 30,000, and that other Special Recreation Permit participation would grow at the 19 percent rate, total participation for special recreation permit events should reach a minimum of 91,068 visitor days and generate about \$2.5 million in expenditures in the year 2020: \$1,387,142 for residents, and \$1,141,200 for nonresidents.

Using the IMPact Analysis for PLANning multipliers generated for our analysis in Chapter 3, these total recreation expenditures of \$4,701,165 (planning area total of \$2,172,823 plus resident total of \$1,387,142 and nonresident total of \$1,141,200) would generate \$2.3 million in direct labor and proprietor income in the regional economy and would be directly responsible for 106 jobs. The total direct, indirect, and induced effect of these expenditures on the regional economy would amount to \$3.1 million in income and 133 jobs.

The expansion of Special Recreation Permit events would increase demand for public services. It would be important to fully assess potential requirements, for services and resource protection, and ensure that cost-recovery agreements are adequate to provide complete reimbursement for services provided by the county governments, and for federal planning and management services.

In the long term, as all types of recreation participation increase in the planning area, some deterioration and degradation of resource conditions may be expected. This would increase management costs for resource maintenance and protection.

## Impacts on Minerals and Energy

### Locatable Minerals

A reasonably foreseeable minerals development scenario has been prepared to describe potential mineral resource development. This scenario serves to forecast the kind and degree of minerals development that might reasonably be expected to occur under the No Action Alternative and serves as a benchmark against which the effects of management prescriptions under the other alternatives may be compared.

It is expected that three small opal mines and one small geode mine would continue operations in the area. Work may be conducted on a full-time or a part-time basis, and it is generally seasonal, not being conducted in the colder months. Operators usually have other employment and conduct their

mining operation as a supplement to their regular income, as an avocation, or as a recreational activity.

Earnings are not likely to be high, but some commercial sales could result, with a potential income of up to \$10,000–20,000 per year. Operators are likely to have a permanent residence outside of the local area, so the additional income would not provide much benefit to the local economy. Local expenditures, too, would be small, because these operators usually remain on site while working the mine, with temporary quarters in a trailer located at the mine site, or in a truck with a camper shell. All necessary supplies are usually brought in for the duration of the expected stay. Local purchases may consist of incidental groceries, an occasional restaurant meal, local entertainment, and gasoline. County revenues from net proceeds from mine tax would be minimal.

Based on the probability of a hot-spring gold deposit consisting of an estimated 630,000 troy ounces of gold and 2.4 million troy ounces of silver, it is also forecast that development of one gold and silver mining operation would occur. The mine would most likely be a typical open pit heap-leach operation, but there is also the possibility that an underground mining operation might be more efficient depending on the grade and quality of the ore.

The grade of the ore is not known, but for purposes of analysis, an estimate of 2.4 grams of gold per ton has been determined to be reasonable. It is further assumed that the operation would achieve a 90 percent recovery rate for the precious metals. Annual production would be about 2.2 million grams of gold, with an 8-year operating life.

Exploration to determine the extent and quality of the ore body would begin about 1 year before site preparation and construction and continue at a less intensive level throughout the operating life of the mine. No direct local employment may be expected to result from the exploration activities. Usually an exploration company is contracted for the work; however, indirect local income and employment may result from field crew expenditures for food and lodging, gasoline and tire purchases, and vehicle maintenance. Industry sources estimate local expenses for the field crews to be \$500 per day.

Site preparation and construction should take about 3–4 years, with operations beginning within

the last year of the construction phase. Total construction employment is estimated at 115 people, with wages of about \$3.7 million annually. This employment level may be expected to create additional employment and income in the local area estimated at 44 more jobs with \$920,000 in wages. The operational phase, expected to last 8 years, would employ an estimated 104 persons with total annual wages estimated at \$4.7 million. Based on multiplier and economic impact analysis (Dobra 1988, 1989), this may be expected to create an additional 74 jobs in the local area, and 52 more jobs in the Reno metropolitan area, with additional wages estimated at \$7.3 million.

An underground mining operation would be comparable to that described above, with smaller facilities. About 250 people would be employed during the construction phase, with wages estimated at about \$8 million annually. Construction should take about 1 year. Operations might employ about 150 people, continuing through an 8-year period, with annual wages estimated at about \$6.8 million.

Tax revenue from net proceeds of mines would accrue to the State and to the county in which the mine is located; the amount of that tax revenue would depend on the prevailing price of gold at that time, and the assessment rate of the host county. Taxes would also be paid for sales, use, and property taxes.

Wilderness Area designation requires Class I VRM classification. This classification would constrain mineral development operations and increase costs. Indeed, Class I VRM requirements cannot be met by a gold mining operation, and extensive modification of operations by permit stipulation would be required. VRM Class IV in other locations would have little effect on development.

It is expected that the majority of the construction and operations employees would reside in the Winnemucca area, where housing and services, and community infrastructure are adequate to accommodate the additional population, and access via highway can provide a reasonably comfortable commute. However, it is likely that some employees would reside in Washoe County and commute from Reno and Sparks. Some others might commute from Fernley or Lovelock.

#### Leasable Minerals

The development of one 20-megawatt geothermal power plant within the planning area would be a positive short- and long-term benefit to the county in which it may be located, and to the local and regional economies. Tax revenues would be enhanced and short- and long-term employment opportunities would be created.

Geothermal exploration and development activities, themselves, include very little local employment. Some of the workforce includes regular full-time company employees, primarily supervisory; others may be consultants or contract-hires employed through the exploration companies' established sources.

Geological exploration usually occurs during a 3-month summer field season, while geophysical exploration may occur throughout the year. Exploratory drilling may also occur with development and would also entail expenditures in the local community.

Indirect local income and employment may result from field crew expenditures for food and lodging, gasoline and tire purchases, and vehicle maintenance. Industry sources estimate daily local expenditures of geological field crews to be \$500 per day.

After a suitable location is established, well drilling is initiated and construction is begun. It may be expected that commercial operation would begin about 9 months after project construction is started. Final construction would continue for about another 3 months while commercial production is in effect.

Costs for construction of the power plants and development of the wellfields are estimated at about \$35 million. The construction workforce would probably consist of about 150 workers at the peak of activity, with about 100 persons employed throughout the 12-month construction period. Because of the technical nature of the facilities, it is expected that no more than 60 percent of the construction contracts would be subcontracted to local firms. This would provide an estimated 60–90 construction jobs for the local communities. An additional economic benefit would derive from incoming construction workers who would be housed and provisioned within the local economies, probably taking up temporary residence in Gerlach, Fernley, or Winnemucca.

Operation of the power plant and wellfield would probably require 12 permanent employees: 8 operators and helpers, 2 maintenance personnel, a foreman, and a supervisor. Seven or eight of these employees might be hired locally. Total salaries are estimated at \$534,000. Additional workers may be required over the life of the project for periodic activities such as reworking a well, pulling a pump, or repairing a turbine. Geothermal projects have a predicted 20–30 year economic life.

A location in the South Playa Area, which is Class IV under this alternative, would not be affected by VRM classifications. It is expected that the electric power generated would be sold to the Sierra Pacific Power Company. The operation would pay sales, use, and property taxes, and net proceeds from mines taxes.

#### Salable Minerals

Nine free-use permits for salable minerals are currently authorized in the planning area, with three additional free-use permits pending. Free-use permits are provided for public purposes and are used by the State, counties, and BLM for road construction and maintenance.

Community pits and free-use permits are usually separate pits, but free-use operations may from time to time, use community pits. Local community use is assessed at 50 cents per ton. Five sales per year are expected from one pit within the planning area.

Three private sales for landscape or decorative rock are anticipated within the area covered by this plan. Private operations are conducted on a contract-of-sale basis, for which BLM receives a royalty on production. Contracts of sale are issued for a specific amount of materials to be extracted within a specified period of time.

The State receives 4 percent of the revenues from sand and gravel sales for the State School Fund. The balance of the money is used to cover the costs of reclamation of the pits. Revenues from sales of sand and gravel are relatively small and are primarily assessed for the purpose of reclamation. The principal value of these commodities is obtained from the cost of labor and equipment for extraction and transportation, and the haul-distance to the location of use. Close proximity of the source pits to the site of application can represent considerable cost savings to the State and county governments, to private operations, and to BLM.

The No Action Alternative would have no effect on current extraction and use of these commodities.

#### **Impacts on Lands and Realty**

Current conditions would be maintained.

#### **Impacts on Road Maintenance and Repair**

BLM has responsibility for approximately 989 miles of routes within the planning area. BLM system roads within the NCA total 132.7 miles, and boundary roads comprise another 73.2 miles of BLM system roads. The current capability for road maintenance is about 100 miles per year.

Humboldt County has 39.6 miles of roads within the planning area, and 20.3 miles of boundary roads. It is currently able to maintain all roads within its area of responsibility to a satisfactory level. The additional traffic that might be expected from slowly growing visits for recreation, as projected for this alternative, appears to present no hardship to its capabilities.

Pershing County is already in a tight fiscal situation that makes it impossible for it to regularly maintain its 20.9 miles of roads within the NCA, and 4.4 miles of boundary roads. BLM has been working well with the county and has established excellent cooperation. However, as traffic increases, BLM would necessarily be required to shoulder a larger burden in maintaining the 20.9-mile portion of the Soldier Meadows road, which is a Pershing County road.

Only 5.6 miles of Washoe County roads are within the planning area. No difficulties resulting from increased visits to the area for recreation is anticipated. However, Washoe, Humboldt, and Pershing Counties point out the critical cost-saving importance of aggregate pits and water for efficient road maintenance. Costs for aggregate are about \$70 for 8–10 yards, but hauling costs are high. The greater the distance, the higher the cost.

#### **Impacts on Law Enforcement and Court Costs**

BLM's law enforcement capability for the NCA, comparable to the road maintenance and repair services, is insufficiently funded and staffed. For an area comparable in size to the State of Delaware, BLM has only one full-time law

enforcement ranger assigned to the NCA. The Surprise Field Office has two law enforcement personnel, one of which was recently hired and is assigned to the NCA. The other spends as much time as possible within the NCA because it is the area of highest use. But the NCA area represents only about 18 percent of the law enforcement personnel's total area of responsibility.

The Winnemucca Field Office has only one and one-half full-time law enforcement rangers. One half-time position is shared with the Las Vegas Field Office. Two vacant law enforcement officer positions at the Winnemucca Field Office remain unfilled because of lack of funding. The NCA is patrolled as often as possible, but it represents only 6 percent of their area of responsibility.

The most important aspect and effective use of law enforcement is presence. By simply being present in the area, or known to be about the area with some frequency, law enforcement becomes more effective. Destruction of signs and other vandalism, damage to resources, intrusions into roadless areas, and cultural resource violations would be diminished by the simple visibility and occasional presence of law enforcement capabilities.

Neither Humboldt, Pershing, nor Washoe County Sheriff's Offices perceive the NCA area as a problem or concern. Washoe County Deputies currently patrol the northwestern portion of the NCA and have had no major problems. Humboldt County law enforcement patrols on an infrequent basis, which they determine is appropriate to the need. They respond immediately to any requests for assistance. Pershing County Deputies do not patrol the southern portion of the NCA on a regular basis. And, except for the Burning Man Festival, when their presence is contracted, they have had no problems. None of the counties expressed a particular concern about law enforcement requirements at the current level of visitation, and they anticipate no compelling difficulties under the low-level growth in visitation projected for this alternative. They all report excellent cooperation and coordination with BLM. The predominant season of use for the area is from Memorial Day through Labor Day—or about 3 months, and they feel that, so far, current staffing has proven adequate.

Only Pershing County has identified a problem with arrest, incarceration, and trial costs. Such

concerns are understandable for a county with a small population and limited tax base. However, all of the incidents have been associated with the Burning Man Festival and the large population of revelers that congregate in the area. The population of Black Rock City, at that time, is 4 to 5 times as large as Pershing County's normal population. Any extra costs are onerous for the county, but the incidents have been relatively few in number.

Effective mitigation has been provided over the years as BLM and its Burning Man Organization cooperators have learned from experience. The Special Recreation Permit stipulations have grown more sophisticated and appropriate to the issues of managing such a large event and have proven to be increasingly effective. Other than continuing to refine the constraints imposed by the Special Recreation Permit stipulations, there is little that BLM can do to guarantee lawful human behavior. Pershing County's law enforcement costs for the festival are compensated. And, it should be recognized, too, that payments in lieu of taxes are intended to assist counties in the provision of necessary taxpayer services. Federal payments in lieu of taxes to Pershing County in fiscal year 2002 amounted to \$489,334.

### **Impacts on Search and Rescue Operations**

Current conditions would be maintained; however, all of the local sheriff's offices have expressed a concern about access to Wilderness Areas for search and rescue or law enforcement. This impact is minimized by the fact that the BLM authorized officer may, at his or her discretion, allow limited motorized access to Wilderness in emergencies involving the health and safety of persons.

### **Impacts on Indigent Aid**

Current conditions would be maintained under this alternative.

Humboldt and Pershing Counties both identified occasions requiring aid to the indigent. All of Humboldt County's cases, and most of Pershing County's, were incidental assistance, but Pershing County identified a total of eight high-cost cases, over the years, involving hospitalization for injuries to persons. All were associated with the Burning Man Festival. The State does provide an

insurance program, to which all counties contribute, to cover such indigent billings. Nevertheless, Pershing County had to pay a \$3,000 deductible in seven of the cases, and the eighth (which was \$25,000) was forwarded to BLM for resolution.

Again, short of continuing to refine the Special Recreation Permit stipulations, there is little that BLM can do to guarantee lawful or responsible human behavior. However, there were no such incidents at the 2002 Burning Man Festival, with nearly 30,000 people in attendance. Because the Burning Man Festival appears to be approaching its natural population limit, it can reasonably be expected that such problems would not increase in the future. Pershing County can, of course, refuse to permit such events if the problem grows beyond that which is bearable. As mentioned above, payments in lieu of taxes are intended to help the counties bear these taxpayer costs.

## **4.2.2 ALTERNATIVE A** (Emphasis on Natural Processes)

In addition to the impacts from the common to all actions as indicated in the No Action Alternative discussion (Section 4.2.1), the following impacts would also occur as a result of Alternative A.

### **4.2.2.1 Impacts on Transportation and OHV**

#### **From Land Health Standards**

Applying Rangeland Health Standards to all uses and programs in the planning area could limit road upgrades and maintenance on short road segments required to achieve standards related to soil, vegetation, water, or wildlife habitats in some areas. These limitations could potentially result in increased rutting, washboards, and dust or mud holes in some areas, which would diminish drivability, slightly decrease safety for drivers, and decrease public access along short segments of BLM roads. In other cases, application of the standards could lead to improved drivability of short segments of roads where improved stream crossings are installed to decrease stream sediment associated with vehicles.

#### **From Transportation and OHV Management**

In addition to the impacts discussed for the actions common to all alternatives in No Action, reevaluating the functional or maintenance class if vehicle use on any road or route causes damage to resources would potentially decrease rutting, washboards, and dust or mud holes along limited segments of BLM roads and designated routes. This could minimally improve access for visitors; however, costs would increase because of maintenance needs on upgraded road and route segments.

Downgrading designated routes receiving vehicle use in excess of capacity to decrease vehicle use levels could potentially diminish the safety for

drivers and public access associated with a decline in road condition on a few route segments.

Attempting to acquire public access easements or developing road alignments where public roads cross private property could potentially increase public access to public lands currently blocked by closed private lands.

Limiting OHV use to 599 miles of designated vehicle routes within the 346,191-acre limited use area would decrease public access and potentially reduce future maintenance requirements.

#### **From Cultural Resource Management**

Impacts would be the same as those described for the No Action Alternative.

#### **From Native American Values Management**

No impacts are anticipated.

#### **From Paleontological Resource Management**

No impacts are anticipated.

#### **From Wilderness Management**

Closing 16 miles of the 22 miles of vehicle routes within the Lahontan Cutthroat Trout WSA would decrease public access and decrease future BLM maintenance needs.

Closing the Lahontan Cutthroat Trout Area to motor vehicles from February to June during the Lahontan cutthroat trout spawning season would temporarily decrease public access to about 22 miles of road during the closure period. However, road damage during wet seasons and the risk of drivers becoming stuck in mud would be reduced. In the long-term, drivability and safety for drivers would be improved. The seasonal closure would also increase BLM costs to implement the closure each year.

#### **From Special Designation Management**

Closing portions of the ACEC in High Rock, Little High Rock, East Fork, Mahogany, Grassy, and Yellow Rock Canyons to visitor use from January 31 through May 15 each year would reduce the amount of road damage caused by vehicle use during the wet seasons each year and decrease rutting, washboards, and dust or mud holes, which would improve drivability and reduce the risk of drivers becoming stuck in the mud. It would also

decrease public access associated with the 17 miles of road during portions of the year that receive the least traffic. BLM costs would increase to implement the closures.

Rerouting the existing hot spring access road in Soldier Meadows away from sensitive resources and closing all spur roads would decrease public access to approximately 3 miles of road and increase costs to BLM to implement the closures.

#### **From Vegetation Management**

No impacts are anticipated.

#### **From Livestock Grazing Management**

No impacts are anticipated.

#### **From Wild Horse and Burro Management**

No impacts are anticipated.

#### **From Fire Management**

No impacts are anticipated.

#### **From Fish and Wildlife Management**

Although actions proposed in this alternative to recover sage-grouse populations would be somewhat different than discussed in the No Action alternative, the potential impacts would be the same.

#### **From Visual Resource Management**

Designation of those portions of the planning area as VRM Class II that were Class IV would restrict potential upgrades in road width there the disturbance would be apparent on the landscape.

#### **From Water Resource Management**

Impacts would be the same as discussed for the No Action Alternative.

#### **From Lands and Realty Management**

Impacts would be the same as discussed for the No Action Alternative.

#### **From Minerals and Energy Management**

Impacts would be the same as discussed for the No Action Alternative.

#### **From Recreation Management**

Only allowing one access point closure to the playa and only one Class III or IV Special Recreation Permit events to occur at a time would maintain playa access for the public.

#### **From Public Outreach and Visitor Service Management**

Impacts would be similar to those discussed for the No Action Alternative because the levels of visitor use and the types of actions likely to occur would be expected to be similar.

### **4.2.2.2 Impacts on Cultural Resources**

#### **From Land Health Standards**

No impacts are anticipated.

#### **From Transportation and OHV Management**

Downgrading designated routes receiving vehicle use in excess of capacity to decrease vehicle use levels could decrease inadvertent damage or disturbance to cultural sites by decreasing public access. Changing the High Rock Canyon trail to a resource road, maintenance level 2 could result in widening and construction of drainage ditches within High Rock Canyon. This change would decrease the primitive character of the viewshed associated with the emigrant trail.

Closing 751,879 acres and limiting 346,191 acres to OHV use on 599 miles of designated routes could increase protection or site stability, decrease inadvertent damage to cultural resources, decrease opportunities for vandalism and looting, and improve or maintain the integrity of the setting of the emigrant trails and other important emigrant locations. However, there would be greater potential for impacts on the integrity of the Barbara Worth site on the playa.

#### **From Cultural Resource Management**

Managing cultural resources as to site types would improve site protection and increase opportunities for historic preservation awareness and site preservation.

Emphasizing site conservation would enhance the long-term protection of cultural resources; however, it would also limit opportunities for scientific study and public use of cultural resources.

#### **From Native American Values Management**

Protecting PCRI for the use and benefit of current and future generations could limit opportunities for scientific study and public use of some related cultural resource sites when traditional uses are potentially in conflict with scientific study or public use.

#### **From Paleontological Resource Management**

No impacts are anticipated.

#### **From Wilderness Management**

Current conditions would be maintained.

#### **From Special Designation Management**

Not allowing camping within the High Rock Canyon portion of the ACEC or rock climbing adjacent to the emigrant trail would reduce the possibility of inadvertent damage or disturbance to cultural resources and opportunities for vandalism and looting.

Closing portions of the High Rock Canyon ACEC in High Rock, Little High Rock, East Fork, Mahogany, Grassy, and Yellow Rock Canyons to visitor use from January 31 through May 15 each year would prevent damage to the emigrant trail by removing traffic during times when the High Rock Canyon trail is likely to be muddy.

Increasing the existing Soldier Meadows ACEC to approximately 3,770 acres and applying additional protection measures, including day-use only designation and livestock and wild horse and burro restrictions, would provide better protection of important cultural resource values. As a result, integrity of cultural resources would be protected, inadvertent damage or disturbance to cultural sites would be reduced, and opportunities for vandalism and looting would be reduced. In the long-term, opportunities for scientific study and public use of cultural resources would be enhanced.

#### **From Vegetation Management**

Implementing vegetation manipulation projects to move plant communities toward desired

conditions, improve structural and species diversity, and protect soil and water resources would also increase protection and site stability of cultural resources. Although some inadvertent damage or disturbance to cultural sites may occur during implementation, the integrity of cultural resources and the setting of the emigrant trails would be protected.

Restoration and maintenance of individual aspen stands may inadvertently damage or disturb arborglyphs on some aspen trees. Overall these actions would preserve the integrity of cultural resources and the setting of the emigrant.

#### **From Livestock Grazing Management**

Impacts would be similar to those described for the No Action Alternative.

#### **From Wild Horse and Burro Management**

Impacts would be similar to those described for the No Action Alternative.

#### **From Fire Management**

Using prescribed fire outside of Wilderness to accomplish localized small-scale projects could cause inadvertent damage or disturbance to cultural sites during implementation. Overall the integrity of cultural resources would be maintained and the setting of the emigrant trails would be improved.

#### **From Fish and Wildlife Management**

Impacts would be similar to those described for the No Action Alternative.

#### **From Visual Resource Management**

Designating the South Playa Area as VRM Class III and the remaining portions of the planning area (excluding Wilderness Areas and the WSA) as VRM Class II would maintain the integrity of cultural resources and improve or maintain the integrity of the setting of the emigrant trail. Indirectly, these designations would restrict activities that could damage cultural resources.

#### **From Water Resource Management**

Current conditions would be maintained.

### **From Lands and Realty Management**

Impacts would be similar to those described for the No Action Alternative.

### **From Minerals and Energy Management**

Withdrawing federal lands within the South Playa Area, the Lahontan Cutthroat Trout Area, and vehicle access routes outside the NCA, but within the planning area, from mineral development would prevent inadvertent damage or disturbance to cultural sites and increase site protection. Withdrawing these areas would also maintain the integrity of cultural resources and the setting of the emigrant trails.

### **From Recreation Management**

If resource damage occurs from recreation activities, applying visitor restrictions, such as camping limits, and implementing a permit system or trail development, would stop, prevent, or alleviate inadvertent damage to cultural resources. As a result of these measures to increase resource protection, integrity of cultural resources and the setting of the emigrant trails would be maintained in the long term.

Applying camping restrictions, such as group size limits in the Wilderness zone; allowing designated and dispersed camping with some limits and monitoring in the Rustic zone; and closing dune and hummock areas on the playa to camping would also protect cultural resources from inadvertent damage and looting, maintain the integrity of cultural resources and their setting, and improve opportunities for cultural appreciation and discovery in the long term. Designating portions of the High Rock Canyon ACEC outside of Wilderness, Soldier Meadows ACEC, Class A and B historic trail segments, and rustic portions of the Lahontan Cutthroat Trout Area as day-use only would decrease public use thus increasing protection and preservation of the cultural resources located in these areas.

### **From Public Outreach and Visitor Services Management**

Although public outreach and visitor services are different under this alternative, impacts would be similar to those described for the No Action Alternative.

## **4.2.2.3 Impacts on Native American Values**

### **From Land Health Standards**

Applying Rangeland Health Standards to all uses and programs within the planning area could preserve the opportunity to pursue traditional uses.

### **From Transportation and OHV Management**

Although transportation and OHV management actions vary under this alternative, impacts would be similar to those described for the No Action Alternative, except less habitat loss would occur, as 249 miles of routes would be closed to OHV use. This would result in less reduction of availability of hunting and fishing for Tribal sustenance than in the No Action Alternative.

### **From Cultural Resource Management**

Site conservation emphasis would benefit Native American values and any potential PCRI.

### **From Native American Values Management**

Managing PCRI under the Traditional Use Category and allowing only uses that are consistent with the resource objectives in that area and that do not interfere with sustainability of that resource would help maintain the integrity of the PCRI and preserve the opportunity to pursue traditional uses. This would also increase opportunities for preservation awareness and site preservation.

### **From Paleontological Resource Management**

No impacts are anticipated.

### **From Wilderness Management**

Current conditions would be maintained.

### **From Special Designation Management**

Not allowing camping within the High Rock Canyon portion of the ACEC and applying additional protection measures in the Soldier Meadows ACEC, including day-use only designation and livestock and wild horse and burro restrictions, would reduce conflicts between users and preserve the opportunity to pursue traditional

uses. As a result, opportunities for preservation awareness and PCRI preservation would be improved.

#### **From Vegetation Management**

Implementing vegetation manipulation projects to move plant communities toward desired conditions and improve structural and species diversity would also improve or preserve the opportunity to pursue traditional uses involving native vegetation.

#### **From Livestock Grazing Management**

Impacts would be similar to those described for the No Action Alternative.

#### **From Wild Horse and Burro Management**

Impacts would be similar to those described for the No Action Alternative.

#### **From Fire Management**

Using prescribed fire outside of Wilderness to accomplish localized small-scale projects could cause inadvertent damage or disturbance to PCRI during implementation. However, overall the integrity of PCRI and opportunities to pursue traditional uses would be maintained or improved.

#### **From Fish and Wildlife Management**

Impacts would be similar to those described for the No Action Alternative.

#### **From Visual Resource Management**

Designating the South Playa as VRM Class III and the remaining portions of the planning area (excluding Wilderness Areas and the WSA) as VRM Class II would maintain landscape setting of PCRI. Indirectly, these designations could restrict activities that would damage PCRI or traditionally used resources.

#### **From Water Resource Management**

Impacts would be similar to those described for the No Action Alternative.

#### **From Lands and Realty Management**

No impacts are anticipated.

#### **From Minerals and Energy Management**

Withdrawing federal lands within the South Playa Area, the Lahontan Cutthroat Trout Area, and vehicle access routes outside the NCA, but within the planning area, from mineral development could prevent inadvertent damage or disturbance to PCRI. Withdrawing these areas would also maintain the integrity of the setting of important Native American locations.

#### **From Recreation Management**

If resource damage occurs from recreation activities, applying visitor restrictions, such as camping limits, and implementing a permit system or trail development, would prevent or alleviate inadvertent damage or disturbance to PCRI. As a result of these protections, the integrity of any potential PCRI would be maintained, and the setting and resource base would be improved.

Applying camping restrictions, such as group size limits in the Wilderness zone; allowing designated and dispersed camping with some limits and monitoring in the Rustic zone; and closing dune and hummock areas on the playa to camping would also protect PCRI from inadvertent damage, improving the integrity of PCRI settings, and increasing opportunities for preservation awareness and site preservation in the long term. Designating portions of the High Rock Canyon ACEC outside of Wilderness, Soldier Meadows ACEC, and rustic portions of the Lahontan Cutthroat Trout Area as day-use only would provide further protection and preservation of PCRI and traditionally used resources located in these areas.

#### **From Public Outreach and Visitor Services Management**

Although public outreach and visitor services are different under this alternative, impacts would be similar to those described for the No Action Alternative.

#### **4.2.2.4 Impacts on Paleontological Resources**

##### **From Land Health Standards**

No impacts are anticipated.

##### **From Transportation and OHV Management**

Impacts would be similar to those described for the No Action Alternative. The closure of 249 miles of vehicle route would decrease the likelihood that paleontological resources are disturbed.

##### **From Cultural Resource Management**

No impacts are anticipated.

##### **From Native American Values Management**

No impacts are anticipated.

##### **From Paleontological Resource Management**

Managing paleontological sites as to site types with an emphasis on conservation with some scientific use allowed would improve opportunities to identify priorities for site management and site preservation, and reduce conflicts and the risk of inadvertent damage to important sites. As a result, theft, breakage, and displacement of fossils and vandalism, alteration, and erosion of sites could be diminished, and scientific inquiry and public use and appreciation of paleontological resources could be enhanced.

Prohibiting collection of petrified wood and common invertebrate fossils, unless for scientific purposes with a permit, would preserve paleontological resources for future generations and reduce the risk of inadvertent damage to important sites.

##### **From Wilderness Management**

Current conditions would be maintained.

##### **From Special Designation Management**

Current conditions would be maintained, neither ACEC is known for fossil resources.

##### **From Vegetation Management**

No impacts are anticipated.

##### **From Livestock Grazing Management**

No impacts are anticipated.

##### **From Wild Horse and Burro Management**

No impacts are anticipated.

##### **From Fire Management**

Impacts would be similar to those described for the No Action Alternative.

##### **From Fish and Wildlife Management**

No impacts are anticipated.

##### **From Visual Resource Management**

No impacts are anticipated.

##### **From Water Resource Management**

No impacts are anticipated.

##### **From Lands and Realty Management**

Eliminating the two existing utility corridors, but not existing utilities, would decrease the risk of inadvertent damage to important sites, including theft, breakage, and displacement of fossils and vandalism, alteration, and erosion of sites.

##### **From Minerals and Energy Management**

Current conditions would be maintained.

##### **From Recreation Management**

Prohibiting collection of petrified wood and common invertebrate fossils, unless for scientific purposes with a permit, would preserve paleontological resources for future generations and reduce the risk of inadvertent damage to important sites.

##### **From Public Outreach and Visitor Services Management**

Although public outreach and visitor services are different under this alternative, impacts would be similar to those described for the No Action Alternative.

## 4.2.2.5 Impacts on Wilderness

### From Land Health Standards

Applying Land Health Standards to all uses and programs in the planning area would contribute to the long-term maintenance of naturalness in Wilderness Areas.

### From Transportation and OHV Management

Limiting access in the Lahontan Cutthroat Trout WSA to the Barlett Butte and Idaho Canyon roads would increase naturalness and opportunities for solitude and primitive recreation in the WSA.

### From Cultural Resource Management

Impacts would be similar to those described for the No Action Alternative.

### From Native American Values Management

No impacts are anticipated.

### From Paleontological Resource Management

Impacts would be similar to those described for the No Action Alternative.

### From Wilderness Management

Providing signs specifying the wilderness boundaries at 0.5-mile intervals could decrease the amount of illegal mechanized trespass in the wilderness areas, which would maintain or enhance naturalness and opportunities for solitude and primitive recreation and decrease naturalness in the vicinity of the signs.

Adding all 10 acquired wilderness inventory units to the WSA would increase naturalness throughout the WSA by limiting potential future disturbances.

Limiting access in the Lahontan Cutthroat Trout WSA to the main Barlett Butte BLM system road #2052 and the Idaho Canyon Road #2070 would increase naturalness and opportunities for solitude and primitive recreation in the WSA and the North Black Rock Range Wilderness by decreasing vehicle use in the entire WSA.

Closing the Lahontan Cutthroat Trout Area seasonally to motor vehicles during the spawning season of the Lahontan cutthroat trout from

February to June would increase the opportunities for solitude and primitive recreation during the closure.

### From Special Designation Management

Restricting rock climbing in the High Rock Canyon adjacent to the emigrant trail would diminish the potential for this type of primitive recreational activity. Because impacts associated with climbing (such as fixed gear, impacts to raptors) would not occur, the naturalness of the area would probably be maintained by not allowing climbing.

The 14-week public closure of portions of the High Rock ACEC would decrease opportunities for primitive recreation in approximately 15 percent of the Little High Rock Canyon, High Rock Canyon, and East Fork High Rock Canyon Wilderness Areas. Although the area impacted is a relatively small portion of the Wilderness Areas, it is the area where the majority of primitive recreation occurs. Very little if any primitive recreation use occurs during January and February, so the closure would have a negligible impact during those months. Primitive recreation use increases during March, April, and May (mainly in the form of hiking, backpacking, and equestrian use). Closure during those 3 months would impact wilderness users and hikers using the Desert Trail.

### From Vegetation Management

Limiting the application of vegetation treatments in Wilderness Areas to those to eliminate noxious weeds would maintain naturalness.

### From Livestock Grazing Management

Not grazing 11,214 acres of land in the Stanley Camp Pasture and Mahogany Creek exclosure would maintain the exclosure would maintain the naturalness and solitude in about 75% of the WSA, and a small portion of the North Black Rock Range Wilderness. Impacts to naturalness associated with livestock grazing, such as trampling, would not occur in the WSA.

### From Wild Horse and Burro Management

Impacts would be similar to those described for the No Action Alternative.

### **From Fire Management**

The naturalness of areas that have been reduced by the absence of fire caused by fire suppression would be maintained due the restriction on prescribed burning. Impacts to solitude and primitive recreation associated with prescribed burning activities would not occur.

### **From Fish and Wildlife Management**

Removing the existing wildlife water developments in Wilderness Areas, and not conducting predator control would maintain and enhance the wilderness values of the areas. Not allowing the construction of new wildlife water developments could maintain the naturalness of the areas but may also hinder the ability of wildlife managers to correct human-caused impacts on native wildlife.

### **From Visual Resource Management**

Current conditions would be maintained.

### **From Water Resource Management**

Impacts would be similar to those described for the No Action Alternative.

### **From Lands and Realty Management**

Impacts would be similar to those described for the No Action Alternative.

### **From Minerals and Energy Management**

Withdrawing the Lahontan Cutthroat Trout Area and the wilderness vehicle access roads outside the NCA from the locatable, leasable, and salable minerals would maintain the wilderness values in the areas by preventing future mineral development. The potential, but low probability, development of a mine in the South Jackson Wilderness Area could reduced eliminate naturalness, solitude and primitive recreation on hundreds of acres associated with this development.

### **From Recreation Management**

Applying camping restrictions to prevent resource damage and restricting camping to areas more than 200 feet from water, unless otherwise designated would maintain naturalness.

The potential implementation of a permit system to manage use would maintain or enhance naturalness and solitude by allowing BLM to contact users prior to using the Wilderness Areas about regulations and resources. This could lead to decreased impacts to naturalness.

Limiting collection of rocks, minerals, and fossils to scientific purposes would maintain naturalness by reducing the amount of surface disturbance associated with those activities.

Implementing group size limits in the Wilderness zone could minimize the impact that large groups could have on the experience of other wilderness visitors, as well as the physical environment and naturalness of the areas.

### **From Public Outreach and Visitor Services Management**

Visitors' sense of appreciation and understanding of area resources would be directly impacted by management actions for public outreach and visitor services. Fewer interpretive opportunities would be available under this alternative. The development of an outreach plan would have indirect beneficial impacts to the primitive character of the area by raising awareness of wilderness values.

## **4.2.2.6 Impacts on Special Designations**

### **4.2.2.6.1 ACECs**

#### **From Land Health Standards**

Applying Rangeland Health Standards to all uses and programs would decrease the potential impact on the values for which the two ACEC were designated. For both ACECs, Rangeland Health Standards would most likely apply to livestock grazing, wild horses, transportation system operations and recreation uses.

#### **From Transportation and OHV Management**

Impacts would be similar to the No Action Alternative for the High Rock ACEC. OHV designations would be the same for the High Rock Canyon ACEC.

Changing the High Rock Canyon trail to a resource road, maintenance level 2 could result in widening and construction of drainage ditches within High Rock Canyon. This change would decrease the primitive character of the viewshed associated with the emigrant trail.

OHV use within the Soldier Meadows ACEC would be limited to designated roads and routes and the closure of about 3 miles of vehicle route would lead to decreased disturbance of habitats of the special status species from motorized use.

**From Cultural Resource Management**

No impacts are anticipated.

**From Native American Values Management**

No impacts are anticipated.

**From Paleontological Resource Management**

No impacts are anticipated.

**From Wilderness Management**

Current conditions would be maintained.

**From Special Designation Management**

Not allowing camping within the High Rock Canyon portion of the High Rock Canyon ACEC, designating camping sites in the remainder of the ACEC, prohibiting rock climbing adjacent to the emigrant trail, and closing portions of the ACEC in High Rock, Little High Rock, East Fork, Mahogany, Grassy, and Yellow Rock Canyons to public use from January 31 through May 15 would protect the primitive character of the High Rock area and associated emigrant trail segments and eliminate conflicts with camping in sites sensitive to resource and visual impacts.

Increasing the size of the Soldier Meadows ACEC, not allowing camping within the ACEC, rerouting the existing hot spring access road, and fencing habitats of special status species would decrease disturbance of habitat and minimize conflicts with camping for the desert dace, springsnails, and basalt cinquefoil.

**From Vegetation Management**

Establishing diversity, mosaics, and connectivity of upland communities, and

implementing vegetation manipulation projects would increase integrity and condition of important wildlife and plant habitat within both ACECs. Increasing vegetation diversity, cover, and structure could increase protection of the primitive character of the High Rock area and associated emigrant trail segments.

**From Livestock Grazing Management**

Permitting livestock grazing within the fenced portions of the Soldier Meadows ACEC when consistent with recovery of the special status species would promote recovery of the desert dace, springsnails, and basalt. If research shows prescription grazing is an applicable tool, of the prescribed grazing would contribute to habitat quality for the desert dace and basalt cinquefoil.

**From Wild Horse and Burro Management**

Impacts would be similar to those described for the No Action Alternative.

**From Fire Management**

Impacts would be similar to those described for the No Action Alternative.

**From Fish and Wildlife Management**

Impacts would be similar to those described for the No Action Alternative.

**From Visual Resource Management**

Current conditions would be maintained.

**From Water Resource Management**

Impacts would be similar to those described for the No Action Alternative.

**From Lands and Realty Management**

No impacts are anticipated.

**From Minerals and Energy Management**

No impacts are anticipated.

**From Recreation Management**

Designating portions of High Rock Canyon ACEC outside of Wilderness and the Soldier Meadows ACEC as day-use only would decrease

disturbance of important habitat for the desert dace, springsnails, and basalt cinquefoil. Day-use only designation would protect the primitive character of the High Rock area and associated emigrant trail segments and eliminate problems with camping in sites sensitive to resource and visual impacts.

#### **From Public Outreach and Visitor Services Management**

Impacts would be similar to those described for the No Action Alternative.

#### **4.2.2.6.2 Wild and Scenic Rivers**

##### **From Land Health Standards**

Applying Rangeland Health Standards to all uses and programs in the planning area would maintain the outstandingly remarkable values associated with the eligible streams.

##### **From Transportation and OHV Management**

Impacts would be similar to those described for the No Action Alternative; however, closure of 249 miles of routes would further protect the outstandingly remarkable values of the eligible streams by reducing riparian damage and sedimentation caused by vehicle use. Closing all of the routes in the Lahontan Cutthroat Trout Area except for the systems roads would enhance the values associated with Mahogany, Summer Camp, and Snow Creeks.

##### **From Cultural Resource Management**

No impacts are anticipated.

##### **From Native American Values Management**

No impacts are anticipated.

##### **From Paleontological Resource Management**

No impacts are anticipated.

##### **From Wilderness Management**

The 10 acquired parcels (1,092 acres) in the Lahontan Cutthroat Trout WSA contain segments of Mahogany and Summer Camp Creeks; managing those parcels as WSAs would protect the values associated with those streams.

Seasonally closing the Lahontan Cutthroat Trout Area to motor vehicles would decrease the impacts that vehicle use has on the fish in Mahogany, Summer Camp, and Snow Creeks.

#### **From Special Designation Management**

Not allowing camping in the High Rock Canyon portion of the High Rock Canyon ACEC and the Soldier Meadows ACEC would reduce impacts (such as trampling of vegetation and vandalizing of historic sites) to the outstandingly remarkable values of High Rock, and Mahogany and Soldier Meadows Creeks. Closing the area would also reduce opportunities for recreation along the Desert Trail through High Rock Canyon and in the vicinity of Soldier Meadows Creek, which is also a value that qualified those streams for eligibility.

Rerouting the existing hot spring access road and closing spur roads would reduce the impacts from vehicles on the vegetation and fisheries values associated with Soldier Meadows Creek.

Minimizing human impacts to springs and streams within the Soldier Meadows ACEC would maintain the values associated with Soldier Meadows Creek.

Fencing and restricting grazing in the Soldier Meadows ACEC could reduce impacts from livestock and wild horses on the vegetation and fisheries values associated with Soldier Meadows Creek.

#### **From Vegetation Management**

Impacts would be similar to those described for the No Action Alternative.

#### **From Livestock Grazing Management**

Restricting grazing in the Stanley Camp pasture and allowing grazing in the Soldier Meadows ACEC only when it is consistent with recovery of the threatened and endangered species, would maintain or enhance the values associated with Mahogany, Summer Camp, Snow, and Soldier Meadows Creeks.

#### **From Wild Horse and Burro Management**

Impacts would be similar to those described for the No Action Alternative.

**From Fire Management**

No impacts are anticipated.

**From Fish and Wildlife Management**

Current conditions would be maintained.

**From Visual Resource Management**

Current conditions would be maintained.

**From Water Resource Management**

Impacts would be similar to those described for the No Action Alternative.

**From Lands and Realty Management**

No impacts are anticipated.

**From Minerals and Energy Management**

Impacts would be similar to those described for the No Action Alternative.

**From Recreation Management**

Restricting camping to 200 feet away from any water source would reduce impacts associated with camping in riparian areas and would maintain the outstandingly remarkable values.

Designating portions of High Rock Canyon ACEC outside of Wilderness, Soldier Meadows ACEC, Class A and B historic trail segments, and rustic portions of the Lahontan Cutthroat Trout Area as day-use only would decrease disturbance of stream segments and reduce impacts to riparian areas from camping.

**From Public Outreach and Visitor Services Management**

Impacts would be similar to those described for the No Action Alternative.

**4.2.2.7 Impacts on Vegetation**

**From Land Health Standards**

Applying Rangeland Health Standards to all uses and programs, including recreation, transportation, and livestock grazing, could potentially improve species composition,

productivity, and structure of upland and riparian plant communities, eliminate noxious weeds, and reduce soil compaction and vegetation damage from vehicles.

**From Transportation and OHV Management**

Impacts from operation of the transportation system would be the same as the No Action Alternative. However, closure of 249 miles of vehicle routes and restriction of OHV on 346,191 acres to specific existing vehicle routes would decrease visitor access, which would improve species composition, productivity, structure of upland and riparian plant communities, lead to the decreased spread of noxious weeds, and reduce or maintain soil compaction and vegetation damage from vehicles.

**From Cultural Resource Management**

Impacts would be similar to those described for the No Action Alternative.

**From Native American Values Management**

Current conditions would be maintained.

**From Paleontological Resource Management**

No impacts are anticipated.

**From Wilderness Management**

Closing the Lahontan Cutthroat Trout Area seasonally to motor vehicles from February to June and year-round closure of about 16 miles of vehicle routes could potentially improve species composition, productivity, and structure of riparian plant communities near streams in the Lahontan Cutthroat Trout Area on 12,378 acres by limiting vehicle to the BLM system roads during the wet season. The closure during the wet season would also reduce soil compaction and vegetation damage from vehicles, near streams in the Lahontan Cutthroat Trout Area by limiting vehicle use.

**From Special Designation Management**

Not allowing camping within the High Rock Canyon portion of the ACEC would reduce soil compaction and vegetation damage from vehicles, on less than 20 acres in High Rock Canyon.

The 14-week public closure of a portion of the High Rock Canyon ACEC in High Rock, Little High Rock, East Fork, Mahogany, Grassy, and Yellow Rock Canyons each year would reduce soil compaction and vegetation damage from vehicles during the wettest part of the year associated with 17 miles of the High Rock Canyon road.

Not allowing camping within the Soldier Meadows ACEC and rerouting the existing hot spring access road and closing all spur roads would improve species composition, productivity, structure of upland and riparian plant communities; reduce the spread of noxious weeds; and reduce soil compaction and vegetation damage from vehicles.

### **From Vegetation Management**

Maintaining or establishing diversity, mosaics, and connectivity of upland communities and implementing vegetation manipulation projects to move plant communities toward desired conditions would potentially improve species composition, productivity, and structure of upland and riparian plant communities. Indirectly, managing for healthy native plant communities could lead to the decreases in areas occupied by noxious weeds and reduced vegetation damage where vehicle restrictions are implemented.

In addition to improving species composition, productivity, and structure of upland and riparian plant communities, emphasizing retention of sagebrush and other woody vegetation cover and reseeded would also reduce the likelihood that burned areas would become dominated by invasive annual species.

Not applying vegetation treatments in Wilderness Areas, except for the treatment of noxious weeds, would maintain species composition, productivity, structure of upland and riparian plant communities even where species composition does not meet desired conditions. However, lack of vegetation treatments could potentially increase the likelihood that burned areas would become dominated by invasive annual species because of restrictions on potential management actions that could decrease wildland fire size and intensity.

### **From Livestock Grazing Management**

Impacts would be similar to those described for the No Action Alternative.

### **From Wild Horse and Burro Management**

Impacts would be similar to those described for the No Action Alternative.

### **From Fire Management**

Designating 1,214,514 acres of lands as Category B (potential opportunities for using wildland fire to meet resource objectives) and 7,892 acres of lands as Category A (full suppression) would maintain species composition, productivity, and structure of upland and riparian plant communities by increasing the level of fire protection on almost all lands within the planning area.

Using prescribed fire outside of Wilderness on a site-specific basis to accomplish localized small-scale projects consistent with the vegetation objectives could potentially improve species composition, productivity, and structure of upland and riparian plant communities on fewer acres than No Action because implementation of mechanical treatments would be less likely to occur than prescribed burning.

Not using prescribed fire in Wilderness Areas would maintain species composition, productivity, and structure of upland and riparian plant communities even where species composition does not meet desired conditions.

### **From Fish and Wildlife Management**

Requirements to meet needs for sage grouse and other sagebrush dependent species could potentially improve species composition, productivity, and structure of sagebrush plant communities.

### **From Visual Resource Management**

Current conditions would be maintained.

### **From Water Resource Management**

Impacts would be similar to those described for the No Action Alternative.

### **From Lands and Realty Management**

Impacts would be similar to those described for the No Action Alternative.

### **From Minerals and Energy Management**

Impacts would be similar to those described for the No Action Alternative.

### **From Recreation Management**

Although the various camping restrictions and group size limits proposed under this alternative are potentially much more restrictive, the impacts to vegetation (e.g., increases in cover, composition and structure, decreased weed invasion) would apply to only a few hundred widely scattered acres, even if applied widely.

### **From Public Outreach and Visitor Services Management**

Impacts would be similar to those described for the No Action Alternative.

## **4.2.2.8 Impacts on Livestock Grazing**

### **From Land Health Standards**

Impacts would be similar to those described for the No Action Alternative.

### **From Transportation and OHV Management**

In addition to the impacts discussed in the No Action Alternative, designation of transportation routes and OHV classifications would cause decreased access to rangelands by vehicles and increased travel times because of closure of 249 miles of vehicle routes.

### **From Cultural Resource Management**

Current conditions would be maintained.

### **From Native American Values Management**

Current conditions would be maintained.

### **From Paleontological Resource Management**

Current conditions would be maintained.

### **From Wilderness Area Management**

Current conditions would be maintained.

### **From Special Designation Management**

Grazing operator flexibility could increase as related to livestock grazing practices including intensity, duration, frequency, timing, and areas of grazing use in the Warm Springs pasture because the areas with rare species are separated from the larger pasture.

Grazing operator flexibility would potentially decrease on several thousand acres in the new pasture because of additional limitations on the ability to graze the area and decreased access to livestock water.

Taking these actions could also increase the potential for vandalism to livestock-related projects, increase or maintain rates of livestock loss, and increase the operational expenses of livestock operators by increasing the amount of fence that would require maintenance and the number of gates that may be left open by recreational users of the ACEC.

### **From Vegetation Management**

Maintaining or establishing diversity, mosaics, and connectivity of upland communities and implementing vegetation manipulation projects to move plant communities toward desired conditions could decrease operator flexibility related to livestock grazing practices including intensity, duration, frequency, timing, and areas of grazing use.

In addition to improving species composition, productivity, and structure of upland and riparian plant communities, emphasizing retention of sagebrush and other woody vegetation cover and reseeding could decrease operator flexibility related to livestock grazing practices. However, improved vegetation conditions could lead to increased livestock forage production.

### **From Livestock Grazing Management**

In addition to impacts discussed under the No Action Alternative and the ACEC section above, permitting grazing by livestock within the fenced portions of the Soldier Meadows ACEC when consistent with the recovery of the rare and listed species within the ACEC would have the potential to increase operator flexibility on several thousand acres if prescribed grazing occurs.

**From Wild Horse and Burro Management**

Impacts would be similar to those described for the No Action Alternative.

**From Fire Management**

Current conditions would be maintained.

**From Fish and Wildlife Management**

Not allowing predator control in wilderness areas would potentially increase livestock losses in and adjacent to Wilderness.

Management of sage-grouse habitats to aid in the recovery of the species would potentially decrease operator flexibility related to livestock grazing practices including intensity, duration, frequency, timing, and areas of grazing use.

**From Visual Resource Management**

Current conditions would be maintained.

**From Water Resource Management**

Impacts would be similar to those described for the No Action Alternative.

**From Lands and Realty Management**

No impacts are anticipated.

**From Minerals and Energy Management**

Current conditions would be maintained.

**From Recreation Management**

No impacts are anticipated.

**From Public Outreach and Visitor Services Management**

Current conditions would be maintained.

**4.2.2.9 Impacts on Wild Horses and Burros**

**From Land Health Standards**

Applying Rangeland Health Standards to all uses and programs, including wild horses and burros, could result in a decrease of appropriate

management levels and potentially limit the use of certain herd management areas if wild horses or burros are found to be a major reason that one or more of the standards is not being met.

**From Transportation and OHV Management**

In addition to the impacts in the No Action Alternative, closing 249 miles of vehicle route to OHV use could decrease human contact with wild horses and burros, resulting in decreased animal harassment and potential theft of wild horses and burros.

**From Cultural Resource Management**

Current conditions would be maintained.

**From Native American Values Management**

Current conditions would be maintained.

**From Paleontological Resource Management**

Current conditions would be maintained.

**From Wilderness Area Management**

Current conditions would be maintained.

**From Special Designation Management**

**From Vegetation Management**

In addition to the impacts in the No Action Alternative, maintaining or establishing diversity, mosaics, and connectivity of upland communities and implementing vegetation manipulation projects to move plant communities toward desired conditions would potentially limit the use of certain herd management areas if wild horses or burros were preventing the achievement of desired vegetation conditions.

**From Livestock Grazing Management**

Impacts would be the same as the No Action Alternative.

**From Wild Horse and Burro Management**

Impacts would be the same as the No Action Alternative.

### **From Fire Management**

Current conditions would be maintained.

### **From Fish and Wildlife Management**

Impacts would be the same as the No Action Alternative.

### **From Visual Resource Management**

Current conditions would be maintained.

### **From Water Resource Management**

Impacts would be the same as the No Action Alternative.

### **From Lands and Realty Management**

No impacts are anticipated.

### **From Minerals and Energy Management**

Current conditions would be maintained.

### **From Recreation Management**

No impacts are anticipated.

### **From Public Outreach and Visitor Services Management**

Current conditions would be maintained.

## **4.2.2.10 Impacts on Fire Management**

### **From Land Health Standards**

Rangeland Health Standards apply to all uses and programs including fire management. Potential impacts from application of the standards include potential changes to the fuel loads, size of fires, and suppression costs where additional requirements to manage fire are implemented to meet one or more standards.

### **From Transportation and OHV Management**

Upgrading BLM road functional classification or maintenance level change based on monitoring would improve effective fire protection by improving access for fire suppression resources.

The potential to downgrade the quality of routes receiving vehicle use in excess of capacity could decrease access for fire suppression resources on small areas.

Closure of 249 miles of OHV routes could reduce effective fire protection by decreasing access for fire suppression resources. This would also potentially increase fire suppression costs including the need for aerial fire suppression to replace ground suppression. However, the closures would likely decrease the potential for human-caused fires because public access would also be decreased.

### **From Cultural Resource Management**

Current conditions would be maintained.

### **From Native American Values Management**

Current conditions would be maintained.

### **From Paleontological Resource Management**

Current conditions would be maintained.

### **From Wilderness Area Management**

Prohibiting prescribed fires in Wilderness Areas could locally increase the fuel loads and the size of fires by not reducing fuels in Wilderness.

### **From Special Designation Management**

Current conditions would be maintained.

### **From Vegetation Management**

Impacts would be similar to those described for the No Action Alternative. In addition, actions to improve vegetation condition, diversity, and cover would potentially change fuel loads, the size of fires, and suppression costs.

### **From Livestock Grazing Management**

Impacts would be similar to those described for the No Action Alternative.

### **From Wild Horse and Burro Management**

No impacts are anticipated.

### **From Fire Management**

Designating the planning area into one of two management categories with a corresponding

appropriate management response where fire would not be desired or where a variety of appropriate fire suppression techniques would be applied would potentially improve fire protection by the most sensitive areas by allowing fire managers to assign the best mix of fire suppression techniques and equipment.

Using minimum impact suppression techniques throughout the area and limiting use of heavy surface-disturbing equipment would decrease the flexibility of fire managers to respond to wildland fire situations. This could also lead to increased fire suppression costs.

Use of prescribed fire outside Wilderness Areas to accomplish localized small-scale projects consistent with the vegetation objectives would reduce the fuel loads, reduce the size of fires, and slightly decrease suppression costs on a few thousand acres. Fire protection effectiveness may also improve by breaking fuel continuity associated with treated acres.

Prohibiting prescribed fires in Wilderness Areas would increase the fuel loads and possibly increase the size of fires by not treating fuels in the Wilderness. In addition, suppression costs could increase for wilderness fires.

#### **From Fish and Wildlife Management**

Current conditions would be maintained.

#### **From Visual Resource Management**

Current conditions would be maintained.

#### **From Water Resource Management**

No impacts are anticipated.

#### **From Lands and Realty Management**

No impacts are anticipated.

#### **From Minerals and Energy Management**

No impacts are anticipated.

#### **From Recreation Management**

No impacts are anticipated.

#### **From Public Outreach and Visitor Services Management**

Impacts would be similar to those described for the No Action Alternative.

### **4.2.2.11 Impacts on Fish and Wildlife**

#### **From Land Health Standards**

Applying Rangeland Health Standards to all uses and programs, including transportation and recreation, would potentially decrease erosion and sedimentation of aquatic habitat and decrease the chance of wildlife being disturbed or harassed. Future actions modified to meet Rangeland Health Standards would lead to better habitat conditions and enhanced species viability. Application of standards to recreation and transportation could decrease inadvertent disturbance and increase wildlife populations in the immediate area or projects or other activities.

#### **From Transportation and OHV Management**

In addition to the impacts for the common to all discussed in the No Action Alternative, changing the functional or maintenance class of a road or vehicle route if vehicle use causes damage to resources would most likely result in upgrades in functional or maintenance levels, which could decrease erosion and sedimentation of aquatic habitat by improving drainage, installation of culverts, hardened crossings, graveling surfaces and maintaining or protecting and enhancing habitats by reducing braiding, improving drainage. This action would potentially affect only a few hundred acres in the planning area.

Changing the High Rock Canyon trail to a resource road, maintenance level 2 could result in widening and construction of drainage ditches within High Rock Canyon. This change could lead to addition visitor use potentially disturbing wildlife populations within the Canyon.

Closing 249 miles of routes to OHV use could decrease erosion and sedimentation of aquatic habitat, decrease the chance of wildlife mortality, protect and enhance habitat, and decrease inadvertent disturbance.

### **From Cultural Resource Management**

Current conditions would be maintained.

### **From Native American Values Management**

Current conditions would be maintained.

### **From Paleontological Resource Management**

No impacts are anticipated.

### **From Wilderness Area Management**

Allowing use on 6 of the 22 miles of road within the LCT Area would decrease erosion and sedimentation of aquatic habitat, protect and enhance habitat, decrease inadvertent disturbance, and increase human-sensitive wildlife populations.

Closing the Lahontan Cutthroat Trout Area to motor vehicles during the trout spawning season would decrease erosion and sedimentation of the aquatic habitat by eliminating vehicle use during the period of year most likely to have increased sedimentation caused by vehicle use on wet roads. Reducing human use during half the year would decrease the chance of wildlife being disturbed or harassed, protect and enhance the habitat of the Lahontan Cutthroat Trout Area, and decrease inadvertent disturbance of wildlife by visitors during breeding seasons for most species.

### **From Special Designation Management**

Closing portions of the ACEC in High Rock, Little High Rock, East Fork, Mahogany, Grassy, and Yellow Rock Canyons to visitor use for 12 weeks each year would reduce human disturbance of wildlife, including big horn sheep lambing and raptor nesting. Closing the area during the spring would decrease erosion and sedimentation of aquatic habitat. Extending the closure by 6 weeks during periods of raptor nesting and bighorn lambing would decrease the chance of wildlife being disturbed or harassed, enhance species viability, protect and enhance habitat, and potentially increase wildlife populations by limiting human uses during period of raptor nesting and the entire bighorn lambing period.

Increasing the Soldier Meadows ACEC to approximately 3,770 acres would protect wildlife species and their habitats. Reducing bank disturbance from livestock and wild horses would decrease erosion and sedimentation of aquatic

habitat by closing or relocating roads adjacent to hot water channels. Elimination of camping would potentially decrease the chance of wildlife being disturbed or harassed. Reducing human-related disturbance near aquatic systems would potentially enhance species viability and protect and enhance habitat. As a result, restricting human uses may increase wildlife populations in the immediate area.

### **From Vegetation Management**

Maintaining cover on upland watersheds and restoration of the monoculture stand of sagebrush would potentially decrease erosion and sedimentation of aquatic habitat.

Retaining mature sagebrush cover on sage-grouse habitats would protect and enhance habitats and species viability of sage-grouse, other sagebrush dependent species, and non-game species dependent on mountain shrub and aspen stands. Restoration of key wildlife habitats associated with mountain shrub stands and aspen groves would benefit wildlife species that use these habitats.

Not applying vegetation treatments in Wilderness Areas, except for the treatment of noxious weeds, would maintain habitat conditions on areas where wildlife species would benefit from changes in vegetation composition, structure and production.

### **From Livestock Grazing Management**

In addition to the impacts in the No Action Alternative, excluding livestock grazing or trailing from the Stanley Camp Pasture and limiting grazing within fenced portions of the Soldier Meadows ACEC would maintain wildlife habitat and species viability, which could lead to increased wildlife populations. Limiting grazing near riparian areas would protect aquatic wildlife and sensitive riparian habitat.

### **From Wild Horse and Burro Management**

In addition to the impacts in the No Action Alternative, excluding wild horses and burros from fenced portions of the Soldier Meadows ACEC would maintain wildlife habitat and species viability, which could lead to increased wildlife populations. Excluding wild horses near riparian areas would protect aquatic wildlife and sensitive riparian habitat.

### **From Fire Management**

Because fire management is acting in a support role to meet the needs of the resources, the categorization of the planning area into two fire management zones would have no impact on wildlife.

Using prescribed fire outside of Wilderness to accomplish localized small-scale projects would improve habitat conditions on a few thousand acres where wildlife species would benefit from changes in vegetation composition, structure, and production.

Not using prescribed fire in Wilderness Areas would maintain habitat conditions on areas where wildlife species would benefit from changes in vegetation composition, structure, and production.

### **From Fish and Wildlife Management**

Not maintaining existing wildlife water developments or constructing new water developments in Wilderness Areas and removing developments as they become nonfunctional would increase competition for water among small mammal and bird species, and reduce wildlife populations in the immediate area of removed projects, which could result in some mortality among non-mobile small mammals. This would affect mobile species on about 25,000 acres and non-mobile species on about 2,000 acres.

Not allowing animal damage control in wilderness would potentially decrease the chance of predators being disturbed or harassed and reduce species viability of populations being affected by predation above normal rates. Predator populations in the area would potentially increase; populations of prey species would potentially decrease.

Managing sage-grouse habitats for recovery of sage-grouse populations protect and enhance habitats and species viability of sage-grouse, other sagebrush dependent species, and non-game species dependent on mountain shrub and aspen stands.

### **From Visual Resource Management**

Current conditions would be maintained.

### **From Water Resource Management**

Impacts would be similar to those described for the No Action Alternative.

### **From Lands and Realty Management**

Current conditions would be maintained.

### **From Minerals and Energy Management**

Impacts would be similar to those described for the No Action Alternative.

### **From Recreation Management**

Restricting camping to more than 200 feet from water would decrease erosion and sedimentation of aquatic habitat on a few acres. Applying camping restrictions, including designated camping sites, would decrease the chance of wildlife being disturbed or harassed on a few hundred acres adjacent to areas of camping restrictions.

If trails or camping areas were restricted, habitat would be protected or enhanced and wildlife populations may be increased on a few acres.

Designating portions of High Rock Canyon ACEC outside of Wilderness, Soldier Meadows ACEC, Class A and B historic trail segments, and rustic portions of the Lahontan Cutthroat Trout Area as day-use only would decrease erosion and sedimentation of aquatic habitats. It would potentially protect and enhance 30 miles of stream habitat by reducing human uses, and decrease the chance of wildlife being disturbed or harassed.

Requiring large groups to camp in BLM-designated group camp areas and limiting camping in designated sites to 10 days would potentially decrease erosion and sedimentation of a few acres of aquatic habitat by limiting large camps within aquatic areas. The chance of wildlife being disturbed or harassed may also be reduced by limiting large groups to areas less sensitive to human disturbance.

### **From Public Outreach and Visitor Services Management**

Maintaining a roadside trailer-based Visitor Contact Station at peak use times and providing interpretive information at off-site locations would potentially decrease the chance of wildlife being disturbed or harassed and protect and enhance habitat by increased visitor appreciation of the wildlife.

## **4.2.2.12 Impacts on Special Status Species**

### **4.2.2.12.1 Plants**

There would be no impact to special status plant species except basalt cinquefoil as discussed for the No Action Alternative.

#### **From Land Health Standards**

Applying Rangeland Health Standards to all uses and programs could potentially improve basalt cinquefoil habitat and increase populations by reducing disturbance from other activities. Indirectly, applying restrictions to other activities, including recreation and transportation, could increase visitor awareness and appreciation of planning area resources, thereby decreasing inadvertent disturbance.

#### **From Transportation and OHV Management**

Relocating routes within the Soldier Meadows ACEC that currently cross less than an acre of basalt cinquefoil habitat would decrease disturbance of habitat and individuals in those areas and enhance habitat and species viability.

#### **From Cultural Resource Management**

No impacts are anticipated.

#### **From Native American Values Management**

No impacts are anticipated.

#### **From Paleontological Resource Management**

No impacts are anticipated.

#### **From Wilderness Area Management**

No impacts are anticipated.

#### **From Special Designation Management**

Increasing the Soldier Meadows ACEC to approximately 3,770 acres and designating it as day-use only would decrease disturbance of habitat and individuals, which would improve basalt cinquefoil habitat and species viability.

Rerouting the existing hot spring access road away from the habitat and closing all spur roads would decrease disturbance of habitat and individuals on less than one acre of basalt cinquefoil habitat, thereby improving habitat and species viability.

Managing springs and streams to minimize human use impacts on desert dace would also improve basalt cinquefoil habitat and species viability, because they occur only near springs.

#### **From Vegetation Management**

No impacts are anticipated.

#### **From Livestock Grazing Management**

Limiting livestock grazing within the fenced portions of the Soldier Meadows ACEC could decrease disturbance of important habitat for basalt cinquefoil because of maintenance of a relatively natural disturbance regime when compared to current levels of grazing.

If research shows grazing is an applicable tool, disturbance of important habitat for basalt cinquefoil may be increased to meet the needs of the species.

#### **From Wild Horse and Burro Management**

Impacts would be similar to those described for the No Action Alternative.

#### **From Fire Management**

No impacts are anticipated.

#### **From Fish and Wildlife Management**

Impacts would be similar to those described for the No Action Alternative.

#### **From Visual Resource Management**

No impacts are anticipated.

#### **From Water Resource Management**

Current conditions would be maintained.

#### **From Lands and Realty Management**

Current conditions would be maintained.

### **From Minerals and Energy Management**

No impacts are anticipated.

### **From Recreation Management**

Impacts would be similar to those described for the No Action Alternative.

### **From Public Outreach and Visitor Services Management**

Impacts would be similar to those described for the No Action Alternative.

#### **4.2.2.12.2 Fish and Wildlife**

There are no known impacts to black tern, least bittern, and white-faced ibis because of the lack of wetlands and actions affecting those areas.

### **From Land Health Standards**

Applying Rangeland Health Standards to all uses and programs could potentially improve special status species habitat and increase populations by reducing disturbance from other activities. Indirectly, applying restrictions to other activities, including recreation and transportation, could increase visitor awareness and appreciation of planning area resources, thereby decreasing inadvertent disturbance.

### **From Transportation and OHV Management**

In addition to the impacts discussed under the No Action Alternative, changing the High Rock Canyon trail to a resource road, maintenance level 2, could result in widening and construction of drainage ditches within High Rock Canyon. This change could lead to addition visitor use potentially disturbing bighorn sheep populations within the Canyon.

Designating 346,191 acres for OHV use on designated roads and vehicle routes would close 249 miles of routes, which would potentially decrease disturbance of habitat.

### **From Cultural Resource Management**

No impacts are anticipated.

### **From Native American Values Management**

Current conditions would be maintained.

### **From Paleontological Resource Management**

No impacts are anticipated.

### **From Wilderness Area Management**

Allowing vehicle access on 6 of the 22 miles of roads, and closing the Lahontan cutthroat trout Area during the spawning season (February-June) would decrease the potential for disturbance of trout habitat and reduce run-off from roads.

### **From Special Designation Management**

Designating the High Rock Canyon portion of the ACEC as day-use only and closing portions of the High Rock Canyon ACEC in High Rock, Little High Rock, East Fork, Mahogany, Grassy, and Yellow Rock Canyons from January 31 through May 15 each year would reduce human disturbance during big horn sheep lambing and potentially increase populations.

Increasing the Soldier Meadows ACEC to approximately 3,770 acres, designating the area as day-use only, rerouting the existing hot spring access road, minimizing human impacts on desert dace, and limiting livestock grazing and eliminating wild horse use would improve desert dace and springsnail habitat and potentially increase desert dace and springsnail populations.

### **From Vegetation Management**

Retaining mature sagebrush cover would maintain sage-grouse habitats in the short term and could result in improved conditions of those habitats in the long term.

### **From Livestock Grazing Management**

Limiting livestock grazing within the fenced portions of the Soldier Meadows ACEC could decrease disturbance of important habitat for the desert dace and springsnails by maintaining a relatively natural disturbance regime when compared to current levels of grazing.

If research shows prescription grazing is an applicable tool, disturbance of important habitat for the desert dace may increase.

### **From Wild Horse and Burro Management**

Impacts would be similar to those described for the No Action Alternative.

### **From Fire Management**

Incorporation of Minimum Impact Suppression Techniques (MIST) and assignment of resource advisors during appropriate management response would preserve and protect special status species by reducing disturbance to habitats. However, if application of MIST cause burned acreage to increase in sagebrush communities, habitats for sagebrush obligates including sage-grouse and pygmy rabbits would be reduced.

### **From Fish and Wildlife Management**

Managing sage-grouse habitats for recovery of sage-grouse populations would decrease disturbance of sage-grouse habitat and protect and improve habitat and populations.

### **From Visual Resource Management**

Current conditions would be maintained.

### **From Water Resource Management**

Impacts would be similar to those described for the No Action Alternative.

### **From Lands and Realty Management**

No impacts are anticipated.

### **From Minerals and Energy Management**

Current conditions would be maintained.

### **From Recreation Management**

Applying visitor restrictions if visitation causes resource damage, such as camping restrictions, implementing a permit system, or constructing trails, and restricting camping to more than 200 feet from water could potentially decrease disturbance to special status species and their habitats. Applying group size limits in Wilderness and designating portions of High Rock Canyon ACEC outside of Wilderness, Soldier Meadows ACEC, Class A and B historic trail segments, and rustic portions of the Lahontan Cutthroat Trout Area as day-use only would reduce human disturbance in special status species habitats and potentially improve their populations.

### **From Public Outreach and Visitor Services Management**

Limiting interpretive information to off-site means could potentially increase visitor appreciation and decrease inadvertent disturbance of special status species and their habitats if special status species information is included in interpretive information. However, because the outreach would be limited to off-site means, the ability to reach enough users to have an effect on planning area resources could be minimal.

## **4.2.2.13 Impacts on Visual Resources**

### **From Land Health Standards**

Applying Rangeland Health Standards to all uses and programs would reduce damage from other uses and improve plant diversity and cover, indirectly enhancing visual quality.

### **From Transportation and OHV Management**

Upgrading the High Rock Canyon road from a trail to a resource road, maintenance level 2, could reduce the primitive, undeveloped character within the viewshed and potentially disrupt the historic setting of the emigrant trails by increasing the width of the disturbed area.

Downgrading designated routes in functional or maintenance-class receiving-vehicle use in excess of capacity could improve the quality of viewsheds and setting of historic trails by enhancing the primitive, undeveloped feel of the area.

Closing 751,879 acres and limiting 346,191 acres to OHV use would enhance visual resources by reducing soil disturbance, increasing vegetative ground cover, and reducing dust.

Maintaining existing directional signs and adding new signs to prevent resource damage or visitor confusion could increase the number of road signs and lead to localized reductions in visual quality and in the area's primitive, undeveloped character, naturalness, and sense of isolation.

### **From Cultural Resource Management**

Current conditions would be maintained.

**From Native American Values Management**

Current conditions would be maintained.

**From Paleontological Resource Management**

No impacts are anticipated.

**From Wilderness Management**

Impacts would be similar to those described for the No Action Alternative, but the visual impact along the wilderness boundaries may be greater due to the increased signage.

**From Special Designation Management**

Current conditions would be maintained.

**From Vegetation Management**

Maintaining cover on upland watersheds and retaining mature sagebrush cover on sage-grouse habitats would improve plant diversity and cover, indirectly enhancing visual quality.

**From Livestock Grazing Management**

Impacts would be similar to those described for the No Action Alternative.

**From Wild Horse and Burro Management**

Current conditions would be maintained.

**From Fire Management**

Using prescribed fire outside of Wilderness on a site-specific basis to accomplish localized small-scale projects would decrease visibility in the short-term during implementation; however, in the long-term improved vegetation structure and species diversity would enhance the viewshed.

**From Fish and Wildlife Management**

Current conditions would be maintained.

**From Visual Resource Management**

Designating the South Playa as VRM Class III and the remaining portions of the planning area (outside Wilderness Areas and the WSA) as VRM Class II could restrict visually obtrusive development from occurring within a majority of the planning area and contribute to retention of the

primitive and undeveloped setting of the planning area.

**From Water Resource Management**

No impacts are anticipated.

**From Lands and Realty Management**

Eliminating two existing utility corridors, but not the existing utilities, would have no impact on visual quality.

**From Minerals and Energy Management**

Withdrawing federal lands within the South Playa Area, the Lahontan Cutthroat Trout Area, and vehicle access routes outside the NCA, but within the planning area from all types of new mineral entry would maintain visual resources. The potential, but low probability, development of two mines in the South Jackson Wilderness and near Rabbithole Spring would reduce visual quality in large areas surrounding these developments.

**From Recreation Management**

Applying visitor restrictions if resource damage occurs and designating sensitive areas, including portions of the ACECs, historic trail segments, and portions of the Lahontan Cutthroat Trout Area as day-use only could locally reduce surface disturbance and damage to vegetation where restrictions are applied, potentially improving viewsheds.

Encouraging the development of privately operated campgrounds on public lands outside of the NCA and on private lands both inside and outside of the NCA boundary could diminish the quality of the viewshed in these areas depending on the level of development that takes place. However, potentially displacing camping impacts to lands outside the NCA may reduce the level of surface disturbance and vegetation damage within the planning area.

Class III and IV events would be authorized only in a designated area within the Playa and designating a rocket launch area to reduce disturbances to vegetation, soils, and riparian zones would protect visual resources outside these areas. Within this designated area, visual quality would be expected to temporarily be reduced during the

period of large scale recreational events on the playa.

#### **From Public Outreach and Visitor Services Management**

Impacts would be similar to those described for the No Action Alternative.

### **4.2.2.14 Impacts on Water Resources**

#### **From Land Health Standards**

Applying Rangeland Health Standards to all uses and programs would decrease soil erosion and stream sedimentation, leading to increased hydrologic function.

#### **From Transportation and OHV Management**

Impacts would be similar to the No Action Alternative, managing BLM system roads to their designated maintenance level and upgrading the classification of several roads could aid in improving road conditions, thereby decreasing soil erosion and subsequent sedimentation of streams.

Closing 249 miles of routes would reduce the potential for soil erosion and subsequent stream sedimentation, leading to increased hydrologic function.

#### **From Cultural Resource Management**

No impacts are anticipated.

#### **From Native American Values Management**

Current conditions would be maintained.

#### **From Paleontological Resource Management**

No impacts are anticipated.

#### **From Wilderness Area Management**

Closing 16 of 22 road miles within the Lahontan Cutthroat Trout WSA could decrease vehicular traffic immediately outside the WSA, resulting in decreased soil erosion and stream sedimentation.

A seasonal closure of the Lahontan Cutthroat Trout Area to vehicular use would reduce soil erosion and subsequent stream sedimentation, leading to increased hydrologic function.

#### **From Special Designation Management**

Closing portions of the ACEC in High Rock, Little High Rock, East Fork, Mahogany, Grassy, and Yellow Rock Canyons to public use from January 31 through May 15 would reduce erosion and sedimentation of streams, leading to increased hydrologic function.

Expanding the Soldier Meadows ACEC and limiting uses (e.g., access, camping, grazing) within this area would increase protections to water sources located within the ACEC and therefore would decrease soil erosion, stream sedimentation, and nutrient loading.

#### **From Vegetation Management**

Impacts would be similar to those described for the No Action Alternative; however, the management actions under this alternative would reduce soil erosion and stream sedimentation over a greater area than the No Action Alternative.

#### **From Livestock Grazing Management**

Impacts would be similar to those described for the No Action Alternative.

#### **From Wild Horse and Burro Management**

Impacts would be similar to those described for the No Action Alternative.

#### **From Fire Management**

Current conditions would be maintained.

#### **From Fish and Wildlife Management**

Current conditions would be maintained.

#### **From Visual Resource Management**

Current conditions would be maintained.

#### **From Water Resource Management**

Impacts would be the same as the No Action Alternative.

**From Lands and Realty Management**

Impacts would be similar to those described for the No Action Alternative.

**From Minerals and Energy Management**

Withdrawing federal lands from mineral development within the South Playa Area, the Lahontan Cutthroat Trout Area, and vehicle access routes outside the NCA would reduce potential water contamination and could reduce soil erosion and stream sedimentation, leading to increased hydrologic function. However the potential, but low probability, development of two mines could lead to local increases in runoff, erosion and sedimentation in season steam channels.

**From Recreation Management**

Restrictions on camping location, duration, and group size could enhance water quality and hydrologic function through decreased erosion and stream sedimentation.

**From Public Outreach and Visitor Services Management**

Impacts would be similar to those described for the No Action Alternative even though outreach actions vary under this alternative.

**4.2.2.15 Impacts on Lands and Realty**

**From Land Health Standards**

No impacts are anticipated.

**From Transportation and OHV Management**

Current conditions would be maintained.

**From Cultural Resource Management**

Current conditions would be maintained.

**From Native American Values Management**

Current conditions would be maintained.

**From Paleontological Resource Management**

Current conditions would be maintained.

**From Wilderness Management**

Current conditions would be maintained.

**From Special Designation Management**

Current conditions would be maintained.

**From Vegetation Management**

No impacts are anticipated.

**From Livestock Grazing Management**

No impacts are anticipated.

**From Wild Horse and Burro Management**

No impacts are anticipated.

**From Fire Management**

No impacts are anticipated.

**From Fish and Wildlife Management**

Current conditions would be maintained.

**From Visual Resource Management**

Designation of the NCA for VRM Class I or II management would increase visual quality requirements when realty actions are proposed. This could lead to fewer rights-of-way being granted or development of rights-of-way being more expensive.

**From Water Resource Management**

Current conditions would be maintained.

**From Lands and Realty Management**

Impacts would be similar to those described in the No Action Alternative.

**From Minerals and Energy Management**

Current conditions would be maintained.

**From Recreation Management**

Current conditions would be maintained.

**From Public Outreach and Visitor Services Management**

No impacts are anticipated.

## **4.2.2.16 Impacts on Minerals and Energy**

### **From Land Health Standards**

No impacts are anticipated.

### **From Transportation and OHV Management**

Current conditions would be maintained.

### **From Cultural Resource Management**

Current conditions would be maintained.

### **From Native American Values Management**

Current conditions would be maintained.

### **From Paleontological Resource Management**

Current conditions would be maintained.

### **From Wilderness Area Management**

Current conditions would be maintained.

### **From Special Designation Management**

No impacts are anticipated.

### **From Vegetation Management**

No impacts are anticipated.

### **From Livestock Grazing Management**

No impacts are anticipated.

### **From Wild Horse and Burro Management**

No impacts are anticipated.

### **From Fire Management**

No impacts are anticipated.

### **From Fish and Wildlife Management**

Current conditions would be maintained.

### **From Visual Resource Management**

Designating the South Playa as VRM Class III and the remaining portions of the planning area (excluding Wilderness Areas and the WSA) as

VRM Class II could increase the costs of future minerals development.

### **From Water Resource Management**

Current conditions would be maintained.

### **From Lands and Realty Management**

Providing for future right-of-way in the non-Wilderness portion of the planning area for access to private lands and in support of valid existing rights would have impacts similar to those described for the No Action Alternative.

### **From Minerals and Energy Management**

Subject to valid existing rights, withdrawal of federal lands within the South Playa Area, the Lahontan Cutthroat Trout Area, and vehicle access routes outside the NCA but within the planning area would decrease opportunities for development.

### **From Recreation Management**

No impacts are anticipated.

### **From Public Outreach and Visitor Services Management**

No impacts are anticipated.

## **4.2.2.17 Impacts on Air Quality**

### **From Land Health Standards**

Current conditions would be maintained.

### **From Transportation and OHV Management**

Impacts would be similar to those described for the No Action Alternative, designated routes receiving vehicle use in excess of capacity could be downgraded in quality for the purpose of decreasing vehicle use levels. Vehicle use, including OHV use, would be managed by designating three use levels that cover the planning area. These actions could result in decreased fugitive dust levels due to improved road surfaces and decrease route mileage.

### **From Cultural Resource Management**

No impacts are anticipated.

**From Native American Values Management**

No impacts are anticipated.

**From Paleontological Resource Management**

No impacts are anticipated.

**From Wilderness Management**

Current conditions would be maintained.

**From Special Designation Management**

Current conditions would be maintained.

**From Vegetation Management**

Current conditions would be maintained.

**From Livestock Grazing Management**

Current conditions would be maintained.

**From Wild Horse and Burro Management**

Current conditions would be maintained.

**From Fire Management**

Outside of Wilderness, prescribed fire would be used on a site-specific basis to accomplish localized small-scale projects consistent with the vegetation objectives. Low surface disturbance mechanical treatments, consistent with vegetation objectives, would be the preferred treatment for fuel reduction. These actions could result in short-term localized increases in smoke and reduced visibility.

If there are no prescribed fire techniques used in Wilderness Areas, wildland fires could burn longer, resulting in increased levels of smoke and reduced visibility.

**From Fish and Wildlife Management**

Current conditions would be maintained.

**From Visual Resource Management**

Current conditions would be maintained.

**From Water Resource Management**

Current conditions would be maintained.

**From Lands and Realty Management**

No impacts are anticipated.

**From Minerals and Energy Management**

Impacts would be similar to those described for the No Action Alternative.

**From Recreation Management**

Implementing group size limits in the Wilderness Zone, day-use only limits in sensitive areas of the Rustic Zone, and requiring vehicle limits on groups camping in the Rustic and Front Country Zones would decrease the frequency of vehicles traveling for recreational purposes, and consequently the fugitive dust from those vehicles and dispersed recreation.

Limiting Class III and IV events to four weekends a year and restricting those events to limited areas within or near the Playa would limit the frequency of fugitive dust from organized events within those sections of the planning area. However, the potential for increased numbers of events could lead to an increase in short-term.

**From Public Outreach and Visitor Services Management**

No impacts are anticipated.

**4.2.2.18 Impacts on Soils**

**From Land Health Standards**

Implementing Land Health Standards under all programs would decrease soil disturbance, compaction, and erosion from all activities.

**From Transportation and OHV Management**

Impacts would be similar to those described for the No Action Alternative. In addition, the closure of 249 miles of vehicle routes would reduce soil disturbance, compaction, and erosion and would improve soil conditions and productivity. The ability to adjust road designations and maintenance levels in response to resource conditions would locally improve soil stability and reduce erosion.

**From Cultural Resource Management**

Current conditions would be maintained.

**From Native American Values Management**

Current conditions would be maintained.

**From Paleontological Resource Management**

Current conditions would be maintained.

**From Wilderness Area Management**

The closure of 16 of the 22 miles of routes and the seasonal closure of the Lahontan Cutthroat Trout Area would also result in decreased soil compaction and erosion.

**From Special Designation Management**

Impacts would be similar to those described for the No Action Alternative.

**From Vegetation Management**

Impacts would be similar to those described for the No Action Alternative.

**From Livestock Grazing Management**

Impacts would be similar to those listed under the impacts from Land Health Standards.

**From Wild Horse and Burro Management**

Current conditions would be maintained.

**From Fire Management**

Impacts would be similar to those described for the No Action Alternative.

**From Fish and Wildlife Management**

Current conditions would be maintained.

**From Visual Resource Management**

Current conditions would be maintained.

**From Water Resource Management**

Current conditions would be maintained.

**From Lands and Realty Management**

There could be short-term soil disturbance, compaction, and erosion associated with potential utility rights-of-way in non-Wilderness areas. Potential long-term compaction and erosion of soils

could occur when new right-of-way roads are developed.

**From Minerals and Energy Management**

A loss of soil productivity would occur due to soil disturbance, compaction, and erosion in areas of valid existing rights.

**From Recreation Management**

Day use designations in areas containing sensitive resources would locally reduce the potential for soil disturbance, compaction, and erosion.

Restrictions on location, duration, and group size for camping and other activities would decrease soil disturbance, compaction, and erosion as compared with the No Action Alternative.

**From Public Outreach and Visitor Services Management**

Impacts would be similar to those described for the No Action Alternative.

**4.2.2.19 Impacts on Recreation**

**From Land Health Standards**

Current conditions would be maintained.

**From Transportation and OHV Management**

Managing BLM system roads to their functional and maintenance class would increase public access throughout the planning area, providing opportunities for a wider range of visitors. The potential for increased traffic along these routes could result in a decrease of natural quiet and solitude associated with primitive recreation.

Changing the High Rock Canyon trail to a resource road, maintenance level 2, could result in improved access within High Rock Canyon. This change could lead to addition visitor use potentially providing some users access to the canyon that is not currently available. Other users that seek the isolation and primitive nature of the area would see the road improvement as degrading their opportunity for solitude, self-discovery and isolation.

Downgrading BLM road 2054 (High Rock Lake Road) would maintain existing levels of solitude associated with primitive recreation along the travel corridor and adjacent lands, including High Rock Canyon. However, public access would be limited due to poor road condition, which would limit opportunities for recreation visitors that do not have high clearance, 4WD, or skills in negotiating rough terrain.

Potentially changing maintenance levels where resource impacts are occurring could locally enhance the ability to manage areas for their critical physical and social settings.

Downgrading designated routes experiencing vehicle use in excess of capacity for the purpose of decreasing vehicle use levels would help retain critical physical, social, and managerial settings of specified areas. These settings include natural quiet and solitude associated with primitive recreation and the perception of recreating in an area free from human development that has traditionally been available. However, recreation opportunities to a population of visitors who use the routes in their current condition would be lost.

Public access through and across the planning area would be enhanced for the long term by acquiring public access easements or developing road alignments in areas where public roads cross private property. Recreation opportunities would be available to a larger segment of users as a result of improved access. However, some areas that currently experience minimal use may experience increased visitation, resulting in the loss of solitude and natural quiet that were traditionally available.

Designating 346,191 acres as limited to designated roads would restrict the freedom for cross-country travel and reduce conflicts between motorized and nonmotorized users. Within this area, 599 miles of routes would be designated as available for vehicle use. Since visitor-use data indicates that most multi-passenger vehicles are operated on the playa and existing roads, the OHV limitations proposed in this alternative are not expected to impact this segment of users. However, hunters who use motorized vehicles to transport game off-trail would most likely be inconvenienced by the proposed action. The availability of an extensive road system should off-set most lost opportunities, but OHV users who enjoy cross-country travel would likely be displaced to areas outside of the planning area.

Adding signage in areas experiencing resource damage or where visitors consistently become lost would help increase comfort for visitors. There would be a loss of self-discovery and exploration on the road system, associated with increased signage. New users and those who are unfamiliar with the area may benefit from directional signage.

#### **From Cultural Resource Management**

Emphasizing site conservation would enhance the preservation of rare resources for discovery by future generations, but would provide fewer opportunities for interpretation and public.

#### **From Native American Values Management**

Managing PCRI under the Traditional Use Category would enhance the preservation of rare resources for enjoyment of future generations. There would, however, be potential conflict between recreation users and traditional users.

#### **From Paleontological Resource Management**

Prohibiting the collection of petrified wood and common invertebrate fossils except for scientific purposes with a permit would contribute to the protection of rare resources for discovery by future generations. However, collection opportunities would be diminished, decreasing visitor freedom, which would lead to displacement of users who enjoy rockhounding to other areas.

#### **From Wilderness Management**

Signing wilderness boundaries would help to increase visitor awareness of areas having important and sensitive values. A long-term increase in primitive character would be expected due to a reduction of motorized trespass and the creation of new ways in wilderness areas. These potential outcomes would enhance the perception of recreating in an area free from human development, although some visitors may find the boundary signs themselves to be obtrusive. A decrease in conflict between motorized and non-motorized users would also be expected.

The addition of all 10 acquired parcels within the Lahontan Cutthroat Trout WSA to the existing WSA and limiting vehicle access to Barlett Butte and Idaho Canyon roads would have long-term impacts to management and the visitor experience.

Within the WSA boundaries, 1,092 acres would be managed as a WSA, which would enhance the ability to manage the existing WSA for wilderness characteristics and important values associated with primitive recreation. However, giving these areas WSA status and further restricting vehicle access would decrease opportunities associated with motorized travel, which would lead to a decreased range of visitors.

A seasonal closure of the Lahontan Cutthroat Trout Area to motorized travel during the spawning season (February to June) would have short-term, localized impacts on visitors. There would be a localized decrease in opportunities for motorized recreation, which would provide opportunities for a decreased range of visitors. Public access to other areas outside of the planning area may also be impacted by the proposed closure. Since a large portion of the closure period would take place during the off-season, these impacts would be minimal. There would, however, still be some visitor displacement to other areas within and outside of the planning area. A seasonal closure would also contribute to the protection of critical physical, social, and managerial settings through the enhanced ability to manage the WSA for characteristics associated with primitive recreation.

### **From Special Designation Management**

Not allowing camping in the High Rock Canyon portion of the ACEC or rock climbing adjacent to the emigrant trail, restricting camping in the Soldier Meadows ACEC, and limiting camping to designated sites in the remainder of the ACEC would cause direct and indirect impacts to the visitor experience. There would be decreased opportunities for camping with a loss in visitors' freedom of choice in campsite location. This restriction would likely cause visitor displacement and may increase crowding at designated sites and competition for desirable campsites, but would decrease competition for day-use recreation opportunities at attraction areas. Through improved protection of wildlife populations, there would be a long-term increase in wildlife viewing and hunting opportunities. The proposed restrictions would also increase protection of rare cultural resources for enjoyment by future generations.

Closing portions of the High Rock ACEC in High Rock, Little High Rock, East Fork High Rock, Mahogany and Grassy Canyons from January 31 through May 15 would restrict recreational activities in desirable and traditionally used areas. There would be a high potential for visitor displacement to other areas inside and outside of the planning area, primarily during the spring season. The improved protection of wildlife populations would increase opportunities for wildlife viewing and hunting during other times of the year.

Rerouting the Soldier Meadows hot spring access road would decrease vehicle access to the areas immediately adjacent to the hot spring complex, Although vehicle camping would not be permitted in areas of traditional camping use, public access to the hot springs would be largely unaffected. Since vehicle travel and parking would not occur immediately adjacent to the springs, competition for use of the springs would be minimized. However, the potential competition for desirable sites would be increased, and may result in increased potential for visitor displacement to other areas inside and outside of the planning area. Impacts to the spring system and areas of critical habitat from vehicle travel or vehicle camping would also be minimized, which would enhance the perception of recreating in an undisturbed area.

Managing springs and streams to minimize human use impacts on desert dace would restrict certain recreational activities in desirable and traditionally used areas of riparian and spring complexes, and may increase competition for desirable sites. Long-term protection would contribute to the preservation of rare resources for enjoyment by visitors.

### **From Vegetation Management**

Impacts would be similar to those described for the No Action Alternative.

### **From Livestock Grazing Management**

Current conditions would be maintained.

### **From Wild Horse and Burro Management**

Impacts would be similar to those described for the No Action Alternative.

### **From Fire Management**

No impacts are anticipated.

### **From Fish and Wildlife Management**

Restricting the development of new wildlife water developments would have the potential to enhance perception of isolation to small areas. Eliminating motorized activities associated with these developments would increase natural quiet and solitude associated with primitive recreation. The proposed actions would also enhance the perception of recreating in an area free from human development. However, the reduced ability to manage wildlife populations would have the potential to decrease wildlife viewing and hunting opportunities associated with these projects.

### **From Visual Resource Management**

Designating the South Playa as VRM Class III and the remaining areas outside of wilderness as VRM Class II would maintain the perception of recreating in an area free from human development. Certain critical settings of specified areas would be protected from impacts caused by development.

### **From Water Resource Management**

Impacts would be similar to those described for the No Action Alternative.

### **From Lands and Realty Management**

Current conditions would be maintained.

### **From Minerals and Energy Management**

In addition to the impacts discussed under the No Action Alternative, administering geothermal leases in the South Playa could result in construction related to the extraction of resources, which could also reduce public access to most highly visited portions of the planning area and would likely result in visitor displacement. Geothermal development would also diminish the perception of recreating in a primitive area, free from human development.

### **From Recreation Management**

Restricting camping within 200 feet of water would have direct and long-term potential to diminish visitors' freedom of choice in campsite

location, and would enhance the preservation of rare resources for use by future generations. Eliminating camping in spring and riparian areas would minimize camping related impacts, and would enhance or restore the undisturbed character of localized areas. There would likely be a reduction in competition for use of springs for other recreational activities. However, with an overall loss of overnight recreation sites there would likely be an increase in competition for desirable campsites.

Restricting further development of facilities and removing existing structures would enhance the perception of recreating in an area free from human development. The proposed action would deter future on-site interpretive development, which would diminish the potential for educational and interpretive opportunities, and would indirectly decrease the visitor's sense of appreciation and understanding of area resources. The potential to increase awareness of important and sensitive values would also be diminished, which could lead to increased inadvertent damage to resources and the primitive character of the area. Recreation opportunities associated with developed facilities would be lost. However, the absence of physical development would enhance self-discovery and exploration, and would contribute to the perception of recreating in an area free from human development.

Implementing a permit system in areas where resources or the visitor experience is being impacted would decrease visitor conflict and competition for favorite/desirable sites as a result of increased use, and would contribute to increased natural quiet and solitude associated with primitive recreation. However, the proposed action would lead to a decrease in spontaneity and unconfined recreation. There would also be an increased potential for visitor displacement to other areas inside and outside of the planning area.

Encouraging the development of privately operated campgrounds would have the potential to increase natural quiet and solitude associated with primitive recreation by distributing use away from attraction areas on public lands. The proposed action would also increase the availability of recreational opportunities, thereby providing for an increased range of visitors.

Prohibiting the collection of rock, minerals, and invertebrate fossils would contribute to the

protection of rare resources for discovery by future generations. However, collection opportunities would be diminished, decreasing visitors' freedom, which would ultimately lead to increased displacement of users who enjoy rockhounding.

The ability to construct, relocate, or close trails to mitigate human-caused impacts would have direct and indirect impacts on the visitor experience. There would be the potential to decrease natural quiet and solitude associated with primitive recreation by encouraging use on developed trails, and the perception of recreating in an area free from human development would be diminished. However, the increased trail opportunities would provide for an increased range of visitors. Opportunities for discovery and exploration would also be increased, and increased resource protection would enhance the perception of recreating in an area free from human-caused impacts.

Group sizes in wilderness would be limited to 15 humans and stock combined (e.g., 10 humans and 5 stock, or 7 and 8), and groups traveling with more than three and five vehicles would be limited to group sites in Rustic and Front Country Zones respectively. Limiting visitor numbers would enhance the ability to manage for critical social and physical settings of specified areas, and would increase natural quiet and solitude associated with primitive recreation. The proposed actions would limit visitors' freedom of choice, and would likely result in visitor displacement to other areas or zones. There would, however, be a decrease in visitor conflict and competition for favorite/desirable sites that would be anticipated in conjunction with increased use in the planning area.

Prohibiting camping within ½ mile of designated campsites would restrict visitors' freedom of choice in camping location and may increase competition for desirable sites. However, widespread camping-related impacts stemming from campsite proliferation would be minimized. Reduced impacts would improve naturalness in heavily used areas, contributing to the protection or restoration of the primitive character.

Prohibiting camping in portions of High Rock Canyon ACEC outside of Wilderness, Soldier Meadows ACEC, Class A and B historic trail segments, and rustic portions of the Lahontan Cutthroat Trout Area would restrict certain recreational activities in desirable and traditionally

used areas. Visitors' freedom of choice would be restricted, with an increased potential for visitor displacement. The increased protection of rare resources and sensitive wildlife species would enhance opportunities for enjoyment by future generations. Reduced camping related impacts would contribute to the perception of recreating in an area free from human disturbance. The overall loss of campsite locations would likely cause increased competition for campsites in light of increased visitation. However, competition for day-use of attraction areas would be decreased.

Camping would be limited to 10 days and 5 days in Rustic and Front Country Zones respectively. Limiting the length of overnight stays would restrict visitors' freedom of choice and may cause displacement to other areas or zones. The proposed action would also decrease competition for favorite/desirable sites. Only a small population of visitors would be impacted by this action.

Allowing dispersed camping on the playa, except in bordering dune and hummock areas, would restrict visitors' freedom of choice in campsite location. There would likely be an increase in visitor displacement and overall camping opportunities would be limited. The improved ability to manage for the preservation of sensitive resources would enhance the perception of recreating in an area free from human disturbance.

The development of a comprehensive permit process would enhance the ability to manage for resource and visitor experience. The proposed actions would limit the number, location, or scale of permitted activities. The development of permit limitations would have long-term impacts on dispersed users and permittees. These limitations would help to retain or restore the natural quiet and solitude associated with primitive recreation in light of higher demand and visitation. There is also potential to increase public access in areas where events are taking place. There would likely be decreased freedom of choice and increased competition for event location. Certain types of events that require large areas of public closure would be restricted. The current evaluation process would allow for a greater range of permitted activities than the proposed action, which would provide opportunities for a greater range of visitors. Spontaneity in permit applications would be increased with improved efficiency of the evaluation process.

## From Public Outreach and Visitor Services Management

Expanding public awareness programs, continuing use of the visitor contact trailer, maintaining an information kiosk in Gerlach and other locations outside the NCA, as well as introducing low-impact recreation principles through volunteers and staff would bring long-term direct and indirect benefits to the visitor experience. These interpretive and educational actions would increase visitor's sense of appreciation and understanding of area resources, as well as visitors' awareness of important and sensitive values. Increased recreation opportunities would be available through on-the-ground programs and any additional interpretive exhibits. Indirect benefits would stem from a decrease in inadvertent impacts of visitor use, which would enhance the ability to manage for critical physical, social, and managerial settings of specified areas.

Restricting on-site development of interpretive facilities in all zones and removing those existing structures would have direct and indirect impact on the visitor experience. The proposed action would limit outreach capabilities and decrease the ability to enhance the visitor's sense of appreciation and understanding of area resources. The potential to increase awareness of important and sensitive values would be diminished, which could lead to increased inadvertent damage to resources and the primitive character of the area. Recreation opportunities associated with interpretive facilities would be lost. However, the absence of physical development would enhance self-discovery and exploration, and would strengthen the perception of recreating in an area free from human development.

Developing self-guided tours in Rustic and Front Country Zones would enhance opportunities to stimulate learning through self-discovery. Since self-guided tours would not require on-site development, the perception of recreating in an area free from human development would be retained. Many of the same benefits realized through other outreach efforts would also be enhanced.

## 4.2.2.20 Impacts on Social and Economic Conditions

### Impacts on Recreation

Impacts of this alternative would be similar to those described for the No Action alternative.

Elements within proposed management prescriptions for this alternative both encourage and discourage recreation. However, recreation is expected to continue to grow at the rate described in the No Action Alternative. Increased visitation could be expected due to the development of a Public Outreach Program, and the growing public awareness that the Black Rock Desert has been designated as an NCA. Conversely, more rigorous management of recreation activities might discourage some visitors. Together, the emphasis on more management and control of recreation activities is seen as insufficient to discourage recreation visitation below normal growth levels but could limit increased visitation that might otherwise be expected to occur.

Stronger stipulations in special recreation permits would include measures for reimbursement on a cost-recovery basis. This would ensure that federal expenditures necessitated for planning and managing large-scale events would more likely be fully reimbursed. Cost recovery would also provide compensation for the costs imposed upon public health, public safety, law enforcement, and medical services provided by the counties.

### Impacts on Minerals and Energy

#### Locatable Minerals

If a gold mining operation was located within the South Jackson Wilderness Area, Class I VRM standards would apply, as in the No Action Alternative. In either case, it is doubtful that a gold mining operation, either open pit or below ground, could meet such standards. Some modification of operations by permit stipulation would be required.

Major gold mining companies are quite accustomed to preparing mining plans of operations and environmental assessments. These requirements could discourage smaller or higher risk based operations. However, in all such situations, the decision to proceed would be based

on estimated returns over costs. For larger operations, those that entail major investment and the expected long-term returns, such additional costs are usually incidental, not prohibitive, and may exist in most mineral exploration and development areas. If any gold ore discoveries prove to be of sufficient quality, it is unlikely that a gold mining operation with valid existing rights would be deferred.

#### Leasable Minerals

Geothermal exploration and development would be less likely to occur under this alternative. The withdrawal from leasable development within the South Playa would close this potential development area to all except those with valid existing rights. Potential for development would be limited to the one existing geothermal lease in the South Playa Area. Only minor modifications and costs would be necessary to conform to VRM Class III standards in this area. Companies would make their investment decisions based on expected returns, taking into consideration the extra costs that might be entailed. The potential for an additional 12 jobs in the local area, and the associated incomes, including the possibility of nine local hires, which would result from the operation of a geothermal plant, would be less likely.

#### Saleable Minerals

No economic impacts are anticipated. Specific and necessary pits could be identified and authorized, and VRM Class III standards maintained.

The public lands outside of the planning area also contain abundant supplies of sand and gravel, so it is highly likely that alternative sources could be found if necessary. Transportation costs could be affected if haul-distance is increased. It is estimated that transportation costs increase about 25 percent for each doubling of the haul-distance (Mine Cost Services, 1998).

#### **Impacts on Lands and Realty**

Impacts from issuance of land use permits would be similar to those described for the No Action Alternative.

There is concern with regard to the restriction on rights-of-way for utilities, which would only be granted for access to private lands and in support of valid existing rights. However, the question

concerning availability of utilities appears to be moot. Current costs of providing electricity in these rural areas range upward from \$60,000 per mile. At this cost, electricity provided by gasoline generators or solar panels is already more cost effective.

#### **Impacts on Road Maintenance and Repair**

Impacts would be similar to those described for the No Action Alternative.

Some upgrading of roads based upon resource or public safety issues could impose additional maintenance costs. No additional impacts would occur to the counties.

#### **Impacts on Law Enforcement and Court Costs**

Impacts would be the same as those described for the No Action Alternative.

#### **Impacts on Search and Rescue Operations**

Impacts would be the same as those described for the No Action Alternative.

#### **Impacts on Indigent Aid**

Impacts would be the same as those described for the No Action Alternative.

## **4.2.3 ALTERNATIVE B** (Emphasis on Response to Change)

In addition to the impacts from the common to all actions as indicated in the No Action Alternative discussion (Section 4.2.1), the following impacts would also occur as a result of Alternative B.

### **4.2.3.1 Impacts on Transportation and OHV**

#### **From Land Health Standards**

Impacts would be the same as Alternative A.

#### **From Transportation and OHV Management**

Same as Alternative A, except upgrading the Sulphur-Jackson Road to Maintenance Level 3 would improve drivability, increase safety for drivers, and increase public access due to the improved road condition. However, traffic may also increase because a wider range of vehicles could use the road. Costs to BLM would increase in the short term to upgrade the road; however, maintenance costs would be reduced in the long term because higher standard roads require less regular maintenance.

Developing public access on the east side of the Black Rock Range from Humboldt County road 214 to provide north-south access to Black Rock Point and east-west access to BLM road 2051 (Pahute Meadow Road) would increase public access to a large area associated with the southeastern and central portions of the Black Rock Range that is currently difficult to access. Unknown new costs are also associated with this action.

Limiting OHV use to designated routes within the 346,191-acre limited area would reduce public access. Closure of 105 miles of vehicle routes would also decrease public access. However, these impacts would be less than those described for Alternative A because 144 fewer miles of vehicle route would be closed.

#### **From Cultural Resource Management**

Impacts would be the same as those discussed for the No Action Alternative.

#### **From Native American Values Management**

No impacts are anticipated.

#### **From Paleontological Resource Management**

No impacts are anticipated.

#### **From Wilderness Management**

No impacts are anticipated; no vehicle access routes would be closed.

#### **From Special Designation Management**

Impacts would be the same as those discussed for Alternative A.

#### **From Vegetation Management**

No impacts are anticipated.

#### **From Livestock Grazing Management**

No impacts are anticipated.

#### **From Wild Horse and Burro Management**

No impacts are anticipated.

#### **From Fire Management**

No impacts are anticipated.

#### **From Fish and Wildlife Management**

Impacts would be the same as those discussed for Alternative A.

#### **From Visual Resource Management**

Impacts would be the same as those discussed for Alternative A.

#### **From Water Resource Management**

Impacts would be the same as for the No Action Alternative.

#### **From Lands and Realty Management**

Impacts would be the same as for the No Action Alternative.

### **From Minerals and Energy Management**

Impacts would be the same as for the No Action Alternative.

### **From Recreation Management**

Impacts would be the same as those discussed for Alternative A.

### **From Public Outreach and Visitor Services Management**

Developing an Administrative Site/Visitor Contact Station located along a major access corridor to the NCA would directly cause increases in traffic associated with the Administrative Site/Visitor Contact Station and indirectly increase traffic associated with improved visitor awareness of travel opportunities within the planning area. Costs would also increase for BLM, and to a lesser degree to the State and counties, to construct and maintain transportation related facilities directly associated with the center and indirect traffic increases associated with improved visitor awareness of travel opportunities within the planning area.

Providing on-site interpretive panels, public awareness programs, and informational kiosks in high-use camp areas in the Front Country Zone and along main travel corridors, and a scenic overlook with interpretive and safety information would increase safety for drivers by increasing awareness of hazards. However, costs to BLM associated with maintenance of transportation access to panels, kiosks, and overlooks would also increase.

## **4.2.3.2 Impacts on Cultural Resources**

### **From Land Health Standards**

No impacts are anticipated.

### **From Transportation and OHV Management**

Impacts would be similar to those described for Alternative A, except upgrading Stevens Camp to local road and Sulphur-Jackson Road to Maintenance Level 3 could increase inadvertent damage or disturbance to cultural sites and the opportunity for vandalism and looting. The

integrity of the setting of the emigrant trails and other cultural resources could also be impaired by the upgrades.

Adjusting functional classification or maintenance levels of BLM system roads or designated routes as needed could decrease inadvertent damage to cultural resources and maintain the integrity of cultural resources.

Developing public access on the east side of the Black Rock Range from Humboldt County Road 214 would increase public access to a large area associated with the southeastern and central portions of the Black Rock Range, which may result in increased opportunity for vandalism and looting.

Limiting OHV use to designated routes and closure of 105 miles of vehicle routes would reduce inadvertent damage to cultural sites and decrease the potential vandalism and looting.

### **From Cultural Resource Management**

Emphasizing public use, with monitoring to determine if additional protection is needed, would enhance opportunities for scientific study and public use of cultural resources. However, inadvertent damage to cultural resources or vandalism and looting may occur before the additional protection is in place.

### **From Native American Values Management**

Impacts would be similar to those described for Alternative A.

### **From Paleontological Resource Management**

No impacts are anticipated.

### **From Wilderness Management**

Locating the WSA boundary along a 100-foot offset from both sides of the centerline of the main Barlett Butte BLM system road #2052, the Summer Camp route, the Idaho Canyon route and the route into Wood Canyon would decrease inadvertent damage to cultural resources from unrestricted OHV traffic.

Excluding camping in Units 1 and 2 would decrease inadvertent damage to cultural resources and the opportunity for vandalism and looting.

### **From Special Designation Management**

Allowing camping within the High Rock Canyon in designated sites and elimination of potential rock climbing adjacent to the emigrant trail would reduce the possibility of inadvertent damage or disturbance to cultural resources and opportunities for vandalism and looting.

Closing portions of the High Rock Canyon ACEC between the mouth of High Rock Canyon and 5 miles below Steven's Camp to visitor use from January 31 through May 15 each year would prevent damage to the emigrant trail from vehicular traffic during muddy periods.

Increasing the existing Soldier Meadows ACEC to approximately 2,077 acres and applying additional protection measures, including designated camping, fencing of sensitive resources, and livestock and wild horse and burro restrictions, would provide better protection of cultural resource values. In the long term, opportunities for scientific study and public use of cultural resources would be enhanced.

### **From Vegetation Management**

Impacts would be similar to those described for Alternative A.

### **From Livestock Grazing Management**

Excluding the Stanley Camp Pasture within the Soldier Meadows allotment from livestock grazing or trailing would decrease inadvertent damage to cultural resources. Overall, the integrity of cultural resources would be maintained and the setting of the emigrant trails would be maintained or improved.

Authorizing grazing of the fenced portions of the Soldier Meadows ACEC consistent with resource management objectives would increase the risk of inadvertent damage to cultural resources.

### **From Wild Horse and Burro Management**

Impacts would be similar to those described for the No Action Alternative.

### **From Fire Management**

Using wildland fire and prescribed fire throughout the planning area to meet vegetation objectives could cause inadvertent damage to cultural resources during implementation. Overall,

however, the integrity of cultural resources and the setting of the emigrant trails would be maintained.

### **From Fish and Wildlife Management**

Impacts would be similar to those described for the No Action Alternative.

### **From Visual Resource Management**

Designating the South Playa as VRM Class III and the remaining portions of the planning area (excluding Wilderness Areas and the WSA) as VRM Class II would maintain the integrity of the setting of the emigrant trails and other cultural resources. Indirectly, these designations would restrict activities that could damage cultural resources.

### **From Water Resource Management**

Current conditions would be maintained.

### **From Lands and Realty Management**

No impacts are anticipated.

### **From Minerals and Energy Management**

Impacts would be similar to those described for Alternative A.

### **From Recreation Management**

Applying visitor restrictions, such as camping limits, activity restrictions, trail development bans, or a permit system if resource damage occurs would prevent or alleviate inadvertent damage or disturbance to cultural resources and improve protection or site stability. As a result of these measures to increase resource protection, integrity of cultural resources would be maintained and the setting of the emigrant trails would be maintained or improved.

Applying camping restrictions if resource damage occurs, and closing dune and hummock areas on the playa to camping, would also protect cultural resources from inadvertent damage, vandalism, and looting; improve or maintain the integrity of cultural resources and their setting; and increase opportunities for cultural appreciation and discovery.

### **From Public Outreach and Visitor Services Management**

In addition to impacts discussed in the No Action Alternative, using the appropriate interpretive and education tools to prevent resource damage or enhance visitor safety and providing a variety of visitor facilities, maps, and interpretive trails would increase the knowledge of the prehistory and history of the region and enhance opportunities for public use of cultural resources. This would also increase appreciation of cultural resources, decrease inadvertent damage, vandalism, and looting; maintain the integrity of cultural resources; and maintain or improve the setting of the emigrant trails.

### **4.2.3.3 Impacts on Native American Values**

#### **From Land Health Standards**

Impacts would be the same as those described under Alternative A.

#### **From Transportation and OHV Management**

Impacts would be the same as those described under Alternative A.

However, limiting 346,191 acres and 743 miles to OHV use on designated roads and vehicle routes could decrease effects on aquatic habitat adjacent to a few miles of closed route in Lahontan cutthroat trout habitat and therefore increase fishing opportunities for Tribal sustenance.

#### **From Cultural Resource Management**

Emphasizing public use of cultural resources could lead to potential conflicts with traditional Native American users.

#### **From Native American Values Management**

Impacts would be the same as those described under Alternative A.

#### **From Paleontological Resource Management**

No impacts are anticipated.

### **From Wilderness Management**

Current conditions would be maintained.

### **From Special Designation Management**

Not allowing camping within the High Rock Canyon portion of the ACEC or rock climbing adjacent to the emigrant trail would reduce conflicts between users and preserve the opportunity to pursue traditional uses.

Increasing the existing Soldier Meadows ACEC to approximately 2,077 acres and applying additional protection measures, including designated camping only, fencing around sensitive resources, and applying livestock and wild horse and burro restrictions, would provide better protection for cultural resources and preserve the opportunity to pursue traditional uses.

### **From Vegetation Management**

Impacts would be the same as those described under Alternative A.

### **From Livestock Grazing Management**

Excluding the Stanley Camp Pasture within the Soldier Meadows allotment from livestock grazing or trailing would maintain the existing conditions of PCRI.

Authorizing grazing of the fenced portions of the Soldier Meadows ACEC consistent with resource management objectives would increase the risk of inadvertent damage or disturbance to PCRI.

### **From Wild Horse and Burro Management**

Current conditions would be maintained.

### **From Fire Management**

Using wildland fire and prescribed fire throughout the planning area to manipulate the woody and herbaceous species to meet vegetation objectives could cause inadvertent damage or disturbance to cultural resources during implementation. Overall, however, the integrity of cultural resources and opportunities to pursue traditional uses would be maintained or improved.

### **From Fish and Wildlife Management**

Impacts would be similar to those described for the No Action Alternative.

### **From Visual Resource Management**

Designating the South Playa as VRM Class III and the remaining portions of the planning area (excluding Wilderness Areas and the WSA) as VRM Class II would maintain the integrity of cultural resources particularly the landscape setting, and opportunities to pursue traditional uses would be maintained or improved. Indirectly, these designations would restrict activities that could damage resources important to traditional users.

### **From Water Resource Management**

Impacts would be similar to those described for the No Action Alternative.

### **From Lands and Realty Management**

No impacts are anticipated.

### **From Minerals and Energy Management**

Impacts would be similar to those described for Alternative A.

### **From Recreation Management**

Applying visitor restrictions, such as camping limits, activity restrictions, trail development bans, or a permit system if resource damage occurs from recreation activities would prevent or alleviate inadvertent damage or disturbance to cultural resources. As a result of these measures to increase resource protection, integrity of the setting of important Native American locations would also be maintained or improved in the long term.

Applying camping restrictions, such as allowing dispersed camping except within one-half mile of designated campsites, applying restrictions if resource damage occurs, and closing dune and hummock areas on the playa to camping, would also protect cultural resources from inadvertent damage and reduce opportunities for looting and vandalism.

### **From Public Outreach and Visitor Services Management**

In addition to impacts discussed in the No Action Alternative, using the appropriate interpretive and education tools to prevent resource damage or enhance visitor safety and providing a variety of visitor facilities, maps, and interpretive

trails would increase the knowledge of Native American values. Indirectly, increased appreciation of Native American values could decrease inadvertent damage to cultural resources, decrease conflicts between traditional users and recreationists, and improve or maintain the integrity and their traditional settings.

## **4.2.3.4 Impacts on Paleontological Resources**

### **From Land Health Standards**

No impacts are anticipated.

### **From Transportation and OHV Management**

Impacts would be similar to those described for Alternative A, except upgrading Stevens Camp to local road and Sulphur-Jackson Road to maintenance level 3 would increase inadvertent damage or disturbance to paleontological resources and the opportunity for vandalism and looting.

Adjusting functional classification or maintenance levels of BLM system roads or designated routes as needed could decrease inadvertent damage to paleontological resources.

Developing public access on the east side of the Black Rock Range from Humboldt County road 214 would increase public access to a large area associated with the southeastern and central portions of the Black Rock Range, which may result in increased opportunities for fossil theft and vandalism and increased chances of alteration and erosion of sites.

Limiting OHV use to designated routes and closure of 105 miles of vehicle routes would reduce inadvertent damage to paleontological resources and decrease the potential for vandalism and looting.

### **From Cultural Resource Management**

No impacts are anticipated.

### **From Native American Values Management**

No impacts are anticipated.

**From Paleontological Resource Management**

Impacts would be the same as those described under Alternative A.

Allowing collection of petrified wood and common invertebrate fossils throughout the planning area would increase the risk of inadvertent damage to important sites. Restricting collection in the Hanging Rock Petrified Forest to permitted scientific purposes could result in conflicts with rock hounds accustomed to collecting petrified wood in that area.

**From Wilderness Management**

Current conditions would be maintained.

**From Special Designation Management**

Impacts would be similar to those described for Alternative A.

**From Vegetation Management**

No impacts are anticipated.

**From Livestock Grazing Management**

No impacts are anticipated.

**From Wild Horse and Burro Management**

No impacts are anticipated.

**From Fire Management**

Impacts would be similar to those described for the No Action Alternative.

**From Fish and Wildlife Management**

No impacts are anticipated.

**From Visual Resource Management**

No impacts are anticipated.

**From Water Resource Management**

No impacts are anticipated.

**From Lands and Realty Management**

Continuing to designate the one utility corridor south of the Union Pacific railroad tracks for buried utilities would increase the risk of inadvertent damage to important sites and could result in fossil

theft, breakage, and displacement and vandalism, alteration, and erosion of sites if additional utilities are developed in the corridor.

**From Minerals and Energy Management**

Impacts would be similar to those described for the No Action Alternative.

**From Recreation Management**

Authorizing collection of rocks, minerals, and common invertebrate fossils by permit would decrease the risk of inadvertent damage to important sites and decrease fossil theft, breakage, and displacement. Issuing permits would educate collectors, increase appreciation of paleontological resources, decrease conflicts, and enhance scientific inquiry and/or public use.

**From Public Outreach and Visitor Services Management**

In addition to impacts discussed in the No Action Alternative, using the appropriate interpretive and education tools to prevent resource damage or enhance visitor safety and providing a variety of visitor facilities, maps, and interpretive trails would increase the knowledge and appreciation of paleontological resources. Increased appreciation of paleontological resources could decrease inadvertent damage to paleontological resources, and reduce the risk of fossil theft, breakage, displacement and vandalism, alteration, and erosion of paleontological sites.

**4.2.3.5 Impacts on Wilderness**

**From Land Health Standards**

Impacts would be similar to those described for Alternative A.

**From Transportation and OHV Management**

Impacts would be similar to those described for the No Action Alternative.

**From Cultural Resource Management**

Impacts would be similar to those described for the No Action Alternative.

### **From Native American Values Management**

No impacts are anticipated.

### **From Paleontological Resource Management**

Impacts would be similar to those described for the No Action Alternative.

### **From Wilderness Management**

Signing wilderness boundaries at approximately 1-mile intervals along all boundary roads would not be as frequent as Alternative A. The possibility for motorized trespass by visitors not knowing where the wilderness boundaries are located would be slightly increased.

Adding all 10 acquired wilderness inventory units to the WSA and offsetting the WSA boundary in Units 1 and 2 along 100 feet from both sides of the centerline of the routes would increase naturalness throughout the WSA, while allowing for traditional vehicle camping along the main routes.

Closing the Lahontan Cutthroat Trout Area seasonally to motor vehicles during the spawning season of the Lahontan cutthroat trout if needed would increase the opportunities for solitude and primitive recreation during the closure, and enhance the special fisheries values found in the area.

### **From Special Designation Management**

Impacts would be similar to those described for Alternative A.

### **From Vegetation Management**

Allowing vegetation treatment if it is the minimum required action for the management of wilderness could maintain or enhance naturalness; however, solitude may be decreased short term.

### **From Livestock Grazing Management**

Impacts would be similar to those described for Alternative A.

### **From Wild Horse and Burro Management**

Impacts would be similar to those described for the No Action Alternative.

### **From Fire Management**

Allowing wildland fire to play a more natural role on 1,214,514 acres of Category B lands and providing opportunities for prescribed fire could increase naturalness where fire is desired and the risks associated with invasive species are low. In the short term, solitude could be decreased during the activities.

### **From Fish and Wildlife Management**

Allowing animal damage control in wilderness could decrease naturalness and opportunities for solitude and primitive recreation.

Maintaining the 14 existing small game wildlife water developments and constructing new developments could decrease naturalness and solitude in the immediate vicinity of those projects. These manmade structures in the wilderness would be a constant reminder of the human manipulation in the area and would reduce naturalness. During maintenance and new construction, solitude would be reduced temporarily in the immediate area.

### **From Visual Resource Management**

Current conditions would be maintained.

### **From Water Resource Management**

Impacts would be similar to those described for the No Action Alternative.

### **From Lands and Realty Management**

Impacts would be similar to those described for the No Action Alternative.

### **From Minerals and Energy Management**

Impacts would be similar to those described for Alternative A.

### **From Recreation Management**

Restricting uses that are causing resource impacts would maintain naturalness and opportunities for solitude and primitive recreation.

Requiring a permit for collection of rocks, minerals, and common invertebrate fossils would allow BLM to contact collectors beforehand and inform them of sensitive resources and regulation. This information would reduce the impact these collectors have on naturalness. Applying limits to

rock, mineral, and invertebrate fossil collection would reduce the impacts associated with collection.

Designating the Desert Trail Corridor through the Wilderness Areas would allow more people to access and enjoy those Wilderness Areas, which could increase opportunities for primitive recreation. Increased visitor use could also decrease naturalness and solitude in the vicinity of the emigrant trail corridor.

Implementing group size limits if impacts on resources occurred or the visitor experience was impaired could enhance or maintain naturalness, primitive recreation or solitude, and special features.

#### **From Public Outreach and Visitor Service Management**

Not allowing onsite outreach, interpretive, or regulatory information in the Wilderness Zone, except when required to protect resources, could indirectly enhance naturalness and primitive recreation.

### **4.2.3.6 Impacts on Special Designations**

#### **4.2.3.6.1 ACECs**

##### **From Land Health Standards**

Impacts would be the same as for Alternative A.

##### **From Transportation and OHV Management**

Impacts would be the same as for Alternative A.

##### **From Cultural Resource Management**

No impacts are anticipated.

##### **From Native American Values Management**

No impacts are anticipated.

##### **From Paleontological Resource Management**

No impacts are anticipated.

##### **From Wilderness Management**

Current conditions would be maintained.

##### **From Special Designation Management**

Although both ACECs would be smaller than for Alternative A and some camping would be allowed, the impacts would be largely the same as Alternative A. Camping would be allowed only in portions of the ACECs that would not affect the values for which the ACECs were designated. In the High Rock Canyon ACEC, the portion of the area that receives most of the visitor use and contains the most sensitive resources would remain in the ACEC. In the Soldier Meadows ACEC, the habitats of the rare species would remain in the ACEC.

##### **From Vegetation Management**

Impacts would be similar to those described for Alternative A.

##### **From Livestock Grazing Management**

Impacts would be similar to those described for Alternative A.

##### **From Wild Horse and Burro Management**

Impacts would be similar to those described for the No Action Alternative.

##### **From Fire Management**

Impacts would be similar to those described for the No Action Alternative.

##### **From Fish and Wildlife Management**

Impacts would be similar to those described for the No Action Alternative.

##### **From Visual Resource Management**

Current conditions would be maintained.

##### **From Water Resource Management**

Impacts would be similar to those described for the No Action Alternative.

##### **From Lands and Realty Management**

No impacts are anticipated.

### **From Minerals and Energy Management**

No impacts are anticipated.

### **From Recreation Management**

Applying limits on human activities, constructing facilities around hot springs, or implementing a permit system if resource impacts are occurring would decrease disturbance of important habitat for the desert dace, springsnails, and basalt cinquefoil. Adapting to changing recreation user situations would allow protection of the primitive character of High Rock Canyon and associated emigrant trail segment, eliminate problems with camping in sites sensitive to resource, and alleviate visual impacts.

### **From Public Outreach and Visitor Service Management**

In addition to impacts discussed in the No Action Alternative, using the appropriate interpretive and education tools to prevent resource damage or enhance visitor safety and providing a variety of visitor facilities, maps, and interpretive trails would increase public appreciation of ACEC values. Indirectly, if habitat for the desert dace, springsnails, and basalt cinquefoil is disturbed, the primitive character of the High Rock area and associated emigrant trail segments could be reduced.

#### **4.2.3.6.2 Wild and Scenic Rivers**

### **From Land Health Standards**

Impacts would be similar to those described for Alternative A.

### **From Transportation and OHV Management**

Impacts would generally be similar to those described for the No Action Alternative; however, closure of 105 miles of routes would further protect the outstandingly remarkable values of the eligible streams by reducing riparian damage and sedimentation caused by vehicle use.

### **From Cultural Resource Management**

No impacts are anticipated.

### **From Native American Values Management**

No impacts are anticipated.

### **From Paleontological Resource Management**

No impacts are anticipated.

### **From Wilderness Management**

The 10 acquired parcels in the Lahontan Cutthroat Trout WSA also contain segments of Mahogany and Summer Camp Creeks; therefore, managing the parcels as part of the WSA would also protect the values associated with those streams. The 100-foot offset from centerline of the main Barlett Butte BLM system road 2052, the Summer Camp route, the Idaho Canyon route, and the route into Wood Canyon in Units 1 and 2 would continue to allow users to camp in or near the riparian area of Mahogany Creek and would allow impacts associated with camping to continue.

Seasonally closing the Lahontan Cutthroat Trout Area to motor vehicles if monitoring indicates that impacts are occurring would decrease the impacts that vehicle use has on the fish in Mahogany, Summer Camp, and Snow Creeks and increase the viability of that species, preserving the outstandingly remarkable values.

### **From Special Designation Management**

Allowing camping in the High Rock Canyon portion of the High Rock Canyon ACEC and the Soldier Meadows ACEC only in designated sites would reduce impacts from camping (such as trampling of vegetation and vandalizing of historic sites) on the outstandingly remarkable values of High Rock Canyon, Mahogany, and Soldier Meadows Creeks. Allowing camping in designated sites would allow recreation to continue and would confine camping-related impacts to those small areas.

Closing a portion of the ACEC between the mouth of High Rock Canyon and 5 miles below Stevens Camp from January 31 through May 15 each year would reduce opportunities for recreation along High Rock Canyon Creek, which is one of the outstandingly remarkable values for which High Rock Canyon Creek was found eligible.

Rerouting the existing hot spring access road and closing spur roads would reduce the impacts

from vehicles on the vegetation and fish associated with Soldier Meadows Creek.

Minimizing human impacts on springs and streams within the Soldier Meadows ACEC would maintain the values associated with Soldier Meadows Creek.

Fencing and restricting grazing in the Soldier Meadows ACEC could reduce impacts from livestock and wild horses on vegetation and fish associated with Soldier Meadows Creek.

#### **From Vegetation Management**

Impacts would be similar to those described for the No Action Alternative.

#### **From Livestock Grazing Management**

Impacts would be similar to those described for Alternative A.

#### **From Wild Horse and Burro Management**

Impacts would be similar to those described for the No Action Alternative.

#### **From Fire Management**

No impacts are anticipated.

#### **From Fish and Wildlife Management**

Current conditions would be maintained.

#### **From Visual Resource Management**

Current conditions would be maintained.

#### **From Water Resource Management**

Impacts would be similar to those described for the No Action Alternative.

#### **From Lands and Realty Management**

No impacts are anticipated.

#### **From Minerals and Energy Management**

Impacts would be similar to those described for the No Action Alternative.

#### **From Recreation Management**

Applying limits on human activities, constructing facilities around hot springs, or

implementing a permit system if resource impacts are occurring could reduce impacts on outstandingly remarkable values.

Allowing dispersed camping throughout the Rustic Zone except within one-half mile of designated camp sites and limiting drive-in camping to designated sites in portions of High Rock Canyon ACEC outside of Wilderness and rustic portions of the Lahontan Cutthroat Trout Area could reduce impacts on values associated with Soldier Meadows Creek, if restrictions are implemented.

#### **From Public Outreach and Visitor Service Management**

Implementing interpretive techniques, including on-the-ground elements, to prevent resource damage and constructing an offsite Administrative Site/Visitor Contact Station could indirectly protect outstandingly remarkable values by decreasing recreational disturbance. However, increasing outreach could also increase visitation to the area, which could impact the outstandingly remarkable values in the long term.

### **4.2.3.7 Impacts on Vegetation**

#### **From Land Health Standards**

Impacts would be similar to those described for Alternative A.

#### **From Transportation and OHV Management**

Impacts would generally be similar to those described for Alternative A.

Developing public access on the east side of the Black Rock Range would potentially degrade species composition, productivity, and structure of upland and riparian plant communities on less than 5 miles of new road where new road alignments would be developed. The construction of up to 5 miles of new road may also increase soil compaction and vegetation damage from vehicles on areas adjacent to new roads.

Closing 105 miles of road and limiting 346,191 acres and 743 miles to OHV use on designated vehicle routes would improve species composition, productivity, and structure of upland and riparian plant communities and; lead to the elimination of noxious weeds, and could reduce,

increase, or maintain soil compaction and vegetation damage from vehicles.

**From Cultural Resource Management**

Current conditions would be maintained.

**From Native American Values Management**

Current conditions would be maintained.

**From Paleontological Resource Management**

No impacts are anticipated.

**From Wilderness Management**

Impacts would be similar to those described for Alternative A.

**From Special Designation Management**

Although the High Rock Canyon ACEC would be decreased by 18,342 acres, the impacts would be the same as for Alternative A because the areas designated under this alternative would include all the areas subject to vegetation disturbance associated with vehicle use and camping.

Impacts from management actions in the Soldier Meadows ACEC would be similar to those described for Alternative A. However, vegetation disturbance and compaction would be increased on a few acres associated with designated camping areas.

**From Vegetation Management**

Impacts would generally be the same as for Alternative A; however, allowing vegetation treatments, including prescribed fire, in all Wilderness Areas would potentially improve species composition, productivity, and structure of upland and riparian plant communities on, at most, a few hundred acres per decade.

**From Livestock Grazing Management**

Impacts would be the same as for Alternative A.

**From Wild Horse and Burro Management**

Impacts would be the same as for the No Action Alternative.

**From Fire Management**

Impacts would be similar to those described for Alternative A.

**From Fish and Wildlife Management**

Impacts associated with sage-grouse habitat management actions would be similar to those described for Alternative A.

Maintaining existing and constructing new wildlife water developments would degrade species composition, productivity, and structure of upland communities on less than an acre associated with project development and increase soil compaction and vegetation damage from vehicles on a few acres.

**From Visual Resource Management**

Current conditions would be maintained.

**From Water Resource Management**

Impacts would be similar to those described for the No Action Alternative.

**From Lands and Realty Management**

Impacts would be similar to those described for the No Action Alternative.

**From Minerals and Energy Management**

Impacts would be similar to those described for the No Action Alternative.

**From Recreation Management**

Impacts would be similar to those described for the No Action Alternative. Although the potential limitation on recreation users would be applied in a different manner, it is likely that the area of vegetation affected would be similar.

**From Public Outreach and Visitor Services Management**

Impacts would generally be similar to those described for Alternative A. However, developing an Administrative Site/Visitor Contact Station outside the NCA could result in a potential loss of vegetation on a few acres outside the planning area if a previously undisturbed site is chosen; and elimination of noxious weeds might occur if visitors

take measures to decrease weed spread and report new infestations.

### **4.2.3.8 Impacts on Livestock Grazing**

#### **From Land Health Standards**

Applying the Rangeland Health Standards to all uses and programs would have impacts similar to those described for the No Action Alternative.

#### **From Transportation and OHV Management**

In addition to the impacts discussed in the No Action Alternative and Alternative A, designation of transportation routes and OHV classifications would cause decreased access to rangelands by vehicle and increased travel times due to closure of 105 miles of vehicle routes.

Public access on the east side of the Black Rock Range would have the potential to increase vandalism of livestock-related projects, increase livestock loss, and increase operational expenses of livestock operators with improved roads that allow more visitors access. The action would also result in decreased maintenance to vehicles and shorter travel times on the improved access.

#### **From Cultural Resource Management**

Current conditions would be maintained.

#### **From Native American Values Management**

Current conditions would be maintained.

#### **From Paleontological Resource Management**

Current conditions would be maintained.

#### **From Wilderness Area Management**

Current conditions would be maintained.

#### **From Special Designation Management**

Although the Soldier Meadows ACEC would be 1,693 acres smaller than in Alternative A, impact on livestock grazing would be similar to that in Alternative A because the area with restricted livestock use would be the same.

#### **From Vegetation Management**

Impacts would be similar to those described for Alternative A.

#### **From Livestock Grazing Management**

Impacts would be similar to those described for Alternative A. Additionally, adjusting the boundaries of the Buffalo Hills, Jackson Mountains, and Paiute Meadows Allotments without adjusting permitted forage use would maintain operator flexibility related to livestock grazing practices on areas in Buffalo Hills, Paiute Meadows, and Jackson Mountains Allotments by authorizing use on 26,385 acres historically used for livestock but not in grazing allotments. These actions would also maintain areas historically available for livestock grazing.

#### **From Wild Horse and Burro Management**

Impacts would be similar to those described for the No Action Alternative.

#### **From Fire Management**

Current conditions would be maintained.

#### **From Fish and Wildlife Management**

Impacts would be similar to those discussed in Alternative A, allowing animal damage control to be conducted in wilderness by USDA Wildlife Services only to protect threatened and endangered species, to prevent the transmission of disease to other wildlife or humans, and to prevent serious losses to domestic livestock would maintain the opportunity to remove predators causing losses of livestock.

#### **From Visual Resource Management**

No impacts are anticipated.

#### **From Water Resource Management**

Impacts would be similar to those described for the No Action Alternative.

#### **From Lands and Realty Management**

No impacts are anticipated.

**From Minerals and Energy Management**

Current conditions would be maintained.

**From Recreation Management**

No impacts are anticipated.

**From Public Outreach and Visitor Service Management**

Current conditions would be maintained.

**4.2.3.9 Impacts on Wild Horses and Burros**

**From Land Health Standards**

Impacts would be the same as for Alternative A.

**From Transportation and OHV Management**

In addition to the impacts in the No Action Alternative, closing 105 miles of vehicle route to OHV use could decrease human contact with wild horses and burros, resulting in decreased animal harassment and potential theft of wild horses and burros.

**From Cultural Resource Management**

Current conditions would be maintained.

**From Native American Values Management**

Current conditions would be maintained.

**From Paleontological Resource Management**

Current conditions would be maintained.

**From Wilderness Area Management**

Current conditions would be maintained.

**From Special Designation Management**

Impacts would be the same as for Alternative A.

**From Vegetation Management**

Impacts would be the same as for the No Action Alternative.

**From Livestock Grazing Management**

Impacts would be the same as for the No Action Alternative.

**From Wild Horse and Burro Management**

Impacts would be the same as for the No Action Alternative.

**From Fire Management**

Current conditions would be maintained.

**From Fish and Wildlife Management**

Impacts would be the same as for the No Action Alternative.

**From Visual Resource Management**

Current conditions would be maintained.

**From Water Resource Management**

Impacts would be the same as the No Action Alternative.

**From Lands and Realty Management**

No impacts are anticipated.

**From Minerals and Energy Management**

Current conditions would be maintained.

**From Recreation Management**

No impacts are anticipated.

**From Public Outreach and Visitor Services Management**

Current conditions would be maintained.

**4.2.3.10 Impacts on Fire Management**

**From Land Health Standards**

Impacts would be the same as Alternative A.

**From Transportation and OHV Management**

Impacts would be the similar to those discussed for Alternative A. However, the access

improvement in the Black Rock Range could improve the effectiveness of fire protection to central part of that range by providing new access. Additionally, there is the potential for an increase in human-caused fires due to increase visitor access to central part of Black Rock.

Revised route designations could degrade effective fire protection by decreasing access for fire suppression resources due to closure of 105 miles of existing vehicle routes. This could also result in increased fire suppression costs and a decrease in the potential for human-caused fires by decreasing public access.

**From Cultural Resource Management**

Current conditions would be maintained.

**From Native American Values Management**

Current conditions would be maintained.

**From Paleontological Resource Management**

Current conditions would be maintained.

**From Wilderness Area Management**

Prescribed burning in wilderness areas to manipulate vegetation to benefit other resources would change the fuel loading a few hundred acres and have little affect on wildland fire size, intensity and indirectly fire suppression efforts.

**From Special Designation Management**

Current conditions would be maintained.

**From Vegetation Management**

Impacts would be similar to those described for Alternative A.

**From Livestock Grazing Management**

Impacts would be similar to those described for the No Action Alternative.

**From Wild Horse and Burro Management**

No impacts are anticipated.

**From Fire Management**

In addition to the impacts in Alternative A, prescribed fire could also be used on a site-specific

basis to accomplish localized small-scale projects consistent with the vegetation objectives in wilderness. The impacts would be the same as the No Action Alternative.

**From Fish and Wildlife Management**

Current conditions would be maintained.

**From Visual Resource Management**

Current conditions would be maintained.

**From Water Resource Management**

No impacts are anticipated.

**From Lands and Realty Management**

No impacts are anticipated.

**From Minerals and Energy Management**

No impacts are anticipated.

**From Recreation Management**

No impacts are anticipated.

**From Public Outreach and Visitor Services Management**

Impacts would be similar to those described for the No Action Alternative.

**4.2.3.11 Impacts on Fish and Wildlife**

**From Land Health Standards**

Impacts would be similar to those described for Alternative A.

**From Transportation and OHV Management**

Impacts from operation of the transportation system would be similar to those described for Alternative A since the area of road disturbance and amount of visitor use from these actions would not measurably change.

Impacts from providing public access on the east side of the Black Rock Range are unknown because specifics of how this would be accomplished are unknown. Improvements could

range from no impact if ROWs for existing routes could be obtained to degrading habitat on a few acres if new roads are constructed and reducing wildlife populations in the immediate area of new road construction.

Limiting 346,191 acres and 743 miles to OHV use on designated roads and vehicle routes could decrease erosion and sedimentation of aquatic habitat adjacent to a few miles of closed route in Lahontan cutthroat trout habitat

#### **From Cultural Resource Management**

Current conditions would be maintained.

#### **From Native American Values Management**

Current conditions would be maintained.

#### **From Paleontological Resource Management**

No impacts are anticipated.

#### **From Wilderness Area Management**

Closing the Lahontan cutthroat trout Area to motor vehicles if monitoring indicates impacts are occurring to the spawning habitat would decrease erosion and sedimentation of aquatic habitat by elimination of vehicle use during period of year most likely to have increased sedimentation associated with vehicle use of wet roads. Reducing human use during half the year would decrease the chance of wildlife being disturbed or harassed, protect and enhance wildlife habitat within the Lahontan cutthroat trout Area, and decrease inadvertent disturbance by visitors.

#### **From Special Designation Management**

Although High Rock Canyon ACEC would be reduced in size and the Soldier Meadows ACEC would be increased in size, the actions would have the same impact as discussed in Alternative A because the ACEC would include wildlife habitats that are most sensitive to human impacts.

#### **From Vegetation Management**

Impacts from vegetation management would be the same as those for Alternative A, because most of the actions are the same. In addition, allowing vegetation treatments, including prescribed fire, in Wilderness Areas would restore

native vegetation communities on a few hundred acres and enhance wildlife habitat and species viability.

#### **From Livestock Grazing Management**

Authorizing grazing within the fenced portions of the Soldier Meadows ACEC consistent with resource management objectives would maintain or enhance wildlife habitat and species viability, which could lead to increased wildlife populations. Limiting grazing near riparian areas would protect aquatic wildlife and sensitive riparian habitat.

#### **From Wild Horse and Burro Management**

Impacts would be similar to those described for the No Action Alternative.

#### **From Fire Management**

Impacts would be similar to those described for Alternative A, using wildland fire and prescribed fire throughout the planning area to manipulate the woody and herbaceous species to meet vegetation objectives could disturb wildlife during implementation, but would also improve and enhance wildlife habitat in the long-term.

#### **From Fish and Wildlife Management**

Impacts would be similar to those described for Alternative A, allowing animal damage control in wilderness to protect threatened and endangered species and prevent the transmission of disease to other wildlife or humans may lead to decreased predator populations and increased prey species viability.

Managing sage-grouse and other sage brush obligate species habitats for the long-term sustainability of sage-grouse and other sagebrush dependent wildlife species would enhance protect and enhance habitats and species viability of sage-grouse, other sagebrush dependent species, non-game species dependent on mountain shrub and aspen stands, and sagebrush stands needing changes to understory vegetation.

#### **From Visual Resource Management**

Current conditions would be maintained.

### **From Water Resource Management**

Impacts would be similar to those described for the No Action Alternative.

### **From Lands and Realty Management**

Current conditions would be maintained.

### **From Minerals and Energy Management**

Impacts would be similar to those described for the No Action Alternative.

### **From Recreation Management**

Although recreation management actions in Alternative B are somewhat less restrictive than Alternative A, the concept of implementing restrictions on recreation use only as needed to protect resources would result in the same impacts.

### **From Public Outreach and Visitor Services Management**

Using interpretive techniques, including on-the-ground elements, to prevent resource damage and developing an off-site Administrative Site/Visitor Contact Station would potentially decrease the chance of wildlife being disturbed or harassed through increase visitor appreciation of the wildlife values.

## **4.2.3.12 Impacts on Special Status Species**

### **4.2.3.12.1 Plants**

There would be no impact to special status plant species except basalt cinquefoil as discussed for the No Action Alternative.

### **From Land Health Standards**

Impacts would be similar to those described for Alternative A.

### **From Transportation and OHV Management**

Impacts would be similar to those described for Alternative A.

### **From Cultural Resource Management**

No impacts are anticipated.

### **From Native American Values Management**

No impacts are anticipated.

### **From Paleontological Resource Management**

No impacts are anticipated.

### **From Wilderness Area Management**

No impacts are anticipated.

### **From Special Designation Management**

Impacts would be similar to those described for Alternative A, even though the Soldier Meadows ACEC is smaller in size and actions change somewhat, impacts to basalt cinquefoil habitat would be the same.

### **From Vegetation Management**

No impacts are anticipated.

### **From Livestock Grazing Management**

Impacts would be similar to those described for Alternative A.

### **From Wild Horse and Burro Management**

Impacts would be similar to those described for Alternative A.

### **From Fire Management**

No impacts are anticipated.

### **From Fish and Wildlife Management**

Impacts would be similar to those described for Alternative A.

### **From Visual Resource Management**

No impacts are anticipated.

### **From Water Resource Management**

Current conditions would be maintained.

### **From Lands and Realty Management**

Current conditions would be maintained.

**From Minerals and Energy Management**

No impacts are anticipated.

**From Recreation Management**

Applying limits on human activities, constructing facilities around hot springs, or implementing a permit system if resource impacts are occurring would potentially improve basalt cinquefoil habitat and increase their populations. If restrictions implemented include information about protection of basalt cinquefoil, increased visitor awareness could indirectly decrease inadvertent disturbance.

**From Public Outreach and Visitor Services Management**

Using interpretive techniques, including on-the-ground elements, to prevent resource damage or to enhance visitor safety could indirectly decrease inadvertent disturbance.

**4.2.3.12.2 Fish and Wildlife**

There are no known impacts to black tern, least bittern, and white-faced ibis because of the lack of wetlands and actions affecting those areas.

**From Land Health Standards**

Impacts would be similar to those described for Alternative A.

**From Transportation and OHV Management**

Impacts would be similar to those described for Alternative A, limiting 346,191 acres and 743 miles to OHV use on designated roads and vehicle routes would close 105 miles of vehicle routes, which would potentially decrease disturbance and could improve special status species habitats and increase their populations

**From Cultural Resource Management**

No impacts are anticipated.

**From Native American Values Management**

Current conditions would be maintained.

**From Paleontological Resource Management**

No impacts are anticipated.

**From Wilderness Area Management**

Impacts would be similar to those described for Alternative A.

**From Special Designation Management**

Impacts would be similar to those described for Alternative A, even though the High Rock Canyon and Soldier Meadows ACECs are smaller in size and actions change somewhat, impacts to special status species and their habitats would be the same.

**From Vegetation Management**

Impacts would be similar to those described for those discussed for Alternative A.

**From Livestock Grazing Management**

Impacts would be similar to those described for those discussed for Alternative A.

**From Wild Horse and Burro Management**

Impacts would be similar to those described for those discussed for the No Action Alternative.

**From Fire Management**

Impacts would be similar to those described for Alternative A.

**From Fish and Wildlife Management**

Impacts would be similar to those described for Alternative A.

**From Visual Resource Management**

Current conditions would be maintained.

**From Water Resource Management**

Impacts would be similar to those described for the No Action Alternative.

**From Lands and Realty Management**

No impacts are anticipated.

**From Minerals and Energy Management**

Current conditions would be maintained.

### **From Recreation Management**

Applying limits on human activities, constructing facilities around hot springs, or implementing a permit system if resource impacts are occurring would potentially improve sensitive habitats and increase special status species populations. If restrictions implemented include information about protection of special status species, increased visitor awareness could indirectly decrease inadvertent disturbance.

### **From Public Outreach and Visitor Services Management**

Using interpretive techniques, including on-the-ground elements, to prevent resource damage or to enhance visitor safety could indirectly decrease inadvertent disturbance to special status animal species.

## **4.2.3.13 Impacts on Visual Resources**

### **From Land Health Standards**

Impacts would be similar to those discussed for Alternative A.

### **From Transportation and OHV Management**

Impacts would be similar to those discussed for Alternative A, developing public access on the east side of the Black Rock Range from Humboldt County Road 214 could be visually intrusive in some viewsheds.

Limiting 346,191 acres and 743 miles of route for OHV use on designated roads would enhance visual resources by reducing soil disturbance, increasing vegetative ground cover, and reducing dust.

Maintaining existing directional signs would be maintained and adding new signs to prevent resource damage or visitor confusion could increase the number of road signs and lead to localized reductions in visual quality and in the area's primitive, undeveloped character, naturalness, and sense of isolation.

### **From Cultural Resource Management**

Current conditions would be maintained.

### **From Native American Values Management**

Current conditions would be maintained.

### **From Paleontological Resource Management**

No impacts are anticipated.

### **From Wilderness Management**

Signing Wilderness boundaries at approximately one-mile intervals along all boundary roads or as needed may reduce the primitive, undeveloped viewsheds and degrade the settings of historic trails.

### **From Special Designation Management**

Current conditions would be maintained.

### **From Vegetation Management**

Impacts would be similar to those discussed for the No Action Alternative.

### **From Livestock Grazing Management**

Impacts would be similar to those discussed for the No Action Alternative.

### **From Wild Horse and Burro Management**

Current conditions would be maintained.

### **From Fire Management**

No impacts are anticipated.

### **From Fish and Wildlife Management**

Current conditions would be maintained.

### **From Visual Resource Management**

Impacts would be similar to those discussed for Alternative A.

### **From Water Resource Management**

No impacts are anticipated.

### **From Lands and Realty Management**

Designating one utility corridor south of the Union Pacific Railroad tracks for buried utilities would protect viewsheds by placing major new underground utilities beyond an existing man-made corridor. Authorizing rights-of way for buried

utilities in the Front Country and Rustic zones would locally reduce visual quality during and immediately following construction.

#### **From Minerals and Energy Management**

Impacts would be similar to those described for Alternative A.

#### **From Recreation Management**

Applying visitor restrictions if resource damage occurs, such as camping limitations and constructing trails, would alleviate surface disturbance and damage to vegetation where restrictions are applied, potentially improving viewsheds within these areas.

Encouraging the development of privately operated campgrounds on public lands outside of the NCA and on private lands both inside and outside of the NCA boundary could diminish the quality of the viewshed in these areas depending on the level of development that takes place. However, potentially displacing camping to lands outside the NCA may reduce the level of surface disturbance and vegetation damage within the planning area.

Limiting Class III and IV events to a designated area within the Playa and designating a rocket launch area to reduce disturbances to vegetation, soils and riparian zones would maintain visual resources away from the playa. Permitting large scale events within the designation area on the playa would temporarily decrease visual quality during the events.

#### **From Public Outreach and Visitor Services Management**

Impacts would be similar to those discussed for the No Action Alternative.

### **4.2.3.14 Impacts on Water Resources**

#### **From Land Health Standards**

Impacts would be similar to those described for Alternative A.

#### **From Transportation and OHV Management**

Impacts would be similar to those discussed for the No Action Alternative. However, upgrading 9 more miles of road and closing 105 miles of road would reduce the amount of erosion and sedimentation, which would protect water resources.

#### **From Cultural Resource Management**

No impacts are anticipated.

#### **From Native American Values Management**

Current conditions would be maintained.

#### **From Paleontological Resource Management**

No impacts are anticipated.

#### **From Wilderness Area Management**

Adding all ten acquired wilderness inventory units to the WSA and offsetting the WSA boundary in Units 1 and 2 along a 100-foot from both sides of the centerline of the routes would decrease vehicular traffic and other uses in these areas, thereby reducing soil erosion and stream sedimentation.

Closing the Lahontan cutthroat trout Area seasonally to motor vehicles during the spawning season of the Lahontan Cutthroat Trout if needed would reduce soil erosion and subsequent stream sedimentation, leading to increased hydrologic function.

#### **From Special Designation Management**

Extending the closure period of a portion of High Rock Canyon ACEC would decrease soil disturbance, compaction, and erosion.

#### **From Vegetation Management**

Impacts would be similar to those described for Alternative A.

#### **From Livestock Grazing Management**

Impacts would be similar to those described for the No Action Alternative.

**From Wild Horse and Burro Management**

Impacts would be similar to those described for the No Action Alternative.

**From Fire Management**

Current conditions would be maintained.

**From Fish and Wildlife Management**

Current conditions would be maintained.

**From Visual Resource Management**

Current conditions would be maintained.

**From Water Resource Management**

Impacts would be similar to those described for the No Action Alternative.

**From Lands and Realty Management**

Impacts would be similar to those described for the No Action Alternative. In addition, localized soil disturbance, compaction, and erosion could occur within a utility corridor south of the Union Pacific railroad tracks if utilities were developed.

**From Minerals and Energy Management**

Impacts would be similar to those described for Alternative A.

**From Recreation Management**

Adjusting recreation management and uses to prevent resource damage from users would minimize soil disturbance, compaction, and erosion.

**From Public Outreach and Visitor Services Management**

Impacts would be similar to those described for the No Action Alternative, although outreach actions vary under this alternative.

**4.2.3.15 Impacts on Lands and Realty**

**From Land Health Standards**

No impacts are anticipated.

**From Transportation and OHV Management**

Current conditions would be maintained.

**From Cultural Resource Management**

Current conditions would be maintained.

**From Native American Values Management**

Current conditions would be maintained.

**From Paleontological Resource Management**

Current conditions would be maintained.

**From Wilderness Management**

Current conditions would be maintained.

**From Special Designation Management**

Current conditions would be maintained.

**From Vegetation Management**

No impacts are anticipated.

**From Livestock Grazing Management**

No impacts are anticipated.

**From Wild Horse and Burro Management**

No impacts are anticipated.

**From Fire Management**

No impacts are anticipated.

**From Fish and Wildlife Management**

Current conditions would be maintained.

**From Visual Resource Management**

Current conditions would be maintained.

**From Water Resource Management**

Current conditions would be maintained.

**From Lands and Realty Management**

Designating one utility corridor, 2.75 miles wide, south of the Union Pacific railroad tracks for buried utilities would accommodate development of underground utilities while eliminating the possibility of constructing overhead utilities, which would increase the cost of installation.

Maintaining and permitting rights-of-way grants for buried utilities in Rustic and Front country zones would accommodate development at slightly higher costs and facilitate limited development on private lands.

**From Minerals and Energy Management**

Impacts would be similar to those described for Alternative A.

**From Recreation Management**

Current conditions would be maintained.

**From Public Outreach and Visitor Services Management**

No impacts are anticipated.

**4.2.3.16 Impacts on Minerals and Energy**

**From Land Health Standards**

No impacts are anticipated.

**From Transportation and OHV Management**

Current conditions would be maintained.

**From Cultural Resource Management**

Current conditions would be maintained.

**From Native American Values Management**

Current conditions would be maintained.

**From Paleontological Resource Management**

Current conditions would be maintained.

**From Wilderness Area Management**

Current conditions would be maintained.

**From Special Designation Management**

No impacts are anticipated.

**From Vegetation Management**

No impacts are anticipated.

**From Livestock Grazing Management**

No impacts are anticipated.

**From Wild Horse and Burro Management**

No impacts are anticipated.

**From Fire Management**

No impacts are anticipated.

**From Fish and Wildlife Management**

Current conditions would be maintained.

**From Visual Resource Management**

Impacts are similar to those described for Alternative A.

**From Water Resource Management**

Current conditions would be maintained.

**From Lands and Realty Management**

Designating one utility corridor, 2.75 miles wide, south of the Union Pacific railroad tracks for buried utilities would have similar impacts to the Alternative A because the technology does not exist to bury the high voltage powerlines that would be expected to use this type corridor.

Maintaining and permitting rights-of-way grants for utilities in Rustic and Front country zones would maintain opportunities for future development

**From Minerals and Energy Management**

Impacts would be similar to those described for Alternative A.

**From Recreation Management**

No impacts are anticipated.

**From Public Outreach and Visitor Services Management**

No impacts are anticipated.

**4.2.3.17 Impacts on Air Quality**

**From Land Health Standards**

Current conditions would be maintained.

**From Transportation and OHV Management**

Road management activities would result in the same impacts as Alternative A. Road upgrades and additional closures/limitations would result in reduced fugitive dust from vehicular traffic.

Providing greater public access on the east side of the Black Rock Range would result in potentially greater vehicular traffic throughout that area and potentially greater fugitive dust emissions.

**From Cultural Resource Management**

No impacts are anticipated.

**From Native American Values Management**

No impacts are anticipated.

**From Paleontological Resource Management**

No impacts are anticipated.

**From Wilderness Management**

Current conditions would be maintained.

**From Special Designation Management**

Current conditions would be maintained.

**From Vegetation Management**

Current conditions would be maintained.

**From Livestock Grazing Management**

Current conditions would be maintained.

**From Wild Horse and Burro Management**

Current conditions would be maintained.

**From Fire Management**

Wildland fire and prescribed fire techniques used throughout the planning area would lead to more frequent, periodic increases in smoke and decreased visibility.

**From Fish and Wildlife Management**

Current conditions would be maintained.

**From Visual Resource Management**

Current conditions would be maintained.

**From Water Resource Management**

Current conditions would be maintained.

**From Lands and Realty Management**

No impacts are anticipated.

**From Minerals and Energy Management**

Impacts would be similar to those described for the No Action Alternative.

**From Recreation Management**

Impacts would be similar to those discussed for Alternative A, implementing visitor restrictions, such as group size or camping restrictions, where resource damage is occurring and limiting drive in camping to portions of the High Rock Canyon ACEC outside of Wilderness may indirectly decrease fugitive dust from recreation activities.

Limiting Class III and IV events to eight weekends a year, restricting these events to designated areas within or near the playa, and limiting the number of events that could occur simultaneously could result in increased events on the playa, which would increase fugitive dust production over current levels.

**From Public Outreach and Visitor Services Management**

No impacts are anticipated.

### **4.2.3.18 Impacts on Soils**

#### **From Land Health Standards**

Impacts would be similar to those described for Alternative A.

#### **From Transportation and OHV Management**

Providing upgraded roads and road closures would result in decreased soil erosion and increased soil productivity.

#### **From Cultural Resource Management**

Current conditions would be maintained.

#### **From Native American Values Management**

Current conditions would be maintained.

#### **From Paleontological Resource Management**

Current conditions would be maintained.

#### **From Wilderness Management**

Current conditions would be maintained.

#### **From Special Designation Management**

Impacts would be similar to those discussed for Alternative A, providing opportunities for camping in designated sites would locally increase soil disturbance and erosion potential.

#### **From Vegetation Management**

Impacts would be similar to those described for Alternative A.

#### **From Livestock Grazing Management**

Impacts would be similar to those described under the Land Health Standards.

#### **From Wild Horse and Burro Management**

Current conditions would be maintained.

#### **From Fire Management**

Impacts would be similar to those described for the No Action Alternative.

#### **From Fish and Wildlife Management**

Current conditions would be maintained.

#### **From Visual Resource Management**

Current conditions would be maintained.

#### **From Water Resource Management**

Current conditions would be maintained.

#### **From Lands and Realty Management**

Localized short-term soil disturbance could occur from developments with the utility corridor south of the Union Pacific railroad tracks in the unlikely event such developments occur.

#### **From Minerals and Energy Management**

Impacts would be similar to those described for Alternative A.

#### **From Recreation Management**

While this alternative is less restrictive regarding location, duration, and group size for camping and other activities than Alternative A, it would still protect soils by applying management restrictions where monitoring indicates the need.

#### **From Public Outreach and Visitor Services Management**

Short-term impacts would occur from increased visitor use until monitoring identified the need for protective measures. Long-term soil stability would be improved from outreach methods used to mitigate resource impacts.

### **4.2.3.19 Impacts on Recreation**

#### **From Land Health Standards**

Current conditions would be maintained.

#### **From Transportation and OHV Management**

Same as Alternative A, except upgrading the Sulphur-Jackson Road to Maintenance Level 3 would increase public access throughout the planning area, providing opportunities for a wider range of visitors. The potential for increased traffic

along these routes could result in a decrease of natural quiet and solitude associated with primitive recreation.

Public access through and across the planning area would be enhanced, by developing public access easements or developing a travel corridor on the east side of the Black Rock Range from Humboldt County Road 214, north-south access to Black Rock Point and east-west access to BLM Road 2051 (Pahute Meadow Road), and by acquiring public access easements or developing road alignments in areas where public roads cross private property. Recreation opportunities would be available to a larger range of visitors as a result of improved access. However, some areas that currently receive minimal use may experience increased visitation resulting in the loss of solitude and natural quiet.

Designating 346,191 acres as limited to designated roads would restrict opportunities for cross-country travel and reduce conflicts between motorized and non-motorized users. Within this area, 743 miles of routes would be designated as available for vehicle use, which would make more routes available for vehicle use than in Alternative A. Since visitor-use data indicates that most multi-passenger vehicles are operated on the playa and existing roads, the OHV limitations proposed in this alternative are not expected to impact this segment of users. An extensive road system, with 743 miles of designated routes, should off-set lost opportunities. However, those OHV users who enjoy cross-country travel would likely be displaced to areas outside of the planning area. Overall impacts to motorized users would be less as compared to alternative A.

Installation and maintenance of directional signs at intersections of BLM system, State, and County roads would reduce visitor confusion and increase public safety. New directional signs would also diminish the perception of recreating in an area free from human development, as well as the opportunities for self-discovery that were traditionally available.

However, using an adaptive management approach to evaluate and implement alternative methods of providing location and directional information to visitors would reduce unnecessary signage that diminishes the perception of recreating in an environment free from human development.

### **From Cultural Resource Management**

Emphasizing public use would increase the availability of cultural resources for interpretation. Improved visitor awareness and appreciation for cultural resources would enhance the preservation of rare resources for discovery by future generations.

### **From Native American Values Management**

Managing Properties of Cultural and Religious Importance (PCRI) under the Traditional Use Category would enhance the preservation of rare resources for discovery by future generations. There would, however, be the potential for conflict between recreation users and traditional users.

### **From Paleontological Resource Management**

Closing the Hanging Rock Petrified Forest area to petrified wood and other fossil, rock, and mineral collection would contribute to the long-term preservation of rare resources for discovery by future generations. The proposed action has the potential to restrict visitor's freedom of choice and certain recreational activities in desirable and traditionally used areas, and would likely result in visitor displacement to other rockhounding areas inside and outside of the planning area.

### **From Wilderness Management**

Signing wilderness boundaries would help to increase visitor awareness of areas having important and sensitive values. A long-term increase in primitive character within designated wilderness would be expected due to a reduction of motorized trespass and the creation of new ways in wilderness areas. These potential outcomes would enhance the perception of recreating in an area free from human development inside wilderness. However, signing wilderness boundaries would diminish the perception of recreating in an area free from human development in areas adjacent to wilderness. A decrease in conflict between motorized and non-motorized users would also be expected.

The addition of all 10 acquired parcels within the Lahontan cutthroat trout WSA to the existing WSA, limiting vehicle access to BLM system roads and existing designated routes, as well as providing a one-hundred foot offset from the centerline of routes, would have long-term impacts to

management and the visitor experience. Retaining the existing vehicle access routes would reduce the ability to manage the existing WSA for wilderness characteristics and important values associated with primitive recreation. Retaining these routes with a one hundred foot buffer, would maintain current opportunities associated with motorized travel and vehicle camping, which would provide for a decreased range of visitors.

Implementing mitigating actions when Lahontan cutthroat trout habitat is threatened by human use could restrict certain recreational activities in desirable and traditionally used areas of riparian and spring complexes. The proposed action would have the potential to displace use to other areas. However, actions taken to protect riparian areas would also retain opportunities for recreating in a natural setting free from human disturbance.

### **From Special Designation Management**

Limiting camping to designated sites in the Rustic portions of High Rock Canyon ACEC and Soldier Meadows ACEC, would have direct and indirect benefits to the visitor experience. There would be decreased opportunities for camping with a loss in visitor's freedom of choice in campsite locations. This restriction may cause visitor displacement and would likely increase competition for desirable campsites, but would decrease competition for day-use recreation opportunities at attraction areas. Through improved protection of wildlife populations there would be a long-term increase in wildlife viewing and hunting opportunities. The proposed restrictions would also increase protection of rare resources for enjoyment by future generations. Although the natural quiet and solitude associated with primitive recreation could be diminished in the immediate vicinity of designated campsites, it would be expected to increase in other parts of these ACEC's.

Restricting climbing in High Rock Canyon would limit climbing opportunities in the planning area. This impact would be localized and minimal since climbing is not currently known to be occurring in the canyon. Improved protection of raptor and bighorn would potentially increase populations of these species, thereby increasing opportunities for wildlife viewing and hunting.

Closing portions of the High Rock ACEC between the mouth of High Rock Canyon and five miles below Steven's Camp from January 31<sup>st</sup> through May 15<sup>th</sup> would restrict recreational activities in desirable and traditionally used areas. There would be a high potential for visitor displacement to other areas inside and outside of the planning area, especially during the spring season. Both motorized and non-motorized users would be impacted by the closure. The improved protection of wildlife populations would increase opportunities for wildlife viewing and hunting during other times of the year. Overall, there would be fewer impacts to wilderness users when compared to alternative A, since the area of closure would not include Little High Rock, Yellow Rock, East Fork, Mahogany, or Grassy Canyons.

Implementation of the Soldier Meadow Activity Plan (SMAP) would have impacts to public access, resource conditions and visitor experiences. Rerouting the Soldier Meadows hot spring access road would decrease vehicle access to the areas immediately adjacent to the hot springs. Access to the hot pools would be more challenging and would require a short walk. There would also be a loss of traditional and desirable camping locations. This would increase the potential for visitor displacement to other areas inside and outside of the planning area. However, opportunities for natural quiet and solitude at the hot spring pools would be enhanced, and user conflict would be minimized. Implementation of the SMAP would also mitigate impacts to overnight users by providing alternative overnight camping locations. On-site developments, such as interpretive signage, tent pads, and fire grates would have the potential to diminish the wild and undeveloped character of the area. Impacts to critical habitat that are related to vehicle travel and camping would also be minimized, which would enhance the perception of recreating in an undisturbed area.

Using an adaptive management approach to adjust management actions to recover rare species of the ACEC would enhance the ability to manage specific areas for their critical environmental settings, while further protecting rare resources for enjoyment by future generations. The proposed action has the potential to restrict certain recreational activities in desirable and traditionally

used areas of riparian and spring complexes, which may result in visitor displacement to other areas inside and outside of the planning area.

#### **From Vegetation Management**

Impacts would be similar to those described for the No Action Alternative.

#### **From Livestock Grazing Management**

Current conditions would be maintained.

#### **From Wild Horse and Burro Management**

Impacts would be similar to those described for the No Action Alternative.

#### **From Fire Management**

No impacts are anticipated.

#### **From Fish and Wildlife Management**

Actions taken to repair, maintain, and reconstruct existing wildlife related projects, and allowing new wildlife projects, including water developments, would have the potential to diminish critical physical, social, and managerial settings of specified areas, but may enhance other recreation opportunities. Allowing motorized access for construction or maintenance of wildlife projects would decrease natural quiet and solitude associated with primitive recreation. The proposed actions would also diminish the perception of recreating in an area free from human development, since permanent structures would remain inside wilderness. However, the increased ability to manage wildlife populations would have the potential to increase wildlife viewing and hunting opportunities throughout the planning area. Regular inspections of projects would minimize impacts from the proposed actions by reducing the amount of maintenance and reconstruction required.

#### **From Visual Resource Management**

Impacts would be similar to those described for Alternative A.

#### **From Water Resource Management**

Impacts would be similar to those described for the No Action Alternative.

#### **From Lands and Realty Management**

Current conditions would be maintained.

#### **From Minerals and Energy Management**

Impacts would be similar to those described for the No Action Alternative.

#### **From Recreation Management**

Developing a recreation management plan to determine resource standards that would guide management decisions would help create clear guidelines for management actions, thereby enhancing the ability to retain critical physical, social, and managerial settings of specified areas

Putting limits on human activities affecting areas of use, group size, duration of stay, number of people or vehicles, or types of activities would enhance the ability to manage for critical social and physical settings of specified areas, and would increase natural quiet and solitude associated with primitive recreation. The proposed actions would limit visitor's freedom of choice, and would likely result in visitor displacement to other areas or zones. There would, however, be a decrease in visitor conflict and competition for favorite/desirable sites that would be anticipated in conjunction with increased use in the planning area. Overall, the impacts from proposed actions in this alternative would be similar to those described for alternative A. However, under this alternative management actions would be tailored to site-specific conditions and based on standards developed through activity level plans, thereby reducing unnecessary constraints to recreation users.

Developing campgrounds when other management tools prove ineffective would increase the potential for a wider range of recreational opportunities, thereby providing for an increased range of visitors. There would also be the potential for a localized decrease in natural quiet and solitude associated with primitive recreation, and also to diminish the perception of recreating in an area free from human development. However, by concentrating impacts to designated areas, widespread camping related impacts would be reduced, which would contribute to the retention or restoration of the undisturbed character of other areas.

Any new developments would diminish the undeveloped character of the area and may promote increased visitation. However, these impacts would be minimized by requiring all facilities to be unobtrusive and aesthetically compatible with the area's setting. New facilities could also provide improved access and may make some areas more desirable to a wider range of visitors. Strategically locating developments may help encourage use away from sensitive resources and attractions, thereby minimizing impacts to those areas.

Developing boardwalks or fencing around hot spring attraction areas would have the potential to diminish the perception of recreating in an area free from human development. However, the proposed action would also improve access for people of all abilities, improve visitor safety, and contribute to the preservation of rare resources for enjoyment by future generations. Carefully planned developments would discourage user-made facilities, which are often unsightly or unsafe.

Implementing a permit system in areas where resources or the visitor experience is being impacted, would decrease visitor conflict and competition for favorite/desirable sites resulting from increased use, and would contribute to increased natural quiet and solitude associated with primitive recreation. However, the proposed action would lead to a decrease in spontaneity and unconfined recreation. There would also be an increased potential for visitor displacement to other areas inside and outside of the planning area. However, under this alternative, negative impacts to visitors would be minimized, since actions would be tailored to specific areas through an adaptive management approach, which would contribute to the retention of important physical, managerial and social settings of certain areas.

Encouraging the development of privately operated campgrounds would have the potential to increase natural quiet and solitude associated with primitive recreation by distributing use away from attraction areas. The proposed action would also increase the potential for a wider range of recreational opportunities, thereby providing for an increased range of visitors, which would also have implications to areas adjacent to developments on private lands within the NCA.

Limiting the collection of rock, minerals, and invertebrate fossils to 25 pounds per day, plus one piece with a maximum collection of 250 pounds per

year, and requiring a permit would contribute to the protection of rare resources for enjoyment by future generations. Imposing collection limits and requiring a permit would restrict opportunities for collection, which would decrease visitor's freedom and spontaneity, and could lead to displacement of users who traditionally collect large quantities. Impacts to visitors would be reduced under this alternative, when compared to A, since collection would still be allowed.

The ability to construct, relocate or close trails to mitigate human caused impacts would have direct and indirect impacts to the visitor experience. There would be the potential to decrease natural quiet and solitude associated with primitive recreation by encouraging use on developed trails, and the perception of recreating in an area free from human development would be diminished. However, the increased trail opportunities would provide for an increased range of visitors. Opportunities for discovery and exploration would also be increased, and increased resource protection would enhance the perception of recreating in an area free from human caused impacts.

The ability to develop trails to separate user-types and routing the Desert Trail through portions of the NCA would have the potential to reduce conflict between different user types, and would increase available trail opportunities. Some of the negative impacts from trail use could also be reduced by imposing limits on times and location of use. Informational brochures/guidebooks that accompany trail systems would contribute to an increased understanding and appreciation for area resources, which may minimize use related impacts.

Prohibiting camping within ½ mile of designated campsites would restrict visitor's freedom of choice in camping location, and may increase competition for desirable sites. However, widespread camping related impacts, due to campsite proliferation, would be minimized. Crowding and user conflict at attraction areas would also be minimized. Reduced impacts would improve naturalness in heavily used areas, contributing to the protection or restoration of the primitive character.

Limiting camping to designated sites in portions of High Rock Canyon ACEC outside of Wilderness, Soldier Meadows ACEC, Class A and B historic trail segments, dune and hummock areas associated with the playa, and rustic portions of the

Lahontan cutthroat trout area would restrict certain recreational activities in desirable and traditionally used areas. Visitor's freedom of choice would be restricted, with an increased potential for visitor displacement. The increased protection of rare resources and sensitive wildlife species would enhance opportunities for enjoyment by future generations. Reduced camping related impacts to sensitive areas and wildlife populations would contribute to the perception of recreating in an area free from human disturbance. Closing impacted sites would likely increase competition for campsites in light of increased visitation. However, competition for day-use of attraction areas would be decreased through strategic campsite location.

The development of a comprehensive permit process would enhance the ability to manage for resource and visitor experience. The proposed actions would limit the number, location, or scale of permitted recreation activities. The development of permit limitations would have long-term impacts to dispersed users and permittees. These limitations would help to retain or restore the natural quiet and solitude associated with primitive recreation in light of higher demand and visitation. There is also potential to increase public access in areas where events are taking place. There would likely be decreased freedom of choice, and increased competition for event location due to proposed limitations of areas available for large scale events. Certain types of events that require large areas of public closure would be restricted. The current evaluation process would allow for a greater range of permitted activities, which would provide opportunities for a greater range of visitors. Spontaneity in permit applications would be increased with improved efficiency of the evaluation process. Overall impacts to permittees would be reduced under this alternative, when compared with Alternative A, since areas, times, and numbers of events permitted would be expanded. The same would be conversely true for dispersed recreation users.

#### **From Public Outreach and Visitor Services Management**

Expanding public awareness programs, continuing use of the visitor contact trailer, maintaining an information kiosk in Gerlach, and introducing low-impact recreation principles

through volunteers and staff, would have long-term direct and indirect benefits to the visitor experience. These interpretive and educational actions would have the potential to increase visitor's sense of appreciation and understanding of area resources, as well as visitor's awareness of important and sensitive values. Increased recreation opportunities would be available through on-the-ground programs and any additional interpretive exhibits, but would also diminish the undeveloped character of the area. Indirect benefits would stem from a decrease in inadvertent impacts of visitor use, which would enhance the ability to manage for critical physical, social, and managerial settings of specified areas. Visitor safety would also be enhanced.

The creation of an Administrative Site/Visitor Contact Station for the NCA would have similar impacts as those listed above, but outreach capabilities would be enhanced by having a facility located along a major travel corridor. Providing information to visitors before they reach the planning area would also enhance visitor safety.

Developing cooperative partnerships, and encouraging academic and public research would have similar impacts as those listed above. These proposed actions would also enhance management opportunities as a result of greater resources

### **4.2.3.20 Impacts on Social and Economic Conditions**

#### **Impacts on Recreation**

This Alternative proposes a Public Outreach and Visitor Services program that is designed to encourage, accommodate, and facilitate recreation, but not to the degree or level of effort envisaged for Alternative C. This Alternative stresses conservation of the area's resources and values for which the NCA was created, while recognizing recreation as a legitimate public use. Opportunities and priorities for scientific research and educational opportunities are also emphasized, consistent with the NCA legislation.

Recreation growth for the No Action Alternative and Alternative A was estimated at approximately 19 percent, based on US Forest Service studies for their Renewable Resources Planning Act. Appropriate to a reduced emphasis on recreation, and in keeping with a stronger

conservation ethic, this Alternative postulates a mid-range growth in recreation of 35 percent, which appears to have reasonable potential in view of the 50 percent growth deriving from a “designation effect” hypothesis for Alternative C.

A 35 percent increase in recreation in the year 2020 would result in a total of 86,134 visitor days for dispersed recreation. Special Recreation Permit events would add another 91,208 visitor days, for a total of 177,342 visitor days. This compares to a total visitor day estimate of 187,045 for Alternative C which projects 50 percent growth.

Recreation expenditures for this level of visitation are estimated at \$5.4 million, \$2.9 million for residents, and \$2.5 million for non-residents. Based on analysis utilizing multipliers derived from an IMPLAN model for Washoe County, these total expenditures would generate \$2.7 million in direct income and directly create or sustain a total of 122.8 jobs (2000 hour FTE). Non-resident expenditures, which bring in new money in exchange for “exported” recreation, and contribute to expansion of the regional economy, would be responsible for \$1.2 million of the \$2.7 million total in direct income, and produce 59.6 jobs. The total direct, indirect, and induced effect of these expenditures, as they circulate through the economy, would result in 154.2 jobs and \$3.65 million in income (all estimates are in 2001 dollars).

Willingness-to-Pay value is estimated at \$2.4 million. This represents the value, or “worth,” of the recreation experience to the recreationist.

Construction of an Administrative Site/Visitor Contact Station along a major access corridor to the NCA, as proposed in this Alternative, would provide local employment for a construction contractor and crew, which would be a short-term economic benefit to the local area. The operation of a full-time Administrative Site/Visitor Contact Station would create one or two permanent full-time jobs, employing locally hired attendants with a salary in the range of \$15-20,000 each.

As mentioned in the No Action Alternative, as all types of recreation participation increase in the planning area, some deterioration and degradation of resources conditions may be expected. This would increase management costs for resource maintenance and protection – to a degree greater than the No Action Alternative and Alternative A, but less than Alternative C.

## Impacts on Minerals and Energy

### Locatable Minerals

Impacts would be the same as those described for the Alternative A.

### Leasable Minerals

Impacts would be the same as those described for the Alternative A.

### Salable Minerals

Impacts would be the same as those described for the Alternative A.

## Impacts on Lands and Realty

Impacts would be the same as those described for Alternative A.

## Impacts on Road Maintenance and Repair

Impacts for BLM road maintenance and repair would be as described in Alternative A, but with increased costs resulting from the increase in recreation visitation and associated vehicle traffic. Roads are much more likely to be more heavily used, barriers more likely to be circumvented, and vandalism to signs might be expected to occur more frequently without adequate law enforcement presence. Maintenance and repair of roads, particularly Soldier Meadows road, would probably be required with greater frequency resulting from increased vehicle traffic.

Pershing County currently maintains no roads in the area, so is not expected to be affected. A heavier traffic burden on the portion of Soldier Meadows road through Humboldt County would probably necessitate higher maintenance and repair costs to Humboldt County. Washoe County would probably experience more traffic on its 5.6 miles of roads in the planning area, but access roads in the vicinity of Gerlach would be much more heavily used.

## Impacts on Law Enforcement and Court Costs

Impacts would be similar to those discussed in the No Action Alternative, but potentially increased by higher recreation visitation. There would potentially be a need for increased BLM law enforcement presence.

The Sheriff's Office for all three counties could find that the need for their services in the area would increase with increased recreation visitation. Though recreationists do not, in general, create law enforcement problems, such things as vehicle accidents could potentially occur with greater frequency.

Any potential increase in costs for law enforcement, housing of prisoners, or court costs for Pershing County cannot be estimated with the data available.

### **Impacts on Search and Rescue Operations**

Search and rescue operations could increase, as well, along with increased recreation visitation. With more people recreating in the NCA, personal injuries requiring assistance could occur. However, no specific impacts are identified or expected. Certainly nothing would occur that would unduly tax the very fine search and rescue capabilities of the Washoe County Sheriff's Office.

### **Impacts on Indigent Aid**

Impacts would be the same as those described for the No Action Alternative.

## **4.2.4 ALTERNATIVE C**

(Emphasis on Visitation and Interpretation)

In addition to the impacts from the common to all actions as indicated in the No Action Alternative discussion (Section 4.2.1), the following impacts would also occur as a result of Alternative C.

### **4.2.4.1 Impacts on Transportation and OHV**

#### **From Land Health Standards**

Impacts would be similar to those described for Alternative A.

#### **From Transportation and OHV Management**

Impacts would generally be similar to those described for Alternative B, except for those associated with the following actions.

Upgrading Stevens Camp, High Rock Lake, Grassy road, and Sulphur-Jackson Road to local road-level 3 and Road 37002--High Rock from a trail to a road with Maintenance level 2 would improve the drivability and safety of about 75 miles of BLM roads due to decreased rutting, washboards, dust or mud holes. Public access would also increase by enabling a wider range of vehicles to access the High Rock Lake, Massacre Mountain and Jackson Mountain areas for longer periods of time. However, traffic could also increase and costs to BLM could increase in the short-term associated with upgrades. In the long-term, maintenance costs would decrease because higher standard roads require less frequent maintenance.

Public access would decrease on 346,191 acres designated for limited OHV use. This impact would be similar to those described for the No Action Alternative because only about 16 miles of existing vehicle route would be closed.

#### **From Cultural Resource Management**

Impacts would be similar to those described for the No Action Alternative.

#### **From Native American Values Management**

No impacts are anticipated.

#### **From Paleontological Resource Management**

No impacts are anticipated.

#### **From Wilderness Management**

Impacts would be similar to those described for Alternative B.

#### **From Special Designation Management**

No impacts are anticipated, no areas are recommended for special designation.

#### **From Vegetation Management**

No impacts are anticipated.

#### **From Livestock Grazing Management**

No impacts are anticipated.

#### **From Wild Horse and Burro Management**

No impacts are anticipated.

#### **From Fire Management**

No impacts are anticipated.

#### **From Fish and Wildlife Management**

Impacts would be similar to those described for Alternative A.

#### **From Visual Resource Management**

Impacts would be similar to those described for Alternative A.

#### **From Water Resource Management**

Impacts would be similar to those described for the No Action Alternative.

### **From Lands and Realty Management**

Impacts would be similar to those described for the No Action Alternative.

### **From Minerals and Energy Management**

Impacts would be similar to those described for the No Action Alternative.

### **From Recreation Management**

Unlimited play closures not to exceed two consecutive days or 48 total hours within a 30-day period could continue to create temporary decreased public access, however, for a shorter duration that may occur under the No Action Alternative.

### **From Public Outreach and Visitor Services Management**

This alternative anticipates the largest increase in visitor use, which could diminish the drivability and safety of BLM roads due to increased rutting, washboards, dust or mud holes caused by increased traffic volumes. In addition, costs to BLM and to a lesser degree to the State and Counties would increase because more frequent road maintenance would be required.

Establishing an Administrative Site/Visitor Contact Station and administrative facility in or near the NCA would also diminish the drivability and safety of BLM roads and increase costs to BLM and to a lesser degree to the State and Counties associated with increased vehicle traffic in the vicinity of the Administrative Site/Visitor Contact Station.

## **4.2.4.2 Impacts on Cultural Resources**

### **From Land Health Standards**

No impacts are anticipated.

### **From Transportation and OHV Management**

Impacts would generally be similar to those described for Alternative B, except for those associated with the following actions.

Upgrading Stevens Camp, High Rock Lake, Grassy road, and Sulphur-Jackson Road to local

road-level 3 and Road 37002--High Rock from a trail to a road with Maintenance level 2 would increase potential for inadvertent damage to cultural resources and increase the opportunity for vandalism and looting.

Designating 346,191 acres as limited and 751,879 acres as closed to OHV use would provide more protection than the No Action Alternative, however, it would be less than Alternative A and B.

### **From Cultural Resource Management**

Impacts would be similar to those discussed for Alternative A, emphasizing site interpretation and scientific discovery would enhance opportunities for scientific study and public use of cultural resources, opportunities for historic preservation awareness and site preservation, knowledge of the prehistory and history of the region, and opportunity for collection of data useful in overall cultural resource management. Indirectly, the integrity of cultural resources would be protected and the emigrant trails setting would be maintained or improved. Inadvertent damage or disturbance to cultural sites and vandalism and looting may also be reduced.

### **From Native American Values Management**

Impacts would be similar to those described for Alternative A. There could be a potential for conflict between Native Americans and archaeologists over site excavation and interpretation.

### **From Paleontological Resource Management**

No impacts are anticipated.

### **From Wilderness Management**

Impacts would generally be similar to those described for Alternative B. There might be conflicts between wilderness values and cultural resources in Natural Emphasis managed Wilderness Areas since Natural Emphasis management would require the removal of alterations and influences of human origin.

### **From Special Designation Management**

No impacts are anticipated, no areas are recommended for special designation.

### **From Vegetation Management**

Impacts would be similar to those described for Alternative A.

### **From Livestock Grazing Management**

Impacts would be similar to those in the No Action Alternative, excluding the Stanley Camp Pasture within the Soldier Meadows Allotment from grazing, except for occasional prescription use, would maintain protection and site stability.

### **From Wild Horse and Burro Management**

Impacts would be similar to those described for the No Action Alternative.

### **From Fire Management**

Impacts would be similar to those discussed in Alternative A, allowing wildland fire and prescribed fire outside wild emphasis Wilderness Areas to meet vegetation objectives would increase inadvertent damage to cultural resources, decrease integrity of cultural resources, and increase opportunity for vandalism and looting.

### **From Fish and Wildlife Management**

Impacts would be similar to those described for the No Action Alternative.

### **From Visual Resource Management**

Impacts would be similar to those described for Alternative A.

### **From Water Resource Management**

Current conditions would be maintained.

### **From Lands and Realty Management**

Issuing rights-of-way for buried and aboveground facilities in the Rustic Zone, within non-playa portions of the Front Country Zone, and in support of geothermal leasing in the south playa could increase inadvertent damage or disturbance to cultural sites and the opportunity for vandalism and looting if development occurred in new rights-of-way. Integrity of cultural resources and the setting of the emigrant trails would also be impaired.

### **From Minerals and Energy Management**

Impacts would generally be similar to those described for Alternatives A and B; however, leaving the South Playa Area open to future geothermal leasing and development could increase inadvertent damage or disturbance to cultural sites and opportunity for vandalism and looting.

### **From Recreation Management**

Applying visitor restrictions, such as camping limits, activity restrictions, trail development or permit system implementation, if resource damage occurs from recreation activities could reduce inadvertent damage to cultural resources and improve site protection. As a result of these measures to increase resource protection, cultural resource integrity would be maintained and the emigrant trails' setting would be maintained or improved.

Applying camping restrictions, such as allowing dispersed camping throughout the zone except within one-half mile of designated campsites, applying restrictions if resource damage occurs, and closing dune and hummock areas on the playa to camping, would also protect cultural resources from inadvertent damage, vandalism and looting, maintain the integrity of cultural resources and their setting, and create opportunities for cultural appreciation and discovery in the long-term.

Not applying limits on group size or length of stay, except as provided in existing regulations would increase inadvertent damage to cultural resources and the opportunity for vandalism and looting.

### **From Public Outreach and Visitor Services Management**

This alternative anticipates the largest increase in visitor use, which could increase inadvertent damage, vandalism and looting.

Establishing an Administrative Site/Visitor Contact Station and administrative facility in or near the NCA could indirectly increase opportunities for historic preservation awareness and site preservation and knowledge of the prehistory and history of the region. Indirectly, the increased knowledge and appreciation of cultural

resources should lead to greater preservation of cultural resources.

### **4.2.4.3 Impacts on Native American Values**

#### **From Land Health Standards**

Impacts would be the same as those described under Alternative A.

#### **From Transportation and OHV Management**

Impacts would generally be similar to those described for Alternative B, except for those associated with the following actions.

Upgrading Stevens Camp, High Rock Lake, Grassy road, and Sulphur-Jackson Road to local road-level 3 could decrease integrity of PCRI near these roads.

Designating 346,191 acres as limited and 751,879 acres as closed to OHV use would provide more protection to PCRI by decreasing the amount of public access than the No Action Alternative. Leaving all existing roads except for 16 miles open for vehicle use would maintain access to PCRI for Native Americans.

#### **From Cultural Resource Management**

Emphasizing site interpretation and scientific discovery may result in conflicts between archaeologists and Native Americans over recovery of scientific values. Site interpretation could educate visitors and increase appreciation of Native American values and decrease conflicts. Indirectly, integrity of PCRI could be improved, inadvertent impacts to these values would decrease, and the opportunity to pursue traditional uses would be preserved.

#### **From Native American Values Management**

Impacts would be similar to those described for Alternative A.

#### **From Paleontological Resource Management**

No impacts are anticipated.

#### **From Wilderness Management**

Impacts would be similar to those discussed for Alternative A.

#### **From Special Designation Management**

No impacts are anticipated, no areas are recommended for special designation.

#### **From Vegetation Management**

Impacts would be similar to those described for Alternatives A and B.

#### **From Livestock Grazing Management**

Impacts would be similar to Alternative A, excluding regularly scheduled livestock use in the Stanley Camp Pasture within the Soldier Meadows Allotment from grazing would preserve the opportunity to pursue traditional uses.

#### **From Wild Horse and Burro Management**

Current conditions would be maintained.

#### **From Fire Management**

Allowing wildfire and prescribed fire outside of wild emphasis Wilderness to meet vegetation objectives could decrease integrity of PCRI in the short-term, but preserve the opportunity to pursue traditional uses in the long-term.

#### **From Fish and Wildlife Management**

Impacts would be similar to those described for the No Action Alternative.

#### **From Visual Resource Management**

Impacts would be similar to those described for Alternative A.

#### **From Water Resource Management**

Impacts would be similar to those described for the No Action Alternative.

#### **From Lands and Realty Management**

Issuing rights-of-way for buried and aboveground facilities in the Rustic Zone, within non-playa portions of the Front Country Zone, and in support of geothermal leasing in the south playa

could decrease the integrity PCRI if future geothermal development occurred.

#### **From Minerals and Energy Management**

Impacts would be similar to those described for Alternative A, the potential for additional geothermal development on the South Playa could locally reduce the integrity and setting of PCRI.

#### **From Recreation Management**

Applying visitor restrictions, such as camping limits, activity restrictions in areas, trail development or implementing a permit system, if resource damage occurs from recreation activities would prevent or alleviate inadvertent damage or disturbance to PCRI. As a result of these measures to increase resource protection, integrity of PCRI and the setting of other important Native American locations would also be improved in the long-term.

Applying camping restrictions, such as allowing dispersed camping throughout the zone except within one-half mile of designated campsites, applying restrictions if resource damage occurs, and closing dune and hummock areas on the playa to camping, would also protect PCRI from inadvertent damage and improve or maintain the integrity of their setting.

Not applying limits on group size or length of stay, except as provided in existing regulations, could increase conflicts between Native American users and recreationists.

#### **From Public Outreach and Visitor Services Management**

This alternative anticipates the largest increase in visitor use, which could increase conflicts between Native Americans seeking to practice traditional uses and recreationists.

Establishing an Administrative Site/Visitor Contact Station and administrative facility in or near the NCA would educate users and increase appreciation of Native American values and traditional uses. With increased knowledge and appreciation, inadvertent impacts to these values and uses may decrease.

### **4.2.4.4 Impacts on Paleontological Resources**

#### **From Land Health Standards**

No impacts are anticipated.

#### **From Transportation and OHV Management**

Impacts would generally be similar to those described for Alternative B, except for those associated with the following actions.

Upgrading Stevens Camp, High Rock Lake, Grassy road, and Sulphur-Jackson Road to local road-level 3 could increase fossil theft, breakage, and displacement and vandalism, alteration, and erosion of sites if resources occur in those areas.

Closing 16 miles and limiting 849 miles to OHV use would provide more protection than the No Action Alternative, however, it would be less than Alternatives A and B.

#### **From Cultural Resource Management**

No impacts are anticipated.

#### **From Native American Values Management**

No impacts are anticipated.

#### **From Paleontological Resource Management**

Managing paleontological sites as to site types with an emphasis on scientific research would improve opportunities to identify priorities for site management and site preservation, and reduce the risk of inadvertent damage to important sites. As a result, fossil theft, breakage, and displacement and vandalism, alteration, and erosion of sites would diminish, and scientific inquiry and public use and appreciation of paleontological resources would increase.

Allowing collection of petrified wood and common invertebrate fossils throughout the planning area would increase the risk of inadvertent damage to important sites. Restricting collection in the Hanging Rock Petrified Forest to permitted scientific purposes could result in conflicts with rock hounds used to collecting petrified wood in that area.

**From Wilderness Management**

Current conditions would be maintained.

**From Special Designation Management**

No impacts are anticipated, no areas are recommended for special designation.

**From Vegetation Management**

No impacts are anticipated.

**From Livestock Grazing Management**

No impacts are anticipated.

**From Wild Horse and Burro Management**

No impacts are anticipated.

**From Fire Management**

Impacts would be similar to those described for the No Action Alternative.

**From Fish and Wildlife Management**

No impacts are anticipated.

**From Visual Resource Management**

No impacts are anticipated.

**From Water Resource Management**

No impacts are anticipated.

**From Lands and Realty Management**

Retaining two existing utility corridors for buried and aboveground facilities, particularly the corridor south of the railroad, could increase the risk of inadvertent damage to important sites, and increase fossil theft, breakage, and displacement and increase the potential for vandalism, alteration, and erosion of sites if additional development occurs in the corridor.

**From Minerals and Energy Management**

Impacts would be similar to those described for the No Action Alternative.

**From Recreation Management**

Impacts would be similar to those described for Alternative B.

**From Public Outreach and Visitor Services Management**

This alternative anticipates the largest increase in visitor use, which could increase the risk of inadvertent damage to important sites, and increase potential fossil theft, breakage, and displacement and increase the potential for vandalism, alteration, and erosion of sites.

Establishing an Administrative Site/Visitor Contact Station and administrative facility in or near the NCA would educate users and increase appreciation of paleontological resources and decrease conflicts, inadvertent impacts, and willful damage to paleontological resources.

**4.2.4.5 Impacts on Wilderness**

**From Land Health Standards**

Impacts would be similar to those described for Alternative A.

**From Transportation and OHV Management**

No impacts would be anticipated.

**From Cultural Resource Management**

Emphasizing site interpretation and scientific discovery could temporarily disturb natural emphasis wilderness characteristics, however, these activities would be short-term and occur within limited areas when sites within Wilderness are excavated.

**From Native American Values Management**

No impacts are anticipated.

**From Paleontological Resource Management**

Impacts would be similar to those described for the No Action Alternative.

**From Wilderness Management**

Impacts would generally be similar to those described for Alternative B; however, naturalness

of unit 2 would be reduced due to lack a designation to allow for a developed campground.

#### **From Special Designation Management**

No impacts are anticipated, no areas are recommended for special designation.

#### **From Vegetation Management**

Impacts would generally be similar to those described for Alternatives A and B; however, allowing vegetation treatments if it is the minimum required action for the management of Wilderness could maintain or enhance naturalness in the NE Wilderness. Solitude may be decreased in the short-term during project implementation.

#### **From Livestock Grazing Management**

Impacts would be similar to those described for Alternative A.

#### **From Wild Horse and Burro Management**

Impacts would be similar to those described for the No Action Alternative.

#### **From Fire Management**

Allowing wildland fire to play a more natural role on 598,715 acres of Category B lands and providing opportunities for prescribed fire in natural emphasis wilderness could increase naturalness where fire is desired and the risks associated with invasive species are low.

#### **From Fish and Wildlife Management**

Allowing animal damage control in Natural Emphasis wilderness areas could decrease naturalness, and opportunities for solitude and primitive recreation in those areas. Maintaining the six existing small game wildlife water developments and constructing new developments in NE Wilderness Areas could decrease naturalness and solitude in the immediate vicinity of those projects. During maintenance and new construction, solitude would be reduced temporarily in the immediate area.

Removing the eight existing small game wildlife water developments in wild emphasis Wilderness Areas would enhance the wilderness values of those areas. Not allowing the construction

of new wildlife water developments could maintain the naturalness of the areas, but may also hinder the ability of wildlife managers to correct human caused impacts on native wildlife.

#### **From Visual Resource Management**

Current conditions would be maintained.

#### **From Water Resource Management**

Impacts would be similar to those described for the No Action Alternative.

#### **From Lands and Realty Management**

Impacts would be similar to those described for the No Action Alternative.

#### **From Minerals and Energy Management**

Impacts would generally be similar to those described for Alternative A; however, allowing saleable minerals to be sold or developed in the wilderness vehicle access roads outside the NCA could potentially impact wilderness values in the adjacent Wilderness Areas.

#### **From Recreation Management**

Restricting uses that are causing resource impacts would maintain naturalness, and opportunities for solitude and primitive recreation.

Allowing collection of rocks, minerals and common invertebrate fossils with limits would reduce the impacts associated with unlimited collection. Allowing even limited collection may slightly diminish special features and naturalness.

Designating the Desert Trail Corridor through the natural emphasis Wilderness Areas would allow more people to access and enjoy those Wilderness Areas, which could increase opportunities for primitive recreation. Increased visitor use could also decrease naturalness in the vicinity of the trail corridor.

Allowing dispersed camping and not applying group size limits may enhance primitive recreation, but could decrease solitude as visitation increases.

#### **From Public Outreach and Visitor Services Management**

Visitors' sense of appreciation and understanding of wilderness values would be

directly impacted by management actions for public outreach and visitor services. More interpretive opportunities would be available.

Developing an Administrative Site/Visitor Contact Station within or near the NCA would enhance primitive recreation opportunities by providing the greatest amount of resource and safety information.

#### **4.2.4.6 Impacts on Special Designations**

No special designations would occur under Alternative C. The impacts discussed below are the potential impacts to the important values for which the special designations were recommended in other alternatives.

##### **4.2.4.6.1 ACECs**

###### **From Land Health Standards**

Impacts would be to the same as Alternative A.

###### **From Transportation and OHV Management**

Improvements of High Rock Lake Road to standards capable of providing access for a much wider range of vehicles could increase disturbance of habitats for the desert dace, spring snails, and basalt cinquefoil, the scenic and primitive qualities of the High Rock area, and nesting raptors and lambing bighorn sheep by facilitating increased visitor use.

Upgrading the Stevens Camp and Grassy Roads to local level 3, adjusting the functional or maintenance class of roads to adapt to visitor use, and improving access where public roads cross private property would lead to increased visitor use, and could also diminish the primitive character of the High Rock area and associated emigrant trail segments.

Leaving vehicle routes within the Soldier Meadows ACEC open to OHV use would maintain existing vehicle related disturbances on or near habitat for the desert dace, spring snails, and basalt cinquefoil.

###### **From Cultural Resource Management**

No impacts are anticipated.

###### **From Native American Values Management**

No impacts are anticipated.

###### **From Paleontological Resource Management**

No impacts are anticipated.

###### **From Wilderness Management**

Current conditions would be maintained.

###### **From Special Designation Management**

No impacts are anticipated, no areas are recommended for special designation.

###### **From Vegetation Management**

Impacts would be similar to those described for Alternative A.

###### **From Livestock Grazing Management**

Impacts would be similar to those described for the No Action Alternative.

###### **From Wild Horse and Burro Management**

Impacts would be similar to those described for the No Action Alternative.

###### **From Fire Management**

Impacts would be similar to those described for the No Action Alternative.

###### **From Fish and Wildlife Management**

Impacts would be similar to those described for the No Action Alternative.

###### **From Visual Resource Management**

Current conditions would be maintained.

###### **From Water Resource Management**

Impacts would be similar to those described for the No Action Alternative.

###### **From Lands and Realty Management**

No impacts are anticipated.

**From Minerals and Energy Management**

No impacts are anticipated.

**From Recreation Management**

Impacts would be similar to those described for Alternative B.

**From Public Outreach and Visitor Services Management**

Impacts would be similar to those described for Alternative B.

**4.2.4.6.2 Wild and Scenic Rivers**

**From Land Health Standards**

Impacts would be similar to those described for the Alternative A.

**From Transportation and OHV Management**

Impacts would be similar to those described for Alternative B.

**From Cultural Resource Management**

No impacts are anticipated.

**From Native American Values Management**

No impacts are anticipated.

**From Paleontological Resource Management**

No impacts are anticipated.

**From Wilderness Management**

The nine acquired parcels in the WSA also contain segments of Mahogany and Summer Camp Creeks; therefore, managing the parcels as WSAs would also protect the values associated with those streams. The 100-foot offset from centerline of routes in Unit 1 would continue to allow users to camp in or near the riparian area of Mahogany Creek and would allow impacts associated with that camping to continue. Not adding Unit 2 to the WSA would leave about .5 miles of Mahogany and Summer Camp Creeks open to more impacts than if they were added to the WSA.

**From Special Designation Management**

Impacts occurring from recreational and grazing use would continue in the High Rock Canyon and Soldier Meadows areas by removing the ACEC designations.

**From Vegetation Management**

Impacts would be similar to those described for the No Action Alternative.

**From Livestock Grazing Management**

Impacts would generally be similar to those described for Alternative A; however, if grazing was determined acceptable in the Stanley Camp Pasture within the Soldier Meadows Allotment, it could impact the outstandingly remarkable values of Mahogany, Summer Camp, and Snow Creeks.

**From Wild Horse and Burro Management**

Impacts would be similar to those described for the No Action Alternative.

**From Fire Management**

No impacts are anticipated.

**From Fish and Wildlife Management**

Current conditions would be maintained.

**From Visual Resource Management**

Current conditions would be maintained.

**From Water Resource Management**

Impacts would be similar to those described for the No Action Alternative.

**From Lands and Realty Management**

No impacts are anticipated.

**From Minerals and Energy Management**

Impacts would be similar to those described for the No Action Alternative.

**From Recreation Management**

Impacts would generally be similar to those described for Alternative B; in addition, designating portions of High Rock Canyon ACEC outside of

Wilderness, Soldier Meadows ACEC, Class A and B historic trail segments, and rustic portions of the Lahontan cutthroat trout area as day-use only would decrease disturbance of stream segments and reduce impacts to riparian areas from camping.

#### **From Public Outreach and Visitor Services Management**

Impacts would generally be similar to those described for Alternative B; however, the most public outreach would occur under this alternative, which could reduce impacts to outstandingly remarkable values even more. The increased outreach could also increase visitation, which could also have more of an impact on the outstandingly remarkable values.

### **4.2.4.7 Impacts on Vegetation**

#### **From Land Health Standards**

Impacts would be similar to those described for Alternative A.

#### **From Transportation and OHV Management**

Impacts would be generally similar to those described for Alternative B; upgrade of maintenance levels on road Stevens Camp, High Rock and Sulphur-Jackson would be same as Alt B. However, upgrades to Grassy and High Rock Lake could lead to the spread of noxious weeds by increasing vehicle traffic and the types of vehicles using these roads in the High Rock Lake Basin and the Stevens Camp area.

Designating 346,191 acres as limited to OHV use on 849 miles of designated roads and vehicle routes would maintain existing vegetation impacts associated with vehicle use similar to those described for Alternative although fewer miles of road would be closed in this alternative.

#### **From Cultural Resource Management**

Impacts would be similar to those described for the No Action Alternative.

#### **From Native American Values Management**

Current conditions would be maintained.

#### **From Paleontological Resource Management**

No impacts are anticipated.

#### **From Wilderness Management**

Impacts would be similar to those described for Alternative B; however, the potential development of a campground could result in loss of vegetation and compaction on no more than an acre associated with the campground site in the Lahontan cutthroat trout Wilderness Study Area. This loss of vegetation could be offset due to decreased camping in primitive, dispersed campsites.

#### **From Special Designation Management**

No impacts are anticipated, no areas are recommended for special designation.

#### **From Vegetation Management**

Impacts would be similar to those described for Alternatives A and B.

#### **From Livestock Grazing Management**

Impacts would be similar to those described for Alternative A. The Stanley Camp Pasture would be available for limited grazing in support of the recovery of the Lahontan Cutthroat trout, but the impacts on vegetation of this limited grazing would be similar to no grazing.

#### **From Wild Horse and Burro Management**

Impacts would be similar to those described for the No Action Alternative.

#### **From Fire Management**

Impacts similar to those described for Alternative A, additionally using wildland fire and prescribed fire outside of Wilderness on a site-specific basis to accomplish localized small-scale projects consistent with the vegetation objectives and in natural emphasis Wilderness Areas could potentially improve species composition, productivity, structure of upland and riparian plant communities on fewer acres than No Action because implementation of mechanical treatments are more difficult to implement than prescribed burning.

Not using prescribed fire in wild emphasis Wilderness Areas would maintain species composition, productivity, and structure of upland and riparian plant communities even where species composition does not meet desired conditions.

#### **From Fish and Wildlife Management**

Impacts would be similar to those described for Alternative B.

#### **From Visual Resource Management**

Current conditions would be maintained.

#### **From Water Resource Management**

Impacts would be similar to those described for the No Action Alternative.

#### **From Lands and Realty Management**

Impacts would be similar to those described for the No Action Alternative.

#### **From Minerals and Energy Management**

Impacts would generally be similar to those described for the No Action Alternative. Leaving the South Playa open to geothermal leasing would have minimal impacts since most of the South Playa is un-vegetated.

#### **From Recreation Management**

Impacts would be similar to those described for the No Action Alternative.

#### **From Public Outreach and Visitor Services Management**

Impacts would generally be similar to those described for Alternative B. However, implementation of more onsite interpretive facilities and location of a visitor within the NCA could lead an additional acre or less having vegetation removed or impacted by vehicles. The proactive approach to prevent resource impacts could potentially decrease human related impacts to vegetation.

### **4.2.4.8 Impacts on Livestock Grazing**

#### **From Land Health Standards**

Impacts would be similar to those described for Alternative A.

#### **From Transportation and OHV Management**

Impacts would be similar to those discussed in Alternative B. Designation of transportation routes and OHV classes under this alternative would have impacts similar to those described for the No Action Alternative because only about 16 miles of road are being closed.

Improved road quality of the Grassy and High Rock Lake roads would locally improve vehicle access for livestock grazer in the area.

#### **From Cultural Resource Management**

Current conditions would be maintained.

#### **From Native American Values Management**

Current conditions would be maintained.

#### **From Paleontological Resource Management**

Current conditions would be maintained.

#### **From Wilderness Area Management**

Current conditions would be maintained.

#### **From Special Designation Management**

No impacts are anticipated, since ACEC designations are removed.

#### **From Vegetation Management**

Vegetation management actions under this alternative would have impacts similar to those described for Alternative A.

#### **From Livestock Grazing Management**

In addition to the impacts from Alternative A, permitting limited grazing within the Stanley Camp Pasture under a grazing prescription consistent with recovery of the Lahontan cutthroat trout would potentially provide additional flexibility to one

livestock operator if the area is used for livestock grazing.

**From Wild Horse and Burro Management**

Impacts would be similar to those described for the No Action Alternative.

**From Fire Management**

Current conditions would be maintained.

**From Fish and Wildlife Management**

Impacts would be similar to those described for Alternative B, allowing animal damage control to be conducted only in Natural Emphasis Wilderness would maintain the opportunity to remove predators causing losses of livestock in six of the ten wilderness areas.

**From Visual Resource Management**

Current conditions would be maintained.

**From Water Resource Management**

Water resource management actions under this alternative would have similar impacts to the No Action Alternative.

**From Lands and Realty Management**

No impacts are anticipated.

**From Minerals and Energy Management**

Current conditions would be maintained.

**From Recreation Management**

No impacts are anticipated.

**From Public Outreach and Visitor Services Management**

Visitor outreach actions under this alternative would have the potential to increase vandalism to livestock related projects, increase livestock loss, and increase operational expenses of livestock operators due to outreach activities that lead to increase visitor use.

**4.2.4.9 Impacts on Wild Horses and Burros**

**From Land Health Standards**

Impacts would be the same as Alternative A.

**From Transportation and OHV Management**

Impacts would be similar to those discussed in Alternative A and B, closing 16 miles of vehicle route to OHV use would essentially maintain current levels of human contact with wild horses and burros.

**From Cultural Resource Management**

Current conditions would be maintained.

**From Native American Values Management**

Current conditions would be maintained.

**From Paleontological Resource Management**

Current conditions would be maintained.

**From Wilderness Area Management**

Current conditions would be maintained.

**From Special Designation Management**

No impacts are anticipated, since ACEC designations would be removed.

**From Vegetation Management**

Impacts would be similar to those discussed for Alternative A.

**From Livestock Grazing Management**

Impacts would be similar to those discussed for the No Action Alternative.

**From Wild Horse and Burro Management**

Constructing a permanent facility to support wild horse and burro management by providing opportunities for low cost horse gathers and adoptions by the public would increase public awareness and appreciation of wild horses and burros.

**From Fire Management**

No impacts are anticipated.

**From Fish and Wildlife Management**

Impacts would be the same as the No Action Alternative.

**From Visual Resource Management**

No impacts are anticipated.

**From Water Resource Management**

Impacts would be the same as the No Action Alternative.

**From Lands and Realty Management**

No impacts are anticipated.

**From Minerals and Energy Management**

No impacts are anticipated.

**From Recreation Management**

No impacts are anticipated.

**From Public Outreach and Visitor Services Management**

This alternative contains the most public outreach activities. Increased public knowledge may indirectly lead to more adoptions and protection and appreciation of wild horses and burros.

**4.2.4.10 Impacts on Fire Management**

**From Land Health Standards**

Impacts would be similar to those described for Alternative A.

**From Transportation and OHV Management**

Impacts would be similar to those described for Alternative B but only about 16 miles of vehicle route would be closed. Additionally improvements in the High Rock Lake, Grassy and Sulphur-Jackson roads would increase the effectiveness of

fire protection to the High Rock Canyon area by upgrading road condition. Additionally, there is an increase in the potential for human-caused fires due to increase visitor access by upgrading road conditions.

**From Cultural Resource Management**

Current conditions would be maintained.

**From Native American Values Management**

Current conditions would be maintained.

**From Paleontological Resource Management**

Current conditions would be maintained.

**From Wilderness Area Management**

Prescribed burning in wilderness areas to manipulate vegetation to benefit other resources would change the fuel loading a few hundred acres in 6 of the 10 wilderness areas and have little affect on wildland fire size, intensity and indirectly fire suppression efforts.

**From Special Designation Management**

No impacts would occur because no special designations would be made under this alternative.

**From Vegetation Management**

Impacts similar to those described for Alternative A would occur from vegetation management actions, but prescribed fire would be allowed in 6 of the 10 wilderness areas.

**From Livestock Grazing Management**

Impacts would be similar to those discussed for the No Action Alternative.

**From Wild Horse and Burro Management**

No impacts are anticipated.

**From Fire Management**

Impacts similar to those described for Alternative A, additionally wildland fire and prescribed fire outside of Wilderness Areas could be used to manipulate the woody and herbaceous species to meet vegetation objectives.

Prescribed fire could be applied in the 6 Natural Emphasis wilderness areas, as noted above in Vegetation Management. No prescribed fire would be applied in Wild Emphasis wilderness areas.

**From Fish and Wildlife Management**

Current conditions would be maintained.

**From Visual Resource Management**

Current conditions would be maintained.

**From Water Resource Management**

No impacts are anticipated.

**From Lands and Realty Management**

No impacts are anticipated.

**From Minerals and Energy Management**

No impacts are anticipated.

**From Recreation Management**

No impacts are anticipated.

**From Public Outreach and Visitor Services Management**

The public outreach and visitor services actions for this alternative are extensive and an Administrative Site/Visitor Contact Station would be constructed. This could increase the potential for human-caused fires due to increased visitation; however, this could be mitigated through presentation of an effective fire prevention message as part of the outreach efforts.

**4.2.4.11 Impacts on Fish and Wildlife**

**From Land Health Standards**

Impacts would be similar to those described for Alternative A.

**From Transportation and OHV Management**

Impacts would be similar to those described for Alternative B, upgrading the High Rock Lake

and Grassy Roads to Maintenance level 3 would potentially increase erosion and sedimentation of aquatic habitat and increase the chance of wildlife being disturbed or harassed by increasing vehicle traffic and types of vehicles able to access both ends of High Rock Canyon. As a result, sage-grouse and bighorn sheep habitats in the High Rock area could be degraded and populations reduced.

Limiting 346,191 acres to OHV use on designated roads and vehicle routes could decrease erosion and sedimentation of aquatic habitat adjacent to 16 miles of closed route.

**From Cultural Resource Management**

Current conditions would be maintained.

**From Native American Values Management**

Current conditions would be maintained.

**From Paleontological Resource Management**

No impacts are anticipated.

**From Wilderness Area Management**

Impacts would be similar to those described for Alternative B.

**From Special Designation Management**

No impacts would occur because no special designations would be made under this alternative.

**From Vegetation Management**

Impacts from vegetation management would be the same as those for Alternative A, because most of the actions are the same. In addition, allowing vegetation treatments, including prescribed fire, in Natural Emphasis Wilderness Areas would restore native vegetation communities on a few hundred acres in those wilderness areas and enhance wildlife habitat and species viability.

**From Livestock Grazing Management**

Impacts would be similar to those described for the No Action Alternative. In addition, the requirement for specific grazing prescription in the Stanley Camp Pasture within the Soldier Meadows Allotment would minimize disturbance to wildlife from livestock grazing.

### **From Wild Horse and Burro Management**

Impacts would be similar to those described for the No Action Alternative.

### **From Fire Management**

Impacts would be similar to those described for Alternative A, using wildland fire and prescribed fire everywhere except wild emphasis Wilderness Areas to meet vegetation objectives would maintain habitat conditions on areas where wildlife species would benefit from changes in vegetation composition, structure and production.

Not using prescribed fire in Wild Emphasis Wilderness Areas would maintain habitat conditions on areas where wildlife species would benefit from changes in vegetation composition, structure and production.

### **From Fish and Wildlife Management**

Impacts would be similar to those described for Alternative A.

Allowing animal damage control in Natural Emphasis Wilderness Areas to protect threatened and endangered species and prevent the transmission of disease to other wildlife or humans may lead to decreased predator populations and increased prey species production.

Not allowing animal damage control in Wild Emphasis Wilderness Areas would potentially decrease the chance of predators being disturbed or harassed and reduce species viability of populations being affected by predation above normal rates. Predator populations in the area of control would increase, but populations of prey species would decrease.

Not maintaining existing wildlife water developments or constructing new water developments in Wild Emphasis Wilderness Areas and removing developments as they become non-functional would reduce wildlife populations in the immediate area of removed projects. This would affect mobile species on about 10,000 acres and non-mobile species on about 1,000 acres.

Constructing new water developments within wilderness near High Rock Canyon to provide water during bighorn sheep lambing would enhance species viability by allowing bighorn sheep access to low disturbance habitats during dry portions of

year, and decrease the chance of bighorn sheep being disturbed or harassed.

### **From Visual Resource Management**

Current conditions would be maintained.

### **From Water Resource Management**

Impacts would be similar to those described for the No Action Alternative.

### **From Lands and Realty Management**

Current conditions would be maintained.

### **From Minerals and Energy Management**

Impacts would be similar to those described for those discussed for the No Action Alternative.

### **From Recreation Management**

Although recreation management actions in Alternative C are somewhat less restrictive than Alternatives A and B, restricting recreation use as needed to protect resources would result in the same impacts.

### **From Public Outreach and Visitor Services Management**

Impacts would be similar to those described for Alternative B.

## **4.2.4.12 Impacts on Special Status Species**

### **4.2.4.12.1 Plants**

There would be no impact to special status plant species except basalt cinquefoil as discussed for the No Action Alternative.

### **From Land Health Standards**

Impacts would be similar to those described for Alternative A.

### **From Transportation and OHV Management**

Impacts would be similar to those described for the No Action Alternative, since roads would not be relocated in Soldier Meadows area.

**From Cultural Resource Management**

No impacts are anticipated.

**From Native American Values Management**

No impacts are anticipated.

**From Paleontological Resource Management**

No impacts are anticipated.

**From Wilderness Area Management**

No impacts are anticipated.

**From Special Designation Management**

No impacts would occur because no special designations would be made under this alternative.

**From Vegetation Management**

No impacts are anticipated.

**From Livestock Grazing Management**

No impacts are anticipated.

**From Wild Horse and Burro Management**

Impacts would be similar to those described for the No Action Alternative.

**From Fire Management**

No impacts are anticipated.

**From Fish and Wildlife Management**

Impacts would be the same as those discussed for the No Action Alternative.

**From Visual Resource Management**

No impacts are anticipated.

**From Water Resource Management**

Current conditions would be maintained.

**From Lands and Realty Management**

Current conditions would be maintained.

**From Minerals and Energy Management**

No impacts are anticipated.

**From Recreation Management**

Applying limits on human activities, constructing facilities around hot springs, or implementing a permit system if resource impacts are occurring would potentially improve basalt cinquefoil habitat and increase their populations. If restrictions implemented include information about protection of basalt cinquefoil, increased visitor awareness could indirectly decrease inadvertent disturbance.

Designating the Soldier Meadows area as day-use only would protect basalt cinquefoil from recreational activities.

**From Public Outreach and Visitor Services Management**

Using a proactive approach to prevent resource impacts, provide interpretation and public safety would increase visitor awareness, which could indirectly decrease inadvertent disturbance.

**4.2.4.12.2 Fish and Wildlife**

There are no known impacts to black tern, least bittern, and white-faced ibis because of the lack of wetlands and actions affecting those areas.

**From Land Health Standards**

Impacts would be similar to those described for Alternative A.

**From Transportation and OHV Management**

Impacts would be similar to those discussed for Alternative A, no impacts are anticipated from transportation maintenance and functional classes because considerations of special status species are required before actions could be implemented as part of Land Health Standards.

Limiting 346,191 acres to OHV use on designated roads and vehicle routes would close 16 miles of vehicle routes, which would maintain existing disturbance and have little impact on special status species habitats.

Upgrading the High Rock Lake and Grassy Roads to Maintenance level 3 would potentially increase the chance of bighorn being disturbed or

harassed by increasing vehicle traffic and types of vehicles able to access the High Rock Canyon area.

**From Cultural Resource Management**

No impacts are anticipated.

**From Native American Values Management**

Current conditions would be maintained.

**From Paleontological Resource Management**

No impacts are anticipated.

**From Wilderness Area Management**

Impacts would be similar to those described for Alternative B.

**From Special Designation Management**

No impacts would occur because no special designations would be made under this alternative.

**From Vegetation Management**

Impacts would be similar to those described for Alternative A.

**From Livestock Grazing Management**

Impacts would be similar to those described for Alternative B.

**From Wild Horse and Burro Management**

Impacts would be similar to those described for the No Action Alternative.

**From Fire Management**

Impacts would be similar to those described for Alternative A.

**From Fish and Wildlife Management**

Impacts would be similar to those described for Alternative A.

**From Visual Resource Management**

Current conditions would be maintained.

**From Water Resource Management**

Impacts would be similar to those described for the No Action Alternative.

**From Lands and Realty Management**

No impacts are anticipated.

**From Minerals and Energy Management**

Current conditions would be maintained.

**From Recreation Management**

Impacts would be similar to those described for Alternative B.

**From Public Outreach and Visitor Services Management**

Impacts would be similar to those described for Alternative B.

**4.2.4.13 Impacts on Visual Resources**

**From Land Health Standards**

Impacts would be similar to those discussed for Alternative A.

**From Transportation and OHV Management**

Impacts would be similar to those described for Alternative B.

**From Cultural Resource Management**

Current conditions would be maintained.

**From Native American Values Management**

Current conditions would be maintained.

**From Paleontological Resource Management**

No impacts are anticipated.

**From Wilderness Management**

Impacts would be similar to those described for Alternative B.

**From Special Designation Management**

Current conditions would be maintained.

### **From Vegetation Management**

Impacts would be similar to those discussed for the No Action Alternative.

### **From Livestock Grazing Management**

Impacts would be similar to those discussed for the No Action Alternative.

### **From Wild Horse and Burro Management**

Current conditions would be maintained.

### **From Fire Management**

Allowing wildland fire and prescribed fire within the planning area, except for Wild Emphasis Wilderness Areas to meet vegetation objectives would decrease visibility temporarily during implementation, but would enhance the viewshed and natural setting of historic trails in the long-term.

### **From Fish and Wildlife Management**

Current conditions would be maintained.

### **From Visual Resource Management**

Impacts would be similar to those described for Alternative A.

### **From Water Resource Management**

No impacts are anticipated.

### **From Lands and Realty Management**

Impacts would be similar to those described for the No Action Alternative.

### **From Minerals and Energy Management**

Impacts would be similar to those described in Alternative B, withdrawing federal lands within the South Playa Area, the Lahontan cutthroat trout area, and vehicle access routes outside the NCA would protect visual resources from impacts to visual resources that could have been caused by surface disturbance and infrastructure development associated with mining in these areas.

Continuing to leave the South Playa open to geothermal development could result in visually obtrusive development that may affect the viewshed and primitive setting in this part of the planning area.

### **From Recreation Management**

Applying visitor restrictions if resource damage occurs and designating sensitive areas, including portions of ACECs, historic trail segments, and the Lahontan cutthroat trout area as day-use only would alleviate surface disturbance and damage to vegetation where restrictions are applied, potentially improving viewsheds within these areas.

Encouraging the development of privately operated campgrounds on public lands outside of the NCA and on private lands both inside and outside of the NCA boundary could diminish the quality of the viewshed in these areas depending on the level of development that takes place. However, potentially displacing camping to lands outside the NCA may reduce the level of surface disturbance and vegetation damage within the planning area.

Restricting Class III and IV events to a designated area of the Front Country to reduce disturbances to vegetation, soils, and riparian zones would protect visual resources.

### **From Public Outreach and Visitor Services Management**

Using a proactive approach to prevent resource impacts would increase public appreciation and awareness, which could indirectly lead to increased protection of planning area resources and consequently visual quality.

## **4.2.4.14 Impacts on Water Resources**

### **From Land Health Standards**

Impacts would be similar to those discussed for Alternative A.

### **From Transportation and OHV Management**

This alternative provides for the largest number of “open” roads and the greatest potential for vehicular access, which would maintain existing soil erosion and stream sedimentation and hydrological conditions. Improving the High Rock Lake and Grassy roads would locally decrease runoff and erosion in to streams.

**From Cultural Resource Management**

No impacts are anticipated.

**From Native American Values Management**

Current conditions would be maintained.

**From Paleontological Resource Management**

No impacts are anticipated.

**From Wilderness Area Management**

Adding 9 of the 10 parcels within the Lahontan cutthroat trout WSA that were acquired and inventoried for wilderness characteristics to the WSA would decrease vehicular traffic and other uses in these areas, thereby reducing soil erosion and stream sedimentation. This impact would not be as extensive as Alternatives A or B due to the exclusion of one parcel from the WSA.

Excluding existing designated routes as well as the portions of the main Barlett Butte BLM system road #2052, the Summer Camp route, the Idaho Canyon Route and the route into Wood Canyon from the Lahontan cutthroat trout WSA could increase vehicular traffic within and immediately outside the WSA, resulting in increased soil erosion and stream sedimentation.

**From Special Designation Management**

No impacts would occur because no special designations would be made under this alternative.

**From Vegetation Management**

Impacts would be similar to those described for Alternative A.

**From Livestock Grazing Management**

Impacts would be the same as the No Action Alternative.

**From Wild Horse and Burro Management**

Impacts would be the same as the No Action Alternative.

**From Fire Management**

Current conditions would be maintained.

**From Fish and Wildlife Management**

Current conditions would be maintained.

**From Visual Resource Management**

Current conditions would be maintained.

**From Water Resource Management**

Impacts would be the same as the No Action Alternative.

**From Lands and Realty Management**

Impacts would be the same as the No Action Alternative.

**From Minerals and Energy Management**

Impacts would be similar to those described in Alternative A, potential development of geothermal resources within the South Playa Area could result in increased potential for contamination of water resources and could increase soil erosion and stream sedimentation within this area.

**From Recreation Management**

This alternative is the least restrictive regarding camping location, duration and group size, which could lead to increased soil erosion and stream sedimentation and decreased hydrologic function.

**From Public Outreach and Visitor Services Management**

The increased public outreach and visitor services proposed under this alternative could increase public appreciation for the values of the planning area and thereby decrease human-related impacts (e.g., erosion, sedimentation and contamination) to water resources.

**4.2.4.15 Impacts on Lands and Realty**

**From Land Health Standards**

No impacts are anticipated.

**From Transportation and OHV Management**

Current conditions would be maintained.

**From Cultural Resource Management**

Current conditions would be maintained.

**From Native American Values Management**

Current conditions would be maintained.

**From Paleontological Resource Management**

Current conditions would be maintained.

**From Wilderness Management**

Current conditions would be maintained.

**From Special Designation Management**

No impacts would occur because no special designations would be made under this alternative.

**From Vegetation Management**

No impacts are anticipated.

**From Livestock Grazing Management**

No impacts are anticipated.

**From Wild Horse and Burro Management**

No impacts are anticipated.

**From Fire Management**

No impacts are anticipated.

**From Fish and Wildlife Management**

Current conditions would be maintained.

**From Visual Resource Management**

Current conditions would be maintained.

**From Water Resource Management**

Current conditions would be maintained.

**From Lands and Realty Management**

Retaining two utility corridors that encompass existing buried and aboveground utilities would have similar impacts to the No Action Alternative.

Issuing rights-of-way for buried and aboveground facilities in the Rustic Zone and within non-playa portions of the Front Country Zone and in the south playa portion of the planning area would have similar impacts to the No Action Alternative.

**From Minerals and Energy Management**

Current conditions would be maintained.

**From Recreation Management**

Encouraging the development of privately operated campgrounds on public lands outside of the NCA and on private lands both inside and outside of the NCA boundary would have impacts similar to those described for Alternative A.

**From Public Outreach and Visitor Services Management**

No impacts are anticipated.

**4.2.4.16 Impacts on Minerals and Energy**

**From Land Health Standards**

No impacts are anticipated.

**From Transportation and OHV Management**

Current conditions would be maintained.

**From Cultural Resource Management**

Current conditions would be maintained.

**From Native American Values Management**

Current conditions would be maintained.

**From Paleontological Resource Management**

Current conditions would be maintained.

**From Wilderness Area Management**

Current conditions would be maintained.

**From Special Designation Management**

No impacts would occur because no special designations would be made under this alternative.

**From Vegetation Management**

No impacts are anticipated.

**From Livestock Grazing Management**

No impacts are anticipated.

**From Wild Horse and Burro Management**

No impacts are anticipated.

**From Fire Management**

No impacts are anticipated.

**From Fish and Wildlife Management**

Current conditions would be maintained.

**From Visual Resource Management**

Designating the South Playa and two utility corridors as VRM Class III and the remaining portions of the planning area (excluding the Wilderness Area and the WSA) as VRM Class II would have similar impacts to Alternative A.

**From Water Resource Management**

Current conditions would be maintained.

**From Lands and Realty Management**

Impacts would be similar to those described in the No Action Alternative.

**From Minerals and Energy Management**

Subject to the terms of existing leases, the withdrawal of federal lands within the South Playa Area, the Lahontan cutthroat trout area, and vehicle access routes outside the NCA would decrease opportunities for development and increase the cost of development

Leaving the South Playa Area open to leasing of geothermal resources would retain opportunities for future.

**From Recreation Management**

No impacts are anticipated.

**From Public Outreach and Visitor Services Management**

No impacts are anticipated.

**4.2.4.17 Impacts on Air Quality**

**From Land Health Standards**

Current conditions would be maintained.

**From Transportation and OHV Management**

Upgrading BLM System roads or changing designated routes under this alternative would provide for the greatest level of access within the planning area, therefore could result in increased vehicular fugitive dust emissions.

As in Alternative B, providing greater public access on the east side of the Black Rock Range would result in potentially greater vehicular traffic throughout that area and potentially greater fugitive dust emissions.

Improvements to the High Rock Lake and Grassy roads would decrease dust production from these roads, but improved conditions for vehicles would result in increased traffic and higher vehicle speeds, which would contribute to, increased visibility of dust.

**From Cultural Resource Management**

No impacts are anticipated.

**From Native American Values Management**

No impacts are anticipated.

**From Paleontological Resource Management**

No impacts are anticipated.

**From Wilderness Management**

Current conditions would be maintained.

**From Special Designation Management**

Current conditions would be maintained.

**From Vegetation Management**

Current conditions would be maintained.

**From Livestock Grazing Management**

Current conditions would be maintained.

**From Wild Horse and Burro Management**

Current conditions would be maintained.

**From Fire Management**

Impacts would be similar to those described in Alternative A, short-term and periodic increases in smoke, airborne particulate matter, and decreased visibility would occur from implementing prescribed fire in the natural emphasis Wilderness Areas and the remainder of the non-Wilderness planning area.

**From Fish and Wildlife Management**

Current conditions would be maintained.

**From Visual Resource Management**

Current conditions would be maintained.

**From Water Resource Management**

Current conditions would be maintained.

**From Lands and Realty Management**

No impacts are anticipated.

**From Minerals and Energy Management**

Impacts would be similar to those described for the No Action Alternative.

**From Recreation Management**

Implementing visitor restrictions, such as group size or camping restrictions, where resource damage is occurring and designating sensitive areas as day-use only may indirectly decrease fugitive dust from recreation activities.

Impacts from Class III and IV events would be similar to those described for the No Action Alternative, since management actions are similar.

**From Public Outreach and Visitor Services Management**

No impacts are anticipated.

**4.2.4.18 Impacts on Soils**

**From Land Health Standards**

Impacts would be similar to those described for Alternative A.

**From Transportation and OHV Management**

Impacts would be similar to those described in Alternative B, the improvement of the Grassy and High Rock Lake roads could result in localized increases in soil disturbance and compaction but decreased erosion due to better runoff control.

**From Cultural Resource Management**

Current conditions would be maintained.

**From Native American Values Management**

Current conditions would be maintained.

**From Paleontological Resource Management**

Current conditions would be maintained.

**From Wilderness Area Management**

Current conditions would be maintained.

**From Special Designation Management**

No impacts would occur because no special designations would be made under this alternative.

**From Vegetation Management**

Impacts would be similar to those described for Alternative A.

**From Livestock Grazing Management**

Impacts would be similar to those described in the No Action Alternative.

**From Wild Horse and Burro Management**

Current conditions would be maintained.

**From Fire Management**

Impacts would be similar to those described for the No Action Alternative.

**From Fish and Wildlife Management**

Current conditions would be maintained.

**From Visual Resource Management**

Current conditions would be maintained.

**From Water Resource Management**

Current conditions would be maintained.

**From Lands and Realty Management**

Impacts would be similar to those described for the No Action Alternative.

**From Minerals and Energy Management**

Impacts would be similar to those described for Alternative A. In addition, potential development of geothermal resources in the South Playa Area would result in increased potential for soil disturbance, compaction, and erosion if additional development occurs.

**From Recreation Management**

As the least restrictive alternative for limitations on location, duration, and group size of camping and other activities, increased impacts would result from increased soil disturbance, compaction, and erosion.

**From Public Outreach and Visitor Services Management**

Impacts would be similar to those described for the No Action Alternative.

**4.2.4.19 Impacts on Recreation**

**From Land Health Standards**

Current conditions would be maintained.

**From Transportation and OHV Management**

Impacts would generally be similar to those described for Alternative B, except for those associated with the following actions.

Upgrading Stevens Camp, High Rock Lake, Grassy road, and Sulphur-Jackson Road to local road-level 3 would increase public access

throughout the planning area, providing opportunities for a wider range of visitors. The potential for increased traffic along these routes could result in a decrease of natural quiet and solitude associated with primitive recreation. Public access would also increase by enabling a wider range of vehicles to access the High Rock Lake, Massacre Mountain and Jackson Mountain areas for longer periods of time.

Using an adaptive management approach to assign BLM System roads or designated routes a functional classification or maintenance level would enhance the ability to manage certain areas for critical environmental settings. Unwarranted management actions that would negatively impact the visitor experience would be avoided. Public access would be maintained in areas where access has been reduced or eliminated due to road deterioration. Maintaining access only to traditional standards would inhibit access by standard passenger vehicles in many places in the planning area.

Public access through and across the planning area would be enhanced by developing travel corridors on the east side of the Black Rock Range from Humboldt County Road 214, north-south access to Black Rock Point and east-west access to BLM Road 2051 (Pahute Meadow Road), and by acquiring public access easements or developing road alignments in areas where public roads cross private property. Recreation opportunities would be available to a larger range of visitors as a result of improved access. However, some areas that currently received minimal use may experience increased visitation resulting in the loss of solitude and natural quiet.

Designating 346,191 acres as limited to designated roads would restrict opportunities for cross-country travel and reduce conflicts between motorized and non-motorized users. Within this area, 849 miles of routes would be designated as available for vehicle use, which would make more routes available for vehicle use than in Alternatives A and B. Since visitor-use data indicates that most multi-passenger vehicles are operated on the playa and existing roads, the OHV limitations proposed in this alternative are not expected to impact this segment of users. An extensive road system, with 849 miles of designated routes, should off-set lost opportunities. However, those OHV users who enjoy cross-country travel would likely be displaced

to areas outside of the planning area. Overall impacts to motorized users would be less when compared to alternative A.

Installation and maintenance of directional signs at intersections of BLM system, State, and County roads would reduce visitor confusion and opportunities for self-discovery, and increase public safety. New directional signs would also diminish the perception of recreating in an area free from human development, as well as the opportunities for self-discovery that were traditionally available.

Using an adaptive management approach to evaluate and implement alternative methods of providing location and directional information to visitors would reduce unnecessary signage that diminishes the perception of recreating in an environment free from human development.

### **From Cultural Resource Management**

Emphasizing site interpretation would increase awareness and appreciation of important resources and sensitive values. Interpretive materials and exhibits would also expand recreation opportunities in the planning area. This emphasis would also provide for increased scientific discovery, which together would likely improve the ability to manage rare resources for future generations.

Encouraging scientific research into cultural resources, and having public participation in inventories, excavations and scientific analyses would increase awareness of important and sensitive values, and improve management opportunities through greater resources. The proposed action would also maximize opportunities for site interpretation and education.

### **From Native American Values Management**

Managing Properties of Cultural and Religious Importance (PCRI) under the Traditional Use Category would enhance the preservation of rare resources for enjoyment of future generations. There would, however, be potential conflict between recreation users and traditional users.

### **From Paleontological Resource Management**

Common invertebrates and petrified wood collection would be allowed, under the same terms as rock collection in the recreation section, except the Hanging Rock Petrified Forest would be closed

to petrified wood and other fossil, rock, and mineral collection. The proposed action would limit visitor's freedom of choice and may cause displacement of a small population of visitors who use Hanging Rock Canyon. However, there would be increased protection of rare resources for the discovery by future generations.

Encouraging scientific research into paleontological resources and having public participation in inventories, digs and lab analyses, would increase awareness of important and sensitive values and improve management opportunities.

### **From Wilderness Management**

Signing wilderness boundaries would help to increase visitor awareness of areas having important and sensitive values. A long-term increase in primitive character within wilderness would be expected due to a reduction of motorized trespass and the creation of new ways in wilderness areas. These potential outcomes would enhance the perception of recreating in an area free from human development inside wilderness. However, signing wilderness boundaries would diminish the perception of recreating in an area free from human development in areas adjacent to wilderness. A decrease in conflict between motorized and non-motorized users would also be expected.

Adding nine of the 10 acquired parcels within the Lahontan cutthroat trout WSA to the existing WSA, limiting vehicle access to BLM system roads and existing designated routes, as well as providing a one-hundred foot offset from the centerline of routes, would have long-term impacts to management and the visitor experience. Retaining the existing vehicle access routes would reduce the ability to manage the existing WSA for wilderness characteristics and important values associated with primitive recreation. Retaining these routes with a one hundred foot buffer, would maintain current opportunities associated with motorized travel and vehicle camping, which would provide for a similar range of visitors as under the No Action Alternative. Excluding one acquired parcel (Unit 2) of 145 acres from the WSA to allow for a developed campground to be constructed within the Lahontan cutthroat trout area would also enhance camping opportunities. It would also help to concentrate impacts to predetermined locations;

thereby minimizing widespread camping related impacts that compromise the area's primitive character.

#### **From Special Designation Management**

Implementation of the Soldier Meadow Activity Plan (SMAP) would have impacts to public access, resource conditions and visitor experiences. Access to the hot pools would be more challenging and would require a short walk. There would also be a loss of traditional and desirable camping locations. This would increase the potential for visitor displacement to other areas inside and outside of the planning area. However, opportunities for natural quiet and solitude at the hot spring pools would be enhanced, and user conflict would be minimized. Implementation of the SMAP would also mitigate impacts to overnight users by providing alternative overnight camping locations. On-site developments, such as interpretive signage, tent pads, and fire grates would have the potential to diminish the wild and undeveloped character of the area. Impacts to critical habitat that are related to vehicle travel and camping would also be minimized, which would enhance the perception of recreating in an undisturbed area.

#### **From Vegetation Management**

Impacts would be similar to those described for Alternative A.

#### **From Livestock Grazing Management**

Current conditions would be maintained.

#### **From Wild Horse and Burro Management**

Impacts would be similar to those described for the No Action Alternative.

#### **From Fire Management**

No impacts are anticipated.

#### **From Fish and Wildlife Management**

Allowing water developments in Wild Emphasis Zones to deteriorate and be removed and restricting the development of new wildlife water developments would have the potential to enhance critical physical, social, and managerial settings of

specified areas. Eliminating motorized activities associated with these activities would increase natural quiet and solitude associated with primitive recreation. The proposed actions would also enhance the perception of recreating in an area free from human development. However, the reduced ability to manage wildlife populations would have the potential to decrease wildlife viewing and hunting opportunities throughout the planning area.

Permitting the construction of new water developments or other wildlife related projects within Natural Emphasis wilderness near High Rock Canyon for bighorn lambing, would have the potential to diminish critical physical, social, and managerial settings of specified areas. Allowing motorized activities associated with these developments would decrease natural quiet and solitude associated with primitive recreation. The proposed actions would also diminish the perception of recreating in an area free from human development, since permanent structures would remain inside wilderness. However, the increased ability to manage wildlife populations would have the potential to increase wildlife viewing and hunting opportunities throughout the planning area.

#### **From Visual Resource Management**

Impacts would be similar to those described for Alternative A.

#### **From Water Resource Management**

Impacts would be similar to those described for the No Action Alternative.

#### **From Lands and Realty Management**

Current conditions would be maintained.

#### **From Minerals and Energy Management**

The primitive and undeveloped character of areas in the immediate vicinity and viewshed of minerals and energy operations would be directly impacted. Administering geothermal leases in the south playa could result in construction-related to the extraction of resources, which would reduce public access to portions of the planning area. Since, the south playa receives the highest use of all places in the planning area, a large amount of visitor displacement would be expected to occur in cases of minerals development. By displacing use

from the south playa, opportunities for solitude and natural quiet in other areas of the playa and planning area would be diminished. The primitive and undeveloped character of the area would be diminished by any development in the south playa. Traffic related to construction and operations of geothermal development would also compromise public safety on the major access roads to the planning area.

### **From Recreation Management**

Having no limits, other than designated sites, on human activities including group size, duration of stay, number of people or vehicles, or types of activities would reduce the ability to manage for critical social and physical settings of specified areas, and would likely decrease natural quiet and solitude associated with primitive recreation. The proposed actions would enhance visitor's freedom of choice, and would likely result in less visitor displacement to other areas or zones in the short-term, but displacement would still likely occur in the long-term as a result of an increase in visitor conflict and competition for favorite/desirable sites that would be anticipated in conjunction with an increase in use of the planning area. Overall the impacts from proposed actions in this alternative would be similar to those described for the No Action Alternative.

Developing campgrounds when other management tools prove ineffective would increase the potential for a wider range of recreating opportunities, thereby providing for an increased range of visitors. There would also be the potential for a localized decrease in natural quiet and solitude associated with primitive recreation, and also to diminish the perception of recreating in an area free from human development. However, by concentrating impacts to developed areas, widespread camping related impacts would be reduced, which would contribute to the retention or restoration of the undisturbed character of other areas.

Developing boardwalks or fencing around hot spring attraction areas would have the potential to diminish the perception of recreating in an area free from human development. However, the proposed action would also improve access for people of all abilities, improve visitor safety, and contribute to the preservation of rare resources for enjoyment by

future generations. Carefully planned developments would discourage user-made facilities, which are often unsightly, unsafe, and have the potential to disturb sensitive cultural and natural resources.

Implementing a permit system in areas where resources or the visitor experience is being impacted would decrease visitor conflict and competition for favorite/desirable sites resulting from increased use, and would contribute to increased natural quiet and solitude associated with primitive recreation. However, the proposed action would lead to a decrease in spontaneity and unconfined recreation. There would also be an increased potential for visitor displacement to other areas inside and outside of the planning area.

Encouraging the development of privately operated campgrounds would have the potential to increase natural quiet and solitude associated with primitive recreation in high use areas by distributing use away from attraction areas. The proposed action would also increase the potential for a wider range of recreating opportunities, thereby providing for an increased range of visitors, which would also have implications to areas adjacent to developments on private lands within the NCA.

Limiting the collection of rock, minerals, and invertebrate fossils to 25 pounds per day, plus one piece with a maximum collection of 250 pounds per year would contribute to the protection of rare resources for enjoyment by future generations. However, by imposing limits on recreational collection visitor's freedom and spontaneity would be diminished, and could lead to increased displacement of users who traditionally collect large quantities. Negative impacts to visitors would be reduced under this alternative, when compared to A and B, since collection would still be allowed without a permit.

The ability to construct, relocate or close trails to mitigate human caused impacts would have direct and indirect impacts to the visitor experience. There would be the potential to decrease natural quiet and solitude associated with primitive recreation by encouraging use on developed trails, and the perception of recreating in an area free from human development would be diminished. However, the increased trail opportunities would provide for an increased range of visitors. Opportunities for discovery and exploration would

also be increased, and increased resource protection would enhance the perception of recreating in an area free from human caused impacts.

The ability to develop trails to separate user-types, developing day-use and multi-day routes, and routing the Desert Trail through portions of the NCA would have impacts similar to those listed above. However, there would be an enhanced ability to reduce conflict between different user types, and would provide additional trail opportunities. Some of the negative impacts from trail use could also be reduced by imposing limits on times and location of use. Informational brochures/guidebooks that accompany trail systems would contribute to an increased understanding and appreciation for area resources, which may help minimize use related impacts.

Prohibiting dispersed camping within ½ mile of designated campsites would restrict visitor's freedom of choice in camping location, and may increase competition for desirable sites. However, widespread camping related impacts, due to campsite proliferation, would be minimized. Crowding and user conflict at attraction areas would also be minimized. Reduced impacts would improve naturalness in heavily used areas, contributing to the protection or restoration of the primitive character. Under this alternative, camping would be allowed in and among the dunes and hummocks, which would expand camping opportunities, but would reduce protection of resources.

Prohibiting camping in portions of High Rock Canyon ACEC outside of Wilderness, Class A and B historic trail segments, and limiting camping to designated sites in Rustic portions of the Lahontan cutthroat trout area and Soldier Meadows Front Country Zone would restrict certain recreational activities in desirable and traditionally used areas. Visitor's freedom of choice would be restricted, with an increased potential for visitor displacement. The increased protection of rare resources and sensitive wildlife species would enhance opportunities for enjoyment by future generations. Reduced camping related impacts to sensitive natural and cultural resources would contribute to the perception of recreating in an area free from human disturbance. The overall loss of campsite locations would likely cause increased competition for campsites in light of increased visitation. However, increased access to adjacent lands and the

possibility of developing new camping areas would limit overall impacts due to lost camping opportunities. Competition for day-use of attraction areas would also be decreased.

Designating campsites in the Rustic and Front Country zones in areas of traditional camping use, and closing those with resource conflicts would have impacts to camping opportunities. While designating and closing sites would result in some loss to visitor's freedom of choice, the net loss of camping locations would be offset by the possibility of developing new primitive campgrounds. There would still be potential for visitor displacement to other areas due to loss of unconfined primitive camping opportunities. However, the improved ability to manage for human caused impacts, would decrease the amount of human disturbance to resources, and would further protect the primitive experience.

The development of a comprehensive permit process would enhance the ability to manage for resource and visitor experience. The proposed actions would not limit the number, location, or scale of permitted recreation activities. There long-term impacts to dispersed users and permittees would be unchanged. The ability to retain or restore the natural quiet and solitude associated with primitive recreation in light of higher demand and visitation would remain difficult, and public access in areas where events are taking place would be more limited. Freedom of choice for event location and type of activity would be retained, which would allow for a similar range of permitted activities as under No Action Alternative. Overall impacts to permittees would be reduced under this alternative, when compared with Alternative A and B, since areas, times, and numbers of events permitted would be expanded. The same would be conversely true for dispersed recreation users.

### **From Public Outreach and Visitor Services Management**

Expanding public awareness programs, continuing use of the visitor contact trailer, maintaining an information kiosk in Gerlach, and introducing low-impact recreation principles through volunteers and staff, would have long-term direct and indirect benefits to the visitor experience. These interpretive and educational actions would have the potential to increase visitor's sense of

appreciation and understanding of area resources, as well as visitor's awareness of important and sensitive values. Increased recreation opportunities would be available through on-the-ground programs and any additional interpretive exhibits, but would also diminish the undeveloped character of the area. Indirect benefits would stem from a decrease in inadvertent impacts of visitor use, which would enhance the ability to manage for critical physical, social, and managerial settings of specified areas. Visitor safety would also be enhanced.

The creation of an Administrative Site/Visitor Contact Station for the NCA would have similar impacts as those listed above, but outreach capabilities would be enhanced by having a facility located along a major travel corridor. Providing information to visitors before they reach the planning area would also enhance visitor safety. If the Administrative Site/Visitor Contact Station were developed within the planning area, it would also have the potential to diminish the undeveloped character of the area and would reduce opportunities for self discovery.

Developing cooperative partnerships and encouraging academic and public research would have similar impacts as those listed above. These proposed actions would also enhance management opportunities as a result of greater resources

Using a variety of outreach approaches, including on-the-ground interpretive exhibits, maps and brochures, scenic pullouts, site identification signs, and small interpretive centers at Steven's Camp, Soldier Meadows, Gerlach, or Flowing Wells would have similar impacts to the visitor experience as those listed above. The use of an adaptive management plan would reduce unnecessary developments and allow site specific planning. Concentrating developments in Front Country zones would help to retain the critical environmental settings of specified areas within the planning area, but would limit the range of recreation opportunities in other areas. Overall impacts to the undeveloped character of the area would be increased relative to Alternative B.

## **4.2.4.20 Impacts on Social and Economic Conditions**

### **Impacts on Recreation**

This Alternative includes a Public Outreach and Visitor Services program that is designed to encourage, accommodate, and facilitate recreation. It outlines a proactive, aggressive effort that includes an Administrative Site/Visitor Contact Station and administrative facility, cooperative partnerships, research programs, recreational support services, interpretive trails and tours, kiosks, maps, brochures, signage, interpretive centers, and self-guided tours with low-powered radio transmissions. Such an abundance of inducements and publicity would produce a strong public awareness and encourage visitation beyond what may reasonably be expected under any of the other Alternatives.

The much higher level of publicity that would follow this management approach might create a demand for recreation comparable to a "designation effect." As discussed in the No Action Alternative, a "designation effect" describes the sudden increase in visitation that occurs as a result of publicity surrounding the creation of a National Conservation Area or National Monument. The Black Rock/High Rock NCA has had some limited publicity and controversy regarding its designation, but nothing comparable to the level of publicity and public interest that was engendered for the Great Basin National Park in White Pine County, the Red Rock Canyon NCA in Las Vegas, or the Grand Staircase-Escalante National Monument in southern Utah.

In order to evaluate the potential for visitation that might occur as a result of increased publicity, visitation at these three somewhat comparable sites was examined. The Great Basin National Park was designated in 1986. It is comparable to the NCA in that it is in a remote location. However it includes the very popular Lehman Caves, and it does enjoy the prestige of National Park status and therefore draws upon a nationwide tourism and interest. In 1987, the year following designation, the Great Basin National Park enjoyed a 57 percent surge in visitation. This was clearly a "designation effect," as the visitation increases for the previous 5 years ranged from a plus 24 percent to a minus 6 percent.

The following 5 years ranged from a plus 15.8 percent to a minus 7.5 percent.

Red Rock Canyon NCA, in Clark County, was designated in 1989. During the year of its designation, visitation was reported as increasing by 28 percent, from 584,578 visitors to 749,630. The following two years, visitation increased by 25 percent and 22 percent. However, the Administrative Site/Visitor Contact Station, which maintains more accurate records, and is a popular stop, lists visitation as increasing by 46 percent for 1989. This compares with annual average increases in visitation in the range of 11 – 13 percent.

The Grand Staircase-Escalante National Monument was designated in 1996, with 1997 being its first full year of operation. Recreation visitation increased by 51.7 percent in 1997, which was followed by increases of only 7.7 percent and 3.4 percent in the two succeeding years.

There are many differences in all of these sites, and much argument could be sustained about their comparability. Nevertheless, a pattern of “designation effect” on the order of 50 percent seems to emerge. As such, a hypothesis of 50 percent growth for the Black Rock/High Rock NCA, by the year 2020, appears to be possible and reasonable under this Alternative.

This level of growth in visitation would result in a total of 95,703 visitor days, not including Special Recreation Permit events. SRP events would produce another 91,342 visitor days, for a total of 187,045 visitor days. This compares to a total visitor day estimate of 141,498 for the No Action Alternative which projects a 19 percent growth rate to be achieved in the year 2020.

Recreation expenditures for this level of visitation are estimated to reach \$5.8 million in the year 2020, \$3.1 million for residents, and \$2.7 million for non-residents. Based on analysis utilizing multipliers from an IMPLAN model for Washoe County, these total expenditures would generate \$2.8 million of that total in direct income and directly create or sustain a total of 130.2 jobs (2000 hour FTE). Non-resident expenditures, which bring in new money in exchange for “exported” recreation, and contribute to expansion of the regional economy, would produce \$1.3 million of the \$2.8 million total in direct income, and provide 60.4 jobs. The total direct, indirect, and induced effect of these expenditures, as they circulate through the economy, would result in

163.5 jobs and \$3.8 million in income (all estimates are in 2001 dollars).

Willingness-to-Pay value is estimated at \$2.7 million. This represents the value, or “worth,” of the recreation experience to the recreationist.

Construction of an Administrative Site/Visitor Contact Station and administrative facility in or near the NCA, as proposed in this Alternative, would provide local employment for a construction contractor and crew, which would be a short-term benefit to the local area. The operation of a full-time Administrative Site/Visitor Contact Station would create one or two permanent full-time jobs, employing locally hired attendants with a salary in the range of \$15-20,000 each. The Administrative Facility would be utilized by existing BLM personnel, but some contracting for temporary part-time local hires could result.

As mentioned in the No Action Alternative, as all types of recreation participation increase in the planning area, some deterioration and degradation of resources conditions may be expected. This would increase management costs for resource maintenance and protection.

## **Impacts on Minerals and Energy**

### Locatable Minerals

Impacts would be the same as those described for Alternative A.

### Leasable Minerals

Impacts would be similar to those described for the No Action Alternative with some additional costs for modifications to conform to VRM Class III standards.

### Salable Minerals

Impacts would be the same as those described for the No Action Alternative.

## **Impacts on Lands and Realty**

Impacts would be the same as those described for Alternative A.

## **Impacts on Road Maintenance and Repair**

Impacts for BLM road maintenance and repair would be as described in Alternative B, but with even greater costs resulting from the increase in recreation visitation and associated vehicle traffic projected under any of the alternatives.

Impacts on the counties, as well, would be as described in Alternative B, but somewhat more severe due to increased visitation.

**Impacts on Law Enforcement and Court Costs**

Impacts under this Alternative would be the same as those as described for Alternative B.

**Impacts on Search and Rescue Operations**

Impacts under this Alternative would be the same as those as described for Alternative B.

**Impacts on Indigent Aid**

Impacts would be the same as those described for the No Action Alternative.

## **4.2.5 ALTERNATIVE D (PROPOSED RMP)**

### **4.2.5.1 Impacts on Transportation and OHV**

#### **From Land Health Standards**

Applying Rangeland Health Standards to all uses and programs in the planning area could limit road upgrades and maintenance on road segments required to achieve standards related to soil, vegetation, water, or wildlife habitats in some areas. These limitations could potentially result in increased rutting, washboards, and dust or mud holes in some areas, which would diminish drivability, slightly decrease safety for drivers, and decrease public access along short segments of BLM roads and motorized trails. In other cases, application of the standards could lead to improved drivability of short segments of roads where improved stream crossings are installed to decrease stream sediment associated with vehicles.

#### **From Transportation and OHV Management**

Constructing one or more new access roads with railroad crossings to the playa and closing three others to meet railroad crossing safety standards would decrease rutting, washboards, dust or mud holes. Resulting effects would include slightly reduced total miles of road to be maintained (ca. one mile) and long-term maintenance costs, reduced playa access points, improved drivability, increased rail crossing safety for drivers. Increased access to the playa could result increased degradation of the portions of the playa surface associated with the primary vehicle tracks.

If cooperative agreements with Humboldt, Pershing, and Washoe Counties regarding road maintenance are implemented, drivability of 70 miles of county roads could be improved. The occurrence of rutting, washboards, and dust, or mud holes would be reduced, which could create safer

roads for drivers. An increase in traffic could also occur due to the improved road conditions.

Potentially, upgrading the Pershing County portion of Soldier Meadows Road to an all-weather standard would improve public access to the northern part of the NCA, as well as access to the Summit Lake Reservation. Improved conditions on this road section could decrease use on the playa track between 12-Mile and Mormon Dan, and lead to decreased rutting and track depression on the playa surface. Bringing approximately 16 miles of this low-standard road up to all-weather standard, and continued maintenance to the higher standard, would increase costs for BLM or Pershing County.

Maintaining 4 BLM system roads at their designated maintenance levels would improve the drivability of 46 miles of BLM roads due to decreased rutting, washboards, and dust, or mud holes. Indirectly, safety for drivers and public access could also be improved. The result would be an increase in traffic on BLM, State, and county roads and, consequently, increased costs to BLM and, to a lesser degree, to the State and counties. Upgrading the Sulphur-Jackson Road to Maintenance Level 3 would improve drivability, increase safety for drivers, and increase public access due to the improved road condition. However, traffic may also increase because a wider range of vehicles could use the road. Costs to BLM would increase in the short term to upgrade the road; however, maintenance costs would be reduced in the long term because higher standard roads require less regular maintenance.

Developing public access on the east side of the Black Rock Range from Humboldt County road 214 to provide north-south access to Black Rock Point and east-west access to the Soldier Meadows area would increase public access to a large area associated with the southeastern and central portions of the Black Rock Range that is currently difficult to access. Unknown new costs are also associated with this action. The costs are unknown because there are a number of potential means of providing access.

Removal of 19 roads (132 miles) from the BLM system road would have no impact on road condition or public access. Although these roads were designated to receive regularly scheduled maintenance, in the past two decades no maintenance has been conducted primarily due to budget constraints. The roads would be designated

as motorized trails along with all the other open routes within the Planning Areas. The infrequent, localized maintenance of motorized trails would assure that these trails would remain open for administrative and public use, although the ability to use many of these trails would be limited to OHVs with 4-wheel drive and high clearance.

The ability to change the functional or maintenance status of BLM system roads or segments of motorized trails would retain the flexibility to increase maintenance levels to meet future increases of public use and would potentially decrease rutting, washboards, and dust or mud holes along limited segments of BLM roads and motorized trails. This would improve drivability and safety for drivers; however, costs would increase because of maintenance needs on upgraded road and trail segments.

Downgrading motorized trails receiving vehicle use in excess of capacity to decrease vehicle use levels could potentially diminish the drivability of BLM roads, safety for drivers, and public access associated with a decline in road condition on a limited number of route segments.

Attempting to acquire public access easements or developing road alignments where public roads cross private property could potentially increase public access to public lands currently blocked by private land owners.

Limiting OHV use to 831 miles of vehicle routes within the 345,969-acre limited use area would maintain current levels of public access.

#### **From Cultural Resource Management**

Retaining the primitive setting along the emigrant trail viewsheds could diminish drivability, slightly decrease safety for drivers, and decrease public access along short segments of BLM roads (approximately 30 miles) due to increased rutting, washboards, and dust, or mud holes associated with increased traffic on road segments visible from the emigrant trail, primarily in High Rock Canyon and in the southeastern tail of the NCA.

Closing Class B historic trail segments to all mechanized vehicles would have no impact because such vehicles do not currently use these segments. Implementing seasonal closures for vehicle traffic on some Class C historic trail segments would reduce rutting and mud holes thereby potentially increasing safety for drivers on a few short

segments of vehicle routes (about 17 miles) and reduce incidents of vehicles getting stuck in mud. Seasonal closures on vehicle routes would reduce public access during short periods of the year when visitor use is normally low. The permanent and seasonal closures would increase BLM costs (e.g., requiring signage to mark closures).

#### **From Native American Values Management**

No impacts are anticipated.

#### **From Paleontological Resource Management**

No impacts are anticipated.

#### **From Wilderness Management**

No impacts are anticipated.

#### **From Special Designation Management**

Closing portions of the ACEC in High Rock, Canyon to vehicle use from the end of the Chukar hunting season through May 15 each year would reduce the amount of road damage caused by vehicle use during the wet seasons each year and decrease rutting, washboards, and dust or mud holes, which would improve drivability and reduce the risk of drivers becoming stuck in the mud. It would also decrease public access to 17 miles of road during a period that receives the least traffic. BLM costs would increase to implement the closures.

Rerouting the existing hot spring access road in Soldier Meadows away from sensitive resources and closing all spur roads would decrease public access to approximately 3 miles of road and increase costs to BLM to implement the closures.

#### **From Vegetation Management**

No impacts are anticipated.

#### **From Livestock Grazing Management**

No impacts are anticipated.

#### **From Wild Horse and Burro Management**

No impacts are anticipated.

### **From Fire Management**

No impacts are anticipated.

### **From Fish and Wildlife Management**

Sustaining or improving sage-grouse winter, breeding, nesting, and brooding habitats; limiting activities that have a high risk of disturbing breeding or brooding sage-grouse; and conducting other habitat rehabilitation and restoration projects in the planning area could limit road upgrades and maintenance on road segments near these areas. This could lead to increased rutting, washboards, and dust or mud holes along short segments of BLM roads, potentially diminishing drivability, safety, and public access in these limited areas.

### **From Visual Resource Management**

Designation of those portions of the planning area as VRM Class II that were Class IV would restrict potential upgrades in road width there the disturbance would be apparent on the landscape.

### **From Water Resource Management**

Managing streams to meet the life history requirements of the Lahontan cutthroat trout and managing other waters to meet the needs of identified uses and objectives consistent with EPA, State and Tribal water quality standards could limit road upgrades and maintenance on road segments near Lahontan cutthroat trout or desert dace habitats or other water resources. This could lead to increased rutting, washboards, and dust or mud holes along, at most, a few miles of BLM roads, potentially diminishing drivability, safety, and public access in these limited areas.

### **From Lands and Realty Management**

Continuing to acquire private lands within the planning area from willing landowners could lead to improved road conditions on or adjacent to acquired lands by increasing the ability to maintain or increase public access. This could lead to decreased rutting, washboards, dust, and mud holes in these areas, which would improve drivability, safety, and public access. It could also lead to increased traffic in these areas. New road

conditions would increase costs to BLM to maintain access around private lands.

### **From Minerals and Energy Management**

Exercising valid existing rights, such as developing mining operations associated with the gold claims in the South Jackson Mountains Wilderness, would increase road usage and associated resource damage and maintenance costs.

### **From Recreation Management**

Allowing only a maximum of two playa closures on weekends during large permitted events and limiting the occurrence of Class III and IV events simultaneously would decrease the amount of temporary decreased public access, and playa access could be maintained for other recreationists.

### **From Public Outreach and Visitor Service Management**

Developing an Administrative Site/Visitor Contact Station located along a major access corridor to the NCA would directly cause increases in traffic associated with the Administrative Site/Visitor Contact Station and indirectly increase traffic associated with improved visitor awareness of travel opportunities within the planning area. Costs would also increase for BLM, and to a lesser degree to the State and counties, to construct and maintain transportation related facilities directly associated with the center and indirect traffic increases associated with improved visitor awareness of travel opportunities within the planning area.

Providing on-site interpretive panels, public awareness programs, and informational kiosks in high-use camp areas in the Front Country Zone and along main travel corridors, and a scenic overlook with interpretive and safety information would increase safety for drivers by increasing awareness of hazards. However, costs to BLM associated with maintenance of transportation access to panels, kiosks, and overlooks would also increase.

## 4.2.5.2 Impacts on Cultural Resources

All projects that affect Cultural Resources would be subject to the requirements of Section 106 of the National Historic Preservation Act. This process requires that Cultural Resources are inventoried prior to project implementation and mitigation measures are applied to protect on-site resources or to recover the information associated with the cultural values. The result is to reduce adverse impacts to cultural resources.

### From Land Health Standards

Where measures are implemented that improve soil stability and vegetation cover, cultural resources would be expected to be better protected from damage associated with soil erosion.

### From Transportation and OHV Management

Closure of the three existing railroad crossings and creation of a new crossing could decrease integrity of cultural resources, since these changes could impact prehistoric and historic sites at the three locations. However, activities undertaken to comply with Section 106 should minimize this potential impact. Closure of one existing crossing would reduce traffic and associated potential impacts at the Barbara Worth historic site, a site with potential for listing on the National Register.

Downgrading designated routes receiving vehicle use in excess of capacity to decrease vehicle use levels could decrease inadvertent damage or disturbance to cultural sites by decreasing public access. Upgrading the Sulphur-Jackson Road to Maintenance Level 3 could increase inadvertent damage or disturbance to cultural sites and the opportunity for vandalism and looting.

Adjusting functional classification or maintenance levels of BLM system roads or motorized trails as needed could decrease inadvertent damage to cultural resources and maintain the integrity of cultural resources.

Developing public access on the east side of the Black Rock Range from Humboldt County Road 214 would increase public access to a large area associated with the southeastern and central portions of the Black Rock Range, which may

result in increased opportunity for vandalism and looting.

Limiting OHV use to designated routes and closure of 23 miles of vehicle routes would reduce inadvertent damage to cultural sites and decrease the potential vandalism and looting.

Closing 751,892 acres and limiting 345,969 acres to OHV use on 831 miles of designated routes could increase protection or site stability, decrease inadvertent damage to cultural resources, decrease opportunities for vandalism and looting, and improve or maintain the integrity of the setting of the emigrant trails and other important emigrant locations.

### From Cultural Resource Management

Inventoried the emigrant trail in coordination with Oregon-California Trails Association, prioritizing and conducting additional cultural resource inventories, and conducting inventories and site mitigation as needed for specific projects in the planning area would increase opportunities for collection of data useful to cultural resource management, increase opportunities for historic preservation awareness and site preservation, enhance opportunities for scientific study and public use of cultural resources, and increase the knowledge of the prehistory and history of the region. Indirectly, inventorying the emigrant trail could lead to future protection, decreased inadvertent damage and disturbance, protection from vandalism and looting, and maintenance of the integrity of the emigrant trail's setting.

Closing Class B historic trail segments to all mechanized vehicles would have no impact because vehicles do not use these segments. Closure of a few segments of Class A and C trail segments and implementing seasonal closures for vehicle traffic on some Class C historic trail segments would minimally increase trail protection, decrease inadvertent damage to or disturbance of cultural sites, decrease opportunity for vandalism and looting, increase opportunities for historic preservation awareness and site preservation, and maintain the integrity of the emigrant trail's setting.

Nominating any outstanding eligible resources that are identified and recorded as a result of these inventories for inclusion in the National Register of Historic Places would ensure better protection for these sites, increase opportunities for historic

preservation awareness, and increase the public's knowledge of the prehistory and history of the region.

Managing cultural resources as to site types would improve site protection and increase opportunities for historic preservation awareness and site preservation. Emphasizing public use, with monitoring to determine if additional protection is needed, would enhance opportunities for scientific study and public use of cultural resources. However, inadvertent damage to cultural resources or vandalism and looting may occur before the additional protection is in place.

#### **From Native American Values Management**

Protecting PCRI for the use and benefit of current and future generations could limit opportunities for scientific study and public use of some related cultural resource sites when traditional uses are potentially in conflict with scientific study or public use.

#### **From Paleontological Resource Management**

No impacts are anticipated.

#### **From Wilderness Management**

Current conditions would be maintained.

#### **From Special Designation Management**

Allowing camping within the High Rock Canyon in designated sites and elimination of potential rock climbing adjacent to the emigrant trail would reduce the possibility of inadvertent damage or disturbance to cultural resources and opportunities for vandalism and looting.

Closing portions of the High Rock Canyon ACEC in High Rock Canyon to vehicle use from the end of Chukar season through May 15 each year would prevent damage to the emigrant trail by removing traffic during times when the High Rock Canyon trail is likely to be muddy.

Increasing the existing Soldier Meadows ACEC to approximately 2,077 acres and applying

additional protection measures, including designated camping, fencing of sensitive resources, and livestock and wild horse and burro restrictions, would provide better protection of cultural resource values. In the long term, opportunities for scientific study and public use of cultural resources would be enhanced.

#### **From Vegetation Management**

Conducting rehabilitation and restoration efforts on areas burned by wildland fires could lead to inadvertent damage to or disturbance of cultural resources not discovered during inventories.

Implementing vegetation manipulation projects to move plant communities toward desired conditions and improve structural and species diversity would also improve or preserve the opportunity to pursue traditional uses involving native vegetation.

#### **From Livestock Grazing Management**

Continuing to graze lands within the planning area would maintain existing but unknown levels of inadvertent damage to or disturbance of cultural resources.

Site-specific activities at springs, including modifying spring developments to provide water for wildlife at ground level adjacent to the spring source or removing and restoring projects no longer needed, could cause inadvertent damage to or disturbance of cultural sites, but activities undertaken to comply with Section 106 should minimize this potential impact. Improvement of vegetation and soil stability associated with the actions could increase cultural resource stability.

Authorizing grazing of the fenced portions of the Soldier Meadows ACEC and the Stanley Camp Pasture consistent with resource management objectives would increase the risk of inadvertent damage to cultural resources.

#### **From Wild Horse and Burro Management**

The continued presence of wild horses and burros would maintain horse presence on cultural resources and could lead to inadvertent damage to or disturbance of cultural sites.

### **From Fire Management**

Implementation of reduced levels of fire suppression associated with appropriate management response and limiting use of heavy surface disturbing equipment could lead to decreased inadvertent disturbance of cultural resources. The occasional use of prescribed fire and mechanical treatment of vegetation emulating the effect of wild fire could lead to inadvertent loss of integrity of cultural resources. However, activities undertaken to comply with Section 106 should minimize this potential impact.

Using wildland fire and prescribed fire throughout the planning area to meet vegetation objectives could cause inadvertent damage to cultural resources during implementation. Overall, however, the integrity of cultural resources and the setting of the emigrant trails would be maintained.

### **From Fish and Wildlife Management**

Conducting habitat rehabilitation and restoration projects and activities in the planning area could lead to inadvertent loss of integrity of cultural resources. However, activities undertaken to comply with Section 106 should minimize this potential impact.

### **From Visual Resource Management**

Designating the portions of the planning area (excluding Wilderness Areas and the Wilderness Zone of the LCT Area) as VRM Class II would maintain the integrity of cultural resources and improve or maintain the integrity of the setting of the emigrant trail. Indirectly, these designations would restrict activities that could damage cultural resources.

### **From Water Resource Management**

Current conditions would be maintained.

### **From Lands and Realty Management**

Not establishing new utility corridors in Wilderness Areas, the Lahontan cutthroat trout Area, High Rock Canyon, the Black Rock Desert Playa, and along the emigrant trail corridor would result in no impacts to cultural resources in these areas.

Granting utility rights-of-way outside of Wilderness in support of valid existing rights could

lead to inadvertent damage to or disturbance of cultural sites, increase opportunities for vandalism and looting, or impair the integrity of the setting of important cultural resources. However, activities undertaken to comply with Section 106 should minimize this potential impact.

### **From Minerals and Energy Management**

Withdrawing federal lands within the South Playa Area, the Lahontan Cutthroat Trout Area, and vehicle access routes outside the NCA, but within the planning area, from mineral development would prevent inadvertent damage or disturbance to cultural sites and increase site protection. Withdrawing these areas would also maintain the integrity of cultural resources and the setting of the emigrant trails.

### **From Recreation Management**

Applying visitor restrictions, such as camping limits, activity restrictions, trail development bans, or a permit system if resource damage occurs would prevent or alleviate inadvertent damage or disturbance to cultural resources and improve protection or site stability. As a result of these measures to increase resource protection, integrity of cultural resources would be maintained and the setting of the emigrant trails would be maintained or improved.

Applying camping restrictions if resource damage occurs, and closing dune and hummock areas on the playa to camping, would also protect cultural resources from inadvertent damage, vandalism, and looting; improve or maintain the integrity of cultural resources and their setting; and increase opportunities for cultural appreciation and discovery.

### **From Public Outreach and Visitor Service Management**

Implementing and supporting programs that increase public appreciation of the values of the planning area would increase the knowledge of the prehistory and history of the region, increase opportunities for historic preservation awareness and site preservation, and enhance opportunities for scientific study and public use of cultural resources. Indirectly, increasing public appreciation of planning area resources could lead to increased

protection or site stability, decreased inadvertent damage to or disturbance of cultural sites, decreased vandalism and looting, and improved integrity of cultural resources.

Using the appropriate interpretive and education tools to prevent resource damage or enhance visitor safety and providing a variety of visitor facilities, maps, and interpretive trails would increase the knowledge of the prehistory and history of the region and enhance opportunities for public use of cultural resources. This would also increase appreciation of cultural resources, decrease inadvertent damage, vandalism, and looting; maintain the integrity of cultural resources; and maintain or improve the setting of the emigrant trails.

### **4.2.5.3 Impacts on Native American Values**

Native American values are represented as a desire to preserve certain plant and animal species for traditional uses and to preserve Properties of Cultural and Religious Importance (PCRI) for continued use. Some site types often considered to be PCRI are hot springs, unique geographic features and burials. To date, no PCRI have been identified in the planning area.

#### **From Land Health Standards**

Where measures are implemented that improve soil stability and vegetation cover, the values associated with PCRI would be expected to be better protected from damage associated with soil erosion. Applying Rangeland Health Standards to all uses and programs within the planning area could preserve the opportunity to pursue traditional uses.

#### **From Transportation and OHV Management**

Managing BLM system roads to their functional and maintenance class could lead to conflicts between Native American values and recreation users, decrease the integrity of PCRI, or impair the visual setting of important Native American locations.

Continuing to leave the planning area outside of Wilderness, High Rock Canyon, and the Lahontan Cutthroat Trout WSA open to OHV use could affect fish and wildlife habitat and

populations, due to damage to vegetation, increased erosion, and harassment of animals. This would result in reduced availability for Tribal sustenance hunting and fishing.

#### **From Cultural Resource Management**

Prioritizing and conducting additional cultural resource inventories could lead to the identification of PCRI. Conducting site mitigation as needed for specific projects could lead to conflicts between Native Americans and archaeologists over the removal of sensitive artifacts and features. Emphasizing public use of cultural resources could lead to potential conflicts with traditional Native American users.

#### **From Native American Values Management**

Current conditions would be maintained.

#### **From Paleontological Resource Management**

No impacts are anticipated.

#### **From Wilderness Management**

Current conditions would be maintained.

#### **From Special Designation Management**

Allowing camping in designated sites within the High Rock Canyon portion of the ACEC and prohibiting rock climbing adjacent to the emigrant trail would reduce conflicts between users and preserve the opportunity to pursue traditional uses.

Increasing the existing Soldier Meadows ACEC to approximately 2,077 acres and applying additional protection measures, including designated camping only, resources, and applying livestock and wild horse and burro restrictions, would provide better protection for cultural resources and preserve the opportunity to pursue traditional uses.

#### **From Vegetation Management**

Protecting native rangeland vegetation and supporting restoration of native plant communities would preserve the opportunity to pursue traditional uses associated with native vegetation. Implementing vegetation manipulation projects to move plant communities toward desired conditions and improve structural and species diversity would

also improve or preserve the opportunity to pursue traditional uses involving native vegetation.

#### **From Livestock Grazing Management**

Continuing to graze lands within the planning area could decrease native vegetation on localized areas and provide fewer opportunities to pursue traditional uses associated with native vegetation. Where Rangeland Health measures are implemented that improve soil stability and vegetation cover, PCRI would be expected be better protected from damage associated with soil erosion.

Site-specific activities at springs, including modifying spring developments could increase the integrity of Native American values and preserve the opportunity to pursue traditional uses. However, springs have a high potential to be PCRI, and projects could also lead to conflicts with Native American traditionalists.

#### **From Wild Horse and Burro Management**

Current conditions would be maintained.

#### **From Fire Management**

Using prescribed fire within the Planning Area to accomplish localized small-scale projects could cause inadvertent damage or disturbance to PCRI during implementation. However, overall the integrity of PCRI and opportunities to pursue traditional uses would be maintained or improved.

#### **From Fish and Wildlife Management**

Allowing trap and transplant activities in Wilderness Areas for native wildlife species and sustaining or improving sage-grouse winter, breeding, nesting, and brooding habitats could preserve the opportunity to pursue traditional uses associated with native wildlife.

#### **From Visual Resource Management**

Designating the portions of the planning area excluding Wilderness Areas and the Wilderness Zone of the LCT Area as VRM Class II would maintain the visual characteristics of PCRI. Indirectly, these designations could restrict activities that would damage PCRI or traditionally used resources.

#### **From Water Resource Management**

Managing streams to meet the life history requirements of the Lahontan cutthroat trout and managing other waters to meet the needs of identified uses and objectives consistent with EPA, State and Tribal water quality standards, would increase the populations of native fishes important to Native Americans. It would also maintain the water quality of tributaries to Summit Lake.

#### **From Lands and Realty Management**

The granting of future Rights-of-Way for access or other purposes could degrade the values associated with PCRI.

#### **From Minerals and Energy Management**

If development of valid existing rights occurs near PCRI, the integrity of PCRI may be diminished and the visual setting of important Native American locations could be impaired. Withdrawing federal lands within the South Playa Area, the Lahontan Cutthroat Trout Area, and vehicle access routes outside the NCA, but within the planning area, from mineral development could prevent inadvertent damage or disturbance to PCRI. Withdrawing these areas would also maintain the integrity of the setting of important Native American locations.

#### **From Recreation Management**

If resource damage occurs from recreation activities, applying visitor restrictions, such as camping limits and implementing a permit system, or trail development would prevent or alleviate inadvertent damage or disturbance to PCRI. As a result of these protections, the integrity of any potential PCRI would be maintained, and the setting and resource base would be improved.

Applying camping restrictions, such as group size limits in the Wilderness zone; allowing designated and dispersed camping with some limits and monitoring in the Rustic zone; and closing dune and hummock areas on the playa to camping would also protect PCRI from inadvertent damage, improving the integrity of PCRI settings, and increasing opportunities for preservation awareness and site preservation in the long term. Restricting camping to designated sites in portions of the High Rock Canyon ACEC outside of Wilderness, Soldier

Meadows ACEC, and rustic portions of the Lahontan Cutthroat Trout Area would provide further protection and preservation of PCRI and traditionally used resources located in these areas.

### **From Public Outreach and Visitor Service Management**

Implementing and supporting programs that increase public appreciation of the values of the planning area could lead to increased appreciation of Native American values, decreased inadvertent impacts on sites and resources important to Native Americans, reduced user conflicts, and increased opportunities for Native Americans to pursue traditional uses. Using the appropriate interpretive and education tools to prevent resource damage or enhance visitor safety and providing a variety of visitor facilities, maps, and interpretive trails would increase the knowledge of the prehistory and history of the region and enhance opportunities for public use of cultural resources. This would also increase appreciation of cultural resources, decrease inadvertent damage, vandalism, and looting and maintain the integrity of cultural resources.

## **4.2.5.4 Impacts on Paleontological Resources**

### **From Land Health Standards**

Where measures are implemented that improve soil stability and vegetation cover, paleontological resources would be expected to be better protected from damage associated with soil erosion.

### **From Transportation and OHV Management**

Reducing the number of BLM system roads to 46 miles and designating all other vehicle roads and routes as motorized trails would maintain the integrity of paleontological because almost no new surface disturbance would occur as a result of road maintenance activities. Localized maintenance where road braiding, erosion, and other problems associated with motorized trails would decrease surface disturbance and reduce erosion resulting in increased stability of fossil resources. Upgrading the Sulphur-Jackson Road to maintenance level 3 would increase inadvertent damage or disturbance

to paleontological resources and the opportunity for vandalism and looting.

Adjusting functional classification or maintenance levels of BLM system roads or motorized trails as needed could decrease inadvertent damage to paleontological resources, however inventories prior to surface disturbing activities would minimize this impact

Developing public access on the east side of the Black Rock Range from Humboldt County road 214 would increase public access to a large area associated with the southeastern and central portions of the Black Rock Range, which may result in increased opportunities for fossil theft and vandalism and increased chances of alteration and erosion of sites.

Limiting OHV use to designated routes and closure of 23 miles of vehicle routes would reduce inadvertent damage to paleontological resources and decrease the potential for vandalism and looting.

### **From Cultural Resource Management**

No impacts are anticipated.

### **From Native American Values Management**

No impacts are anticipated.

### **From Paleontological Resource Management**

Focusing paleontological inventories on the west Arm of the Black Rock Desert, Soldier Meadows, and the Black Rock Desert Wilderness would enhance scientific inquiry and knowledge of the resources. Consequently, paleontological inventories in these areas could also decrease fossil theft, breakage, and displacement; vandalism, alteration, and erosion of sites; and the risk of inadvertent damage to important sites increasing awareness of the resource during project planning. Managing paleontological sites as to site types with an emphasis on conservation with some scientific use allowed would improve opportunities to identify priorities for site management and site preservation, and reduce conflicts and the risk of inadvertent damage to important sites. As a result, theft, breakage, and displacement of fossils and vandalism, alteration, and erosion of sites could be diminished, and scientific inquiry and public use

and appreciation of paleontological resources could be enhanced.

Allowing collection of petrified wood and common invertebrate fossils throughout the planning area would increase the risk of inadvertent damage to important sites. Restricting collection in the Hanging Rock Petrified Forest to permitted scientific purposes could result in conflicts with rock hounds accustomed to collecting petrified wood in that area.

**From Wilderness Management**

Current conditions would be maintained.

**From Special Designation Management**

Current conditions would be maintained, neither ACEC is known for fossil resources.

**From Vegetation Management**

No impacts are anticipated.

**From Livestock Grazing Management**

No impacts are anticipated.

**From Wild Horse and Burro Management**

No impacts are anticipated.

**From Fire Management**

Limiting the use of heavy surface disturbing equipment could decrease the risk of inadvertent damage to important sites.

**From Fish and Wildlife Management**

No impacts are anticipated.

**From Visual Resource Management**

No impacts are anticipated.

**From Water Resource Management**

No impacts are anticipated.

**From Lands and Realty Management**

The granting of future Rights-of-Way for access or other uses could lead to inadvertent damage to important sites and increase the potential for fossil theft, breakage, or displacement, and

vandalism, alteration, or erosion of sites. Retaining two existing utility corridors for buried and aboveground facilities, particularly the corridor south of the railroad, could increase the risk of inadvertent damage to important sites, and increase fossil theft, breakage, and displacement and increase the potential for vandalism, alteration, and erosion of sites if additional development occurs in the corridor.

**From Minerals and Energy Management**

Current conditions would be maintained.

**From Recreation Management**

Requiring permits for collection of rocks, minerals, and common invertebrate fossils if monitoring indicates that resources are being impacted would decrease the risk of inadvertent damage to important sites and decrease fossil theft, breakage, and displacement. Issuing permits would educate collectors, increase appreciation of paleontological resources, decrease conflicts, and enhance scientific inquiry and/or public use.

**From Public Outreach and Visitor Service Management**

**ALL** Implementing and supporting programs that increase public appreciation of the values of the planning area could lead to increased appreciation of paleontological resources, which in turn could lead to decreased conflicts and risk of inadvertent damage to important sites, enhanced scientific inquiry and/or public use, and decreased fossil theft and vandalism due to increased knowledge of the resource. **ALL** In addition to impacts discussed in the No Action Alternative, using the appropriate interpretive and education tools to prevent resource damage or enhance visitor safety and providing a variety of visitor facilities, maps, and interpretive trails would increase the knowledge and appreciation of paleontological resources. Increased appreciation of paleontological resources could decrease inadvertent damage to paleontological resources, and reduce the risk of fossil theft, breakage, displacement and vandalism, alteration, and erosion of paleontological sites.

### **4.2.5.5 Impacts on Wilderness**

Wilderness characteristics may be directly or indirectly impacted by various management actions from recreation, wilderness, special designations, vegetation, grazing, wild horses and burros, fire, fish and wildlife, water, minerals, and outreach. Management decisions in the plan may have beneficial or adverse impacts on such wilderness characteristics as naturalness, opportunities for solitude, or opportunities for primitive and unconfined recreation.

#### **From Land Health Standards**

Applying Land Health Standards to all uses and programs in the planning area would contribute to the long-term maintenance of naturalness in Wilderness Areas.

#### **From Transportation and OHV Management**

Designating 345,969 acres of the planning area as limited to existing roads and routes would reduce the amount of inadvertent vehicle trespass in the Wilderness Areas which would maintain or enhance the wilderness values of the areas.

#### **From Cultural Resource Management**

Focusing cultural inventories on Wilderness Areas would improve knowledge related to cultural resources, one of the supplemental values found in Wilderness Areas.

#### **From Native American Values Management**

No impacts are anticipated.

#### **From Paleontological Resource Management**

Focusing paleontological inventories on the Black Rock Desert Wilderness would improve knowledge of paleontological features within Wilderness Areas.

#### **From Wilderness Management**

Managing closed ways inside Wilderness Areas to maintain natural conditions, and occasionally installing barriers and gates on the closed ways would enhance naturalness by decreasing inadvertent vehicle trespass inside Wilderness Areas.

Only signing wilderness boundaries as needed along boundary roads could be a decrease in the amount of signing that presently exists and may slightly increase the occurrence of inadvertent vehicle trespass from users not knowing where the boundary is located. This slight increase would generally only occur in areas where the wilderness boundary is adjacent to an area that is designated as an OHV open area.

Managing the ten inventory units in the LCT Area to retain their wilderness character would maintain the naturalness throughout the existing WSA, while allowing for traditional vehicle camping along the designated routes.

Restricting motor vehicle access in the LCT Area during the spawning season of the Lahontan cutthroat trout if needed, would increase the opportunities for solitude and primitive recreation during the restriction, and would maintain or enhance the special fisheries values found in the area.

#### **From Special Designation Management**

Restricting rock climbing in the High Rock Canyon adjacent to the emigrant trail would diminish the marginal potential that exists for this type of primitive recreational activity in the canyon. Because impacts associated with climbing (such as fixed gear, impacts to raptors) would not occur, the naturalness of the area would probably be maintained by not allowing climbing.

The 14-week public closure of portions of the High Rock Canyon ACEC would decrease opportunities for primitive recreation in a small portion of the High Rock Canyon and East Fork High Rock Canyon Wilderness Areas. The closure would impact wilderness users who use High Rock Canyon to access the wilderness areas adjacent to the canyon and hikers using the Desert Trail. The closure would also increase the naturalness of the areas by allowing the resident wildlife to function without disturbance from human use during the closure.

#### **From Vegetation Management**

Using rehabilitation and restoration efforts on areas burned by wildland fires and emphasizing native shrub and herbaceous species would maintain the naturalness of the areas. Use of nonnative seeds for rehabilitation in Wilderness

could minimally decrease the naturalness of the area. However, this impact would be less than that associated with allowing undesirable exotic grasses, such as cheatgrass, to establish themselves in the disturbed areas. Allowing vegetation treatment if it is the minimum required action for the management of wilderness could maintain or enhance naturalness; however, solitude may be decreased short term.

Controlling weed infestations in Wilderness Areas and the Lahontan cutthroat trout Area by methods consistent with minimum tool requirements would improve native vegetation conditions and consequently enhance or maintain naturalness.

### **From Livestock Grazing Management**

Continuing not to graze portions of the Massacre Mountain Allotment associated with High Rock Canyon and the Little High Rock portion of the Bare Allotment on a regular basis would maintain naturalness over a large portion of the East Fork High Rock, High Rock, and Little High Rock Canyon Wilderness Areas.

Excluding the Mahogany Creek Enclosure portion of the Soldier Meadows Allotment from grazing would maintain naturalness on 2,562 acres of the Lahontan Cutthroat Trout Wilderness Study Area. Not grazing 11,214 acres of land in the Stanley Camp Pasture except when consistent with recovery of the Lahontan cutthroat trout would maintain the naturalness and solitude in about 75% of the WSA, and a small portion of the North Black Rock Range Wilderness. Impacts to naturalness associated with livestock grazing, such as trampling, would not occur in the WSA.

### **From Wild Horse and Burro Management**

Gathering wild horses and burros from the herd management areas to achieve the appropriate management level would enhance or maintain naturalness by reducing the impacts these animals could have on the area. Impacts from excess wild horses and burros could include competition with the areas' native populations of wildlife, overgrazing of riparian areas, and trampling of springs. Gather actions could also temporarily decrease the opportunities for solitude of the area during the actual gather.

### **From Fire Management**

Using “minimum impact suppression techniques” for all fire suppression activities would maintain naturalness and opportunities for solitude.

Allowing wildland fire to play a more natural role on 1,214,514 acres of Category B lands and providing opportunities for prescribed fire could increase naturalness where fire is desired and the risks associated with invasive species are low. In the short term, solitude could be decreased during these activities.

### **From Fish and Wildlife Management**

Allowing trap and transplant activities associated with native wildlife species in Wilderness, if it is the minimum required action necessary to manage the Wilderness Areas, could maintain or enhance the naturalness and primitive recreation in the areas. Transplant actions could also temporarily decrease opportunities for solitude in the area during the actual transplant.

Continuing to schedule use of aircraft survey and monitor wildlife populations to avoid high visitor use periods would minimize the flights' impacts on opportunities for solitude and primitive recreation.

Allowing possible motorized use for wildlife actions requiring immediate actions could temporarily decrease the opportunities for solitude and primitive recreation during the action. These impacts would be mitigated by the fact that these types of actions occur infrequently.

Conducting habitat rehabilitation and restoration projects and activities could maintain or enhance the naturalness of the areas. During the implementation of the projects, opportunities for solitude and primitive recreation could be decreased temporarily.

Allowing animal damage control under certain situations in wilderness could decrease naturalness by manipulating the predator populations in the areas and could temporarily impact opportunities for solitude and primitive recreation during the control action.

Retaining the 14 existing small game wildlife water developments could decrease naturalness and solitude in the immediate vicinity of those projects. These manmade structures in the wilderness are a human manipulation of the wildlife populations in the area and impact the natural population

dynamics. During maintenance of the developments, solitude in the area would be reduced temporarily. This impact would be mitigated by the fact that helicopters would only be used to access the guzzlers during major repair work which would occur infrequently. All other maintenance would occur using non-motorized equipment. Although retention and maintenance of the developments does impact the naturalness of the areas, they also provide for increased opportunities to hunt Chukar which is an important form of recreation in the area.

Allowing for the construction of new developments if they are the minimum required action necessary for the management of the Wilderness Areas could maintain the natural wildlife population levels of the areas. Although these manmade structures reduce the appearance of naturalness in the area, they would only be constructed to mitigate other human caused impacts on native wildlife populations and would therefore help maintain natural population dynamics. Opportunities for solitude would be temporarily decreased during the construction and maintenance of the developments.

#### **From Visual Resource Management**

Current conditions would be maintained.

#### **From Water Resource Management**

Managing the potential recovery of streams to meet the life history requirements of the Lahontan cutthroat trout would maintain or enhance naturalness in the North Black Rock Range Wilderness, North and South Jackson Mountains Wildernesses, the High Rock Lake Wilderness, the Calico Mountain Wilderness, and the Lahontan cutthroat trout WSA.

#### **From Lands and Realty Management**

Current conditions would be maintained.

#### **From Minerals and Energy Management**

Potential mining operations associated with the gold claims in the South Jackson Mountains Wilderness could impact the wilderness values of the area. Although the potential footprint of mining disturbance would affect only 500 acres, the sights and sounds of an open pit gold mine would reduce

the wilderness values over half of the Wilderness Area. Wilderness values in the direct vicinity of the 500-acre open pit mine would no longer exist. However, the probability of this development occurring is estimated by BLM at less than 10 percent.

Continuing to withdraw a major portion of the Lahontan Cutthroat Trout Area to location, entry, and patent would maintain naturalness and the special features associated with the WSA.

Withdrawing the Lahontan Cutthroat Trout Area and the wilderness vehicle access roads outside the NCA from locatable, and leasable minerals and would maintain the wilderness values in the areas by preventing future mineral development. Only permitting the use of gravel pits for the maintenance of roads, to the extent consistent with the Act, as amended, and the objectives of the plan would minimize impacts that may occur if the areas were open to the public for saleable materials.

#### **From Recreation Management**

Allowing only use of dead and down wood or imported firewood for campfires would maintain naturalness by reducing the cutting of live trees.

Requiring all outfitters and guides to adhere to Leave No Trace® and Tread Lightly! principles would maintain the naturalness of the areas.

Allowing the collection of rocks, minerals, and common invertebrate fossils could decrease naturalness in small areas. This impact would be mitigated because of the weight limit that is being put on collection of the materials and because in areas where impacts begin to occur a permit system would be implemented.

Applying camping restrictions to prevent resource damage and restricting camping to areas more than 300 feet from springs unless otherwise designated would maintain naturalness.

The potential implementation of a permit system to manage use would maintain or enhance naturalness and solitude by allowing BLM to contact users prior to using the Wilderness Areas about regulations and resources. This could lead to decreased impacts to naturalness.

Implementing group size, duration of stay, or other limits on activities if resource impacts occur in the Wilderness zone would minimize the impact that these factors could have on the experience of

other wilderness visitors, as well as the physical environment and naturalness of the areas.

Extending the Desert Trail through the High Rock Lake and Pahute Peak Wilderness Areas could increase use along the corridor, however it is unlikely that the use would increase to such a level that impacts would occur.

### **From Public Outreach and Visitor Service Management**

Implementing and supporting programs that increase public appreciation of the values of the planning area would indirectly increase naturalness, and opportunities for solitude and primitive recreation, by raising awareness of important and sensitive values. Visitors also would be less likely to inadvertently engage in activities that would disturb wilderness values.

Visitors' sense of appreciation and understanding of area resources would be directly impacted by management actions for public outreach and visitor services. The development of an outreach plan would have indirect beneficial impacts to the primitive character of the area by raising awareness of wilderness values.

Only providing onsite outreach, interpretive, or regulatory signs or other developments in the Wilderness Zone, when required to protect resources, would maintain the naturalness and opportunities for solitude in the areas.

## **4.2.5.6 Impacts on Special Designations**

### **4.2.5.6.1 ACECs**

The High Rock Canyon and Soldier Meadows ACECs were designated because of their important values and identified needs for special management of those values. This section identifies consequences for those identified values. The special values identified for High Rock Canyon relate to the emigrant trail and associated cultural resources, important wildlife and riparian resources, and the primitive character of the area. The special values identified for Soldier Meadows are associated with a unique hot springs complex and

the rare plant and animal species, and cultural resources that are found within the ACEC.

### **From Land Health Standards**

No impacts on the High Rock Canyon ACEC would be anticipated; very little of the ACEC is currently grazed by livestock.

Applying Rangeland Health Standards to all uses and programs would decrease the potential impact on the values for which the two ACEC were designated. For both ACECs, Rangeland Health Standards would most likely apply to livestock grazing, wild horses, transportation system operations and recreation uses.

### **From Transportation and OHV Management**

Managing BLM system roads to their designated functional and maintenance class would maintain existing levels of visitation to both the High Rock Canyon and the Soldier Meadows ACECs because roads and motorized trails accessing these areas would not change.

Limiting OHV use on 345,969 acres of the planning area and allowing open OHV use in the remainder of the planning area (except Wilderness) would maintain existing disturbance of habitat for bighorn sheep, raptors, riparian systems, and segments of the Applegate Emigrant Trail associated with the use of roads. Vehicle use of several segments of motorized trail, totaling several hundred yards in length and the existing hot spring access would be either moved or closed, but access to the areas would be maintained.

### **From Cultural Resource Management**

No impacts are anticipated.

### **From Native American Values Management**

No impacts are anticipated.

### **From Paleontological Resource Management**

No impacts are anticipated.

### **From Wilderness Management**

Current conditions would be maintained.

### **From Special Designation Management**

Acquiring lands adjacent to an existing ACEC if they contain relevant and important resources could decrease disturbance of important habitat for the desert dace, springsnails, and basalt cinquefoil within the Soldier Meadows ACEC and of wildlife habitat and scenic quality in the High Rock Canyon ACEC. This action would also have a potential to slightly increase visitor appreciation of the values for which the ACEC was created.

In the High Rock Canyon ACEC, the portion of the area that receives most of the visitor use and contains the most sensitive resources would remain in the ACEC. In the Soldier Meadows ACEC, the habitats of the rare species would be within in the ACEC.

Allowing camping in designated sites within the High Rock Canyon ACEC, prohibiting rock climbing adjacent to the emigrant trail, and closing portions of the ACEC in High Rock Canyon to vehicle use from the end of the Chukar hunt through May 15 would protect the primitive character of the High Rock area and associated emigrant trail segments and eliminate conflicts with camping in sites sensitive to resource and visual impacts.

Increasing the size of the Soldier Meadows ACEC, allowing camping at designated sites within the ACEC, rerouting the existing hot spring access road, and fencing habitats of special status species would decrease disturbance of habitat and minimize conflicts with camping for the desert dace, springsnails, and basalt cinquefoil.

### **From Vegetation Management**

Control of noxious weeds using the best combination of treatment practices developed specifically for the target species and the infested site could aid in maintaining habitats for the desert dace, springsnails, and basalt cinquefoil in a natural condition and would protect the primitive character of the High Rock Area and the associated emigrant trail segments if noxious weeds were found.

Establishing diversity, mosaics, and connectivity of upland communities, and implementing vegetation manipulation projects would increase integrity and condition of important wildlife and plant habitat within both ACECs. Increasing vegetation diversity, cover, and structure could increase protection of the primitive character

of the High Rock area and associated emigrant trail segments.

### **From Livestock Grazing Management**

Permitting livestock grazing within the fenced portions of the Soldier Meadows ACEC when consistent with recovery of the special status species would promote recovery of the desert dace, springsnails, and basalt. If research shows prescription grazing is an applicable tool, of the prescribed grazing would contribute to habitat quality for the desert dace and basalt cinquefoil.

### **From Wild Horse and Burro Management**

Gathering horses and burros from herd management areas to achieve the appropriate management level would maintain the relatively natural disturbance regime of important habitat for the desert dace, springsnails, and basalt cinquefoil and would protect the primitive character of the High Rock Area and the associated emigrant trail segments by limiting disturbance from wild horses to levels that allow achievement of a thriving ecological balance between horses and other resources.

### **From Fire Management**

Current conditions would be maintained.

### **From Fish and Wildlife Management**

Maintaining the High Rock Canyon as a Watchable Wildlife Site could increase visitor appreciation of the values for which the High Rock Canyon ACEC was established, by developing a better understanding of the important wildlife and habitat. However, it also could potentially decrease the primitive character of the canyon and the associated emigrant trail segments if visitor use associated with wildlife viewing increases.

### **From Visual Resource Management**

Current conditions would be maintained.

### **From Water Resource Management**

Managing water resources to meet site-specific objectives or developed standards could decrease disturbance of important habitat for the desert dace and springsnails. If specific restrictions on

activities are implemented to meet water quality objectives, improvements in natural resource values would be anticipated.

**From Lands and Realty Management**

No impacts are anticipated.

**From Minerals and Energy Management**

No impacts are anticipated.

**From Recreation Management**

Applying limits on human activities, constructing facilities around hot springs and implementing a permit system if resource impacts are occurring would decrease disturbance of important habitat for the desert dace, springsnails and basalt cinquefoil. Adapting to changing recreation user situations would allow protection of the primitive character of High Rock Canyon and associated emigrant trail segment, eliminate problems with camping in sites sensitive to resource, and alleviate visual impacts.

**From Public Outreach and Visitor Service Management**

Implementing and supporting programs that increase public appreciation of the values of the planning area could increase visitor appreciation of the values for which the two ACECs were established and minimize future conflicts with those values. Increasing public appreciation of the ACEC values could minimize resource damage from camping in sensitive areas, decrease disturbance of important sensitive habitat, and protect the primitive character of the canyon and the associated emigrant trail segment.

Using the appropriate interpretive and education tools to prevent resource damage or enhance visitor safety and providing a variety of visitor facilities, maps, and interpretive trails would increase public appreciation of ACEC values. Indirectly, if habitat for the desert dace, springsnails, and basalt cinquefoil is disturbed, the primitive character of the High Rock area and associated emigrant trail segments could be reduced.

**4.2.5.6.2 Wild and Scenic Rivers**

After conducting an evaluation of streams in the planning area, 16 of the streams were found to be eligible for designation as Wild and Scenic Rivers. These streams were found eligible due to the outstandingly remarkable values (ORVs) associated with them; specific ORVs for each eligible stream can be found in Chapter 3. This section identifies consequences to the ORVs. ORVs may include scenic, geologic, historic and prehistoric, recreational values, and the occurrence of special status species.

**From Land Health Standards**

Current conditions would be maintained.

**From Transportation and OHV Management**

Designating 345,969 acres of the planning area as limited to existing roads and routes would maintain or enhance the ORVs of the eligible stream segments located outside of the Wilderness Areas.

**From Cultural Resource Management**

No impacts are anticipated.

**From Native American Values Management**

No impacts are anticipated.

**From Paleontological Resource Management**

No impacts are anticipated.

**From Wilderness Management**

Nine of the ten acquired parcels and the “sliver” in the LCT Area also contain segments of Mahogany, Summer Camp and Snow Creeks; therefore, managing the units and the “sliver” to retain their wilderness character would also protect the values associated with those streams.

**From Special Designation Management**

Allowing camping in the High Rock Canyon and the Soldier Meadows ACECs only in designated sites would reduce impacts from camping (such as trampling of vegetation and vandalizing of historic sites) on the outstandingly

remarkable values of High Rock Canyon and Soldier Meadows Creeks. Allowing camping in designated sites would allow recreation to continue but would confine camping-related impacts to those small areas.

Closing a portion of the ACEC between the mouth of High Rock Canyon and 5 miles below Stevens Camp to vehicles from the end of the Chukar hunt through May 15 each year would reduce opportunities for recreation along High Rock Canyon Creek, which is one of the outstandingly remarkable values for which High Rock Canyon Creek was found eligible.

Rerouting the existing hot spring access road and closing spur roads would reduce the impacts from vehicles on the vegetation and fish associated with Soldier Meadows Creek.

Only permitting the grazing of livestock within the fenced portions of the ACEC when it is consistent with the recovery of the listed and rare species and not allowing wild horse use in the fenced portion of the ACEC would enhance the outstandingly remarkable values associated with Soldier Meadows Creek.

#### **From Vegetation Management**

Current conditions would be maintained.

#### **From Livestock Grazing Management**

Maintaining the existing Mahogany Creek grazing closure, restricting grazing in the Stanley Camp pasture and allowing grazing in the Soldier Meadows ACEC only when it is consistent with recovery of the threatened and endangered species, would maintain or enhance the values associated with Mahogany, Summer Camp, Snow, and Soldier Meadows Creeks.

#### **From Wild Horse and Burro Management**

Current conditions would be maintained

#### **From Fire Management**

No impacts are anticipated.

#### **From Fish and Wildlife Management**

Current conditions would be maintained.

#### **From Visual Resource Management**

Current conditions would be maintained.

#### **From Water Resource Management**

Managing streams to meet the life history requirements of the Lahontan cutthroat trout and Desert Dace would enhance the fisheries values of Mahogany, Summer Camp, Snow, North Fork of Battle, Colman, Donnelly, Happy, Mary Sloan, and Jackson Creeks and Soldier Meadows Creeks. These streams were all found to be eligible for wild and scenic river designation because of their existing or potential Lahontan cutthroat trout populations or Desert Dace populations.

#### **From Lands and Realty Management**

No impacts are anticipated.

#### **From Minerals and Energy Management**

Continuing the segregation of the Lahontan cutthroat trout Area would maintain the values of Mahogany, Summer Camp, and Snow Creeks.

#### **From Recreation Management**

Restricting recreational activities where resource impacts occur and restricting camping to areas more than 300 feet from springs, unless otherwise designated, could decrease disturbance of values associated with eligible stream segments

#### **From Public Outreach and Visitor Services Management**

Implementing interpretive techniques, including on-the-ground elements, to prevent resource damage and constructing an offsite Administrative Site/Visitor Contact Station could indirectly protect outstandingly remarkable values by decreasing recreational disturbance.

### **4.2.5.7 Impacts on Vegetation**

Because decisions related to vegetation management in all alternatives are constrained by the Rangeland Health Standards, few additional, specific decisions related to such management are contained in the alternatives of this plan. The

objectives and actions related to vegetation in all alternatives are considered the minimum necessary to meet Rangeland Health Standards for those resources.

#### **From Land Health Standards**

Applying Rangeland Health Standards to all uses and programs, including recreation, transportation, and livestock grazing, could potentially improve species composition, productivity, and structure of upland and riparian plant communities, eliminate noxious weeds, and reduce soil compaction and vegetation damage from vehicles.

#### **From Transportation and OHV Management**

Managing BLM system roads to their current maintenance class would increase disturbance vegetation immediately adjacent to these roads, on a few acres per year when existing roads are improved to include drainage ditches. Decreased surface disturbance associated with the elimination of braided or parallel alignments of motorized trails would increase vegetation cover in a few areas.

Developing public access on the east side of the Black Rock Range would potentially degrade species composition, productivity, and structure of upland and riparian plant communities on less than 5 miles of new road where new road alignments would be developed. The construction of up to 5 miles of new road may also increase soil compaction and vegetation damage from vehicles on areas adjacent to new roads.

Closing 23 miles of road and limiting 345,969 acres and 831 miles to OHV use on designated vehicle routes would improve species composition, productivity, and structure of upland and riparian plant communities and; lead to the elimination of noxious weeds, and could reduce, increase, or maintain soil compaction and vegetation damage from vehicles.

#### **From Cultural Resource Management**

Closing Class B historic trail segments to all mechanized vehicles would have no impacts because currently these segments are not generally used by motorized vehicles. Implementing seasonal closures for vehicle traffic on 17 miles of Class C

historic trail in High Rock Canyon would maintain existing vegetation.

#### **From Native American Values Management**

Current conditions would be maintained.

#### **From Paleontological Resource Management**

No impacts are anticipated.

#### **From Wilderness Management**

The restoration of approximately 300 miles of vehicle ways within Wilderness Areas would decrease the risk of weed infestation along those ways and lead to improved conditions of native vegetation communities on about 300 acres.

#### **From Special Designation Management**

Current conditions would be maintained.

#### **From Vegetation Management**

Conducting rehabilitation and restoration efforts with predominantly native seed in areas burned by wildland fires, establishing green stripping to protect rangeland vegetation communities at risk of stand conversion, and allowing seed collection to support restoration of native plant communities would reduce the likelihood that burned areas would become dominated by invasive annual species.

Efforts to control noxious weeds would enhance vegetation communities by reducing noxious weed.

Maintaining or establishing diversity, mosaics, and connectivity of upland communities and implementing vegetation manipulation projects to move plant communities toward desired conditions would potentially improve species composition, productivity, and structure of upland and riparian plant communities. Indirectly, managing for healthy native plant communities could lead to the decreases in areas occupied by noxious weeds and reduced vegetation damage where vehicle restrictions are implemented.

In addition to improving species composition, productivity, and structure of upland and riparian plant communities, emphasizing retention of sagebrush and other woody vegetation cover and reseeding would also reduce the likelihood that

burned areas would become dominated by invasive annual species.

### **From Livestock Grazing Management**

Maintaining the current livestock grazing use authorizations would generally lead to the maintenance of species composition, productivity, and structure of upland and riparian plant communities.

Grazing decisions using prescriptions designed to meet resource objectives for portions of the Massacre Mountain Allotment, the Little High Rock portion of the Bare Allotment, the Mahogany Creek Enclosure, the fenced portion of the Soldier Meadows ACEC, and the Stanley Camp Pasture of the Soldier Meadows Allotment would maintain or improve species composition, productivity and structure in upland and riparian plant communities.

### **From Wild Horse and Burro Management**

Maintaining current herd management areas and appropriate management levels of wild horses and burros would improve or maintain species composition, productivity and structure in upland and riparian plant communities.

### **From Fire Management**

Designating 1,214,514 acres of lands as Category B (potential opportunities for using wildland fire to meet resource objectives) and 7,892 acres of lands as Category A (full suppression) would maintain the species composition, productivity and structure of upland and riparian plant communities by increasing the level of fire protection on almost all lands within the planning area.

Using prescribed fire on a site-specific basis to accomplish localized small-scale projects consistent with the vegetation objectives would potentially improve naturalness associated with healthy vegetation.

### **From Fish and Wildlife Management**

Implementing management actions to sustain or improve sage-grouse winter, breeding, nesting, and brooding habitats and implementing other habitat rehabilitation and restoration projects and activities would improve or maintain species composition, productivity, and structure of upland

sagebrush and meadow plant communities, especially plant communities with mature sagebrush stands.

Maintaining existing and constructing new wildlife water developments would degrade species composition, productivity, and structure of upland communities on less than an acre associated with project development and increase soil compaction and vegetation damage from vehicles on a few acres.

### **From Visual Resource Management**

Current conditions would be maintained.

### **From Water Resource Management**

Implementation of the water quality objectives for Lahontan cutthroat trout streams other waters could lead to actions that would improve or maintain species composition, productivity, and structure of riparian plant communities associated with streams with existing or potential populations of Lahontan cutthroat trout or other streams requiring management changes to meet water quality objectives. Vegetation damage associated with direct and indirect vehicle impacts would also be reduced where actions required for water quality result in closure or improvement of roads.

### **From Lands and Realty Management**

Issuing rights-of-way that provide access to private lands outside of Wilderness could result in an increase or continuation of vegetation damage from vehicles in limited areas associated with the access rights-of-way. New access routes for vehicles could increase the spread of noxious weeds along these new routes. This would likely apply to a very small area, because few inholdings would require construction of new access routes and most rights-of-way would be granted using existing access without increasing disturbance.

Granting rights-of-way outside of Wilderness in support of mining activities, including the low probability that two large mines would be developed in the South Jackson Mountains near Rabbithole Spring, has the potential to degrade the species composition, productivity and structure of upland and riparian plant communities. Rights-of-way could disturb less than 20 acres and slightly

increase the spread of noxious weeds within the planning area.

#### **From Minerals and Energy Management**

Closing federal lands in the South Playa, LCT Area, and routes outside the NCA to location, entry, and patent would maintain vegetation conditions.

Potential minerals development on existing mining claims; geothermal development in the South Playa; and development of 12 gravel pits totaling up to 60 acres for road maintenance could result in a loss of vegetation on lands associated with these activities, including several hundred acres associated with the low probability that two large mines would be developed in the South Jackson Mountains and near Rabbithole Spring. This could also increase the risk of noxious weed establishment within the planning area.

#### **From Recreation Management**

Applying specific restrictions to recreational activities where these activities cause resource impacts could improve vegetation cover, composition and structure on the few acres where restrictions on visitor use are applied.

#### **From Public Outreach and Visitor Service Management**

Implementing and supporting programs that increase public appreciation of the values of the planning area could reduce impacts on vegetation on few acres associated with high public use.

Developing an Administrative Site/Visitor Contact Station outside the NCA could result in a potential loss of vegetation on a few acres outside the planning area if a previously undisturbed site is chosen; and elimination of noxious weeds might occur if visitors take measures to decrease weed spread and report new infestations.

### **4.2.5.8 Impacts on Livestock Grazing**

In all alternatives, decisions related to livestock grazing management are constrained by the Rangeland Health Standards and the NCA

legislation. Management decisions are based on existing allotment management plans and related to decision documents.

#### **From Land Health Standards**

When livestock grazing is shown to be a major factor preventing Rangeland Health Standards from being met, applying these standards could result in changes to livestock grazing practices, including timing, duration, frequency, intensity, and areas of grazing use. These changes could decrease the areas grazed and the flexibility of livestock operators.

#### **From Transportation and OHV Management**

Improving the Pershing County portion of Soldier Meadows Road and maintaining BLM system roads at existing maintenance levels would decrease maintenance of ranch vehicles and decrease travel times on the maintained roads.

Converting 132 miles of BLM road to motorized trails would have no impacts on livestock grazing because the conditions of these routes would be maintained in their current conditions.

Designation of transportation routes and OHV classifications would maintain current levels of access to rangelands by motor vehicles because the 23 miles of vehicle routes closed receive minimal use for management of livestock.

Public access on the east side of the Black Rock Range would have the potential to increase vandalism of livestock-related projects, increase livestock loss and increase operational expenses of livestock operators. The action would also result in decreased maintenance to vehicles and shorter travel times on the improved access.

#### **From Cultural Resource Management**

Current conditions would be maintained.

#### **From Native American Values Management**

Current conditions would be maintained.

#### **From Paleontological Resource Management**

Current conditions would be maintained.

#### **From Wilderness Area Management**

Current conditions would be maintained.

### **From Special Designation Management**

Grazing operator flexibility could increase as it relates to livestock grazing practices including intensity, duration, frequency, timing, and areas of grazing use in the Warm Springs pasture because the areas with rare species are separated from the larger pasture.

Grazing operator flexibility would potentially decrease on several thousand acres in the new pasture because of additional limitations on the ability to graze the area and decreased access to livestock water.

Taking these actions could also increase the potential for vandalism to livestock-related projects, increase or maintain rates of livestock loss, and increase the operational expenses of livestock operators by increasing the amount of fence that would require maintenance and the number of gates that may be left open by recreational users of the ACEC.

### **From Vegetation Management**

There is a potential for actions in support of the restoration of burned lands and the management of noxious weed and invasive species to decrease operator flexibility related to livestock grazing practices, including intensity, duration, frequency, timing, and areas of grazing use.

Maintaining or establishing diversity, mosaics, and connectivity of upland communities and implementing vegetation manipulation projects to move plant communities toward desired conditions could decrease operator flexibility related to livestock grazing practices including intensity, duration, frequency, timing, and areas of grazing use.

In addition to improving the species composition, productivity, and structure of upland and riparian plant communities, emphasizing retention of sagebrush and other woody vegetation cover and reseeding could decrease operator flexibility related to livestock grazing practices. However, improved vegetation conditions could lead to increased livestock forage production.

### **From Livestock Grazing Management**

Maintaining the current livestock grazing use authorizations and the class of livestock in allotments would maintain operator flexibility

related to livestock grazing practices, including intensity, duration, frequency, timing, and areas of grazing use.

Including Massacre Ranch in the Massacre Mountain Allotment and making it available for livestock grazing as part of a plan for the allotment could increase areas available for grazing and increase operator flexibility related to livestock grazing practices, including intensity, duration, frequency, timing, and areas of grazing use.

Maintaining or modifying existing authorized structural rangeland projects would increase operator flexibility related to livestock grazing practices by retaining existing water, fences, and other types of livestock-related projects. It could also increase areas available for livestock grazing. In addition, it might provide for continued vandalism of livestock-related projects and maintain similar levels of operational expenses for livestock operators.

Adjusting the boundaries of the Buffalo Hills, Jackson Mountains, and Paiute Meadows Allotments without adjusting permitted forage use would maintain operator flexibility related to livestock grazing practices on areas in Buffalo Hills, Paiute Meadows, and Jackson Mountains Allotments by authorizing use on 26,385 acres historically used for livestock but not in grazing allotments. These actions would also maintain areas historically available for livestock grazing.

Making adjustments in livestock and wild horse and burro forage and class of use based on monitoring data or on proportions of animal unit months of appropriate management levels could cause changes in operator flexibility related to livestock grazing practices, including intensity, duration, frequency, timing, and areas of grazing use.

Permitting grazing by livestock within the fenced portions of the Soldier Meadows ACEC when consistent with the recovery of the rare and listed species within the ACEC would have the potential to increase operator flexibility on several thousand acres if prescribed grazing occurs.

### **From Wild Horse and Burro Management**

Making adjustments in livestock and wild horse and burro forage and class of use based on monitoring data or on proportions of animal unit months and appropriate management levels could

cause changes in operator flexibility related to livestock grazing practices, including intensity, duration, frequency, timing, and areas of grazing use.

**From Fire Management**

Current conditions would be maintained.

**From Fish and Wildlife Management**

Allowing animal damage control activities to be conducted, as needed, within the planning area outside of Wilderness would preserve the opportunity to remove predators causing losses of livestock.

Management of sage-grouse habitats to aid in the recovery of the species would potentially decrease operator flexibility related to livestock grazing practices including intensity, duration, frequency, timing, and areas of grazing use.

Allowing animal damage control to be conducted in wilderness only to protect threatened and endangered species, to prevent the transmission of disease to other wildlife or humans, and to prevent serious losses to domestic livestock would maintain the opportunity to remove predators causing losses of livestock.

**From Visual Resource Management**

Current conditions would be maintained.

**From Water Resource Management**

Managing potential recovery streams to meet the life history requirements of Lahontan cutthroat trout and desert dace, and managing other water resources to achieve resource objectives and meet water quality standards could decrease operator flexibility related to livestock grazing practices.

**From Lands and Realty Management**

No impacts are anticipated.

**From Minerals and Energy Management**

Current conditions would be maintained.

**From Recreation Management**

No impacts are anticipated.

**From Public Outreach and Visitor Service Management**

No impacts are anticipated.

**4.2.5.9 Impacts on Wild Horses and Burros**

Direct impacts on wild horses and burros by other resource management decisions in this plan would be minimal.

**From Land Health Standards**

Applying Rangeland Health Standards to all uses and programs, including wild horses and burros, could result in a decrease of appropriate management levels and potentially limit the use of certain herd management areas if wild horses or burros are found to be a major reason that one or more of the standards is not being met.

**From Transportation and OHV Management**

Improving the Pershing County portion of Soldier Meadows Road and maintaining BLM system roads to the designated maintenance levels would decrease travel times associated with wild horse and burro management including gathers.

**From Cultural Resource Management**

Current conditions would be maintained.

**From Native American Values Management**

Current conditions would be maintained.

**From Paleontological Resource Management**

Current conditions would be maintained.

**From Wilderness Area Management**

Current conditions would be maintained.

**From Special Designation Management**

Excluding wild horses and burros from grazing in the fenced area in the Soldier Meadows ACEC would reduce the amount of forage and water available to them, however this area is not within an HMA.

### **From Vegetation Management**

Specific actions to restore burned lands and manage noxious weeds and invasive species are required constraints and would therefore have no impact on wild horses or burros specific to adoption of this alternative. There is, however, a potential for actions taken under this constraint to change areas used by wild horses or burros to temporarily or permanently alter the appropriate management levels allow burned areas to recover.

Maintaining or establishing diversity, mosaics, and connectivity of upland communities and implementing vegetation manipulation projects to move plant communities toward desired conditions would potentially limit the use of certain herd management areas if wild horses or burros were preventing the achievement of desired vegetation conditions.

### **From Livestock Grazing Management**

Maintaining existing, authorized structural rangeland projects where beneficial to resource values could maintain portions of herd management areas for wild horse or burro use by retaining existing water sources.

Adjusting the available forage for wild horses and burros could require changes in appropriate management levels based on monitoring data that shows impacts on resources.

### **From Wild Horse and Burro Management**

Retaining the current herd management areas and managing the wild horse and burro populations consistent with the Wild Horse and Burro Act of 1971 have the potential to maintain the genetic viability of these populations.

Managing contiguous herd management areas (with documented reproductive interaction) as complexes has the potential to enhance the genetic viability of horse and burro populations by managing desirable traits in large meta-populations of horses.

Gathering excess horses and burros from the herd management areas to achieve the appropriate management level could result in disruption of the social structure of these animals and increase the harassment and inadvertent mortality of individual animals.

Constructing small holding corrals to support wild horse and burro management would increase public awareness and appreciation of wild horses and burros and could reduce the cost of horse gathers and enhance adoptions by the public.

### **From Fire Management**

Current conditions would be maintained.

### **From Fish and Wildlife Management**

Sustaining or improving sage-grouse winter, breeding, nesting, and brooding habitats; limiting activities that have a high risk of disturbing breeding or brooding sage-grouse; and performing other habitat rehabilitation and restoration projects in the planning area could require reductions in appropriate management levels of horses or burros when monitoring data show impacts on these values.

### **From Visual Resource Management**

Current conditions would be maintained.

### **From Water Resource Management**

Managing all water resources to meet resource objectives and water quality standards and managing potential recovery streams to meet the life history requirements of Lahontan cutthroat trout and desert dace could result in a decrease in appropriate management levels of wild horses or burros and could limit the use of herd management areas by wild horses or burros.

### **From Lands and Realty Management**

No impacts are anticipated.

### **From Minerals and Energy Management**

Current conditions would be maintained.

### **From Recreation Management**

No impacts are anticipated.

### **From Public Outreach and Visitor Service Management**

Increased public knowledge may indirectly lead to more adoptions and protection and appreciation of wild horses and burros.

#### **4.2.5.10 Impacts on Fire Management**

##### **From Land Health Standards**

Rangeland Health Standards apply to all uses and programs including fire management. Potential impacts from application of the standards include potential changes to the fuel loads, size of fires, and suppression costs where additional requirements to manage fire are implemented to meet one or more standards.

##### **From Transportation and OHV Management**

Upgrading BLM road functional classification or maintenance level change based on monitoring would improve effective fire protection by improving access for fire suppression resources.

Maintaining 46 miles of BLM system roads to their designated maintenance levels, development of an improved rail crossing and the designation of other roads and routes would generally maintain the existing levels of access for fire suppression activities within the Planning Area. The potential to downgrade the quality of routes receiving vehicle use in excess of capacity could decrease access for fire suppression resources on small areas.

Closure of 23 miles of OHV routes maintain fire protection by maintaining access for fire suppression resources.

Access improvement in the Black Rock Range could improve the effectiveness of fire protection to central part of that range by providing new access. Additionally, there is the potential for an increase in human-caused fires due to increase visitor access to central part of Black Rock.

##### **From Cultural Resource Management**

Current conditions would be maintained.

##### **From Native American Values Management**

Current conditions would be maintained.

##### **From Paleontological Resource Management**

Current conditions would be maintained.

##### **From Wilderness Area Management**

Prescribed burning in wilderness areas would change the fuel loading of a few hundred acres and have little affect on wildland fire size, intensity and indirectly fire suppression efforts.

##### **From Special Designation Management**

Current conditions would be maintained.

##### **From Vegetation Management**

Restoring burned areas, applying green stripping in areas at risk of conversion to invasive annual species, and controlling noxious weeds could reduce the size of fires by creating barriers to fire spread and could decrease suppression costs.

Actions to improve vegetation condition, diversity, and cover would potentially change fuel loads, the size of fires, and suppression costs.

##### **From Livestock Grazing Management**

Not grazing areas, including the Mahogany Creek Exclosure, Stanley Camp Pasture, and portions of the High Rock area on a regular basis, would continue to maintain increased fuel loads and could minimally increase the size of potential fires and fire suppression costs on a few thousand acres where fuel accumulations are likely to affect fire size.

##### **From Wild Horse and Burro Management**

No impacts are anticipated.

##### **From Fire Management**

Maintaining the existing fire management zones would maintain opportunities for use of fire where beneficial to vegetation and reduce fire occurrence where detrimental.

Designating the planning area into one of two management categories with a corresponding appropriate management response where fire would not be desired or where a variety of appropriate fire suppression techniques would be applied would potentially improve fire protection by the most sensitive areas by allowing fire managers to assign the best mix of fire suppression techniques and equipment.

Using minimum impact suppression techniques throughout the area and limiting use of heavy surface-disturbing equipment would decrease the flexibility of fire managers to respond to

wildland fire situations. This could also lead to increased fire suppression costs.

Use of prescribed fire to accomplish localized small-scale projects consistent with the vegetation objectives would reduce the fuel loads, reduce the size of fires, and slightly decrease suppression costs on a few thousand acres. Fire protection effectiveness may also improve by breaking fuel continuity associated with treated acres.

#### **From Fish and Wildlife Management**

Current conditions would be maintained.

#### **From Visual Resource Management**

Current conditions would be maintained.

#### **From Water Resource Management**

No impacts are anticipated.

#### **From Lands and Realty Management**

No impacts are anticipated.

#### **From Minerals and Energy Management**

No impacts are anticipated.

#### **From Recreation Management**

No impacts are anticipated.

#### **From Public Outreach and Visitor Service Management**

Implementing and supporting programs that increase public appreciation of the values of the planning area would potentially improve effective fire protection, decrease suppression costs, and decrease the potential for human-caused fires by increasing public awareness of fire risks.

### **4.2.5.11 Impacts on Fish and Wildlife**

#### **From Land Health Standards**

Applying Rangeland Health Standards to all uses and programs, including transportation and recreation, would potentially decrease erosion and

sedimentation of aquatic habitat and decrease the chance of wildlife being disturbed or harassed. Future actions modified to meet Rangeland Health Standards would lead to better habitat conditions and enhanced species viability. Application of standards to recreation and transportation could decrease inadvertent disturbance and increase wildlife populations in the immediate area or projects or other activities.

#### **From Transportation and OHV Management**

Designation of 623 miles of BLM system roads as motorized trail and maintaining the remaining 46 miles of BLM system roads would maintain existing levels of disturbance to wildlife habitats associated with roads. Changing the functional or maintenance class of a road or vehicle route if vehicle use causes damage to resources would most likely result in upgrades in functional or maintenance levels, which could decrease erosion and sedimentation of aquatic habitat by improving drainage, installation of culverts, hardened crossings, graveling surfaces and maintaining or protecting and enhancing habitats by reducing braiding, improving drainage. This action would potentially affect only a few hundred acres in the planning area.

Impacts from providing public access on the east side of the Black Rock Range are unknown because specifics of how this would be accomplished are unknown. Improvements could range from no impact if ROWs for existing routes could be obtained to degrading habitat on a few acres if new roads are constructed and reducing wildlife populations in the immediate area of new road construction.

Limiting 345,969 acres and 831 miles to OHV use on designated roads and vehicle routes could maintain existing erosion and sedimentation of aquatic habitat adjacent to a few miles of closed motorized trail in Lahontan cutthroat trout habitat.

#### **From Cultural Resource Management**

Current conditions would be maintained.

#### **From Native American Values Management**

Current conditions would be maintained.

### **From Paleontological Resource Management**

No impacts are anticipated.

### **From Wilderness Area Management**

Closing the Lahontan cutthroat trout Area to motor vehicles if monitoring indicates impacts are occurring to the spawning habitat would decrease erosion and sedimentation of aquatic habitat by elimination of vehicle use during period of year most likely to have increased sedimentation associated with vehicle use of wet roads. Reducing human use during half the year would decrease the chance of wildlife being disturbed or harassed, protect and enhance wildlife habitat within the Lahontan cutthroat trout Area, and decrease inadvertent disturbance by visitors.

### **From Special Designation Management**

Closing portions of the ACEC in High Rock Canyon to vehicle use for 14 weeks each year would reduce human disturbance of wildlife, including big horn sheep lambing and raptor nesting. Closing the area during the spring would decrease erosion and sedimentation of aquatic habitat. Extending the closure by 6 weeks during periods of raptor nesting and bighorn lambing would decrease the chance of wildlife being disturbed or harassed, enhance species viability, protect and enhance habitat, and potentially increase wildlife populations by limiting human uses during period of raptor nesting and the entire bighorn lambing period.

Increasing the Soldier Meadows ACEC to approximately 2,077 acres would protect wildlife species and their habitats. Reducing bank disturbance from livestock and wild horses would decrease erosion and sedimentation of aquatic habitat by closing or relocating roads adjacent to hot water channels. Allowing camping only in designated areas would potentially decrease the chance of wildlife being disturbed or harassed. Reducing human-related disturbance near aquatic systems would potentially enhance species viability and protect and enhance habitat. As a result, restricting human uses may increase wildlife populations in the immediate area.

### **From Vegetation Management**

Using rehabilitation and restoration efforts in areas burned by wildland fires, applying green stripping to protect rangeland vegetation communities at risk of stand conversion, and controlling weed infestations would protect wildlife habitat. Increasing opportunities to restore native vegetation communities could decrease erosion and sedimentation of aquatic habitat, maintain and enhance habitat, and enhance species viability.

Maintaining cover on upland watersheds and restoration of the monoculture stand of sagebrush would potentially decrease erosion and sedimentation of aquatic habitat.

Retaining mature sagebrush cover on sage-grouse habitats would protect and enhance habitats and species viability of sage-grouse, other sagebrush dependent species, and non-game species dependent on mountain shrub and aspen stands. Restoration of key wildlife habitats associated with mountain shrub stands and aspen groves would benefit wildlife species that use these habitats.

### **From Livestock Grazing Management**

Maintaining existing authorized structural rangeland projects and modifying all spring developments to provide water for wildlife at ground level adjacent to the spring source would continue to sustain wildlife populations in the vicinity of water projects constructed for livestock.

Excluding livestock grazing or trailing from the Mahogany Creek enclosures and limiting grazing within fenced portions of the Soldier Meadows ACEC and the Stanley Camp Pasture would maintain wildlife habitat and species viability, which could lead to increased wildlife populations. Limiting grazing near riparian areas would protect aquatic wildlife and sensitive riparian habitat.

### **From Wild Horse and Burro Management**

Gathering horses and burros to maintain the appropriate management levels would continue to allow wildlife and wild horses and burros to coexist in a manner that allows achievement of a thriving ecological balance.

Excluding wild horses and burros from fenced portions of the Soldier Meadows ACEC would maintain wildlife habitat and species viability,

which could lead to increased wildlife populations. Excluding wild horses near riparian areas would protect aquatic wildlife and sensitive riparian habitat.

### **From Fire Management**

Because fire management is acting in a support role to meet the needs of the resources, the categorization of the planning area into two fire management zones would have no impact on wildlife.

Using prescribed fire to accomplish localized small-scale projects would improve habitat conditions on a few thousand acres where wildlife species would benefit from changes in vegetation composition, structure, and production.

### **From Fish and Wildlife Management**

Allowing trap and transplant activities associated with native wildlife species in Wilderness, if necessary, would continue to support wildlife populations.

Improving sage-grouse winter, breeding, nesting, and brooding habitats and restricting activities that have a high risk of disturbing sage-grouse would decrease the chance of disturbance and would protect and enhance sage-grouse habitats.

Continuing to conduct habitat rehabilitation and restoration projects would continue to support wildlife populations.

Maintaining existing wildlife water developments or constructing new water developments in Wilderness Areas would maintain water availability for small mammal and bird species. This would affect mobile species on about 25,000 acres and non-mobile species on about 2,000 acres.

Allowing animal damage control in wilderness to protect threatened and endangered species and prevent the transmission of disease to other wildlife or humans may lead to decreased predator populations and increased prey species viability.

Managing sage-grouse and other sage brush obligate species habitats for the long-term sustainability of sage-grouse and other sagebrush dependent wildlife species would enhance protect and enhance habitats and species viability of sage-grouse, other sagebrush dependent species, non-game species dependent on mountain shrub and

aspen stands, and sagebrush stands needing changes to understory vegetation.

### **From Visual Resource Management**

Current conditions would be maintained.

### **From Water Resource Management**

Managing potential recovery streams to meet the life history requirements of Lahontan cutthroat trout and managing all other water resources to meet site-specific water quality objectives and applicable standards would protect and enhance aquatic habitat and aquatic species viability by decreasing erosion and sedimentation, which could lead to increases in those populations when management changes are implemented to meet the objectives.

### **From Lands and Realty Management**

Current conditions would be maintained.

### **From Minerals and Energy Management**

Minerals-related development of the mineral leases, claims, and permits that existed at the time of the NCA legislation could increase erosion and sedimentation of aquatic habitat and the chance of wildlife's being disturbed or harassed. It could also reduce wildlife populations on several hundred acres. In addition, there would be a less than 10 percent chance of the development of two large mines on portions of the planning area in the South Jackson Mountains and near Rabbithole Spring. Mineral development activities could also decrease species viability through increased surface disturbance, noise, light, and dust and could degrade habitats.

### **From Recreation Management**

Potential restrictions on recreational activities where resource impacts occur could decrease erosion and sedimentation of aquatic habitat and decrease the chance of wildlife's being disturbed or harassed. If restrictions were applied, inadvertent disturbance by visitors could be reduced and habitat could be protected or enhanced in the immediate vicinity of the restrictions.

Restricting camping to more than 200 feet from water would decrease erosion and sedimentation of aquatic habitat on a few acres.

Applying camping restrictions, including designated camping sites, would decrease the chance of wildlife being disturbed or harassed on a few hundred acres adjacent to areas of camping restrictions.

If trails or camping areas were restricted, habitat would be protected or enhanced and wildlife populations may be increased on a few acres.

Designating portions of High Rock Canyon ACEC outside of Wilderness, Soldier Meadows ACEC, Class B and C historic trail segments, and rustic portions of the Lahontan Cutthroat Trout Area as day-use only would decrease erosion and sedimentation of aquatic habitats. It would potentially protect and enhance 30 miles of stream habitat by reducing human uses, and decrease the chance of wildlife being disturbed or harassed.

Requiring large groups to camp in BLM-designated group camp areas and limiting camping in designated sites to 10 days would potentially decrease erosion and sedimentation of a few acres of aquatic habitat by limiting large camps within aquatic areas. The chance of wildlife being disturbed or harassed may also be reduced by limiting large groups to areas less sensitive to human disturbance.

#### **From Public Outreach and Visitor Service Management**

Implementing and supporting programs that increase public appreciation of the values of the planning area would increase visitor appreciation of wildlife values and indirectly benefit those values by decreasing inadvertent disturbance of vegetation and waters and potential harassment of wildlife.

Using interpretive techniques, including on-the-ground elements, to prevent resource damage and developing an off-site Administrative Site/Visitor Contact Station would potentially decrease the chance of wildlife being disturbed or harassed through increase visitor appreciation of the wildlife values.

### **4.2.5.12 Impacts on Special Status Species**

#### **4.2.5.12.1 Plants**

Implementation of the Alternative would have no impacts on special status plant species other than basalt cinquefoil. The populations of these species are generally restricted to specialized habitats related to a combination of unique geology or soil features, and the major risk is loss of that habitat due to mineral activities or other surface-disturbing activities. The mineral withdrawal and Wilderness designations associated with the NCA legislation eliminated the potential for these threats.

#### **From Land Health Standards**

Applying Rangeland Health Standards to all uses and programs could potentially improve basalt cinquefoil habitat and increase populations by reducing disturbance from other activities. Indirectly, applying restrictions to other activities, including recreation and transportation, could increase visitor awareness and appreciation of planning area resources, thereby decreasing inadvertent disturbance.

#### **From Transportation and OHV Management**

Relocating routes within the Soldier Meadows ACEC that currently cross less than an acre of basalt cinquefoil habitat would decrease disturbance of habitat and individuals in those areas and enhance habitat and species viability.

#### **From Cultural Resource Management**

No impacts are anticipated.

#### **From Native American Values Management**

No impacts are anticipated.

#### **From Paleontological Resource Management**

No impacts are anticipated.

#### **From Wilderness Area Management**

No impacts are anticipated.

### **From Special Designation Management**

Increasing the Soldier Meadows ACEC to approximately 2,077 acres and allowing camping at designated sites away from basalt cinquefoil populations would decrease disturbance of habitat and individuals, which would improve basalt cinquefoil habitat and species viability.

Rerouting the existing hot spring access road away from the habitat and closing all spur roads would decrease disturbance of habitat and individuals on less than one acre of basalt cinquefoil habitat, thereby improving habitat and species viability.

Managing springs and streams to minimize human use impacts on desert dace would also improve basalt cinquefoil habitat and species viability, because they occur only near springs.

### **From Vegetation Management**

No impacts are anticipated.

### **From Livestock Grazing Management**

Maintaining existing structural rangeland projects (e.g., fencing) would indirectly protect basalt cinquefoil habitat and populations by providing seasonal control of existing wild horse and burro use.

Limiting livestock grazing within the fenced portions of the Soldier Meadows ACEC could decrease disturbance of important habitat for basalt cinquefoil because of maintenance of a relatively natural disturbance regime when compared to current levels of grazing.

If research shows grazing is an applicable tool, disturbance of important habitat for basalt cinquefoil could be increased to meet the needs of the species.

### **From Wild Horse and Burro Management**

No impacts are anticipated.

### **From Fire Management**

No impacts are anticipated.

### **From Fish and Wildlife Management**

Conducting habitat rehabilitation and restoration projects and activities in the planning area could improve basalt cinquefoil habitat, benefit

individuals, and increase populations where projects target these species or displace potential disturbances to other areas.

### **From Visual Resource Management**

No impacts are anticipated.

### **From Water Resource Management**

Current conditions would be maintained.

### **From Lands and Realty Management**

Current conditions would be maintained.

### **From Minerals and Energy Management**

No impacts are anticipated.

### **From Recreation Management**

Applying restrictions on recreational activities where resource impacts occur could improve basalt cinquefoil habitat, increase species populations, and decrease inadvertent disturbance by visitors where restrictions on recreation activities would be applied to the Soldier Meadows area.

Restricting camping to areas more than 300 feet from springs would decrease inadvertent disturbance by visitors and potentially increase species populations and improve basalt cinquefoil habitat, because most basalt cinquefoil habitat is within 300 feet of springs.

### **From Public Outreach and Visitor Service Management**

Implementing and supporting programs that increase public appreciation of the values of the planning area could decrease inadvertent disturbance by increasing awareness of basalt cinquefoil.

#### **4.2.5.12.2 Fish and Wildlife**

There are no known impacts on the black tern, least bittern, and white-faced ibis because of the lack of wetlands and the lack of actions affecting those areas.

The eight sensitive bat species, pygmy rabbit, western burrowing owl, Preble's shrew, Nevada viceroxy, northern goshawk, and eight known

springsnail types would benefit from actions implementing water quality objectives and Land Health Standards.

#### **From Land Health Standards**

Applying Rangeland Health Standards to all uses and programs would reduce damage from other uses and improve plant diversity and cover, indirectly enhancing visual quality.

#### **From Transportation and OHV Management**

Changing the designation of 132 miles of BLM system road to motorized trails would maintain the existing access systems and have no impacts on special status animal species.

Downgrading roads and motorized trails in functional or maintenance-class receiving-vehicle use in excess of capacity could improve the quality of special status animal species by decreasing public use of limited areas of sage-grouse habitats.

#### **From Cultural Resource Management**

No impacts are anticipated.

#### **From Native American Values Management**

Current conditions would be maintained.

#### **From Paleontological Resource Management**

No impacts are anticipated.

#### **From Wilderness Area Management**

Current conditions would be maintained.

#### **From Special Designation Management**

Acquiring lands adjacent to existing ACECs and incorporating those lands into the ACEC could decrease disturbance of habitat for bighorn sheep, desert dace, and several types of springsnail and potentially increase their populations.

Designating the Lahontan Cutthroat Trout WSA as an ACEC, if it were released from study area status, would continue to protect Lahontan cutthroat trout habitat by limiting human-related disturbances, which could lead to increased species populations by increasing the public awareness of the values within the LCT Area.

Closing portions of the High Rock Canyon ACEC in High Rock Canyon from the end of the

Chukar hunt through May 15 each year would reduce human disturbance during big horn sheep lambing and potentially increase populations.

Increasing the Soldier Meadows ACEC to approximately 2,077 acres, designating the area as day-use only, rerouting the existing hot spring access road, minimizing human impacts on desert dace, and limiting livestock grazing and eliminating wild horse use would improve desert dace and springsnail habitat and potentially increase desert dace and springsnail populations.

#### **From Vegetation Management**

Using rehabilitation and restoration efforts on areas burned by wildland fires, applying green stripping to protect rangeland vegetation communities at risk of stand conversion, and controlling weed infestations would maintain habitat for special status species, including sage-grouse, pygmy rabbit, Preble's shrew, and western burrowing owl.

Retaining mature sagebrush cover would maintain sage-grouse habitats in the short term and could result in improved conditions of those habitats in the long term.

#### **From Livestock Grazing Management**

Continuing current livestock grazing use authorizations and excluding portions of the Massacre Mountain Allotment and the Bare Allotment would maintain habitat for special status species, including sage-grouse, pygmy rabbit, Preble's shrew, springsnails, bats, Lahontan cutthroat trout, and western burrowing owl.

Continuing to limit grazing in the Mahogany Creek Enclosure and the Stanley Camp pasture of the Soldier Meadows Allotment from grazing would maintain water and vegetation that provide habitat for the Lahontan cutthroat trout.

Limiting livestock grazing within the fenced portions of the Soldier Meadows ACEC could decrease disturbance of important habitat for the desert dace and springsnails by maintaining a relatively natural disturbance regime when compared to current levels of grazing.

If research shows prescription grazing is an applicable tool, disturbance of important habitat for the desert dace may increase.

### **From Wild Horse and Burro Management**

Gathering horses to achieve appropriate management levels and managing horses to achieve a thriving ecological balance would maintain habitats for special status species, including sage-grouse, pygmy rabbit, Preble's shrew, springsnails, bats, Lahontan cutthroat trout, and western burrowing owl, which would maintain species populations at or above current levels.

### **From Fire Management**

Incorporation of Minimum Impact Suppression Techniques (MIST) and assignment of resource advisors during appropriate management response would preserve and protect special status species by reducing disturbance to habitats. However, if application of MIST cause burned acreage to increase in sagebrush communities, habitats for sagebrush obligates including sage-grouse and pygmy rabbits would be reduced.

### **From Fish and Wildlife Management**

Implementing actions to sustain or improve sage-grouse winter, breeding, nesting, and brooding habitats and restricting activities that have a high risk of disturbing sage-grouse would maintain or improve sage-grouse habitat.

Managing sage-grouse habitats for recovery of sage-grouse populations would decrease disturbance of sage-grouse habitat and protect and improve habitat and populations.

### **From Visual Resource Management**

Current conditions would be maintained.

### **From Water Resource Management**

Managing potential recovery streams to meet the life history requirements of Lahontan cutthroat trout would improve habitat quality and potentially decrease habitat disturbance, which could increase populations where management changes would be implemented to meet the water quality objectives. Indirectly, improvements to Lahontan cutthroat trout habitat would improve adjacent aspen stands that northern goshawk use. Management of other waters to meet site-specific water quality objectives or applicable standards would maintain water quality for desert dace and springsnails.

### **From Lands and Realty Management**

No impacts are anticipated.

### **From Minerals and Energy Management**

Current conditions would be maintained.

### **From Recreation Management**

Potentially restricting recreational activities where resource impacts occur and restricting camping to areas more than 300 feet from springs could improve sensitive habitats, increase special status species populations, and decrease inadvertent disturbance by visitors if such restrictions were applied to the habitats of special status species.

Applying limits on human activities, constructing facilities around hot springs, or implementing a permit system if resource impacts are occurring would potentially improve sensitive habitats and increase special status species populations. If restrictions implemented include information about protection of special status species, increased visitor awareness could indirectly decrease inadvertent disturbance.

### **From Public Outreach and Visitor Service Management**

Implementing and supporting programs that increase public appreciation of the values of the planning area would potentially decrease inadvertent disturbance by visitors.

Using interpretive techniques, including on-the-ground elements, to prevent resource damage or to enhance visitor safety could indirectly decrease inadvertent disturbance to special status animal species.

## **4.2.5.13 Impacts on Visual Resources**

There are four VRM classes, which allow varying levels of visually intensive activities, as described in Appendix G. The VRM classes serve as a management guide for approval of future site-specific activities or placement of development. Designation of VRM Classes I and II would protect the primitive visitor experience from potential

future actions or developments; whereas, VRM Classes III and IV would allow visually obtrusive or unaesthetic activities to occur in low-profile areas that are not visible from sensitive viewsheds.

**From Land Health Standards**

Applying Rangeland Health Standards to all uses and programs would reduce damage from other uses and improve plant diversity and cover, indirectly enhancing visual quality.

**From Transportation and OHV Management**

Designation of 132 miles of BLM system roads as motorized trails would maintain visual disturbance area associated with roads. Restoration of braided or unnecessary parallel road segments would locally decrease disturbance associated with roads leading to decreased visual impacts. Developing public access on the east side of the Black Rock Range from Humboldt County Road 214 could be visually intrusive in some viewsheds.

Downgrading roads or trails in functional or maintenance class receiving vehicle use in excess of capacity could improve the quality of viewsheds and setting of historic trails by enhancing the primitive, undeveloped feel of the area.

Closing 751,892 acres and limiting 345,969 acres to OHV use would enhance visual resources by reducing soil disturbance, increasing vegetative ground cover, and reducing dust.

Maintaining existing directional signs and adding new signs to prevent resource damage or visitor confusion could increase the number of road signs and lead to localized reductions in visual quality and in the area's primitive, undeveloped character, naturalness, and sense of isolation.

**From Cultural Resource Management**

Current conditions would be maintained.

**From Native American Values Management**

Current conditions would be maintained.

**From Paleontological Resource Management**

No impacts are anticipated.

**From Wilderness Management**

Closing all ways in Wilderness to motorized and mechanized vehicles and installing gates or barriers to discourage continued motorized trespass would improve the undeveloped nature within Wilderness Areas and could locally enhance visual quality. However, the signage, gates, and barriers installed along the perimeters could be visually obtrusive unless they are designed to be aesthetically compatible with their surroundings.

Signing Wilderness boundaries at variable intervals along all boundary roads or as needed may slightly reduce the primitive, undeveloped viewsheds and degrade the settings of historic trails.

**From Special Designation Management**

Current conditions would be maintained.

**From Vegetation Management**

Establishing green breaks to limit the spread of noxious weeds would increase the number and size of areas of surface disturbance, which could locally diminish visual quality. Using rehabilitation and restoration efforts in areas burned by wildland fires and controlling weed infestations could locally improve native vegetation communities and indirectly enhance visual quality within those viewsheds.

Continuing to conduct vegetation management activities to meet Land Health Standards leading to improved riparian and upland plant diversity and cover could locally improve visual quality.

**From Livestock Grazing Management**

Current conditions would be maintained.

**From Wild Horse and Burro Management**

Current conditions would be maintained.

**From Fire Management**

Current conditions would be maintained.

**From Fish and Wildlife Management**

Current conditions would be maintained.

### **From Visual Resource Management**

Designating the planning area (outside Wilderness Areas and the Wilderness Zone of the LCT Area) as VRM Class II could restrict visually obtrusive development from occurring within a majority of the planning area and contribute to retention of the primitive and undeveloped setting of the planning area.

### **From Water Resource Management**

No impacts are anticipated.

### **From Lands and Realty Management**

Granting rights-of-way in support of valid existing rights and retaining the two existing utility corridors could introduce aesthetically incompatible or obtrusive materials, which could degrade the settings of historic trails and reduce the primitive, undeveloped naturalness within the immediate viewshed.

### **From Minerals and Energy Management**

Continued development, operation, and expansion of most locatable mineral mines on valid existing claims in the planning area would have minimal impacts on visual resources because of the low mineral reserves and the resulting small scale of these operations. However, there is a less than 10 percent probability that development of the higher potential gold-silver deposits in the South Jackson Wilderness and near the historic trail in the southeast tail of the NCA would impact the setting of the historic trails and reduce the area's primitive, undeveloped character; naturalness; sense of isolation; and visual quality. Infrastructure associated with development of geothermal resources in the South Playa would minimally reduce visual quality. Removal of salable minerals such as sand and gravel from existing pits and development of new pits, possibly resulting in as many as 12 pits disturbing 60 acres, would be restricted to use for the maintenance of roads. This would have minimal impacts on visual resources adjacent to roads in the planning area.

Withdrawing federal lands within the South Playa Area, the Lahontan Cutthroat Trout Area, and vehicle access routes outside the NCA, but within the planning area from all types of new mineral entry would maintain visual resources.

### **From Recreation Management**

Applying visitor restrictions if resource damage occurs could locally reduce surface disturbance and damage to vegetation where restrictions are applied, potentially improving viewsheds.

Encouraging the development of privately operated campgrounds on public lands outside of the NCA and on private lands both inside and outside of the NCA boundary could diminish the quality of the viewshed in these areas depending on the level of development that takes place. However, potentially displacing camping impacts to lands outside the NCA may reduce the level of surface disturbance and vegetation damage within the planning area.

Class III and IV events would be authorized only in a designated area within the Playa and designating a rocket launch area to reduce disturbances to vegetation, soils, and riparian zones would protect visual resources outside these areas. Within this designated area, visual quality would be expected to temporarily be reduced during the period of large scale recreational events on the playa.

### **From Public Outreach and Visitor Service Management**

Implementing and supporting programs that increase public appreciation of the values of the planning area could lead to decreased resource damage, which could improve visual quality throughout the planning area.

## **4.2.5.14 Impacts on Water Resources**

### **From Land Health Standards**

Applying Rangeland Health Standards to all uses and programs would decrease soil erosion and stream sedimentation, leading to increased hydrologic function.

### **From Transportation and OHV Management**

Changing the designation of 132 miles of BLM system roads to motorized trails would

maintain existing road conditions. This would lead to similar rates of soil erosion and sedimentation of streams except where localized maintenance of motorized trails is required.

Limiting vehicular use to designated roads and trails would improve vegetative cover and therefore hydrologic function of water sources.

Closing 23 miles of routes would minimally reduce the potential for soil erosion and subsequent stream sedimentation, leading to increased hydrologic function.

**From Cultural Resource Management**

No impacts are anticipated.

**From Native American Values Management**

Current conditions would be maintained.

**From Paleontological Resource Management**

No impacts are anticipated.

**From Wilderness Area Management**

Current conditions would be maintained.

**From Special Designation Management**

Current conditions would be maintained.

**From Vegetation Management**

Vegetation manipulation projects designed to rehabilitate and protect areas impacted by wildfires would increase the hydrologic function of water resources by enhancing vegetative cover. Although short-term impacts may occur due to ground disturbance, no long-term increases in erosion and sedimentation would be anticipated.

**From Livestock Grazing Management**

Current conditions would be maintained unless requirements to meet Rangeland Health Standards or water quality objectives result in a change in livestock grazing practices. If such changes were made localized improvements in water quality would be anticipated.

**From Wild Horse and Burro Management**

Gathering excess horses and burros from the herd management areas to achieve the appropriate

management level and managing the wild horse and burro populations consistent with the Wild Horse and Burro Act of 1971 could result in maintenance of erosion and stream sedimentation associated with this use.

Adjusting the available forage for wild horses and burros could result in reduced appropriate management levels and therefore reduced erosion and subsequent stream sedimentation, leading to increased hydrologic function.

**From Fire Management**

Current conditions would be maintained.

**From Fish and Wildlife Management**

Current conditions would be maintained.

**From Visual Resource Management**

Current conditions would be maintained.

**From Water Resource Management**

Managing water resources to meet site-specific water quality objectives or applicable standards and managing potential recovery streams to meet the life history requirements of Lahontan cutthroat trout and desert dace would enhance water quality and hydrologic function of streams and spring systems.

**From Lands and Realty Management**

Granting Rights-of-Way for access to private lands would have minimal impact on water quality. Most of these ROWs would be expected to use the existing access disturbance.

Construction or development within utility corridors could result in short-term ground disturbance and increased soil erosion and subsequent stream sedimentation, possibly leading to decreased hydrologic function. However, due to the temporary nature of such disturbances, long-term changes to hydrologic function would not be likely.

**From Minerals and Energy Management**

Mining operations associated with the gold claims in the South Jackson Mountains Wilderness would increase erosion and stream sedimentation, leading to increased hydrologic function from construction, vehicular traffic, and other

development activities. However, the probability of this development is less than 10 percent due to low potential, would only affect approximately 500 acres and neither of these sites is near streams. Best Management Practices employed during these activities would reduce impacts on streams and water sources.

Withdrawing federal lands from mineral development within the South Playa Area, the Lahontan Cutthroat Trout Area, and vehicle access routes outside the NCA would minimally reduce potential water contamination and could reduce soil erosion and stream sedimentation, leading to increased hydrologic function.

#### **From Recreation Management**

Restricting camping activities within 300 feet of springs and managing the geothermal springs area for existing populations of native fish or other aquatic organisms would reduce the potential for human-related contamination and therefore could result in enhanced water quality.

As visitation increases in the planning area, continuing to allow camping near riparian areas with no new signage or enforcement would result in greater vehicle and foot traffic that could increase soil erosion, stream sedimentation, and nutrient loading. This would lead to decreased hydrologic function.

Restrictions on camping location, duration, and group size could enhance water quality and hydrologic function through decreased erosion and stream sedimentation.

#### **From Public Outreach and Visitor Service Management**

Implementing and supporting programs that increase public appreciation of the values of the planning area could decrease the potential for human contamination and thereby enhance water quality.

### **4.2.5.15 Impacts on Lands and Realty**

Management actions and decisions relating to land tenure adjustments and access to private lands could impact lands and realty. No impacts would

result from management decisions in other resource areas.

#### **From Land Health Standards**

No impacts are anticipated.

#### **From Transportation and OHV Management**

Improvements in the transportation system associated with upgraded road conditions, improved rail crossings and an all weather road to Soldier Meadows would lead to better access and slightly decreased travel times for land owners and mining claimants.

#### **From Cultural Resource Management**

Current conditions would be maintained.

#### **From Native American Values Management**

Current conditions would be maintained.

#### **From Paleontological Resource Management**

Current conditions would be maintained.

#### **From Wilderness Management**

Current conditions would be maintained.

#### **From Special Designation Management**

Current conditions would be maintained.

#### **From Vegetation Management**

No impacts are anticipated.

#### **From Livestock Grazing Management**

No impacts are anticipated.

#### **From Wild Horse and Burro Management**

No impacts are anticipated.

#### **From Fire Management**

No impacts are anticipated.

#### **From Fish and Wildlife Management**

Current conditions would be maintained.

**From Visual Resource Management**

Designation of the NCA for VRM Class I or II management would increase visual quality requirements when realty actions are proposed. This could lead to fewer rights-of-way being granted or development of rights-of-way being more expensive.

**From Water Resource Management**

Current conditions would be maintained.

**From Lands and Realty Management**

Impacts from not establishing new utility corridors in Wilderness Areas, the Lahontan Cutthroat Trout Area, High Rock Canyon, the Black Rock Desert Playa, and along the emigrant trail corridor would be minimal because no major utilities are planned for the subject areas and the remoteness of the subject areas does not lend itself to development.

The ability for BLM to grant utility rights-of-way in conformance with constraints would accommodate future unknown demand for development.

Considering the acquisition of private lands within the planning area would maintain the ability of private property owners to dispose of private property with appropriate compensation and reduce the number of inholdings in the planning area, potentially improving the management of those areas.

Discontinuing the issuance of recreation and public purposes leases and Section 302 leases would have no impact on community related development of public lands. There are no known demands for RPP leases in the Planning Area.

Retaining the two existing utility corridors would maintain existing utilities and accommodate future utilities.

Denying rights-of-way for aboveground utilities on the Black Rock Desert Playa north of the Union Pacific Railroad track would have no impact on the development of future utilities because a 2.75 mile wide corridor would remain open south of the railroad track.

For portions of the planning area outside Wilderness Areas, considering and granting rights-of-way on a case-by-case basis could accommodate

development on public lands while also maintaining opportunities for development on private lands.

**From Minerals and Energy Management**

Current conditions would be maintained.

**From Recreation Management**

Current conditions would be maintained.

**From Public Outreach and Visitor Service Management**

No impacts are anticipated.

**4.2.5.16 Impacts on Minerals and Energy**

Management decisions could lead to effects on the development of minerals and energy resources that would affect the local economy.

The NCA Act of 2000, as amended, closed the NCA and the Wilderness Areas to mineral location, entry, and patent; to leasable mineral development; and to development of geothermal energy, subject to valid existing rights. Salable mineral development in the NCA was restricted to road maintenance.

**From Land Health Standards**

No impacts are anticipated.

**From Transportation and OHV Management**

Improved road condition leading to improved access would facilitate the operation of existing and potential minerals operations.

**From Cultural Resource Management**

Current conditions would be maintained.

**From Native American Values Management**

Current conditions would be maintained.

**From Paleontological Resource Management**

Current conditions would be maintained.

**From Wilderness Area Management**

Current conditions would be maintained.

**From Special Designation Management**

No impacts are anticipated.

**From Vegetation Management**

No impacts are anticipated.

**From Livestock Grazing Management**

No impacts are anticipated.

**From Wild Horse and Burro Management**

No impacts are anticipated.

**From Fire Management**

No impacts are anticipated.

**From Fish and Wildlife Management**

Actions required to maintain or restore populations and habitats of special status species could lead to restrictions on the operations of mineral and energy activities.

**From Visual Resource Management**

Designating the planning area (excluding Wilderness Areas and the Wilderness Zone portion of the LCT Area) as VRM Class II could increase the costs of future minerals development.

**From Water Resource Management**

Current conditions would be maintained.

**From Lands and Realty Management**

Not establishing utility corridors in Wilderness Areas, the Lahontan Cutthroat Trout Area, High Rock Canyon, the Black Rock Desert Playa, and along the emigrant trail corridor could increase the cost of potential developments.

Not granting right-of-way for aboveground utilities on the Black Rock Desert Playa north of the Union Pacific Railroad track could increase the cost of any potential development on public lands where powerlines would be required to cross the playa.

**From Minerals and Energy Management**

There would be minimal impact on the potential to develop mineral or energy resources in the LCT area or lands associated with Wilderness Area access in the eastern part of the Planning Areas because the potential for mineral in these areas is considered low.

Subject to valid existing rights, withdrawal of federal lands within the South Playa Area, the Lahontan Cutthroat Trout Area, and vehicle access routes outside the NCA but within the planning area would decrease opportunities for development.

Potential for mineral development on valid existing claims inside the NCA and Wilderness Areas is low, but a <10 percent potential exists that a gold-silver deposit would be developed in the South Jackson Wilderness Area. Similar potential for gold-silver development exists in the southeast portion of the NCA near Rabbithole Springs.

Opportunities to develop energy from wind-powered and solar-powered devices would be retained in the planning area outside Wilderness, but the area's long distance from population centers makes this a low potential.

**From Recreation Management**

No impacts are anticipated.

**From Public Outreach and Visitor Service Management**

No impacts are anticipated.

**4.2.5.17 Impacts on Air Quality**

Management actions would result in only short-term increases in dust from vehicular use, visitation, or the localized mining activities that occur.

**From Land Health Standards**

Current conditions would be maintained.

**From Transportation and OHV Management**

Decreased fugitive dust would occur as a result of road improvements and maintenance that compact road surfaces and increase the particle size

on the roadbed. Designated routes receiving vehicle use in excess of capacity could be downgraded in quality for the purpose of decreasing vehicle use levels. Vehicle use, including OHV use, would be managed by designating three use levels that cover the planning area. These actions could result in decreased fugitive dust levels due to improved road surfaces and decrease route mileage. Providing greater public access on the east side of the Black Rock Range would result in potentially greater vehicular traffic throughout that area and potentially greater fugitive dust emissions.

If visitation to the area increases as a result of improved road conditions, the fugitive dust associated with increased vehicular traffic would be expected to increase.

#### **From Cultural Resource Management**

No impacts are anticipated.

#### **From Native American Values Management**

No impacts are anticipated.

#### **From Paleontological Resource Management**

No impacts are anticipated.

#### **From Wilderness Management**

Current conditions would be maintained.

#### **From Special Designation Management**

Current conditions would be maintained.

#### **From Vegetation Management**

Current conditions would be maintained.

#### **From Livestock Grazing Management**

Current conditions would be maintained.

#### **From Wild Horse and Burro Management**

Current conditions would be maintained.

#### **From Fire Management**

Use of prescribed fire and mechanical treatment of vegetation would result in short-term, localized episodes of smoke and reduced visibility.

Prescribed fire used on a site-specific basis to accomplish localized projects would temporarily increase smoke. These actions could result in short-term localized increases in smoke and reduced visibility. Low surface disturbance mechanical treatments, consistent with vegetation objectives, would have less impact on air quality.

#### **From Fish and Wildlife Management**

Current conditions would be maintained.

#### **From Visual Resource Management**

Current conditions would be maintained.

#### **From Water Resource Management**

Current conditions would be maintained.

#### **From Lands and Realty Management**

No impacts are anticipated.

#### **From Minerals and Energy Management**

Mining operations associated with the gold claims in the South Jackson Mountains Wilderness and near Rabbithole Spring would create short-term and periodic increased fugitive dust from construction, vehicular traffic, and other development activities. However, the probability of this development is less than 10 percent due to low potential and would occur only on approximately 500 acres.

In areas that would remain open to location, entry, and patent, long-term increases could also result from continued mining operations. However, these increases would likely be localized and are subject to federal and State emission regulations.

#### **From Recreation Management**

Implementing visitor restrictions, such as group size or camping restrictions, where resource damage is occurring and limiting drive in camping to portions of the High Rock Canyon ACEC outside of Wilderness may indirectly decrease fugitive dust from recreation activities.

Limiting Class III and IV events to eight weekends a year, restricting these events to designated areas within or near the playa, and limiting the number of events that could occur simultaneously could result in increased events on

the playa, which would increase fugitive dust production over current levels.

#### **From Public Outreach and Visitor Service Management**

No impacts are anticipated.

### **4.2.5.18 Impacts on Soils**

#### **From Land Health Standards**

Implementing Land Health Standards under all programs would decrease soil disturbance, compaction, and erosion from all activities.

#### **From Transportation and OHV Management**

Changing the designation of 132 miles of BLM system roads to motorized trail would maintain road surface conditions, thus maintain soil disturbance associated with braided and parallel roads and erosion caused by vehicular traffic. The closure of 23 miles of vehicle routes would minimally reduce soil disturbance, compaction, and erosion and would improve soil conditions and productivity. The ability to adjust road designations and maintenance levels in response to resource conditions would locally improve soil stability and reduce erosion.

As visitation increases in the area, allowing vehicular traffic would increase soil disturbance, compaction, and erosion. Maintaining a large portion of the Planning Area as open to OHV use would result in future increases in soil disturbance associated with the new vehicle tracks created by recreational users.

#### **From Cultural Resource Management**

Current conditions would be maintained.

#### **From Native American Values Management**

Current conditions would be maintained.

#### **From Paleontological Resource Management**

Current conditions would be maintained.

#### **From Wilderness Area Management**

Current conditions would be maintained.

#### **From Special Designation Management**

Current conditions would be maintained.

#### **From Vegetation Management**

**ALL** Soil stability would increase due to vegetation manipulation projects, although short-term increases in soil disturbance, compaction, and erosion could occur from ground activity. Long-term increases in soil productivity would be anticipated. **ALL**

#### **From Livestock Grazing Management**

Impacts would be the same as those under Land Health Standards.

#### **From Wild Horse and Burro Management**

Current conditions would be maintained.

#### **From Fire Management**

Current conditions would be maintained.

#### **From Fish and Wildlife Management**

Current conditions would be maintained.

#### **From Visual Resource Management**

Current conditions would be maintained.

#### **From Water Resource Management**

Current conditions would be maintained.

#### **From Lands and Realty Management**

Increased access through issuance of rights-of-way to inholdings outside of wilderness could increase traffic and soil disturbance, compaction, and erosion.

Construction or development within utility corridors would result in short-term soil disturbance, compaction, and erosion.

#### **From Minerals and Energy Management**

Potential mining activities on lands available for lease and development would disturb soils and

potentially result in accelerated erosion and loss of soil productivity in those areas.

#### **From Recreation Management**

Day use designations in areas containing sensitive resources would locally reduce the potential for soil disturbance, compaction, and erosion.

Restrictions on location, duration, and group size for camping and other activities would decrease soil disturbance, compaction, and erosion. Implementing visitor restrictions, such as group size or camping restrictions, where resource damage is occurring and limiting drive in camping to portions of the High Rock Canyon ACEC outside of Wilderness may indirectly decrease fugitive dust from recreation activities.

Limiting Class III and IV events to eight weekends a year, restricting these events to designated areas within or near the playa, and limiting the number of events that could occur simultaneously could result in increased events on the playa, which would increase fugitive dust production over current levels.

#### **From Public Outreach and Visitor Service Management**

Long-term soil stability could be improved by outreach methods used to mitigate resource impacts.

### **4.2.5.19 Impacts on Recreation**

The impacts of the planning decisions on the visitor experience depend on the expectations and values of the individual visitor. A particular action could benefit some users and have a negative effect on others. The degree of impact would also vary relative to user sensitivity. Sensitivity will vary among different user types and will be different between new users and traditional users. The analysis will include potential impacts to both traditional users and new users that would be expected to visit the planning area, assuming that these different users groups would have different expectations and desires for recreation opportunities.

#### **From Land Health Standards**

Current conditions would be maintained.

#### **From Transportation and OHV Management**

Limiting playa access associated with railroad crossings to one improved site would enhance visitor safety and public access to NCA resources. Improved access could result in a loss of solitude and natural quiet that has been traditionally available in small portions of the playa margins, near the playa entrance. Closing the playa access road at Trego Hot Springs would enhance the ability to manage vehicle use, and would have the potential to reduce visitation.

Changing the designation of 100 miles of BLM system roads to motorized trails would retain the existing levels and quality of access within the planning area, which would maintain recreation opportunities to visitors. Increased use may result in crowding along BLM motorized trails, with the potential of reducing opportunities for solitude and natural quiet. However, public access would not be improved above the existing conditions, which would still require a high degree of driving skills and many areas would remain inaccessible to some passenger vehicles.

No additional areas would be designated as closed to OHV use, other than required legislative closures to the wilderness areas. Therefore, no additional impact to vehicle access would be expected. The perception of recreating in an area free from human disturbance would be enhanced in areas where cross-country OHV travel is prohibited. Reduced environmental degradation to sensitive habitats, landmarks, cultural resources and other unique resources of the planning area, as a result of OHV use would retain opportunities for enjoyment by future generations.

Downgrading road or trails experiencing vehicle use in excess of capacity for the purpose of decreasing vehicle use levels would help retain critical physical, social, and managerial settings of specified areas. These settings include natural quiet and solitude associated with primitive recreation and the perception of recreating in an area free from human development that has traditionally been available. However, recreation opportunities to a population of visitors who use the routes in their current condition would be lost.

Public access through and across the planning area would be enhanced for the long term by acquiring public access easements or developing road alignments in areas where public roads cross private property. Recreation opportunities would be available to a larger segment of users as a result of improved access. However, some areas that currently experience minimal use may experience increased visitation, resulting in the loss of solitude and natural quiet that were traditionally available. Any newly developed routes requiring surface disturbance would impact the undeveloped character of the planning area.

Designating 345,969 acres as limited to designated roads and motorized trails would restrict the freedom for cross-country travel and reduce conflicts between motorized and non-motorized users. Within this area, 831 miles of routes would be designated as available for vehicle use. Insert number of miles closed. Since visitor-use data indicates that most multi-passenger vehicles are operated on the playa and existing roads, the OHV limitations proposed in this alternative are not expected to impact this segment of users. However, hunters who use motorized vehicles to transport game off-trail would most likely be inconvenienced by the proposed action. The availability of an extensive road system should off-set most lost opportunities, but OHV users who enjoy cross-country travel would likely be displaced to areas outside of the planning area.

Adding signage in areas experiencing resource damage or where visitors consistently become lost would help increase safety for drivers. Impacts associate with the installation of directional signage include, a loss of self-discovery and exploration on the road system and the potential to diminish the undeveloped character of the area. However, there would be a long-term gain in resource protection, which would help to maintain or restore the primitive character of the area. New users and those who are unfamiliar with the area may benefit from directional signage.

Upgrading the Sulphur-Jackson Road to Maintenance Level 3 would increase public access throughout the Eastern portions of the planning area and to the Jackson Mountains Wilderness areas, which would provide opportunities for a wider range of visitors. The potential for increased traffic along these routes and in areas accessed by these

routes could result in a decrease of natural quiet and solitude associated with primitive recreation.

Using an adaptive management approach to assign BLM System roads or designated routes a functional classification or maintenance level would enhance the ability to manage certain areas for critical environmental settings. Unwarranted management actions that would negatively impact the visitor experience or the area's primitive character would be avoided. Public access would be maintained in areas where access has been reduced or eliminated due to road deterioration. Maintaining access only to traditional standards would inhibit access by standard passenger vehicles in many places in the planning area.

Public access through and across the planning area would be enhanced, by developing public access easements or developing a travel corridor on the east side of the Black Rock Range from Humboldt County Road 214, north-south access to Black Rock Point and east-west access to the Soldier Meadows area, and by acquiring public access easements or developing road alignments in areas where public roads cross private property. Recreation opportunities would be available to a larger range of visitors as a result of improved access. However, some areas that currently receive minimal use may experience increased visitation resulting in the loss of solitude and natural quiet.

### **From Cultural Resource Management**

Allowing only non-mechanized transportation on Class A and B trail segments and imposing seasonal restrictions on some Class C trail segments would restrict certain recreational activities in some desirable and traditionally used areas. Decreased vehicular access would impact a small population of OHV and mountain bike users. However, these restrictions would have the potential of increasing opportunities for solitude and reduce conflict among different user types. Increased protection of cultural resources would also retain opportunities for discovery or enjoyment by future generations.

Emphasizing public use of cultural resources would increase their availability for interpretation. Improved visitor awareness and appreciation for cultural resources would enhance the preservation of rare resources for discovery by future generations.

### **From Native American Values Management**

Managing Properties of Cultural and Religious Importance (PCRI) under the Traditional Use Category would enhance the preservation of rare resources for discovery by future generations. There would, however, be the potential for conflict between recreation users and traditional users.

### **From Paleontological Resource Management**

Closing the Hanging Rock Petrified Forest area to petrified wood and other fossil, rock, and mineral collection would contribute to the long-term preservation of rare resources for discovery by future generations. The proposed action has the potential to restrict visitor's freedom of choice and certain recreational activities in desirable and traditionally used areas, and would likely result in visitor displacement to other rockhounding areas inside and outside of the planning area.

### **From Wilderness Management**

Providing signs specifying Wilderness boundaries at variable intervals would help to increase visitor awareness of sensitive areas. A long-term increase in primitive character would be expected because of reduced motorized trespass and the creation of new ways in Wilderness Areas. These potential outcomes would enhance the perception of recreating in an area free from human development. A decrease in conflict between those using motorized vehicles and those not using motorized vehicles would also be expected. Signing wilderness boundaries would help to increase visitor awareness of areas having important and sensitive values. A long-term increase in primitive character within designated wilderness would be expected due to a reduction of motorized trespass and the creation of new ways in wilderness areas. These potential outcomes would enhance the perception of recreating in an area free from human development inside wilderness. However, signing wilderness boundaries would diminish the perception of recreating in an area free from human development in areas adjacent to wilderness, where wilderness signs would be located. A decrease in conflict between motorized and non-motorized users would also be expected.

Implementing mitigating actions when Lahontan cutthroat trout habitat is threatened by

human use could restrict certain recreational activities in desirable and traditionally used areas of riparian and spring complexes. The proposed action would have the potential to displace use to other areas. However, actions taken to protect riparian areas would also retain opportunities for recreating in a natural setting free from human disturbance.

Managing the ten acquired parcels within the Lahontan Cutthroat Trout Area for wilderness characteristics would have long-term impacts on management and the visitor experience. The ten acquired parcels would be managed to retain wilderness qualities and visitor experiences, which would strengthen the ability to manage the existing WSA for wilderness character and retain important values associated with primitive recreation. However, managing these areas for wilderness characteristics would diminish opportunities associated with motorized travel.

### **From Special Designation Management**

Limiting vehicle camping to designated sites in High Rock Canyon ACEC and Soldier Meadows ACEC, would have direct and indirect benefits to the visitor experience. There would be decreased opportunities for camping with a loss in visitors' freedom of choice in campsite locations in the ACECs. This restriction may cause visitor displacement and would likely increase competition for desirable campsites, but would decrease competition for day-use recreation opportunities at attraction areas. Through improved protection of wildlife populations there would be a long-term increase in wildlife viewing and hunting opportunities. The proposed restrictions would also increase protection of rare resources for enjoyment by future generations. Although the natural quiet and solitude associated with primitive recreation could be diminished in the immediate vicinity of designated campsites, it would be expected to increase in other parts of these ACEC's.

Closing portions of the High Rock ACEC between the mouth of High Rock Canyon and five miles below Steven's Camp to vehicle use for fourteen weeks would restrict recreational activities in desirable and traditionally used areas. There would be a potential for visitor displacement to other areas inside and outside of the planning area, especially during the spring season. The closure

will only minimally affect hikers. Reduced impacts to the road system may improve access during seasons of use. The improved protection of wildlife populations would increase opportunities for wildlife viewing and hunting during other times of the year.

Implementation of the Soldier Meadow Activity Plan (SMAP) would have impacts to public access, resource conditions and visitor experiences. Rerouting the Soldier Meadows hot spring access road would decrease vehicle access to the areas immediately adjacent to the hot springs. Access to the hot pools would be more challenging and would require a short walk. There would also be a loss of traditional and desirable camping locations. This would increase the potential for visitor displacement to other areas inside and outside of the planning area. However, opportunities for natural quiet and solitude at the hot spring pools would be enhanced, and user conflict would be minimized. Implementation of the SMAP would also mitigate impacts to overnight users by providing alternative overnight camping locations. On-site developments, such as interpretive signage, tent pads, and fire grates would have the potential to diminish the wild and undeveloped character of the area. Impacts to critical habitat that are related to vehicle travel and camping would also be minimized, which would enhance the perception of recreating in an undisturbed area.

Using an adaptive management approach to adjust management actions to recover rare species of the ACEC would enhance the ability to manage specific areas for their critical environmental settings, while further protecting rare resources for enjoyment by future generations. The proposed action has the potential to restrict certain recreational activities in desirable and traditionally used areas of riparian and spring complexes, which may result in visitor displacement to other areas inside and outside of the planning area.

#### **From Vegetation Management**

Actions taken to eradicate noxious weeds may include the use of work crews, which would have the potential for short-term loss of solitude. However, these impacts would be offset by the long-term increase in naturalness, which would

enhance the perception of recreating in an environment free from human disturbance. A short-term decrease in public access could also be expected in localized areas during the rehabilitation periods.

#### **From Livestock Grazing Management**

Current conditions would be maintained.

#### **From Wild Horse and Burro Management**

The use of helicopters to gather wild horses and burros would have the potential of diminishing solitude in the wilderness and rustic zones by decreasing the natural quiet associated with primitive recreation.

#### **From Fire Management**

No impacts are anticipated.

#### **From Fish and Wildlife Management**

The use of motorized tools in trap and transplant activities, aerial wildlife population surveys, emergency wildlife actions, or to maintain water development would have the potential of diminishing critical physical, social, and managerial settings of specified areas by decreasing natural quiet and solitude associated with primitive recreation. Impacts from aerial surveillance would be localized and minimal because they would be scheduled outside of peak use seasons. Allowing wildlife enhancement activities would enhance the ability to manage wildlife populations, thereby indirectly increasing wildlife viewing and hunting opportunities throughout the planning area.

Maintaining the Watchable Wildlife Sites in High Rock Canyon, South Jackson Wilderness, and the Lahontan Cutthroat Trout Area would also enhance wildlife viewing opportunities.

Actions taken to repair, maintain and reconstruct existing wildlife related projects and allowing new wildlife projects, including water developments, would have the potential to diminish critical physical, social, and managerial settings of specified areas, but may enhance other recreation opportunities. Allowing motorized access for construction or maintenance of wildlife projects would decrease natural quiet and solitude associated with primitive recreation. The proposed actions would also diminish the perception of recreating in

an area free from human development, since permanent structures would remain inside the NCA and wilderness. However, the increased ability to manage wildlife populations would have the potential to increase wildlife viewing and hunting opportunities throughout the planning area. Regular inspections of projects would minimize impacts from the proposed actions by reducing the amount of maintenance and reconstruction required.

#### **From Visual Resource Management**

Designating the planning area as VRM Class II would enhance the perception of recreating in an area free from human development. Certain critical settings of specified areas would be protected from impacts caused by development.

#### **From Water Resource Management**

Managing potential recovery streams to meet the life history requirements of desert dace and Lahontan cutthroat trout and other waters to meet site-specific objectives or applicable water quality standards would restrict certain recreational activities in desirable and traditionally used areas of riparian and spring complexes. The resulting loss of available recreation sites would have the potential of increasing visitor competition and would diminish opportunities for unconfined recreation. However, management actions taken to protect listed species would enhance the preservation of rare resources for enjoyment by future generations.

#### **From Lands and Realty Management**

Current conditions would be maintained.

#### **From Minerals and Energy Management**

Potential minerals and energy operations could directly impact the primitive and undeveloped character of areas in the immediate vicinity and viewsheds. Administering geothermal leases in the South Playa could result in construction-related activities associated with the extraction of resources, which could reduce public access to portions of the planning area. Impacts to SRP proponents and dispersed recreation users would be expected, since the largest percentage of area users visit the south playa at least some time during their trip. Mining operations associated with the gold

claims in the South Jackson Mountains Wilderness, near Rabbithole Springs, and the potential in and along vehicle access routes could also impact the primitive and undeveloped character of the planning area. However, the probability of this development is less than 10 percent because of low potential.

#### **From Recreation Management**

Adopting the Nevada Revised Statute restricting camping within 300 feet of springs would have direct and long-term potential to diminish visitors' freedom of choice in campsite location, but would enhance the preservation of rare resources for use by future generations. Eliminating camping in spring areas would minimize camping-related impacts and enhance or restore the undisturbed character of localized areas. There would likely be a reduction in competition for day use of springs and for other recreational activities. With an overall loss of recreation sites, there would be an increase in competition for desirable campsites. However, in areas where sites are closed new sites could be developed in suitable locations, which would minimize competition for sites.

Allowing open fires only with the use of dead and down wood and requiring a surface protecting device on the playa would decrease visitor spontaneity and may cause inconvenience to users. However, by eliminating burn scars on the playa and increasing protection of wooded areas, there would be an enhanced perception of recreating in an area free from human disturbance.

Developing a recreation management plan to determine resource standards that would guide management decisions would help create clear guidelines for management actions, thereby enhancing the ability to retain critical physical, social, and managerial settings of specified areas.

Putting limits on human activities affecting areas of use, group size, duration of stay, number of people or vehicles, or types of activities would enhance the ability to manage for critical social and physical settings of specified areas. The proposed actions would limit visitor's freedom of choice, and would likely result in visitor displacement to other areas or zones. There would, however, be a decrease in visitor conflict and competition for favorite/desirable sites that would be anticipated in conjunction with increased use in

the planning area. Increased resource protection and natural quiet and solitude associated with primitive recreation would be retained or restored in the affected areas.

Developing campgrounds when other management tools prove ineffective would increase the potential for a wider range of recreational opportunities, thereby providing for an increased range of visitors. There would also be the potential for a localized decrease in natural quiet and solitude associated with primitive recreation, and also to diminish the perception of recreating in an area free from human development. However, by concentrating impacts to designated areas, widespread camping related impacts would be reduced, which would contribute to the retention or restoration of the undisturbed character of other areas.

Any new developments would diminish the undeveloped character of the area and may promote increased visitation. However, requiring all facilities to be unobtrusive and aesthetically compatible with the area's setting would minimize these impacts. New facilities could also provide improved access and may make some areas more desirable to a wider range of visitors. Strategically locating developments may help encourage use away from sensitive resources and attractions, thereby minimizing impacts to those areas.

Developing boardwalks or fencing around hot spring attraction areas would have the potential to diminish the perception of recreating in an area free from human development while improving access for people of all abilities, improving visitor safety, and contributing to the preservation of rare resources for enjoyment by future generations. Carefully planned developments would discourage user-made facilities, which are often unsightly or unsafe.

Implementing a permit system in areas where resources or the visitor experience is being impacted or, where visitor safety is compromised would decrease visitor conflict and competition for favorite/desirable sites resulting from increased use, reduce public safety concerns, and would contribute to increased natural quiet and solitude associated with primitive recreation. Requiring permits would lead to a decreased perception of spontaneity and unconfined recreation. There would also be an increased potential for visitor displacement to other areas inside and outside of the planning area.

However, negative impacts to visitors would be minimized, since actions would be tailored to specific areas through an adaptive management approach, which would contribute to the retention of important physical, managerial and social settings of certain areas.

Encouraging the development of privately operated campgrounds would have the potential to increase natural quiet and solitude associated with primitive recreation by distributing use away from attraction areas. The proposed action would also increase the potential for a wider range of recreational opportunities, thereby providing for an increased range of visitors. New developments on private lands would have the potential to diminish the undeveloped character of the planning area. However, these impacts would be minimal since most private lands are associated with ranches, which already have developments in place.

Limiting the collection of rock, minerals, and invertebrate fossils to 25 pounds per day, plus one piece with a maximum collection of 250 pounds per year, and the potential for permit requirements would contribute to the protection of rare resources for enjoyment by future generations. Imposing collection limits and requiring a permit would restrict opportunities for collection, which would decrease visitor's freedom and spontaneity, and could lead to displacement of users who traditionally collect large quantities.

The ability to construct, relocate or close trails to mitigate human caused impacts would have direct and indirect impacts to the visitor experience. There would be the potential to decrease natural quiet and solitude associated with primitive recreation by encouraging use on developed trails, and the perception of recreating in an area free from human development would be diminished. However, the increased trail opportunities would provide for an increased range of visitors. Opportunities for discovery and exploration would also be increased, and increased resource protection would enhance the perception of recreating in an area free from human caused impacts.

The ability to develop trails to separate user-types and routing the Desert Trail through portions of the NCA would have the potential to reduce conflict between different user types, and would increase available trail opportunities. Some of the negative impacts from trail use could also be reduced by imposing limits on times and location of

use. Informational brochures/guidebooks that accompany trail systems would contribute to an increased understanding and appreciation for area resources, which may minimize use related impacts.

Prohibiting camping within ½ mile of designated campsites would restrict visitor's freedom of choice in camping location, and may increase competition for desirable sites. However, widespread camping related impacts, due to inappropriate campsite location and campsite proliferation, would be minimized. Crowding and user conflict at attraction areas would also be minimized. Reduced impacts would improve naturalness and opportunities for solitude in heavily used areas, contributing to the protection or restoration of the primitive character.

Limiting vehicle camping to designated sites in High Rock Canyon ACEC and Soldier Meadows ACEC, would have direct and indirect benefits to the visitor experience. There would be decreased opportunities for camping with a loss in visitor's freedom of choice in campsite locations in the ACECs. This restriction may cause visitor displacement and would likely increase competition for desirable campsites, but would decrease competition for day-use recreation opportunities at attraction areas. Through improved protection of wildlife populations there would be a long-term increase in wildlife viewing and hunting opportunities. The proposed restrictions would also increase protection of rare resources for enjoyment by future generations. Reduced camping related impacts to sensitive areas and wildlife populations would contribute to the perception of recreating in an area free from human disturbance. Closing impacted sites would likely increase competition for campsites in light of increased visitation. However, competition for day-use of attraction areas would be decreased through strategic campsite location. Although the natural quiet and solitude associated with primitive recreation could be diminished in the immediate vicinity of designated campsites, it would be expected to increase in other parts of these ACECs.

The development of a comprehensive permit process would enhance the ability to manage for resource and visitor experience. The proposed actions would limit the number, location, or scale of permitted recreation activities. The development of permit limitations would have long-term impacts to dispersed users and permittees. These limitations

would help to retain or restore the natural quiet and solitude associated with primitive recreation in light of higher demand and visitation. There is also potential to increase public access through areas where events are taking place. There would likely be decreased freedom of choice, and increased competition for event location due to proposed limitations of areas available for large-scale events. Certain types of events that require large areas or long duration of public closure would be restricted. The current evaluation process would allow for a greater range of permitted activities, which would provide opportunities for a greater range of visitors. Spontaneity in permit applications would be increased with improved efficiency of the evaluation process.

### **From Public Outreach and Visitor Service Management**

The development of an outreach plan would have indirect impacts on the primitive character and visitor experience of the area by raising awareness of important and sensitive values. Visitors would be less likely to inadvertently engage in activities that would disturb important resources and other visitors within the planning area. A reduction of use-related impacts would enhance the perception of recreating in an area free from human development. The proposed action would also be expected to reduce conflict between different user types.

Expanding public awareness programs, continuing use of the visitor contact trailer, maintaining an information kiosk in Gerlach, and introducing low-impact recreation principles through volunteers and staff, would have long-term direct and indirect benefits to the visitor experience. These interpretive and educational actions would have the potential to increase visitor's sense of appreciation and understanding of area resources, as well as visitor's awareness of important and sensitive values. Increased recreation opportunities would be available through on-the-ground programs and any additional interpretive exhibits, but would also diminish the undeveloped character of the area. Indirect benefits would stem from a decrease in inadvertent impacts of visitor use, which would enhance the ability to manage for critical physical, social, and managerial settings of specified areas. Visitor safety would also be enhanced. The use of

an adaptive management plan would reduce unnecessary developments and allow site specific planning. Concentrating developments in Front Country zones would help to retain the critical environmental settings of specified areas within the NCA, but would limit the range of recreation opportunities in other areas.

The creation of an Administrative Site/Visitor Contact Station for the NCA would have similar impacts as those listed above, but outreach capabilities would be enhanced by having a facility located along a major travel corridor. Providing information to visitors before they reach the planning area would also enhance visitor safety and reduce the need for on-site developments within the planning area.

Developing cooperative partnerships, and encouraging academic and public research would have similar impacts as those listed above. These proposed actions would also enhance management opportunities as a result of greater resources.

#### **4.2.5.20 Impacts on Social and Economic Conditions**

##### **Impacts on Recreation**

This Alternative proposes a Public Outreach and Visitor Services program that is designed to encourage, accommodate, and facilitate recreation, but not including major Administrative Site/Visitor Contact Stations within the Planning Area, extensive signing, kiosks or on-site interpretation facilities. This Alternative stresses conservation of the area's resources and values for which the NCA was created, while recognizing recreation as a legitimate public use. Opportunities and priorities for scientific research and educational opportunities are also emphasized, consistent with the NCA legislation.

Recreation growth was estimated at approximately 35 percent, based on US Forest Service studies for their Renewable Resources Planning Act consistent with to a moderate emphasis on recreation, and in keeping with a stronger conservation ethic.

A 35 percent increase in recreation in the year 2020 would result in a total of 86,134 visitor days for dispersed recreation. Special Recreation Permit

events would add another 91,208 visitor days, for a total of 177,342 visitor days.

Recreation expenditures for this level of visitation are estimated at \$5.4 million, \$2.9 million for residents, and \$2.5 million for non-residents. Based on analysis utilizing multipliers derived from an IMPLAN model for Washoe County, these total expenditures would generate \$2.7 million in direct income and directly create or sustain a total of 122.8 jobs (2000 hour FTE). Non-resident expenditures, which bring in new money in exchange for "exported" recreation, and contribute to expansion of the regional economy, would be responsible for \$1.2 million of the \$2.7 million total in direct income, and produce 59.6 jobs. The total direct, indirect, and induced effect of these expenditures, as they circulate through the economy, would result in 154.2 jobs and \$3.65 million in income (all estimates are in 2001 dollars).

Willingness-to-Pay value is estimated at \$2.4 million. This represents the value, or "worth," of the recreation experience to the recreationist.

Construction of an Administrative Site/Visitor Contact Station along a major access corridor to the NCA, as proposed in this Alternative, would provide local employment for a construction contractor and crew, which would be a short-term economic benefit to the local area. The operation of a full-time Administrative Site/Visitor Contact Station would create one or two permanent full-time jobs, employing locally hired attendants with a salary in the range of \$15-20,000 each.

As all types of recreation participation increase in the planning area, some deterioration and degradation of resources conditions may be expected. This would increase management costs for resource maintenance and protection to a degree consistent with the expected moderate increase in recreation use.

##### **Impacts on Minerals and Energy**

###### Locatable Minerals

If a gold mining operation were located within the South Jackson Wilderness Area, Class I VRM standards would apply, as in the No Action Alternative. In either case, it is doubtful that a gold mining operation, either open pit or below ground, could meet such standards. Some modification of operations by permit stipulation would be required.

Major gold mining companies are quite accustomed to preparing mining plans of operations and environmental assessments. These requirements could discourage smaller or higher risk based operations. However, in all such situations, the decision to proceed would be based on estimated returns over costs. For larger operations, those that entail major investment and the expected long-term returns, such additional costs are usually incidental, not prohibitive, and may exist in most mineral exploration and development areas. If any gold ore discoveries prove to be of sufficient quality, it is unlikely that a gold mining operation with valid existing rights would be deferred.

#### Leasable Minerals

Geothermal exploration and development would be less likely to occur under this alternative. The potential for development of geothermal development within the South Playa under the requirements for No Surface Occupancy would decrease the likelihood of potential development area to all except those with valid existing rights. Potential for development would be limited to the one existing geothermal lease in the South Playa Area. Moderate modifications and costs would be necessary to conform to VRM Class II standards in this area. Companies would make their investment decisions based on expected returns, taking into consideration the extra costs that might be entailed. The potential for an additional 12 jobs in the local area, and the associated incomes, including the possibility of nine local hires, which would result from the operation of a geothermal plant, would be less likely.

#### Saleable Minerals

No economic impacts are anticipated. Specific and necessary pits could be identified and authorized, and VRM Class II standards maintained.

The public lands outside of the planning area also contain abundant supplies of sand and gravel, so it is highly likely that alternative sources could be found if necessary. Transportation costs could be affected if haul-distance is increased. It is estimated that transportation costs increase about 25 percent for each doubling of the haul-distance (Mine Cost Services, 1998).

### **Impacts on Lands and Realty**

There would be minimal impact on actions associated lands and realty. Rights-of-way could be granted within the Planning Area. Land exchanges initiated by willing owners would continue to be considered in the context of the objectives of the RMP. There would be continued opportunities for Land Use Permits for filming and other commercial activities in portions of the Planning Area where those activities have occurred in the past.

There is concern with regard to the restriction on rights-of-way for utilities, which would be granted for access to private lands, in support of valid existing rights and consistent with the Visual Resource Management objectives. However, the question concerning availability of utilities appears to be moot. Current costs of providing electricity in these rural areas range upward from \$60,000 per mile. At this cost, electricity provided by gasoline generators or solar panels is already more cost effective.

### **Impacts on Road Maintenance and Repair**

BLM has responsibility for approximately 952 miles of roads and trails within the planning area. BLM system roads within the Planning Area total about 74 miles. BLM may accept responsibility for the 20.9-mile portion of the Soldier Meadows road, which is a Pershing County road that would require construction funds to bring the road up to the same standard as the Humboldt portion of the road and additional yearly maintenance costs. Additional maintenance costs would be required if motorized trails, including wilderness access routes and boundary trails, needed maintenance to keep them open for vehicle use or to correct resource damage. When motorized trail segments receive increased recreation use that requires upgrades in functional or maintenance levels to prevent resource damage, BLM maintenance costs could further increase. The current capability for road maintenance is about 100 miles per year in the Winnemucca and Surprise Field Offices.

Humboldt County has 39.6 miles of roads within the planning area, and 20.3 miles of boundary roads. It is currently able to maintain all roads within its area of responsibility to a satisfactory level. The additional traffic that might be expected from slowly growing visits for

recreation, as projected for this alternative, appears to present no hardship to its capabilities.

Pershing County is already in a tight fiscal situation that makes it impossible for it to regularly maintain its 20.9 miles of roads within the NCA, and 4.4 miles of boundary roads. BLM has been working well with the county and has established excellent cooperation.

Only 5.6 miles of Washoe County roads are within the planning area. No difficulties resulting from increased visits to the area for recreation is anticipated. However, Washoe, Humboldt, and Pershing Counties point out the critical cost-saving importance of aggregate pits and water for efficient road maintenance. Costs for aggregate are about \$70 for 8–10 yards, but hauling costs are high. The greater the distance, the higher the cost for aggregate, equipment transport and wages. Roads are much more likely to be more heavily used, barriers more likely to be circumvented, and vandalism to signs might be expected to occur more frequently without adequate law enforcement presence. Maintenance and repair of roads, particularly Soldier Meadows road, would probably be required with greater frequency resulting from increased vehicle traffic.

Pershing County currently occasionally maintains a few miles of roads in the area, so is expected to be slightly affected. A heavier traffic burden on the portion of Soldier Meadows road through Humboldt County would probably necessitate higher maintenance and repair costs to Humboldt County. Washoe County would probably experience more traffic on its 5.6 miles of roads in the planning area, but access roads in the vicinity of Gerlach would be much more heavily used.

### **Impacts on Law Enforcement and Court Costs**

BLM's law enforcement capability for the NCA is insufficiently funded and staffed. For an area comparable in size to the State of Delaware, BLM has only one full-time law enforcement ranger assigned to the NCA. The Surprise Field Office has two law enforcement personnel, one of which was recently hired and is assigned to the NCA. The other spends as much time as possible within the NCA because it is the area of highest use. But the NCA area represents only about 18

percent of the law enforcement personnel's total area of responsibility.

The Winnemucca Field Office has only one law enforcement rangers. One additional full-time NCA law enforcement officer should be available in 2004. One vacant law enforcement officer position at the Winnemucca Field Office remains unfilled because of lack of funding. The NCA is patrolled as often as possible, but it represents only 6 percent of the Winnemucca Field Office area of responsibility.

The most important aspect and effective use of law enforcement is presence. By simply being present in the area, or known to be about the area with some frequency, law enforcement becomes more effective. Destruction of signs and other vandalism, damage to resources, intrusions into Wilderness Areas, and cultural resource violations would be diminished by the simple visibility and occasional presence of law enforcement capabilities.

Neither Humboldt, Pershing, nor Washoe County Sheriff's Offices perceive the NCA area as a problem or concern. Washoe County Deputies currently patrol the northwestern portion of the NCA and have had no major problems. Humboldt County law enforcement patrols on an infrequent basis, which they determine is appropriate to the need. They respond immediately to any requests for assistance. Pershing County Deputies do not patrol the southern portion of the NCA on a regular basis. And, except for the Burning Man Festival, when their presence is contracted, they have had no problems. None of the counties expressed a particular concern about law enforcement requirements at the current level of visitation, and they anticipate no compelling difficulties under the low-level growth in visitation projected for this alternative. They all report excellent cooperation and coordination with BLM. The predominant season of use for the area is from Memorial Day through Labor Day—or about 3 months, and they feel that, so far, current staffing has proven adequate.

Only Pershing County has identified a problem with arrest, incarceration, and trial costs. Such concerns are understandable for a county with a small population and limited tax base. However, all of the incidents have been associated with the Burning Man Festival and the large population of revelers that congregate in the area. The population

of Black Rock City, at that time, is 4 to 5 times as large as Pershing County's normal population. Any extra costs are onerous for the county, but the incidents have been relatively few in number.

Effective mitigation has been provided over the years as BLM and its Burning Man Organization cooperators have learned from experience. The Special Recreation Permit stipulations have grown more sophisticated and appropriate to the issues of managing such a large event and have proven to be increasingly effective. Pershing County's law enforcement costs for the festival are compensated. And, it should be recognized, too, that payments in lieu of taxes are intended to assist counties in the provision of necessary taxpayer services. Federal payments in lieu of taxes to Pershing County in fiscal year 2002 amounted to \$489,334.

The Sheriff's Office for all three counties could find that the need for their services in the area would increase with projected increased recreation visitation. Though recreationists do not, in general, create law enforcement problems, such things as vehicle accidents could potentially occur with greater frequency.

### **Impacts on Search and Rescue Operations**

Search and rescue operations could increase, as well, along with increased recreation visitation. With more people recreating in the NCA, personal injuries requiring assistance could occur. However, no specific impacts are identified or expected. Certainly nothing would occur that would unduly tax the very fine search and rescue capabilities of the Washoe County Sheriff's Office.

### **Impacts on Indigent Aid**

Current conditions would be maintained under this alternative. Humboldt and Pershing Counties both identified occasions requiring aid to the indigent. All of Humboldt County's cases, and most of Pershing County's, were incidental assistance, but Pershing County identified a total of eight high-cost cases, over the years, involving hospitalization for injuries to persons. All were associated with the Burning Man Festival. The State does provide an insurance program, to which all counties contribute, to cover such indigent billings. Nevertheless, Pershing County had to pay a \$3,000 deductible in seven of the cases, and the

eighth (which was \$25,000) was forwarded to BLM for resolution.

Again, short of continuing to refine the Special Recreation Permit stipulations, there is little that BLM can do to guarantee lawful or responsible human behavior. However, there were no such incidents at the 2002 Burning Man Festival, with nearly 30,000 people in attendance. Because the Burning Man Festival appears to be approaching its natural population limit, it can reasonably be expected that such problems would not increase in the future. Pershing County can, of course, refuse to permit such events if the problem grows beyond that which is bearable. As mentioned above, payments in lieu of taxes are intended to help the counties bear these taxpayer costs.

## 4.3 CUMULATIVE IMPACTS

Cumulative impacts are the effects on the environment that result from the impact of implementing any one of the alternatives in combination with other actions outside the scope of this plan, either within the planning area or outside it.

The Council on Environmental Quality regulations for implementing NEPA defines cumulative impacts as:

*“...the impact on the environment which results from the incremental impact of the action when added to other past, present, or reasonably foreseeable future actions regardless of what agency (Federal or Non-Federal) or person undertakes such actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time” (40 CFR 1500-1508)*

Cumulative impacts are discussed because the environmental conditions are the result of many different factors, acting together. The real effect of any single action cannot be determined by considering that action in isolation, but must be determined by considering the likely result of that action when acting in conjunction with many others. These involve determinations that are often complex, and are to some degree subjective.

The cumulative impacts discussion that follows considers the alternatives in the context of the broader human environment and specifically actions outside the scope and geographic area covered by the Resource Management Plan. It includes discussion of factors that have created the current environment, including actions from the NCA legislation that are constraints of this planning effort. These actions need to be assessed as past actions to be considered cumulatively with the alternatives of this document. It also includes a discussion of factors such as increased visitation to the planning area that could be expected to

influence that environment in the future. Past, present and potential future actions that are reasonably foreseeable over the life of the resource management plan for the planning area to be considered include:

- Designation of 751,844 acres in ten wilderness areas as part of the NCA legislation.
- Withdrawal of 1,188,583 acres from future mineral development within the NCA and wilderness areas.
- Geothermal energy development: The Bureau of Land Management is currently considering the leasing and future development and construction of geothermal energy facilities for 43 pending lease sites, encompassing about 70,000 acres, outside the planning area in northwestern Nevada. Additionally several thousand acres of private land adjacent to the NCA is being considered for geothermal development. The potential exists for cumulative effects to be realized from the ground disturbance, production of air emissions, and physical presence of these facilities.
- Potential mining operations associated with the gold claims in the South Jackson Mountains Wilderness could affect wilderness values. Potential mining operations near Rabbithole Springs could impact visual quality and the trail corridor. Although the potential footprint of each mining operation could affect 500 acres, it is unlikely that both would occur. Wilderness values in the direct vicinity of the 500-acre open pit mine would no longer exist. However, the probability of either development occurring is estimated by BLM at less than 10 percent.
- Designation of additional Wilderness Areas: The potential designation by congress of eight additional wilderness areas (395,000 acres) to be managed in accordance with the Wilderness Act in the same region as the planning area has the potential to affect the quality and quantity of Wilderness values and opportunities for solitude and primitive recreation. Additional designations would also result in impacts on the future development of energy and minerals on these lands and would change the areas available for motorized recreational use.

- Increased visitation: Whether created as a result of the designation of the NCA or through visitation changes associated with regional population growth, increased visitation has the potential to negatively affect the natural environment, traffic, primitive values, wildlife habitat, Native American, and cultural resources.
- Improvement of Jungo Road: Potential increases in truck traffic and overall access by way of the 96 mile east-west corridor from Winnemucca to Gerlach has the potential to greatly increase traffic and access through the planning area as well as influence safety and Wilderness values if the road is improved to a high quality gravel or paved road.
- Partnership between BLM and the Summit Lake Paiute Tribe for the development of an RV park and campground on Tribal lands.

Other potential future actions have been considered and eliminated from further consideration, as there is only a small likelihood of these actions being pursued and implemented within the life of the plan or because there is so little known about the potential action, that formulating an analysis of impacts is premature. Additionally, potential future actions that are protective of the environment (such as new potential threatened or endangered species listings or regulations related to fugitive dust emissions) have little likelihood of creating significant adverse environmental effects alone or in combination with this planning effort. Federal actions such as species listing would require BLM to reconsider the decisions created from this plan as the consultations and relative impacts may no longer be appropriate. These potential future actions may have greater capacity to affect the resource uses within the planning area, however, until more information is developed, no reasonable estimation of impacts could be developed.

Preparation of Environmental Impacts Statements for future Resource Management Plans (for the Winnemucca and Surprise Field Offices) will be required to consider the cumulative effects of the management action alternatives associated with those plans and the management actions decided on within this RMP.

Continued surface disturbing activities (i.e., grazing, wild horse and burros) are foreseeable

actions anticipated for the planning area. Some management actions related to these uses have been considered within the range of the alternatives, but the continued existence of these activities is driven by the NCA legislation and will occur unless another legislative action intercedes. The potential cumulative impacts of these land uses are then inherent based on the intent of the Act and are not clearly identifiable as these uses are so historically connected to the condition of the land.

Data on the precise locations and overall extent of the resources within the planning area are considerable, however, it varies according to resource type and locale. Further, our understanding of the impacts on and the interplay among these resources is evolving. As knowledge improves, management measures (adaptive or otherwise) would be considered to reduce potential cumulative impacts in accordance with law, regulations, and the final RMP for the planning area.

### **4.3.1 SUMMARY OF ALTERNATIVE IMPACTS AND CUMULATIVE IMPACTS**

For each alternative, No Action, and A, B, and C, a summary of the overall impacts for that alternative is provided below. Following the summary is the cumulative impacts for the alternative incorporating the impacts associated with other past, present and foreseeable future actions.

#### **4.3.1.1 No Action Alternative**

##### **Summary of Impacts from the No Action Alternative**

Managing BLM roads to their designated functional and maintenance class and maintaining seasonal closures would improve drivability and safety of roads, and decrease erosion and stream sedimentation. However, improved drivability and minimal visitor restrictions could increase competition among visitors. Improved road

maintenance and access to the planning area and acquisition of private lands would improve public access. However, actions to protect the historic trail, primitive viewshed, sage-grouse habitats, and water sources may diminish drivability and public access.

Important values within the ACECs may be diminished in the long-term from managing BLM roads to their designated functional and maintenance class, maintaining large areas open to unrestricted OHV use, and increased visitation. Implementing Rangeland Health Standards for livestock grazing, seasonal road closures, and segregation of the LCT area from mineral development would maintain or improve important values within the ACECs and outstandingly remarkable values of stream segments eligible for designation as Wild and Scenic Rivers.

Signing wilderness boundaries and withdrawing areas from mineral development would maintain special features and wilderness characteristics. Naturalness and special features would be enhanced by actions to support native vegetation and wildlife, gathering excess wild horses and burros, and not grazing sensitive areas. Actions to improve habitat or vegetation with man-made structures and mineral development activities could impact the wilderness values in those areas.

Inadvertent damage or disturbance to cultural, Native American, and paleontological resources could be increased from improving access to the planning area, vegetation rehabilitation projects, continued grazing, and fire management activities. Actions to support native vegetation and wildlife would retain opportunities for the pursuit of traditional Native American uses. Maintaining seasonal closures, ACEC designations, and VRM designations could improve cultural resources, areas important to Native Americans, and paleontological site protection. Maintaining large areas open to unrestricted OHV use, minimal recreational restrictions, and utility and mineral development would continue to conflict with Native American values and cultural and paleontological resource protection.

Areas historically available for grazing would be maintained and structural rangeland projects would be retained in support of ongoing livestock operations. Implementing Rangeland Health Standards, improving vegetation communities, continued implementation of livestock grazing

management, and current fire management would improve vegetation communities and visual quality. Vegetation rehabilitation activities, fire management, rights-of-way, and mineral development would diminish visual quality and the natural and primitive setting.

Actions to improve vegetation, retaining HMAs, and achieving AML would benefit wild horses and enhance their genetic viability. Implementation of water quality objectives may decrease AMLs for wild horses and burros.

Fire management actions and control of noxious weeds would reduce the size of fires. Continuing to not graze some areas would increase fuel loads in those areas.

Values related to areas of special designation, water quality, and wildlife habitat would be supported by acquiring adjacent private lands, implementation of actions to support native vegetation and wildlife, fire management activities, gathering excess wild horses and burros, limiting grazing within sensitive areas, and adapting recreational restrictions if resource damage occurs. Protection of historic trail segments, water quality objectives, mineral development, and camping restrictions would decrease public access, freedom of choice, and displace some users. Vehicle use and overnight camping would continue to disturb fish and wildlife, basalt cinquefoil, special status fish and wildlife species, and their habitats.

Surface disturbing activities livestock grazing, mineral development, visitation, dispersed recreation, maintaining areas of unrestricted OHV use, and development within existing utility corridors could increase soil erosion and sedimentation of some water resources. Maintaining BLM system roads and vegetation manipulation projects would continue to improve soil stability.

### **Cumulative Impacts from the No Action Alternative**

The No Action Alternative has the potential to affect the following resources and resource uses when combined with the effect of the other actions beyond the scope of this plan: air quality, vegetation, soils, recreation, wilderness, transportation, social and economic conditions, water resources, and visual quality.

Surface disturbing activities including potential geothermal development near the planning

area and livestock and wild horse and burro grazing in the region, mineral development, increased levels of visitation, maintaining areas of unrestricted OHV use, and development within utility corridors would increase vegetation damage, decrease soil productivity, and increase sedimentation of nearby water resources. Potential geothermal development near the planning area and existing geothermal leases in the South Playa would create periodic increases fugitive dust and emissions from construction, traffic, and operations. Vegetation damage and decreased soil productivity would occur from geothermal development and mineral development in the south playa. Actions to protect the historic trail, primitive viewshed, sensitive wildlife habitats, and water sources could help offset any localized impacts that may occur. However, these impacts would not likely lead to a considerable cumulative effect, since these impacts would be contained to the immediate vicinity of the development.

Additional Wilderness Areas would collectively increase the availability and quality of primitive recreation as there would be less competition as visitation increases. In addition, wilderness characteristics could be enhanced overall from dispersed rather than concentrated visitor use. However, the designation of additional wilderness areas would decrease opportunities for motorized recreation and lands available for mineral and energy development.

Increased visitation would place a greater demand on planning area resources since current management allows minimal visitor restrictions. Important values, sensitive areas, and natural resources could require more management actions to alleviate damage from visitors, which could decrease the primitive environment and naturalness of the planning area and diminish visual quality. Additionally, socioeconomic conditions and opportunities would be enhanced for local Tribes based on tourism increases in Lovelock and Pyramid Lake. Enhanced economics effect would also occur as a result of developing an RV park and campground on Tribal Lands. This would provide additional income to the Tribe, and help regulate and control camping and visitation in the area of Summit Lake, thereby assisting in the protection of resources.

As visitation increases, the drivability and safety of roads could be diminished, placing a

greater demand on BLM to maintain or improve the transportation system. Increased visitation would also stimulate the tourism industry in nearby local economies. The improvement of Jungo Road would cumulatively increase access, traffic, and visitor use, and associated resource damage within the planning area.

### **4.3.1.2 Alternative A**

#### **Summary of Impacts from Alternative A**

Improved road maintenance and access to the planning area, and acquisition of private lands would improve public access. However, actions to protect the historic trail, primitive viewshed, sage-grouse habitats, and water sources may diminish drivability and public access. The management actions within Alternative A would lead to overall decreased public access and yet will in some instances increase the drivability and safety for visitors.

Inadvertent damage or disturbance to cultural, Native American, and paleontological resources could be increased from improving access to the planning area, vegetation rehabilitation projects, continued grazing, and fire management activities. Actions to support native vegetation and wildlife would retain opportunities for the pursuit of traditional Native American uses. Site conservation emphasis will act to enhance and protect cultural, paleontological, and Native American values, however, may in some instances limit public involvement with those values. Additionally, hydrologic function, soil productivity and remarkable values of streams would generally be improved by conservation or more restrictive management actions, except in areas of valid existing mineral rights.

Actions associated with this alternative would result in some decreases in recreational opportunities; however, solitude and primitive recreation and visual quality in much of the planning area would generally be enhanced overall.

Naturalness and special features would be enhanced by actions to support native vegetation and wildlife, gathering excess wild horses and burros, and not grazing sensitive areas. Actions to improve habitat or vegetation with man-made structures and mineral development activities could

impact the wilderness values in those areas. Vegetation, transportation, and Wilderness management actions would all contribute to increased naturalness in Wilderness Areas. However, the lack of prescribed fire may contribute to a long-term decrease in naturalness of small portions of the Wilderness areas. Air quality would be generally maintained, however short term localized smoke and reduced visibility would be experienced from prescribed fire outside of Wilderness Areas. Increases in fuel loads and decreased access for fire suppression would result from land health, transportation and Wilderness management activities.

Vegetation management and other management actions would generally support improvements to species composition.

Special status and wildlife populations would experience overall benefits from management actions associated with the natural process emphasis such as decreased disturbance to habitat and promotion of recovery for special status species.

Areas historically available for grazing would be maintained and structural rangeland projects would be retained in support of ongoing livestock operations. Livestock grazing and grazing operator flexibility would be maintained overall as some actions would lead to increased while others actions would reduce flexibility. Potential livestock losses could increase in Wilderness due to limitations on predator control. Wild horse and burro Herd Management Areas could be limited from use by actions associated with vegetation management and land health standards.

Actions to improve vegetation, retaining HMAs, and achieving AML would benefit wild horses and enhance their genetic viability. Implementation of water quality objectives may decrease AMLs for wild horses and burros.

Fire management actions and control of noxious weeds would reduce the size of fires. Vegetation rehabilitation activities, fire management, rights-of-way, and mineral development would diminish visual quality and the natural and primitive setting.

Values related to areas of special designation, water quality, and wildlife habitat would be supported by acquiring adjacent private lands, implementation of actions to support native vegetation and wildlife, fire management activities, gathering excess wild horses and burros, limiting

grazing within sensitive areas, and adapting recreational restrictions if resource damage occurs. Protection of historic trail segments, water quality objectives, mineral development, and camping restrictions would decrease public access, freedom of choice, and displace some users.

Surface disturbing activities livestock grazing, mineral development, visitation, maintaining areas of unrestricted OHV use, and development within existing utility corridors could increase soil erosion and sedimentation of some water resources. Maintaining BLM system roads and vegetation manipulation projects would continue to improve soil stability.

### **Cumulative Impacts from Alternative A**

Alternative A has the potential to cumulatively affect the following resources and resource uses when combined with the effects of those other actions outside the scope of this plan: Wilderness, noxious weeds, visual resources, soils, air quality, and recreation.

Surface disturbing activities including potential geothermal development near the planning area and livestock and wild horse and burro grazing in the region, mineral development, increased levels of visitation, maintaining areas of unrestricted OHV use, and development within utility corridors common to all would increase vegetation damage, decrease soil productivity, and increase sedimentation of nearby water resources. Increases in the spread of noxious weeds and decreased soil productivity could occur from vegetation disturbance associated with geothermal development and in areas of valid existing rights in the planning area. This would not likely lead to a considerable cumulative effect as these activities would not occur in the same geographic areas. However, actions to protect the historic trail, primitive viewshed, sensitive wildlife habitats, and water sources could help offset any localized impacts that may occur.

Air quality effects from geothermal plant construction and mineral development could also create a short-term cumulative effect in the region when considered with the potential increased fugitive dust associated with greater visitation/traffic to the planning area.

Decreased visual quality could occur in the planning area as a result of adjacent geothermal

development activities and from transportation and recreation actions associated with Alternative A.

Additional designated Wilderness Areas would collectively increase the availability and quality of primitive recreation as there would be less competition as visitation increases. In addition, wilderness characteristics could be enhanced overall from dispersed rather than concentrated visitor use. However, the designation of additional wilderness areas would decrease opportunities for motorized recreation and lands available for mineral and energy development.

As visitation increases, the drivability and safety of roads could be diminished, placing a greater demand on BLM to maintain and improve the transportation system. Increased visitation would also stimulate the tourism industry in nearby local economies, including Tribal. The improvement of Jungo Road would cumulatively increase access, traffic, and visitor use, and associated resource damage within the planning area.

### **4.3.1.3 Alternative B**

#### **Summary of Impacts from Alternative B**

Improved road maintenance and access to the planning area, and acquisition of private lands would improve public access. However, actions to protect the historic trail, primitive viewshed, sage-grouse habitats, and water sources may diminish drivability and public access. The management actions within Alternative B would lead to some decreases in public access and increases in traffic on certain roads. However, increases in the drivability and safety for visitors would also result. Greater access to some areas and less restrictive actions associated with this alternative would generally result in increases in recreational opportunities, except where recreational activities would be restricted to prevent resource impacts.

Changes in access would locally improve and degrade fire fighter access within the planning area. A slight increase in human-caused fires would occur as visitor access increases. Greater public access to the Black Rock Range and prescribed fire activities could lead to localized and periodic increases in smoke and fugitive dust emissions.

Inadvertent damage or disturbance to cultural, Native American, and paleontological resources could be increased from improving access to the planning area, vegetation rehabilitation projects, continued grazing, and fire management activities. Actions to support native vegetation and wildlife would retain opportunities for the pursuit of traditional Native American uses. The response to change emphasis will act to protect cultural, paleontological, and Native American values and still support public involvement and scientific study of the resources. Potential vandalism and inadvertent damage would be slightly increased. Hydrologic function and soil productivity would also generally be enhanced by management actions, except in localized areas of utility corridors.

Naturalness and special features would be enhanced by actions to support native vegetation and wildlife, gathering excess wild horses and burros, and not grazing sensitive areas. Actions to improve habitat or vegetation with man-made structures and mineral development activities could impact the wilderness values in those areas. Vegetation, fire and wildlife management activities could result in some limited reductions in solitude and naturalness. Other actions would benefit primitive recreation and increase opportunities for solitude. However, allowing only underground utilities and implementing visitor restrictions based on monitoring would result in protection of viewsheds in other areas. Management actions would also benefit the protection of remarkable values associated with Wild and Scenic status-eligible streams.

The slightly smaller ACECs under this alternative would experience overall benefits from management actions associated with the response-to-change emphasis such as decreased disturbance to habitat and promotion of recovery for special status species based on monitoring. Overall increased protection for habitat and potentially increased species populations would generally be achieved through adaptive management techniques, not the activity restrictions in other alternatives.

Limited vegetation could be lost due to camping, water developments, and Administrative Site/Visitor Contact Stations.

Fire management actions and control of noxious weeds would reduce the size of fires. Vegetation rehabilitation activities, fire management, rights-of-way, and mineral

development would diminish visual quality and the natural and primitive setting.

Values related to areas of special designation, water quality, and wildlife habitat would be supported by acquiring adjacent private lands, implementation of actions to support native vegetation and wildlife, fire management activities, gathering excess wild horses and burros, limiting grazing within sensitive areas, and adapting recreational restrictions if resource damage occurs. Protection of historic trail segments, water quality objectives, mineral development, and camping restrictions would decrease public access, freedom of choice, and displace some users.

Areas historically available for grazing would be maintained and structural rangeland projects would be retained in support of ongoing livestock operations. Grazing operator flexibility would generally be maintained as some actions would lead to improved flexibility while others actions would reduce flexibility, such as management of sage-grouse habitat. Decreased animal harassment and potential theft of wild horse and burro herds would result from closing areas to OHV use.

Actions to improve vegetation, retaining HMAs, and achieving AML would benefit wild horses and enhance their genetic viability. Implementation of water quality objectives may decrease AMLs for wild horses and burros.

Surface disturbing activities livestock grazing, mineral development, visitation, maintaining areas of unrestricted OHV use, and development within existing utility corridors could increase soil erosion and sedimentation of some water resources. Maintaining BLM system roads and vegetation manipulation projects would continue to improve soil stability.

### **Cumulative Impacts from Alternative B**

Alternative B has to potential to cumulatively affect the following resources and resource uses when combined with the effects of those other actions outside the scope of this plan: transportation, Wilderness, Native American and cultural resources, vegetation, noxious weeds, visual resources, soils, air quality, and recreation.

Surface disturbing activities including potential geothermal development near the planning area and livestock and wild horse and burro grazing in the region, mineral development, increased levels

of visitation, maintaining areas of unrestricted OHV use, and development within utility corridors would increase vegetation damage, decrease soil productivity, and increase sedimentation of nearby water resources. Increases in the spread of noxious weeds and decreased soil productivity could occur from vegetation disturbance associated with geothermal development and in areas of utility corridors and camping areas in the planning area. Actions to protect the historic trail, primitive viewshed, sensitive wildlife habitats, and water sources could help offset any localized impacts that may occur. This would not likely lead to a considerable cumulative effect as these activities would not occur in the same geographic areas.

Additional Wilderness Areas would collectively increase the availability and quality of primitive recreation as there would be less competition as visitation increases. In addition, wilderness characteristics could be enhanced overall from dispersed rather than concentrated visitor use. However, the designation of additional wilderness areas would decrease opportunities for motorized recreation and lands available for mineral and energy development. Decreased visual quality could occur in the Calico Mountains and Black Rock Desert Wilderness Areas as a result of adjacent geothermal development activities.

Inadvertent disturbance to cultural and Native American resources could increase with increased visitation, geothermal and mineral development, and fewer public restrictions on resources associated with this Alternative.

As visitation increases, the drivability and safety of roads could be diminished, placing a greater demand on BLM to maintain and improve the transportation system. Increased visitation would also stimulate the tourism industry in nearby local economies, including Tribal. The improvement of Jungo Road would cumulatively increase access, traffic, and visitor use, and associated resource damage within the planning area. Traffic increases associated with greater visitation and the access improvements from upgrading the Jungo road could create additional fugitive dust from vehicles on unimproved roads and ways. Air emission increases from geothermal plant construction and mineral development could also create a short-term cumulative effect in the region.

#### 4.3.1.4 Alternative C

##### Summary of Impacts from Alternative C

Improved road maintenance and access to the planning area, and acquisition of private lands would improve public access. However, actions to protect the historic trail, primitive viewshed, sage-grouse habitats, and water sources may diminish drivability and public access. The management actions within Alternative C would lead to the greatest level of public access, improved drivability, and safety for visitors and minimal visitor restrictions, which would enhance visitor use and provide for the greatest variety of recreational uses. However, primitive recreation and the perception of recreating in a natural environment may be diminished, as well as wilderness characteristics and ACEC and WSR values, fish and wildlife habitat, and inadvertent damage to sensitive habitats in the long-term.

Road improvements would increase the effectiveness of fire protection and fire response. Improved public access would increase fugitive dust emissions and use of prescribed fire would result in more frequent and periodic increases in smoke and decreased visibility.

Fire management actions and control of noxious weeds would reduce the size of fires. Vegetation rehabilitation activities, fire management, rights-of-way, and mineral development would diminish visual quality and the natural and primitive setting.

Naturalness and special features would be enhanced by actions to support native vegetation and wildlife, gathering excess wild horses and burros, and not grazing sensitive areas. Actions to improve habitat or vegetation with man-made structures and mineral development activities could impact the wilderness values in those areas. Vegetation damage, soil disturbance, compaction, and erosion would occur from minimal restrictions to recreational activities, grazing use, and increased public access, removal of ACEC designations, which could lead to increased erosion and stream sedimentation and decreased hydrologic function.

Inadvertent damage or disturbance to cultural, Native American, and paleontological resources could be increased from improving access to the planning area, vegetation rehabilitation projects,

continued grazing, and fire management activities. Actions to support native vegetation and wildlife would retain opportunities for the pursuit of traditional Native American uses. Emphasis on public interpretation and scientific discovery would enhance or protect cultural resources, as would implementing visitor restrictions to prevent resource damage. However, inadvertent damage, vandalism, and looting may increase from improved public access, removal of ACEC designations.

Managing the nine acquired parcels in the LCT area as WSAs, designating sensitive areas as day-use only, and public outreach activities would protect the outstandingly remarkable values of eligible stream segments. Wilderness characteristics would be enhanced by vegetation treatments, prescribed fire, removal of eight wildlife water developments, constructing trails, and fewer camping restrictions.

Areas historically available for grazing would be maintained and structural rangeland projects would be retained in support of ongoing livestock operations. Upgrading roads, increased public access, and increased visitation could lead to increase harassment and theft of wild horses and burros and vandalism to livestock related projects, livestock loss, and increased operational expenses. Appreciation and protection of wild horses and burros may increase from closing some areas to OHV use, constructing a permanent adoption facility, and public outreach activities.

Actions to improve vegetation, retaining HMAs, and achieving AML would benefit wild horses and enhance their genetic viability. Implementation of water quality objectives may decrease AMLs for wild horses and burros.

Values related to areas of special designation, water quality, and wildlife habitat would be supported by acquiring adjacent private lands, implementation of actions to support native vegetation and wildlife, fire management activities, gathering excess wild horses and burros, limiting grazing within sensitive areas, and adapting recreational restrictions if resource damage occurs. Protection of historic trail segments, water quality objectives, mineral development, and camping restrictions would decrease public access, freedom of choice, and displace some users.

Surface disturbing activities livestock grazing, mineral development, visitation, maintaining areas of unrestricted OHV use, and development within

existing utility corridors could increase soil erosion and sedimentation of some water resources. Maintaining BLM system roads and vegetation manipulation projects would continue to improve soil stability.

Mineral development on vehicle access routes outside the NCA, leaving the South Playa open to geothermal development and encouraging development of privately owned campgrounds could result in visually obtrusive development, which may diminish characteristics within nearby Wilderness Areas.

### **Cumulative Impacts from Alternative C**

Alternative C has the potential to cumulatively affect the following resources and resource uses when combined with the effects of the other actions beyond the scope of this plan: recreation, wilderness, social and economic conditions, transportation, vegetation, soils, water resources, visual quality, and air quality.

Surface disturbing activities including potential geothermal development near the planning area and livestock and wild horse and burro grazing in the region, mineral development, increased levels of visitation, maintaining areas of unrestricted OHV use, and development within utility corridors common to all would increase vegetation damage, decrease soil productivity, and increase sedimentation of nearby water resources. Potential geothermal development near the planning area would create increased fugitive dust emissions from construction, traffic, and operations, collectively with increased public access and visitation. Vegetation damage and decreased soil productivity would occur from geothermal development and mineral development in the planning area, however, these impacts would be contained to the immediate vicinity of the development. Actions to protect the historic trail, primitive viewshed, sensitive wildlife habitats, and water sources could help offset any localized impacts that may occur.

Additional Wilderness Areas would collectively increase the availability and quality of primitive recreation as there would be less competition as visitation increases. In addition, wilderness characteristics could be enhanced overall from dispersed rather than concentrated visitor use. However, the designation of additional wilderness areas would decrease opportunities for

motorized recreation and lands available for mineral and energy development.

Increased visitation would place a greater demand on planning area resources since this alternative provides the most accessibility within the planning area. Important values, sensitive areas, and natural resources could require more management actions to alleviate damage from visitors, which could decrease the primitive environment and naturalness of the planning area. As visitation increases, the drivability and safety of roads could be diminished more frequently placing a greater demand on BLM to maintain and improve the transportation system. Increased visitation would also stimulate the tourism industry in nearby local economies. Tribal communities would experience increased revenues and opportunities as a result of partnering with BLM for an RV park and campground, and increased tourism in Lovelock, and Pyramid Lake. The improvement of Jungo Road would cumulatively increase access, traffic, and visitor use, and associated resource damage within the planning area.

### **4.3.1.5 Alternative D**

#### **Summary of Impacts from Alternative D**

Maintaining existing road maintenance levels and access to the planning area, and acquisition of private lands would maintain existing public access at levels similar to current conditions. However, actions to protect the historic trail, primitive viewshed, sage-grouse habitats, and water sources may diminish drivability and public access. The management actions within Alternative D would lead to some decreases in public access and increases in traffic on a few roads and motorized trails. Drivability and safety for visitors would be unchanged. Greater access to some areas and less restrictive actions associated with this alternative would generally result in slight increases in recreational opportunities, except where recreational activities would be restricted to prevent resource impacts.

Changes in access would maintain fire fighter access within the planning area. A slight increase in human-caused fires would occur as visitor access increases. Greater public access to the Black Rock Range and prescribed fire activities could lead to

localized and periodic increases in smoke and fugitive dust emissions.

Inadvertent damage or disturbance to cultural, Native American, and paleontological resources could be increased from improving access to the planning area, vegetation rehabilitation projects, continued grazing, and fire management activities. Actions to support native vegetation and wildlife would retain opportunities for the pursuit of traditional Native American uses. The response to change emphasis will act to protect cultural, paleontological, and Native American values and still support public involvement and scientific study of the resources. Potential vandalism and inadvertent damage would be slightly increased. Hydrologic function and soil productivity would also generally be enhanced by management actions, except in localized areas of utility corridors.

Naturalness and special features would be enhanced by actions to support native vegetation and wildlife, gathering excess wild horses and burros, and not grazing sensitive areas. Actions to improve habitat or vegetation with man-made structures and mineral development activities could impact the wilderness values in those areas. Vegetation, fire and wildlife management activities could result in some limited reductions in solitude and naturalness. Other actions would benefit primitive recreation and increase opportunities for solitude. However, allowing only underground utilities and implementing visitor restrictions based on monitoring would result in protection of viewsheds in other areas. Management actions would also benefit the protection of remarkable values associated with Wild and Scenic status-eligible streams.

The slightly smaller ACECs under this alternative would experience overall benefits from management actions associated with the response-to-change emphasis such as decreased disturbance to habitat and promotion of recovery for special status species based on monitoring. Overall increased protection for habitat and potentially increased species populations would generally be achieved through adaptive management techniques, not the activity restrictions in other alternatives.

Limited vegetation could be lost due to camping, water developments, and Administrative Site/Visitor Contact Stations.

Fire management actions and control of noxious weeds could slightly reduce the size of

fires. Vegetation rehabilitation activities, fire management, rights-of-way, and mineral development would diminish visual quality and the natural and primitive setting.

Values related to areas of special designation, water quality, and wildlife habitat would be supported by acquiring adjacent private lands, implementation of actions to support native vegetation and wildlife, fire management activities, gathering excess wild horses and burros, limiting grazing within sensitive areas, and adopting recreational restrictions if resource damage occurs. Protection of historic trail segments, water quality objectives, mineral development, and camping restrictions would decrease public access, freedom of choice, and displace some users.

Areas historically available for grazing would be maintained and structural rangeland projects would be retained in support of ongoing livestock operations. Grazing operator flexibility would generally be maintained as some actions would lead to improved flexibility while others actions would reduce flexibility, such as management of sage-grouse habitat. Decreased animal harassment and potential theft of wild horse and burro herds would result from closing areas to OHV use.

Actions to improve vegetation, retaining HMAs, and achieving AML would benefit wild horses and enhance their genetic viability. Implementation of water quality objectives may decrease AMLs for wild horses and burros.

Surface disturbing activities livestock grazing, limited opportunities for mineral development, visitation, maintaining areas of unrestricted OHV use, and development within existing utility corridors could increase soil erosion and sedimentation of some water resources. Maintaining BLM system roads and vegetation manipulation projects would continue to improve soil stability.

#### **Cumulative Impacts from Alternative D**

Alternative D has the potential to cumulatively affect the following resources and resource uses when combined with the effects of those other actions outside the scope of this plan: transportation, Wilderness, Native American and cultural resources, vegetation, noxious weeds, visual resources, soils, air quality, recreation and socio-economic conditions.

Surface disturbing activities including potential geothermal development near the planning area and livestock and wild horse and burro grazing in the region, mineral development, increased levels of visitation, and potential development within utility corridors would increase vegetation damage, decrease soil productivity, and increase sedimentation of nearby water resources. Increases in the spread of noxious weeds and decreased soil productivity could occur from vegetation disturbance associated with geothermal development and in areas of utility corridors and camping areas in the planning area. Actions to protect the historic trail, primitive viewshed, sensitive wildlife habitats, and water sources could help offset any localized impacts that may occur. This would not likely lead to a considerable cumulative effect as these activities would not occur in the same geographic areas.

Additional Wilderness Areas would collectively increase the availability and quality of primitive recreation as there would be less competition as visitation increases. In addition, wilderness characteristics could be enhanced overall from dispersed rather than concentrated visitor use. However, the designation of additional wilderness areas would decrease opportunities for motorized recreation and lands available for mineral and energy development. Decreased visual quality could occur in the Calico Mountains and Black Rock Desert Wilderness Areas as a result of adjacent geothermal development activities.

Inadvertent disturbance to cultural and Native American resources could increase with increased visitation, geothermal development, and fewer public restrictions on resources associated with this Alternative.

As visitation increases, the drivability and safety of roads could be diminished, placing a greater demand on BLM to maintain and improve the transportation system. Increased visitation would also stimulate the tourism industry in nearby local economies, including Tribal. The improvement of Jungo Road limiting the number of railroad crossings would cumulatively increase access, traffic, and visitor use, and associated resource damage within the planning area. Traffic increases associated with greater visitation and the access improvements from upgrading the Jungo road could create additional fugitive dust from vehicles on unimproved roads and ways. Air

emission increases from geothermal plant construction could also create a short-term cumulative effect in the region.

Minimally changing the transportation system would retain opportunities for experience the look and feel of the emigrant trail landscape while providing OHV recreational experiences. Providing opportunities for geothermal development in the South Playa and new utilities in two existing corridors would maintain or enhance existing socio-economic conditions in the region.

#### **4.4 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES**

The implementation of actions in accordance with the alternatives is not likely to result in significant impacts that may be characterized as irreversible and irretrievable commitments. However, some small-scale disruption to resources may occur, which in turn may prove to be long-term or permanent. These are most likely associated with ground disturbance from development at valid existing mineral claims and Administrative Site/Visitor Contact Station development inside the planning area.

#### **4.5 UNAVOIDABLE ADVERSE IMPACTS**

Increased visitation and recreational use of the planning area in addition to other ground disturbing activities will negatively affect the natural environment, traffic, primitive values, wildlife habitat, and cultural resources. The management

actions associated with the alternatives have been developed to respond to these impacts and be protective of the resources while allowing the land use to be as diverse as possible.

## **4.6 RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES AND LONG-TERM PRODUCTIVITY**

As described in the introduction to this chapter, short-term is defined as anticipated to occur within 1 to 5 years of implementation of the activity. Long-term is defined as following the first 5 years of implementation but within the life of the Resource Management Plan (RMP) (projected to be 20 years).

The proposed action would result in various short-term effects; such as increased localized soil erosion and fugitive dust emissions as well as decreased visual resource quality. However, the long-term productivity of resources within the planning area would not be diminished, as these short-term uses would be minimized by management actions to effect the reverse change over the long-term. For instance, vegetation manipulation projects may increase ground disturbance over the short-term in localized areas and create additional dust emissions, however, improved vegetative quality and soil productivity would be the net long-term result of the action.

Overall, while there would be some disturbance to resources, the adaptive management approach of the preferred alternative would serve to protect the long-term productivity of the land, resources, and resource uses.

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