Chapter 2. Management Actions for the Proposed RMP

Introduction

This chapter describes proposed management actions under the Preferred Alternative for land and resources managed by the Bureau of Land Management (BLM) Alturas Field Office (AFO). The Proposed Resource Management Plan/Final Environmental Impact Statement (PRMP/FEIS) has been developed from the Preferred Alternative analyzed in the Draft Resource Management Plan (RMP) EIS and in some cases, revised according to public comments received on the Draft RMP. The PRMP has been developed from a reasonable range of alternatives to managing land and activities consistent with law, regulation, and policy. Development of the PRMP/FEIS was guided by the National Environmental Policy Act (NEPA), the Federal Land Policy and Management Act (FLPMA), regulations, policy, and input from the public through public and agency scoping.

The PRMP/FEIS includes specific actions and action plans to be followed so as to make necessary changes in resource management within the planning area. However, not all issues can be resolved in an RMP; some will require that subsequent actions be taken to determine exactly how to reach desired conditions or to achieve a desired result.

Alternatives Considered

BLM developed management alternatives for the AFO Draft RMP using input and comments from public scoping meetings and written comments, as well as ideas from staffs of BLM and other cooperating agency partners. NEPA regulations and BLM resource management planning regulations require the formulation of a reasonable range of alternatives that seek to address identified planning issues and management concerns. Each alternative must be evaluated to ensure that it would be consistent with resource goals and objectives, current laws, regulations, and policy.

The Alturas Draft RMP considered five alternatives. The alternatives are not re-printed here, as they have not changed. They are, however, summarized in the Alternatives Summary Table at the end of this chapter. The basic goal of developing alternatives was to explore the range of use options, protection options, and management tools that would achieve a balance between protection of the planning area's natural character, and a variety of resource uses and management issues. Alternatives were evaluated in the Draft RMP/EIS for potential impacts to resources that might occur as a result of implementing management decisions.

The five management alternatives that were developed for the Draft Alturas RMP include:

No Action Alternative (required by NEPA): Retains current management through guidance and direction from current policies, and existing management plans.

Alternative 1. Resource / Economic Development: Emphasizes commodity production from BLM resources in accordance with local economies and land use plans from local communities and counties.

Alternative 2. Ecosystem Restoration or Protection: Maximizes efforts to maintain, restore, or improve components of the ecosystem using natural ecosystem processes.

Alternative 3. Traditional or Historical Uses: Emphasizes traditional community uses of resources and/or emphasizes historical uses.

Preferred Alternative. The Preferred Alternative was "crafted" from all of the other alternatives and combines management actions from all four of the above listed-alternatives. This alternative has been designed to best meet the purpose and need of the plan as described in Chapter 1 and best meet desired future conditions, goals, and objectives of individual and combined resources and resource uses.

Chapter 2 provides a detailed description of proposed management actions for the Preferred Alternative for 24 resource subjects. The desired future conditions, goals, objectives, and management actions for each major resource area are discussed in detail. The *Alternatives Summary Table*, at the end of this chapter, contains a summary of the five alternatives by resource subject, with emphasis on the key features described below and those aspects that differentiate the alternatives from one another.

Summary of Environmental Consequences

The Impacts Summary Table, at the end of this chapter, contains a comparative summary of the key environmental consequences for each of the five alternatives. A detailed description of environmental impacts resulting from implementation of the Preferred Alternative can be found in Chapter 4, Environmental Consequences.

Environmentally Preferred Alternative

The Environmentally Preferred Alternative is defined as "the alternative that would promote the national environmental policy as expressed in §101 of the National Environmental Policy Act." Section 101 states, "…it is the continuing responsibility of the federal government to…

- Fulfill the responsibilities of each generation as trustee of the environment for succeeding generations.
- Ensure for all Americans safe, healthful, productive, and esthetically and culturally pleasing surroundings.
- Attain the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences.
- Preserve important historic, cultural, and natural aspects of our national heritage and maintain, wherever possible, an environment that supports diversity and variety of individual choice.
- Achieve a balance between population and resource use that would permit high standards of living and a wide sharing of life's amenities.
- Enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources."

Compared to the other alternatives analyzed, Alternative 2 and the Preferred Alternative best meet the national environmental goals identified above. Alternative 2 provides the highest level of protection of natural and cultural resources; however, it does not allow for a wide range of beneficial uses of the environment.

The Preferred Alternative would enhance the ability of BLM to achieve the purpose and need of this document, as outlined in Chapter 1, as well as meet desired future conditions, goals and objectives of specific resources as outlined in Chapter 2. Alternatives No Action, 1, and 3 do not contain the degree of management emphasis required to protect benchmark native vegetative communities and restore degraded sagebrush steppe habitat found in the Preferred Alternative. Portions of the field office area that are currently in a degraded condition can only be improved with the scope of active restoration efforts provided for in the Preferred Alternative.

The Preferred Alternative would result in overall minor to moderate adverse impacts to resources, and these impacts would continue to be mitigated. Proposed management actions would result in moderate to major beneficial impacts to native vegetation communities from restoration efforts, and the use of fire and mechanical treatment to remove invasive juniper. Improvements to riparian areas, water bodies, and other special habitats would improve soil and water resources, and wildlife habitat. The designation of six areas of critical environmental concern (ACECs), three wild and scenic rivers (WSRs), and an increased emphasis on cultural resource protection and management would have beneficial impacts to these important and unique resources.

Adaptive Management

In developing the Alturas PRMP/FEIS, BLM used the best science currently available, collaborated with other government agencies, and involved the public extensively. However, BLM's knowledge of resource conditions continues to evolve as local environmental conditions change, as new management techniques are developed and used, and as advances in science and technology are made available. Therefore, it is inevitable that in the future, some of the management direction in this PRMP/FEIS will be found to be erroneous, or inadequate, and need to be revised. To address this, implementation of the Alturas PRMP/FEIS will use an adaptive management approach to modify management actions and to incorporate new knowledge into our resource management decisions.

The complex interrelationships between physical, biological, and social components of an ecosystem and how they will react to land management practices are often not fully understood when a land use plan is developed. To be successful, plans must have the flexibility to adapt and respond to new knowledge or conditions. Adaptive management involves planning, implementation, monitoring, evaluating and incorporating new knowledge into management approaches. It is a procedure in which decisions are made as part of an on-going process. This process builds on current knowledge, observation, monitoring data and information, and learning from experiences, which are then used to modify management decisions and/or policies.

BLM would utilize the adaptive management process for making modifications to management decisions in the PRMP/FEIS, in the following situations: 1) a management action is no longer appropriate for the resource conditions that were assumed during planning, 2) an event substantially changes the character of the landscape, 3) new information attained through monitoring indicates that planned objectives are not being met, or 4) advances in research and technology indicate a need for a change. Changes to management direction would be made consistent with requirements of FLPMA, NEPA, and other BLM policies and regulations.

2.1 Air Quality

The Clean Air Act requires federal agencies to comply with federal, state, and local air pollution standards. The Act also requires states to develop a plan and implement measures to ensure that national air quality standards are achieved and maintained for criteria pollutants.

National standards have been established for six pollutants described in the Clean Air Act. Of the six, only particulate matter is substantially affected by natural resource management activities. Particulate matter is produced by fire or windblown dust (mainly from uncovered agricultural land and dirt roads). However, particulate matter on BLM-administered land is principally produced by fire, and most of this is less than 10 micrometers in diameter (PM_{10}). This fine particulate matter is the size regulated by the Act, because it is detrimental to human health. However, wildfires and smoke are a natural component of forest and rangeland ecosystems, so PM_{10} does not appreciably affect these systems.

Land managers (and the public) must make well-considered choices regarding particulate emissions from prescribed fires and wildland fire use (WFU) versus emissions from wildfires. Land managers have little control over where, when, or how much smoke is produced by wildfires. However, particulate emissions (smoke) can be managed with prescribed fire.

2.1.1 Desired Future Condition

Continue to meet or exceed the national air quality standards for PM_{10} and the five other criteria pollutants regulated by the Clean Air Act.

2.1.2 Goal

Achieve and maintain federal, state, and local air pollution standards with respect to PM10 throughout the management area.

2.1.3 Objectives

Follow the direction and requirements of the Modoc, Lassen, Shasta and Siskiyou air pollution control districts when using wildland fire, and when conducting fuel reduction projects and other prescribed burns.

2.1.4 Legislative, Regulatory, and Policy Direction

- The Clean Air Act of 1963 as amended (42 United States Code [U.S.C.] 7401 et seq)
- California Code of Regulations. Title 17, Section 80101 and California Code of Regulations Title 14, 1561, 1.
- Any other applicable federal legislation
- Any applicable state legislation
- Regulations, Memoranda of Understanding (MOUs), etc. for applicable counties

2.1.5 Proposed Management Actions

WFU and prescribed fire would be implemented on anywhere from 75 to 10,000 acres/year to achieve maximum resource benefits and quickly reduce dangerous fuels. However, burn totals would be less than 10,000 acres during an average year. A large yearly maximum provides flexibility to achieve resource objectives on a *landscape* scale in exceptional years when high levels of treatments are possible.

Wildland fire use and prescribed fires would be coordinated with the state air quality control board and local air quality control districts. If PM_{10} limits are exceeded, alternative fuel reduction treatments would be considered.

An approved prescribed fire burn plan would be in place prior to the ignition of any prescribed fire, and adhered to throughout the project. In order to select appropriate weather conditions, firing methods, and mop-up standards, a prescribed fire plan must include resource objectives, size of treatment area, topography, and location of population centers, as well as fuel types, loading, moisture content, and (fuel) continuity. A plan must also include techniques and procedures for controlling particulate matter (smoke).

Ensure that prescribed fires comply with stipulations of the Clean Air Act and other federal, state, and local air pollution standards. Use timing and atmospheric dispersal to control particulate emissions. Record and review data on fire prescriptions and mitigation measures; and the location, size, and date of burns.

2.2 Cultural and Paleontological Resources

Cultural sites, artifacts, and traditional gathering areas (prehistoric and historic) of indigenous people are treasured and preserved throughout the world. They connect us with those who came before, making them real in our mind's eye. They help us understand and identify with people of different cultures and times and provide insights into history and our shared humanity. The AFO management area contains a large number of prehistoric and historic Native American archaeological resources including village sites and gathering areas. There are also numerous historical sites and trails associated with European exploration and settlement. Paleontological sites are not common, but there are a few. Protection of cultural and paleontological resources is required by federal laws, regulations, and executive orders, as well as by California law and BLM policy. The cultural and paleontological resource section is comprised of the following program areas, each with an individual goal:

- Preservation and protection
- Survey and inventory
- Education and interpretation
- Native American consultation

2.2.1 Desired Future Condition

National Register of Historic Places (NRHP) "use categories" would be assigned to all (qualified) cultural sites. Eligible and qualified sites would be adequately protected from vandalism and illegal collecting. Physical deterioration would be arrested. Site stewardship, public education, and active involvement of Native Americans and the public at large would enhance understanding, appreciation, and protection of cultural and paleontological resources. An ongoing policy of tribal consultation would help identify and protect undocumented or unknown archaeological sites and cultural properties, and would facilitate protection of eligible and qualified sites. Paleontological sites would also be identified and protected.

2.2.2 Legislative, Regulatory, and Policy Direction

- The National Environmental Policy Act (1969)
- The Federal Land Policy Management Act, Sec. 103c, 201 a, and 202 c (1976)
- The National Historic Preservation Act (NHPA), Sec. 110, 106 (1966)
- The Archaeological Resources Preservation Act, Sec. 14a (1979), as amended (1988)
- The Historic Sites Act (1935)
- American Antiquities Act (1906)
- The Historic and Archaeological Data Preservation Act (1974)
- The Native American Graves Protection and Repatriation Act (1990)
- Executive Order No. 13,007 (Indian Sacred Sites) (May, 1996)
- BLM–California State Historic Preservation Office (SHPO) Protocol Agreement (1998)
- BLM Information Bulletin No. 2002-101 (May, 2002)
- The American Indian Religious Freedom Act (1978), as amended

- The Paleontological Resources Protection Act (2005)
- Reservoir Salvage Act (1960)
- Executive Order no. 11,593 – "Protection and Enhancement of the Cultural Environment" (1971)
- National Trails System Act (1968), as amended (1992)
- Executive Order no. 13,175 – "Consultation and Coordination with Indian Tribal Governments" (2000)
- BLM Manual 8100 (Cultural Resource Management)
- BLM Manual 8270 (Paleontological Resource Management)
- Federal-Aid Highway Act (1956); Section 120, authorizing use of Federal-Aid Highway funds for archaeological and paleontological salvage
- 512 Department Manual 2.1, Departmental Responsibilities for Indian Trust Resources

2.2.3 Goal 1–Preservation and Protection

Cultural and paleontological resources would be adequately protected and physically preserved for appropriate uses by present and future generations.

2.2.3.1 Objectives

- Cultural resources will be managed in accordance with current (federal and state) laws, regulations, executive orders, and BLM policy; and in consultation with the California SHPO and designated representatives of Native American tribes.
- Paleontological resources would be managed for their scientific, educational, and recreational value and to ensure that significant deposits are not deliberately or inadvertently damaged, destroyed, or removed from public lands.

2.2.3.2 Proposed Management Actions

- Management actions and permitted activities on public lands, and private land projects that are federally funded or assisted, must comply with sections 106 and 110 of the NHPA.
- Native American tribes would be consulted on matters related to traditional cultural properties (e.g., religious or village sites and graveyards) or traditional economies (i.e., historical economic activities that employ traditional technology for subsistence-level resource utilization).
- BLM law enforcement officers would regularly patrol listed, eligible, and potential NRHP sites and other areas of significant cultural or paleontological interest to discourage illegal collecting and vandalism. Site condition would be monitored and enforcement effectiveness assessed. Law enforcement efforts would be altered as necessary.
- BLM would develop a cultural resources monitoring protocol in consultation with the tribes.
- The BLM–SHPO Protocol Agreement would be sustained and the state historic preservation officer would be consulted for appropriate issues.
- All livestock grazing allotments would be evaluated for significant cultural resources according to an existing schedule with the California SHPO. Additional, more intensive cultural resource surveys will focus on Category 1 grazing allotments.

- Yankee Jim Ranch would be nominated for the NRHP.
- A geographic information system (GIS) database would be used to record and manage cultural resource information.
- Known and newly identified archaeological sites would be evaluated and placed in one of six use categories (as specified in Department of Interior Information Bulletin [DOI IB] No. 2002-101). Categories and management actions are as follows:

Table 2.2-1 Use Categories for Cultural Resources

Category	Allowable Uses	Management Actions	Desired Future Condition
a. Scientific use	Research	Permit appropriate research & data recovery	Preserve until research potential is realized
b. Conserve for future use	Research or public interpretation	Propose protective measures/designations	Preserve until use conditions are met
c. Traditional use	Native American activities	Consult with tribes & determine use limitations	Long-term preservation
d. Public use	Recreation, public interpretation & education, etc.	Determine limitations and allowed uses	Long-term preservation and on-site interpretation
e. Experimental use	Research, followed by interpretation	Determine nature of experiment	Protect until used
f. Discharged from management	All uses allowed	Remove protective measures	No use after recordation; not preserved

Source: U.S. DOI IB No. 2002-101, "Cultural Resource Considerations in Resource Management Plans"

Three interpretive sites would be developed, as specified in Table 2.2-2.

Table 2.2-2 Proposed Cultural Resource Interpretive Sites

Location	Size (acres)	Cultural Resources
Descent to Goose Lake	5	Historic trail, Prehistoric site
Bayley Reservoir	2	Historic battle, Prehistoric site
Coyote Ridge	½	Historic battle

Cultural sites at or near interpretive areas would be evaluated for NRHP eligibility and nominated, if appropriate. Interpretive sites would be developed in consultation with tribes. Survey efforts would focus on locating areas of ethnographic importance, since these would have greatest value as interpretive sites. The (cultural resource) sensitivity model would be used to prioritize inventory efforts according to disturbance vulnerability. Areas that are potential traditional cultural properties would be protected until properly assessed. Yankee Jim Ranch (1,400 acres) would receive ACEC designation. See Section 2.11 for a detailed description of ACECs.

Exclosure fences (2,750 total acres) would be used (in consultation with permittees and tribes) to protect important cultural sites from damage by off-highway vehicles (OHVs) and livestock (see Table 2.2-3).

Table 2.2-3 Cultural Site Exclosures

Location	Size (acres)	Sensitive Resources
Red Rock Lakes	250	Cultural, Wildlife
Juniper Creek	200	Cultural, Wildlife
Crooks Canyon	700	Cultural, Water quality, Wildlife
Bilicke Spring	300	Cultural, Riparian, Wildlife
Rocky Prairie	200	Cultural, Riparian, Wildlife, Scenery
Tablelands	200	Cultural, Riparian, Water quality, Wildlife, Scenery
Tule Mountain	300	Cultural, Plants, Riparian, Wildlife, Scenery
Dill Field	400	Cultural, Sensitive Species, Water quality
Yankee Jim Ranch	200	Cultural, Wildlife, Scenery

Additional exclosures would be built where (cultural) resource issues are identified. Affected tribes will be notified.

The flag-and-avoid method would be used to protect cultural sites from land-use activities until evaluated for NRHP eligibility. However, protection would not apply to sites described as "sparse or light lithic scatters." On these sites, research efforts may be instigated to determine the degree of site disturbance caused by mechanized juniper harvesting. Should research indicate unacceptably adverse effects, these sites would be subject to avoidance until such time as they are evaluated for NRHP eligibility.

Ground-disturbing activities (e.g., wildlife habitat improvements, urban development projects, right-of-way construction, mineral development, recreation facilities and livestock grazing) would be assessed for archaeological impacts. Activities most likely to directly or indirectly affect archaeological sites would be reduced, restricted, eliminated, or otherwise mitigated, where feasible, in consultation with affected tribes. OHVs would be restricted to existing or designated routes throughout the planning area.

Educational programs would serve and encourage public interest in cultural and paleontological resources. Efforts would include presentations and brochures. Other educational experiences would also be encouraged, particularly field trips to interpretive sites by school, community, and tour groups.

Cultural resource management plans (CRMPs) would be developed for: Rocky Prairie/South Graves, Tule Mountain, Likely Tablelands/Yankee Jim Ranch, and Beaver Creek. CRMPs would also be developed for the three interpretive sites proposed under this alternative. The (existing) Mount Dome CRMP would remain unchanged, but the Juniper Creek CRMP would be updated.

Known paleontological sites would be surveyed to establish the extent and importance of deposits. New sites would be sought and surveyed. Significant finds would be protected from ground-disturbing activities, and considered for interpretive site development.

2.2.4 Goal 2–Survey and Inventory

Imminent threats to cultural and paleontological resources from human-caused or natural deterioration would be substantially reduced or eliminated. Potential conflicts with other land-use activities would be reduced by identifying priority areas for cultural and paleontological resource inventory.

2.2.4.1 Objectives

Increase total of surveyed lands within the field office jurisdiction. Identify priority areas for future survey by designating high, medium and low sensitivity areas.

2.2.4.2 Proposed Management Actions

- Inventory, survey, classification, and preservation of cultural and paleontological resources on public lands, and on private land projects that are federally funded or assisted, will comply with procedures enumerated in Sections 106 and 110 of the NHPA—including consultation with the state historic preservation officer (when appropriate).
- Determine sensitivity ratings (high, medium, or low) for all planning area lands using the model developed in the Class I Cultural Resource Overview.
- Consult with tribal representatives regarding management of areas that are culturally significant for Native Americans. Such areas would be thoroughly inventoried.
- The effects of mechanical and hand treatment of juniper on "sparse/light" lithic scatters would be evaluated, and this information used to determine appropriate protection levels.

Cultural resource inventories would be structured on the recently-developed sensitivity model. Surveys would initially be conducted under NHPA Section 106 guidelines. However, Section 110 guidelines would be used to prioritize high sensitivity areas for thorough evaluation before resource management activities are initiated.

Ground observations may require transect spacing adjustments (a procedure left to the discretion of the archaeologist-in-charge). This procedure would greatly reduce survey times in areas of low to moderate sensitivity, thereby making additional time and resources available for project implementation. All discoveries would be flagged for avoidance—except for sites involved in the juniper harvesting study. (However, juniper harvest must not cause subsurface disturbance that would affect the site's potential for NRHP eligibility.) Motor vehicles would be restricted to existing roads and designated trails.

2.2.5 Goal 3–Education and Interpretation

Increase the public's knowledge of, appreciation for and sensitivity to cultural resources, Native American Issues, and paleontological resources.

2.2.5.1 Objectives

Increase the public's knowledge of, appreciation for and sensitivity to cultural resources, Native American issues, and paleontological resources.

- Scientific research would be encouraged and accommodated.
- Qualified applicants would be enrolled in a 'site stewardship' program designed to monitor site condition and promote public interest and appreciation for cultural and paleontological resources.

2.2.5.2 Proposed Management Actions

- Ensure that management actions on public lands, and on private land projects that are federally funded or assisted, comply with Sections 106 and 110 of the NHPA.

- Consult with Native American tribes regarding cultural resource issues of relevance to them. Interpretive sites, in particular, would be developed in partnership with tribal representatives and qualified (Native American) individuals.
- Actively recruit and enroll qualified native and non-native (cultural) 'site stewards' under the California Site Stewardship Program. Employ local advertising (including the AFO website) and program presentations in this effort.

Research would be actively encouraged through new and existing cooperative agreements. Monies to support research would be sought (on a yearly basis) through the challenge cost share initiative.

Interpretive sites would be built only where they would deflect, or at least not contribute to, activities that would degrade the site. Brochures and other publications would be developed, and would be site-specific or general in nature to assist cultural staff in their public education efforts. However, site-specific literature would be developed for Yankee Jim Ranch, Descent into Goose Lake, and the Infernal Caverns.

A structured, formal program would be developed to educate schoolchildren, local citizens and visitors, thereby encouraging interest and appreciation for cultural and paleontological resources, and aiding in their preservation. Additional inventories would search new locales and evaluate their potential for possible paleontological interpretive sites.

2.2.6 Goal 4–Native American Consultation

Native American tribes would be consulted on matters related to traditional cultural properties (TCPs) and traditional economic activities. These properties and activities would be available to native peoples for recognized traditional uses.

2.2.6.1 Objectives

- Ensure that Native American tribes are consulted on matters related to TCPs (e.g., religious or village sites and graveyards) or traditional economies (i.e., historical economic activities that employ traditional technology for subsistence-level resource utilization).
- Ensure that TCPs are available for traditional uses by Native Americans. Where properties had economic significance, ensure their continued availability for economic activities practiced in a traditional manner.

2.2.6.2 Proposed Management Actions

- Consult with Native American tribes on matters related to traditional cultural properties and traditional economic activities. Ensure that consultations are adequately documented.
- Identify, verify, and document qualifying traditional cultural properties in consultation with Native American representatives.
- Make qualifying TCPs available for traditional uses by Native Americans. Where TCPs had economic significance, ensure continued availability for economic activities practiced in a traditional manner.
- Although traditional cultural properties would be managed for Native American use, TCPs are public land and would remain under BLM management.

An active consultation program would be initiated to identify traditional cultural properties and ethnographic sites. However, ethnographic inquiries would emphasize old village sites. Sites would be confirmed by survey; qualifying TCPs would be protected and (ecologically) restored if deteriorated. Resource uses that threaten these sites would be modified, reduced, or eliminated as necessary to protect the site.

2.3 Energy and Minerals

BLM plays an essential role in supplying mineral and energy resources. However, adverse effects from mineral and energy exploration and development must be minimized (or mitigated) so that overall land health is preserved or restored. For the sake of clarity and administrative efficiency, energy and mineral resources are divided into four program areas: leasable minerals (e.g., oil, natural gas, and geothermal energy), locatable minerals (i.e., 'hard-rock' minerals, such as gold and silver), saleable minerals, (e.g., sand, gravel, cinders, and decorative rock), and renewable energy (e.g., biomass fuels, solar energy, and wind).

The potential for discovering commercially viable oil, natural gas, or geothermal energy reserves is low to non-existent throughout the planning area. Locatable mineral activity has largely been confined to sporadic exploration. Most activity is concerned with saleable minerals, particularly cinder operations and flat-rock collecting.

2.3.1 Desired Future Condition

An active mineral exploration, leasing, and development program would provide essential mineral resources and domestic energy supplies. Exploration and development activities will not be allowed to degrade ecosystem health.

2.3.2 Legislative, Regulatory and Policy Direction

- The Mineral Leasing Act (1920), as amended
- The Geothermal Steam Act (1970), as amended
- The Mining and Mineral Policy Act (1970)
- The Federal Land Policy and Management Act (1976), Section 102
- Executive Order 13212 – Actions to Expedite Energy-Related Products (2001)
- The President's National Energy Policy of 2001
- BLM Mineral Policy (1984)
- The General Mining Law (1872)
- The Material Act (1947)
- Surface Mining And Reclamation Act of 1975
- BLM Wind Energy Policy (IM2003-020)

2.3.3 Proposed Management Actions Common to All Mineral Activities

- Until Congress makes a determination on wilderness status, wilderness study areas (WSAs) are 'Closed' to leasable, salable, and renewable energy development.
- Mineral activities in WSAs will be closely monitored to ensure strict adherence to the terms and conditions of the Wilderness Interim Management Policy (IMP).

- Acquired lands would be managed according to the purpose of acquisition or in the same manner as adjacent lands. For instance, acreage acquired for mining mitigation would be recommended for mineral withdrawal.
- Mineral and energy activities would be monitored to ensure compliance with all stipulations, terms, conditions, and reclamation plans.
- Mines would be rehabilitated and remedial action would be taken where abandoned mine hazards are identified.

2.3.4 Leasable Minerals

The following definitions apply to standards and restrictions for leasable mineral development:

***Standard lease terms*:** These are the usual conditions and requirements applied to mineral leases (Sections 6 of Form 3110-11, "Offer to Lease and Lease for Oil and Gas," and Form 3200-4, "Offer to Lease and Lease for Geothermal Resources"). They are the only constraints when other resources or resource uses do not require additional protection.

***Surface Use and Occupancy Requirements*:** These identify minimum standards and buffer distances for activities involving mechanical surface disturbance. Surface use and occupancy requirements (Appendix K) are designed to protect important natural resources (e.g., sage-grouse leks and nesting habitat) or man-made features (e.g., recreation sites).

***No Surface Occupancy (NSO)*:** This constraint prohibits surface-disturbing activities in order to preserve the natural character of the landscape. It is applied where resource values (e.g., sensitive plants or areas of high scenic value) would not be adequately protected by standard stipulations or special stipulations (such as timing limitations).

***'Closed' to leasing*:** This involves non-discretionary and discretionary leasable mineral closures. Non-discretionary closures (such as WSAs) are 'Closed' to leasing by legal constraints. Discretionary closures are imposed during the planning process. These closures are applied where natural resource values would be irreparably damaged and their preservation is more important than the expected economic return from mineral leasing.

***Special stipulations*:** These are conditions or requirements, applied when a lease is issued, that impose additional restrictions to the standard leasing terms. However, waiver of additional stipulations may be allowed if existing or emerging technologies can be used to satisfy RMP objectives for the protected resource.

***Other special stipulations*:** There are other special stipulations that do not fit any of the previous categories. However, like the other categories, these are applied when a resource requires protection beyond that provided by standard leasing terms. Other special stipulations are applied when the resource requiring protection must be preserved on a regional basis (e.g., special status plants or animals that are present throughout the management area, some in unknown locations) or when information about the resource is incomplete; thereby necessitating blanket stipulations for all leases.

2.3.4.1 Goal

Leasing opportunities for oil, natural gas, and geothermal development would be provided in locations appropriate for these activities.

2.3.4.2 Objectives

Provide exploration and development opportunities for leasable minerals while protecting other resources and maintaining ecosystem integrity.

2.3.4.3 Proposed Management Actions for Leasable Minerals

A total of 445,997 acres would be 'Open' to exploration and development of leasable minerals under standard BLM terms and conditions. Approximately 57,048 acres would be 'Closed' to exploration and development of leasable minerals. This includes WSAs (56,648 acres), the Baker Cypress research natural area (RNA), and the proposed Lower Pit River WSR (400 acres).

Surface use and occupancy requirements (see Appendix K) would apply to new leases (affecting about 200,000 acres).

NSO requirements would apply to the Ash Valley ACEC (1,322 acres) and to the proposed ACECs (see Table 2.3-1). NSO requirements would also apply to important wildlife habitats or other areas of exceptional natural resource value (approximately 9,290 acres). The total area managed under NSO requirements would be 18,580 acres.

Table 2.3-1 Proposed Areas 'Open' to Mineral Leasing with No Surface Occupancy Requirements

ACEC	Size (acres)
Emigrant Trails ACEC (portion outside of WSA)	750
Mountain Peaks ACEC (portion outside WSA)	2,515
Old Growth Juniper ACEC	3,115
Mount Dome ACEC	1,510
Likely Tablelands/Yankee Jim/Fitzhugh Creek ACEC	1,400
Additional NSO area	9,290
Total	18,580

2.3.5 Locatable Minerals

2.3.5.1 Goal

Opportunities to explore and develop locatable mineral resources would be provided in a manner appropriate for the location.

2.3.5.2 Objectives

Opportunities to explore and develop locatable mineral resources would be provided. However, these activities must be conducted in a manner that will protect other resources and resource uses. Therefore, mineral withdrawals would be applied where necessary. Locatable mineral withdrawals would be revoked where and if no longer required.

2.3.5.3 Proposed Management Actions for Locatable Minerals

WSAs are generally 'Open' to exploration for locatable minerals. Where permitted, however, exploration activities must satisfy the non-impairment criteria. This means that (exploration and development)

activities must not require reclamation unless the operation is 'grandfathered' (i.e., had established rights on or before October 21, 1976).

The Ash Valley ACEC would remain withdrawn from mineral entry. All proposed ACECs (i.e., Timbered Crater, Emigrant Trails, Mountain Peaks, Old-Growth Juniper, Mount Dome, and Likely Tablelands/Yankee Jim/Fitzhugh Creek) – a total of 29,171 acres – would also be recommended for withdrawal from mineral entry (Map ACEC-1). Mineral withdrawal would likewise be recommended for (proposed) WSRs (2,500 total acres). The total for newly recommended withdrawals is 32,993 acres, or less than 7% of the management area.

The rest of the management area (470,052 acres) would be 'Open' to exploration and development of locatable minerals, with stipulations to protect other resources.

2.3.6 Saleable Minerals

2.3.6.1 Goal

Saleable mineral materials (e.g., sand, gravel, and cinders) would be provided to meet the needs of local, state, and federal agencies, and the general public. Public demand for decorative rock would also be accommodated.

Mineral material pits would be developed, used, maintained, and 'Closed' in a manner that minimizes adverse impacts on other resources. Decorative rock would be collected in an environmentally responsible and visually acceptable manner.

2.3.6.2 Proposed Management Actions for Saleable Minerals

A total of 435,385 acres (86% of the management area) would be 'Open' to development of mineral material pits; 67,660 acres would be closed. Existing pits would continue to operate under BLM-approved reclamation plans. WSAs, existing and proposed ACECs and RNAs (Map ACEC-1), and the Lower Pit River WSR corridor would be 'Closed' to mineral material disposal. Pit development would be contingent on a favorable environmental assessment (lack of significant environmental conflicts at the proposed site).

Commercial decorative rock collecting would be permitted in the same areas. WSAs, existing and proposed ACECs and RNAs, and the Lower Pit River WSR corridor would be 'Closed' to decorative rock collecting.

Applicants for decorative rock permits must state the amount of rock they intend to collect and delineate boundaries for their proposed collection area. BLM reviews these requests and makes any necessary adjustments to quantities and/or boundaries. Once provisional approval is obtained, applicants must complete botanical and archaeological evaluations and an environmental assessment. If these are satisfactory, a collection permit may be issued. Collecting is limited to the drier months (generally May - September) and trucks must be certifiably free from noxious weeds prior to entering public lands. Other, site-specific stipulations also apply. Old (previously worked) collecting areas (6,612 acres) would remain 'Open', but solely for personal use. Personal use for anyone may not exceed three tons per person per calendar year. Permits are free for Native Americans, but only when gathered from locations designated or approved by BLM. Decorative rock collected under free use permits must be used for sweat lodges or other ceremonial purposes.

2.3.7 Renewable Energy

The National Energy Policy calls for increased use of renewable energy sources from federal lands. Using western juniper as a biomass fuel would be well suited to the AFO management area. This section presents proposed management actions for this and other renewable sources (e.g., wind and solar power).

2.3.7.1 Goal

Opportunities would be provided to develop renewable energy sources—particularly solar, wind, and biomass fuel from western juniper.

2.3.7.2 Objectives

Facilitate renewable energy development and operations in a way that will minimize adverse effects on other resources and resource users.

2.3.7.3 Proposed Management Actions for Renewable Energy

This section is primarily concerned with opportunities for solar, wind, hydroelectric and biomass facilities. A total of 435,385 acres (86% of the management area) would be 'Open' to renewable energy development; 67,660 acres would be closed. WSAs, proposed ACECs and RNAs, and the Lower Pit River WSR corridor would be 'Closed' to renewable energy development.

Wind energy projects will be designed and developed in accordance with the Final Programmatic Environmental Impact Statement on Wind Energy Development on BLM-Administered Lands in the Western United States, 2005 (see Map EN-1). Public land that is designated as an exclusion area (i.e., WSAs, ACECs, RNAs, and WSRs) will not be available for wind energy development. Implementation of any proposed management actions would ensure that potential adverse impacts to the natural and cultural resources present at wind energy development sites would be minimal to negligible. See Appendix O for a list of Wind Energy Best Management Practices.

Adverse impacts to wildlife and their habitats will be reduced by following the U.S. Fish and Wildlife Service's (USFWS's) *Interim Guidelines To Avoid And Minimize Wildlife Impacts From Wind Turbines*, 2003.

Potential wind energy projects will be discussed through consultation with Native American tribes to avoid impacts to cultural resources and traditional cultural properties.

Prior to authorizing any wind energy projects, a site-specific environmental analysis would be conducted to determine project feasibility and address and mitigate impacts. This analysis will include public involvement, and an assessment of cumulative impacts associated with a reasonably foreseeable development scenario for wind energy within the region.

A number of areas potentially suitable for wind energy development are identified in this PRMP as Visual Resource Management (VRM) Class 2 (see Chapter 2.21). BLM recognizes that wind energy development areas would more appropriately be placed in VRM Classes 3 and 4, which allow for more substantial visual contrasts (see Chapter 2.21). The analysis to reconsider VRM classes for wind energy locations is being deferred until specific projects are proposed and a reasonably foreseeable development scenario is completed. This analysis will assess both site-specific and cumulative visual impacts, and will include visual simulations to illustrate these impacts from key observation points, such as communities and trail corridors. Upon completion of this analysis, the VRM classes could be amended, if necessary, to provide an exception for wind energy development in appropriate locations.

Additional transmission corridors may be designated as future needs dictate, subject to on-site environmental reviews and clearances. *The West-Wide Energy Corridor Programmatic EIS, 2005* (PEIS) specifies that coordinating agencies (BLM) will designate appropriate energy corridors on federal lands in 11 western states, perform any environmental reviews required to complete corridor designation, and incorporate designated corridors into relevant agency land use plans. *The Preliminary Draft Map of Potential Energy Corridors on Federal Lands* depicts an east-west transmission corridor between northern California and northern Nevada, which will potentially be routed through the AFO area. This corridor, when coupled with related renewable generation development, will create markets for renewable energy between California and Nevada and will augment California's energy supplies by allowing additional energy to flow into the state at a northerly point other than the California-Oregon border. The routes indicated on the *Preliminary Draft Map* of the PEIS are very general and exact corridor locations will need to be identified by BLM to minimize any impacts to sensitive resources. BLM will complete the environmental reviews necessary to identify proposed routes within the requisite time frames outlined in the PEIS.

2.4 Fire Management

Preservation of human life (public and firefighter) is the overriding consideration in any wildland fire situation. After this, management priorities must achieve a balance between protecting natural resources and community infrastructure. Decisions are based on health and safety considerations, the relative value of resources and structures requiring protection, and the cost of that protection.

Federal fire policy defines wildland fire as: "Any non-structural fire that occurs in the wildland." Three distinct categories of wildland fire are discussed herein:

- **Wildfires**—Naturally ignited or caused by man, these are suppressed using the appropriate management response (AMR).
- **Wildland Fire Use**—Naturally ignited fires that are allowed to burn in order to realize resource benefits.
- **Prescribed Fires**—Planned, deliberately-ignited fires set by resource managers in order to accomplish resource management objectives.

NorCal Fire Management Plan: The NorCal Fire Management Plan (FMP) is a strategic document for wildland fire management and hazardous fuels treatments within the AFOR planning area. FMPs define a strategy to manage wildland and prescribed fires based on the area's approved land management plan. The current NorCal FMP displays qualitative and quantitative objects that are in conformance with the existing Management Framework Plans and Resource Management Plan for the AFO. The current NorCal FMP would be updated upon signature and approval of the Proposed Alturas RMP to reflect management actions within the PRMP.

The NorCal FMP will be reviewed annually and revised as needed to ensure that the strategic guidance provided in the plan is in accordance with resource management and fire/fuels management goals, objectives, and actions outlined in the Alturas RMP. The management direction outlined in any future version of the FMP would be tiered to the NEPA analysis that was completed for this land use plan. Revisions, additions, and adjustments to the FMP that are in conformance with the RMP may be made in the future. Additional NEPA analysis would be conducted on any revision, addition or adjustment that is not adequately analyzed in other planning/NEPA documents.

2.4.1 Appropriate Management Response

AMR is any specific and suitable action taken to meet human safety needs and achieve resource objectives. AMR may encompass the entire spectrum of tactical options from basic monitoring to aggressive and extensive suppression. The AMR for a particular area uses objectives and strategies identified in the current NorCal FMP. Response to wildland fire is based on risk evaluation (public and firefighter), fire circumstances (particularly weather and fuel conditions), natural and cultural resource management objectives, protection priorities, and resource values. Priorities are set according to a holistic evaluation of fire context, local geography, and the national wildland fire situation.

Appropriate management response typically fits one of the following management scenarios:

- Prompt and aggressive suppression to quickly control the fire and keep burned area to a minimum. (Examples would include fires in the wildland-urban interface [WUI], developed recreation sites, and some critical natural or cultural resource areas.)
- Aggressive suppression on one portion of a fire and monitoring another part of the same fire.

- Fire monitoring. (This assumes that topography, weather, and fuel conditions reflect a minimal threat to other government-owned or private lands, resource objectives are enhanced [or at least not imperiled], and safety considerations are reasonable.)

2.4.2 Desired Future Condition

BLM has a mandate to restore and maintain healthy ecosystems. Therefore, fire would be integral to producing multiple seral stages and diverse, healthy vegetation. In turn, healthy and productive watersheds, forests, and rangelands would provide sufficient food, thermal, and escape cover for wildlife; adequate forage for livestock; and enhanced recreational opportunities. Unplanned fires would be successfully suppressed when they threaten the WUI, private timber and property, special (sensitive) resource features, and areas at risk of type-conversion to monocultures of noxious weeds.

Fire managers would be successful in reintroducing fire (and its ecological benefits) to fire-dependent ecosystems—a step that would result in dramatically lower suppression costs in the long term. A 'confine-and-contain' strategy would be typical of the flexibility required of fire managers to achieve these ends.

2.4.3 Goals

Wildland Fire Management

An AMR would be determined for every wildland fire (with public and firefighter safety as first consideration). Further prioritization would be based on the relative value of resources and structures requiring protection and the cost of providing that protection.

Risk Mitigation and Education

The public would acquire a greater appreciation for the hazards associated with fuel accumulation and the risk of catastrophic wildfires. Practical preventive measures would be widely adopted—especially in the WUI. The public would also come to understand and appreciate the natural role of fire and accept the necessity of prescribed burns to reduce fuels, protect property, and maintain healthy plant and animal communities.

2.4.4 Objectives

Wildland Fire Management

Wildland fires that merit full suppression will be fought to achieve a minimum burned area at reasonable cost. The full array of available (firefighting) options may be used, unless site-specific restrictions apply (e.g., WSAs, ACECs, and NRHP-eligible sites). Aggressive suppression is paramount in the WUI and in some important wildlife habitats.

Fire would be used as much as possible to achieve resource management objectives since it is the most natural and cost-effective means of restoring, improving, and maintaining ecosystems. Areas that have a history of wildland fire (when there is little potential for spreading) would be considered for WFU or a monitoring-and-containment strategy. This would be accomplished with minimum firefighter risk and at the lowest possible cost.

The NorCal FMP (in development) would be used for fire management strategies. This Plan would provide details for implementation level wildland fire management response and provides a variety of suppression options. It would also identify conditions and potential locations for WFU, prescribed burning, and other fuel-reduction treatments in accordance with the PRMP. The current NorCal FMP would be updated upon signature and approval of the Record of Decision for the Alturas RMP.

Risk Mitigation and Education

The AFO will provide citizen education and yearly refresher training for volunteer firefighters. The Bureau would also help equip rural and volunteer firefighters when funding is available. Education would emphasize community protection procedures and fire safety measures. However, there would also be lessons on fire ecology, fire's essential role as a natural ecosystem process, and the use of prescribed fire. AFO fire managers are committed to educating communities threatened by wildland fires. AFO fire and resource managers will work with individual communities, fire safety councils, and other government agencies to identify wildland fire hazards, create mitigation strategies, and help develop community wildfire protection plans. However, active community participation and citizen-driven solutions are essential to reducing wildfire risk in the WUI. Vulnerable communities will be encouraged to avail themselves of grant opportunities—such as rural, state, and volunteer fire assistance and economic action programs (available through various state and federal agencies).

2.4.5 Legislative, Regulatory, and Policy Direction

General

- Federal Wildland Fire Management Policy (1995), revised 2001
- Interagency Strategy for the Implementation of Federal Wildland Fire Management Policy (June, 2003)
- Interagency Fire Management Plan Template (2002)
- A Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment: 10-year Comprehensive Strategy Implementation Plan (2002)
- Interagency Standards for Fire and Aviation Operations (published annually)
- U.S. Department of the Interior Departmental Manual, Chapter 910 (2000)
- BLM Manual 9200
- Fire Management Plan Guidance: IM No. 2003-38 (2003)
- Land Use Plan Guidance: IM No. 2004-007 (2004)
- An MOU is in effect between all federal and state agencies concerned with fire management on public and private lands in California. This is the Cooperative Fire Protection Agreement (between DOI BLM for CA and NV; DOI National Park Service, Pacific West Region; U.S. Department of Agriculture [USDA] Forest Service, Regions 4, 5, and 6; and the California Department of Forestry and Fire Protection [CDF]).
- BLM uses the Fire Program Analysis software for resource allocation and fire-related budgeting.

Specific to the Alturas Field Office

MOUs with other agencies:

- Cooperative Fire Protection Agreement – Madeline Fire Department
- Cooperative Fire Protection Agreement – Likely Fire Department
- Cooperative Fire Protection Agreement – Alturas Rural Fire Department

BLM plans:

- California Master Agreement between BLM and the USDA Forest Service, USFWS, Bureau of Indian Affairs, National Park Service, and CDF
- NorCal Fire Management Plan (1998)
- Alturas Field Office Fire Management Direction (From Phase I, Fire Planning)
- Risk Assessment and Mitigation Strategies (RAMS) software
- Alturas Resource Management Plan (1984)

2.4.6 Proposed Management Actions

Wildland Fire Management

- When severe fire intensity levels exist—as described in the current NorCal FMP—aggressive, initial attack and full suppression would be the AMR for all areas, especially in the WUI.
- When fire intensity is low, the AMR would be much less aggressive. Actions would be determined by resource management objectives for the area—the typical response being containment.
- Suppression efforts may employ fire engines and heavy equipment, aircraft, retardant, and hand crews, according to what is appropriate for the particular fire situation. However, use of heavy equipment would be avoided in ACECs, RNAs, WSAs, known NRHP-eligible sites, and other sensitive areas—unless deemed essential by the (fire) line officer.
- Firefighting efforts would employ local contractors and personnel, and utilize local supplies and resources, as much as possible.
- A policy of adaptive management (flexible response according to management objectives and prevailing conditions—especially weather and fuel conditions) would employ AMR (from monitoring and containment to full suppression) on 97% of the field office area (486,047 acres) (Map FIRE-2).
- Containment would involve direct and indirect actions, plus natural (e.g., rocky outcrops and rivers) and man-made (e.g., roads) barriers. In order to achieve specific resource objectives, WFU plans (or monitoring strategies) would be developed for 3% (16,998 acres) of the management area.
- For these areas, when it is apparent that a wildland fire is achieving resource benefits (e.g., reducing fuels or improving wildlife habitats) it would be managed under a contain-and-confine strategy and allowed to burn to natural or man-made barriers. The flexibility provided by these options would allow fire to play a significant and natural role in many vegetation types, given existing constraints.

Risk Mitigation and Education

- Fire education programs would be developed and then presented in local schools. Content would include fire prevention and hazard reduction, as well fire's essential role in ecosystem maintenance.

- BLM fire managers would attend local fire safety council meetings to present practical information on fire safety and on fuel and hazard reduction. Basic information on fire ecology would also be presented. This would emphasize the natural and essential role of fire for fuel reduction and ecosystem maintenance.
- Hazard identification and assessment is an ongoing process. When hazards are identified, fuel-reduction projects would be developed and coordinated with local agency programs.
- Volunteer fire departments would receive safety and fire training on a yearly basis. Equipment would be issued as funding permits.
- BLM would encourage and help local communities to develop comprehensive and effective wildfire protection plans.

2.4.7 Fire Rehabilitation and Stabilization

The National Fire Plan was developed in August, 2000 following a landmark wildland fire season. The intent of this plan is to actively respond to severe wildfires and their impacts on communities and resources while ensuring sufficient firefighting capacity for the future.

Emergency stabilization and rehabilitation (ES&R) activities are essential for landscapes and communities in the aftermath of severe wildfires. The objectives of the ES&R programs are to minimize threats to life or property or to stabilize and prevent further unacceptable degradation to natural and cultural resources resulting from the effects of a fire, in a cost-effective and expeditious manner. Within DOI, burned area rehabilitation (BAR) and emergency stabilization (ES) activities are an integral part of wildfire incidents, but are planned, programmed, and funded separately from each other. BAR and ES Guidebooks provide operational guidance.

ES is defined as “Planned actions to stabilize and prevent unacceptable degradation to natural and cultural resources, to minimize threats to life and property resulting from the effects of a fire, or to repair/replace/construct physical improvements necessary to prevent degradation of land or resources. Emergency stabilization actions must be taken within one year following containment of a wildland fire.”

Rehabilitation is defined as “Efforts undertaken within three years of containment of a wildland fire to repair or improve fire-damaged lands unlikely to recover naturally to management approved conditions, or to repair or replace minor facilities damaged by fire” (620 DM 3.3M). Specific objectives of rehabilitation are: 1) To evaluate actual and potential long-term post-fire impacts to critical cultural and natural resources and identify those areas unlikely to recover naturally from severe wildland fire damage; 2) To develop and implement cost-effective plans to emulate historical or pre-fire ecosystem structure, function, diversity, and dynamics consistent with approved land management plans, or if that is infeasible, then to restore or establish a healthy, stable ecosystem in which native species are well represented; and 3) To repair or replace minor facilities damaged by wildland fire (620 DM 3.4B).

Development of ES&R plans is conducted immediately following a wildfire and implementation of BAR plans is often conducted over the course of several years following a wildfire; it typically includes reforestation, road and trail rehabilitation, fence replacement, fish and wildlife habitat restoration, invasive plant treatments, and replanting and/or reseeding with native or other desirable vegetation.

2.4.7.1 Desired Future Condition

Desired future vegetation in areas recently disturbed by fire are expanses (small to large—depending on the intensity and extent of the burn) of grasses, forbs, and young shrub-dominated areas interspersed with numerous patches of climax vegetation (woody shrubs and trees), and scattered juniper. Vegetation communities (upland, riparian, and special habitats, e.g., special status species) would be vigorous, diverse, reproductively successful, and valuable as wildlife habitat. With respect to site rehabilitation after wildfire, AFO resource managers would have created a site specific, interdisciplinary emergency stabilization/rehabilitation and restoration plan in a timely manner. Burned area ES&R plans would have been developed for specific plant communities and/or watersheds in order to fulfill resource objectives for the areas which have been burned. The ES plans would be prepared immediately following a wildfire. The burned area emergency response (BAER) plan, if needed, should be prepared concurrently with the ES plan.

The ES&R plans are completed by the AFO staff. BAER plans are generally developed by the DOI National BAER Team for a wildfire that involves multiple agency ownership or on large complex wildfires where preparation of ES&R planning is beyond the scope of the local staff and where values at risk are extremely high.

2.4.7.2 Goal

Burned areas would be stabilized and rehabilitated to mitigate the adverse effects of wildland fires on soils, vegetation, and waterways. This would be accomplished in a cost-effective manner. The possibility of wildfire recurrence or invasion by noxious weeds would be minimized.

2.4.7.3 Objectives

A unique environmental analysis would be completed for each emergency fire stabilization and rehabilitation project. Each plan would include monitoring and assessment for adaptive management decisions.

2.4.7.4 Legislative, Regulatory, and Policy Direction

General

- National Environmental Policy Act (1969)
- Federal Wildland Fire Management Policy (1995), program review and update of 2001
- Interagency Fire Management Plan Template (2002)
- A Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment: 10-year Comprehensive Strategy Implementation Plan (2002)
- U.S. Department of the Interior Departmental Manual, chapter 910
- BLM Manual 9200
- Fire Management Plan Guidance: IM No. 2003-38 (2003)
- Land Use Plan Guidance: IM No. 2004-007 (2004)
- Department of the Interior, Departmental Manual, 620 DM 3, Burned Area Emergency Stabilization and Rehabilitation (2004)
- Interagency Burned Area Rehabilitation Guidebook, Version 1.3, November 2006
- Interagency Burned Area Emergency Response Guidebook, Version 4.0, February 2006

- BLM Handbook H-1742-1, Burned Area Emergency Stabilization and Rehabilitation, USDI, BLM, 2006
- An MOU is in effect between all federal and state agencies concerned with fire management operations on public and private lands in California. This is the Cooperative Fire Protection Agreement and coordinates efforts between DOI BLM for CA and NV; DOI National Park Service, Pacific West Region; USDA Forest Service, Regions 4, 5, and 6; and the States of CA (CDF) and NV.
- BLM uses the Fire Protection Analysis software to allocate resources and determine fire management budgets in relation to natural resource goals and objectives.
- BLM Manual 1745 Supplement - California Native Plant Materials Policy

BLM Plans Specific to the Alturas Field Office

- NorCal Fire Management Plan
- Alturas Resource Management Plan

2.4.7.5 Proposed Management Actions

Prioritize post-fire rehabilitation, stabilization, and restoration actions to support ecosystem health of native plant communities. Plant species used for ES&R seedings would consist of native and non-native annuals and perennials.

Hay, straw, mulch, and seed used for emergency stabilization and rehabilitation projects on BLM-administered lands must be certified noxious weed free.

Areas burned by wildland fire would be rested from livestock grazing for a minimum of two growing seasons.

Emergency fire stabilization and rehabilitation activities would be implemented on a case-by-case basis following wildland fire in consultation with affected tribes and other interested parties. A unique and specific environmental analysis would be completed for each emergency fire stabilization and rehabilitation project. Each plan would include monitoring and assessment for adaptive management decisions. A local or regional programmatic ES&R plan with an associated Environmental Assessment (EA) would be developed at the landscape level prior to wildfire occurrence. Locally gathered, native seed caches would be developed for seeding projects. Timber salvage would be considered, with stringent stipulations to minimize impacts on other resources. Roads and trails constructed during timber salvage activities would be closed and rehabilitated to prevent them from becoming established ways.

2.5 Forestry

AFO forest resources are classified as forests or woodlands. By definition, forestlands (actually or potentially) have a 'forest tree' cover of at least 10%. The most common commercial species in northeastern California are Jeffrey pine, ponderosa pine, sugar pine, Douglas-fir, white fir, and incense cedar. For economic reasons, forestlands are divided into commercial (high-site) forestlands (capable of producing at least 20 cubic feet ($ft.^3$) of merchantable timber per acre per year) and non-commercial (low-site) forestlands, which produce less. Low-site forests generally occur where commercial forests grade into juniper woods. In addition to western juniper, these (low-site) forests contain scattered ponderosa pine, Jeffrey pine, and, occasionally, oaks. Woodlands are areas that produce trees not typically used for saw-timber. Woodland trees are usually sold in units other than board-feet and are not included in the allowable cut (which only applies to commercial forests). For management purposes, woodlands are now lumped with non-commercial forestlands and lands that cannot be reforested in less than 15 years.

Starting with BLM's origins (1946) and carrying through to the 1960s, logging concentrated on selective removal of high-risk, old-growth trees. (High-risk trees are those likely to die within 20 years.) These trees were/are between 200 and 400 years old. Over this twenty-year span, about half of these trees were harvested. From the late 1970s until 1993, although some old-growth trees were cut, most timber-harvesting activity was commercial thinning. This focused on trees that had reached economic maturity (i.e., about 120 years old and 21 inches diameter at breast height [DBH]). Since then (1993), the driving force for timber removal has been salvage logging following fire, insect infestation (primarily white fir engraver and pine beetle), and disease (dwarf mistletoe). Recent thinning and salvage operations have created stands that are relatively resistant to insect attack; however, hazardous fuels (in the form of overstocked stands, needle accumulation, slash from previous logging operations, and an abundance of bitterbrush and other shrubs) remain a concern. Stands have not been formally surveyed or rated for hazardous fuel loads – this has created an important gap in the AFO database.

2.5.1 Desired Future Condition

As timber-harvesting continues, commercial forests would show significant structural change. These forests would be increasingly composed of multi-aged stands with a significant old-growth component, although species composition in lower-elevation forests will likely remain constant (i.e., dominated by ponderosa and Jeffrey pine). Mid-elevation forests would contain a mixture of species. White fir would continue to dominate in higher-elevation forests, although other species would be present. Mechanical thinning and prescribed burns would have significantly reduced vulnerability to fire and enhanced forest health and resilience.

2.5.2 Goal

Enhance and maintain the health and resilience of forests and woodlands and reduce their vulnerability to wildfires. Provide a sustainable harvest of forest products for the local economy.

2.5.3 Objectives

- Reduce fire vulnerability on commercial and low-site forestlands, using a variety of techniques to reduce hazardous fuels.
- Conduct salvage logging when and where appropriate.
- Provide timber and other forest products on a sustainable basis.

2.5.4 Legislative, Regulatory, and Policy Direction

- The Federal Land Policy and Management Act (1976)
- 43 Code of Federal Regulations (CFR) 5000 (Administration of Forest Management Decisions) (1984)
- Timber Management FEIS (1976)
- California Vegetation Management FEIS (1988)
- Timber Management Environmental Assessment: Sustained Yield Unit 15 (1981)
- Memorandum of Agreement (MOA) with the Lahontan Water Quality Control Board
- MOA with the California Department of Fish and Game
- MOA with the U.S. Fish and Wildlife Service (consultation re: threatened and endangered species)
- MOA with USDA Forest Service, Modoc National Forest; North Cal-Neva Resource Conservation and Development Council, Inc.; and Modoc County regarding development and implementation of the Northern California Juniper Management Strategy (2003)
- Planning/management documents on adjacent lands:
    - USDA Forest Service RMPs for the Klamath (1995), Lassen (1993), Modoc (1991), and Shasta-Trinity (1995) National Forests
    - EIS for the Lassen National Forest Land and Resource Management Plan (1992)
    - A Conservation Strategy for the Northern Spotted Owl (1990)

2.5.5 Proposed Management Actions

A combination of prescribed fire, manual, chemical (herbicide and pesticide),and biological treatments will be implemented to achieve resource objectives on 13,800 acres of commercial and low-site forestlands. Recreation, wildlife, visual resources and water quality are all taken into consideration when managing forestlands. The most current and effective silviculture practices will be employed considering local conditions.

Forestlands will be managed so that 40% is covered in older (late-succession) trees (i.e., healthy trees of greater than 30-inch DBH with stand density approaching two to four trees per acre). Such trees would not be harvested on low-site forests except for salvage following fire, disease, or insect outbreak, or to reduce the risk of catastrophic wildfire.

Timber harvesting would be implemented using mechanical methods on 12,000 acres of commercial and low-site forests.

Fuel reduction and stand improvement would be implemented on 13,800 acres using prescribed fire and biological treatments.

Reforestation would occur on 8,000 acres of productive and low-site forest lands after natural disasters, or harvesting operations to reach desired stocking levels.

Timber harvesting will be prohibited on Mount Dome to preserve the area as a bald eagle roosting site.

Federally approved herbicides and pesticides would be used as needed to control noxious weeds and insect outbreaks.

Ten miles of new permanent roads and 50 miles of temporary roads will be authorized for timber management and harvesting activities. Motorized recreational access would be determined case-by-case for the new permanent roads.

2.6 Fuels Management

Fuel management decisions are based on the NorCal FMP, RAMS software, this PRMP, and the best available science. Fuel treatment is necessary in order to alter, restore, and maintain vegetation; safeguard natural resources; and protect human life and property. The Healthy Forests Restoration Act (2003) provides direction and guidance for fuel management decisions designed to protect watersheds, reduce threats to forest and rangeland ecosystems, and aid recovery of endangered or threatened species. The scope of the Act includes vulnerable communities, municipal water supplies, and other important sites on or adjacent to federal lands.

2.6.1 Desired Future Condition

Effective and widespread reduction of hazardous fuels would be confirmed by healthy watersheds, vegetation, and wildlife habitats; productive forests; adequate livestock forage; and high-quality recreational opportunities. Fuel reduction efforts, by mimicking natural wildfire effects, would severely diminish invasive juniper and restored plant communities to their original condition and natural range of variability. Wildlife habitats would demonstrate a variety of seral stages and abundant structural diversity. Community-based projects would create fuel breaks and defensible space through aggressive fuel reduction efforts in the WUI.

2.6.2 Goal

Prioritize and conduct effective fuel reduction programs throughout the management area, but especially within the WUI. A variety of fuel treatment methods would be utilized—including fire—which would be reintroduced and promoted as a natural ecosystem component. Specifically developed fuel treatments would restore important wildlife habitats and protect vulnerable archaeological or historic sites.

2.6.3 Objectives

- Projects would be prioritized and planned according to resource specialist input, RAMS software, and community protection needs. Fuel reduction efforts would emphasize mechanical, prescribed fire, and biological methods.
- Fuel treatment projects would specifically target juniper-invaded sagebrush-steppe, important wildlife habitats, the WUI, and sensitive archaeological or historic sites.
- Long-term (fuel treatment) projects would restore and maintain fire-dependent ecosystems, increase forage for wildlife and livestock, minimize fuel accumulation, and protect vulnerable communities. These projects would also improve recreational opportunity and enhance traditional gathering areas for Native Americans.

2.6.4 Legislative, Regulatory, and Policy Direction

General Guidance

- The Healthy Forest Restoration Act (2003)
- Federal Wildland Fire Management Policy (1995), revised 2001
- Interagency Fire Management Plan Template (2002)

- A Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment: 10-year Comprehensive Strategy Implementation Plan (2002)
- Interagency Standards for Fire and Aviation Operations (published annually)
- United States Department of the Interior, Departmental Manual, Chapter 910
- BLM Manual 9200 (Fire Management)
- Fire Management Plan Guidance: IM No. 2003-38 (2003)
- Land Use Plan Guidance: IM No. 2004-007 (2004)
- An MOU is in effect between all federal and state agencies concerned with fire management on public and private lands in California. This is the Cooperative Fire Protection Agreement (between the DOI BLM for CA and NV; DOI National Park Service, Pacific West Region; USDA Forest Service, Regions 4, 5, and 6; and the States of CA [CDF] and NV).

Planning Specific to the Alturas Field Office

- NorCal Fire Management Plan (1998)
- Fire Protection Analysis (software used for resource allocation and fire-related budgeting)
- RAMS (software package)
- Alturas Field Office RMP (1984)

2.6.5 Proposed Management Actions

Fuel treatment plans will emphasize fire as the primary means of restoring and maintaining fire-dependent ecosystems. Although prescribed fire would play a primary role, manual, mechanical, biological, and chemical treatments would also be employed. Special attention would be paid to the WUI to create fuel breaks and defensible space around vulnerable communities. Therefore, treatment would focus on degraded forest and rangeland (especially where western juniper is concerned), critical wildlife habitats, and vulnerable archaeological or historic sites (Map FIRE-1).

Planned yearly fuel reduction treatments are listed below.

- Prescribed fire (75 to 10,000 acres/year)
- Mechanical treatments (75 to 10,000 acres/year)
- Chemical treatments (50 to 2,000 acres/year)
- Biological treatments (0 to 1,250 acres/year)

BLM will continue to identify areas with excessive fuel accumulation and develop mitigation strategies in cooperation with local agency fuel reduction programs. Fuel reduction projects will be implemented by BLM fuel module crews and/or contract labor. Prescribed fire will be widely used as a natural and cost-effective means of reducing hazardous fuels. Its use would be incorporated in (approved) burn plans according to community protection constraints and resource specialist input.

Long-term fuel treatment plans and projects will be designed and gradually implemented to achieve broader-scale objectives. These would include general maintenance of healthy ecosystems, better protection of high-risk communities, general slowing of hazardous fuel build-up, improved timber

production, increased forage for wildlife and livestock, improved hunting (and other recreation), and better protection of traditional gathering areas for Native Americans.

Plans will be developed and implemented to reduce fuels over a wider area, especially targeting invasive juniper. Project design would mimic naturally occurring wildfire effects in order to restore plant communities to a condition approximating the biological diversity that originally characterized local ecosystems. By so doing, wildlife habitats would be enhanced, cultural sites protected, and an acceptable visual appearance maintained. Project locations, and treatment plans, methods and actions would be determined through resource specialist input, RAMS software, and community protection needs.

Classes in hazard reduction and fire protection will be presented at schools, and in greater depth, at fire safety council meetings. Instruction would include discussion of fire's critical role in fire-dependent ecosystems.

2.7 Lands and Realty

Lands and realty is managed under three program areas: land tenure adjustments (including access acquisition), withdrawals, and rights-of-way (ROWs).

The AFO Land Tenure Adjustment Plan (LTAP) was approved by the (California BLM) state director in March of 2002), and will be incorporated in this RMP with minor modifications. (The entire LTAP is found in Appendix L.) The LTAP identifies large geographic areas where land would be retained in public ownership. In these areas, land may be acquired through exchange to provide access or facilitate management, or to protect or enhance natural resources. Retention/acquisition areas currently total 478,040 acres.

The LTAP also identifies large geographic areas that contain legally and/or geographically isolated land that BLM does not actively manage. These are typically small, isolated parcels that lack road access and are surrounded by private property. Disposal of these parcels may be through exchange or sale, or by transfer to other government agencies. Disposal areas currently total 20,180 acres (including 1,847 acres on-or-near Widow Peak). The Widow Peak area is identified for limited disposal. Lands in this vicinity may only be exchanged for parcels with high resource value (e.g., lands adjacent to the Pit River or Hat Creek, lands providing access to the Pit River Canyon WSA, or similarly compelling acquisitions). However, BLM would retain some parcels in disposal areas for their resource value. These areas (a total of 4,825 acres) are identified for custodial management.

The LTAP contains specific rules, requirements, criteria, and procedures that apply to lands selected for retention/acquisition, disposal, or custodial care. There's also a priority acquisition objective—this is the 8,458 acres owned by Pacific Gas & Electric along the Pit River and Hat Creek south and east of Lake Britton (Shasta County).

A historic problem for the AFO (as elsewhere on BLM-administered lands) is public lands that contain valued or sensitive resources, or even facilities, but lack legal public access. Access may be required for public use and enjoyment, management activities, or administrative purposes. Prioritization and action regarding access acquisition (for such areas) is necessary and overdue.

Another important function of the lands and realty program is identification of areas for mineral entry withdrawal. Withdrawals protect vulnerable resources from the effects of mining activities.

The AFO also maintains an efficient system of utility corridors and communication sites to serve public needs.

2.7.1 Desired Future Condition

A deliberate and well-considered pattern of public and private land ownership would emerge to allow productive resource management, and the effective use of time and financial resources. Reasonable access to public lands would be provided so that natural resources and facilities would be available for public use and enjoyment, as well as for resource management and administrative purposes. Lands with sensitive resources would be protected by withdrawals to prevent mineral entry.

2.7.2 Legislative, Regulatory and Policy Direction

- The Federal Land Policy and Management Act (1976), Section 206
- The Federal Land Exchange Facilitation Act (1988)

- BLM Manual 2200 (Land Exchange Handbook) R&PP Act (as amended)
- BLM Handbook H-2101-4—Pre-Acquisition Environmental Site Assessment
- BLM Handbook H-2200-1 – Land Exchange Handbook
- BLM Handbook H-2100 – Acquisition Handbook
- The West-wide Energy Corridor Programmatic EIS (2005)
- BLM Wind Energy Policy (IM2006-216)
- Final Programmatic Environmental Impact Statement on Wind Energy Development on BLM-Administered Lands in the Western United States (2005)

2.7.3 Land Tenure Adjustment

2.7.3.1 Goal

Patterns of land ownership would be consolidated to allow effective resource management and permit efficient use of time and financial resources.

2.7.3.2 Objective

Conduct land tenure actions according to resource management priorities.

2.7.3.3 Proposed Management Actions

- The Alturas LTAP would serve as the basis for future land tenure actions.
- A list of priority land tenure adjustments derived from the LTAP and this PRMP would be the basis for action. The list would be reviewed annually and revised to adjust for changing circumstances and conditions.
- Newly acquired parcels would initially be managed similar to adjacent parcels, unless the site-specific analysis and record of decision for the exchange specifies different management. For instance; Section 2, Township 36 North, Range 9 East, MDM is approved for donation from Lassen Gold, Inc. This parcel would be managed as a wetland preserve, in accordance with Nationwide Permit No. 9100184. Affected tribes would be consulted on the management of newly acquired parcels.

The Alturas LTAP would be implemented with slight modification. The Madeline disposal area would be divided from east to west (roughly in half). The northern half would remain a disposal area, with 687 acres of public land. The southern half (currently with no public land) would be designated as an acquisition (and future retention) area. The objective is to acquire important greater sage-grouse habitat.

Land would be purchased (from willing sellers) at three locations in the Infernal Caverns/Rocky Prairie special recreation management area (SRMA). These purchases would support fishing at Smith Reservoir (80 acres), Nelson Corral Reservoir (200 acres), and Delta Lake (200 acres).

A proposal in BLM's "Sustaining Working Landscapes Initiative" (2003) would be adopted as a pilot project. Under this plan, BLM would place a conservation easement on a parcel of public land in a designated disposal area. In exchange for the monetary value of this land *with* its conservation easement, the adjacent landowner would place a similar conservation easement on his land providing for resource conservation and public access. This would result in a larger block of land being preserved for

conservation purposes according to the covenants of the conservation easements. Such a project is proposed under this initiative for the Kramer grazing allotment. The project would involve 850 acres of public land in Big Valley (See Map LAND-1.) If successful, the project would become a program that would be expanded to other disposal areas.

Lands with habitat for federally listed, proposed, or candidate species or proposed or critical habitat would not be exchanged or disposed, unless the party acquiring the land agrees to maintain the habitat for the species.

All land use authorizations will be evaluated for their impact to sensitive resources, including critical and/or important wildlife habitat. Future BLM granted ROWs, including utility corridors and communication sites would be consistent with USFWS guidance to minimize effects to migratory birds.

2.7.4 Access Acquisition

2.7.4.1 Goal

The AFO would acquire and maintain legal public and administrative access to BLM-administered lands where none now exists.

2.7.4.2 Objectives

The need for easement acquisition or access around private land would be identified and pursued in order to facilitate public use and enjoyment of public lands, resources, and facilities; as well as for resource management and administrative purposes.

2.7.4.3 Proposed Management Actions

Measures would be taken to secure legal public and administrative access to BLM-administered lands, resources, and facilities. Bypass roads may be built (around private lands) where easement acquisition is not feasible. Easements would be acquired from willing owners or partners.

The AFO would be proactive in acquiring legal access (public and/or administrative) to BLM assets—regardless of whether access issues have arisen. Adequate public access through or around locked gates and private lands would be pursued where these hinder or deny access to public lands. Access acquisition would be prioritized according to the following schedule and criteria:

- Access to BLM facilities (e.g., campgrounds, fire stations, remote automated weather stations) and authorized communication sites.
- Access for BLM management activities (e.g., critical wildlife habitat, significant cultural resources, areas with special designations)
- Public recreational access—particularly where locked gates have hindered or eliminated access for historic uses.
- Access for range improvement projects.
- All other resource management issues or concerns.

2.7.5 Mineral Withdrawals (Locatable Minerals)

2.7.5.1 Goal

Areas where mineral entry is undesirable would be identified and recommended for withdrawal.

2.7.5.2 Objective

The minimum area necessary to protect sensitive resources or vulnerable lands would be recommended for withdrawal from mineral entry.

2.7.5.3 Proposed Management Actions

All ACECs and RNAs (30,493 acres) would be recommended for withdrawal from mineral entry. All 19 miles (2,500 acres) of proposed WSR corridors would also be recommended for withdrawal from mineral entry. There would be no variances for recreational mining. The total area recommended for withdrawal from mineral entry would be 7% of the management area (32,993 acres).

2.7.6 Rights-of-Way and Communication Sites

2.7.6.1 Desired Future Condition

An efficient and environmentally sensitive system of utility corridors and communication sites would be maintained or augmented (when necessary) to meet the energy and communication requirements of the public while minimizing adverse impacts on visual, biological, physical, or cultural resources. Primary access and maintenance roads would be maintained to a level that supports normal use and safe passage of vehicles.

2.7.6.2 Goal

Manage public lands to support the goals and objectives of all resource programs, respond to public requests for land use authorizations, and acquire administrative and public access where needed. Conduct ROW transactions, decisions, and actions in a manner that would prevent adverse impacts to scenic, ecological, water, air, scientific, and archaeological or historical values.

2.7.6.3 Objectives

Identify areas that are suitable and available for land-use authorizations that support the utility, telecommunications, and transportation needs of the region. Ensure that natural and cultural resources are adequately protected, or appropriately and effectively mitigated.

2.7.6.4 Proposed Management Actions

- Current linear ROWs and communication sites would be authorized, providing continued compliance with the terms and conditions of grants or permits.
- New utility corridors, pipelines or electrical transmission lines, or communication sites would not be permitted in any designated ACEC, WSA, or in the proposed Lower Pit River WSR corridor (excluded areas total 67,660 acres; total acres of ACECs include only those portions outside of respective WSAs, to avoid duplication of the same acres).

- New utility corridors, pipelines and electrical transmission lines, and communication sites (and associated ROWs) would be considered throughout the management area, except within the above-stated exclusion zones.
- All land use authorizations will be evaluated for their impact to sensitive resources, including critical and/or important wildlife habitat.
- Any new ROWs, including utility corridors, wind energy, and communication sites, would be consistent with USFWS guidance to minimize effects to migratory birds.
- Requests to authorize residential power line installation would be considered case-by-case.
- Wherever feasible, new development would use existing utility corridors and communication sites.
- Existing pipeline and electrical transmission corridors would be expanded to a width of up to 500 feet. All existing (commercial) lines would become utility corridors, thereby increasing development possibilities to a potential 500-foot or smaller width, depending on the size of the line and use potential.
- Interagency cooperation to facilitate regional utility corridor development would be encouraged (since only a small portion is likely to involve BLM-administered lands).
- ROW holders would be responsible for removing abandoned structures and facilities.
- Road access may be granted within a WSA where non-federal land is completely surrounded by lands administered by BLM.
- Additional corridors may be designated as future needs dictate, subject to on-site environmental reviews and clearances. *The West-Wide Energy Corridor PEIS, 2005* specifies that coordinating agencies (BLM) will designate appropriate energy corridors on federal lands in 11 western states, perform any environmental reviews required to complete corridor designation, and incorporate designated corridors into relevant agency land use plans. *The Preliminary Draft Map of Potential Energy Corridors on Federal Lands* depicts an east-west transmission corridor between northern California and northern Nevada, which will potentially be routed through the AFO area. This corridor, when coupled with related renewable generation development, will create markets for renewable energy between California and Nevada and will augment California's energy supplies by allowing additional energy to flow into the state at a northerly point other than the California-Oregon border. The routes indicated on the *Preliminary Draft Map* of the PEIS are very general and exact corridor locations will need to be identified by BLM to minimize any impacts to sensitive resources. BLM will complete the environmental reviews necessary to identify proposed routes within the requisite time frames outlined in the PEIS.

2.8 Livestock Grazing

The land base managed by the Alturas Field Office is 503,045 acres in size. Livestock use is currently conducted on 457,519 acres in 145 grazing allotments (Appendix I). Past management involved adjudication of livestock numbers in the 1960s, when livestock animal unit months (AUMs) were reduced and forage allocations were provided for wildlife. The Bureau then placed allotments in selective management categories as: 'improve' (I), 'maintenance' (M), and 'custodial' (C). These categories were used to direct funding for monitoring and management, with major emphasis on "I" allotments. Beginning in the late 1990s, interdisciplinary rangeland health assessments using the newly established, numbered categories (i.e., 1, 2, 3, or 4) began replacing the older category designations. Under the new system, each allotment is placed into one of four categories according to identified rangeland health standards (see Map GRAZE-1):

- **Category 1:** Areas where one or more standard(s) is/are not met or significant progress is not being made toward meeting the standard(s), and livestock grazing is a significant contributing factor.
- **Category 2:** Areas where all standards have been met or significant progress is being made toward meeting those standards.
- **Category 3:** Areas where the status regarding one or more of the standards is not known or the cause of failure to meet the standard(s) is/are not known.
- **Category 4:** One or more of the standards are not being met or significant progress is not being made toward meeting the standards, by causes other than--or in addition to--livestock grazing activities.

Health assessments have been completed on 45 grazing allotments encompassing 300,000 acres of public land. Seventeen of these are areas where one or more (rangeland health) standards have not been met or significant progress achieved, and livestock grazing is identified as a significant contributing factor.

Of 17 allotments assessed as category 1, one has a new allotment management plan (AMP), seven have no AMP, and nine have AMPs over 15 years old. Six years after implementation of rangeland health standards, the AFO has increased compliance and short-term monitoring on category 1 allotments and will implement long-term monitoring when funding and budgeting permit. In the meantime, based on short-term monitoring, changes have been made to allotment terms and conditions in order to improve rangeland health. Rangeland improvement projects have also been implemented to minimize unacceptable livestock grazing impacts to riparian and spring areas and to improve livestock distribution.

2.8.1 Desired Future Condition

Allotments will be managed in compliance with standards set forth in the Approved Northeastern California and Northwestern Nevada Standards and Guidelines for Livestock Grazing (2000). Rangeland management strategies will provide for the maintenance or restoration of watersheds, nutrient cycling, water quality, habitat for special status species, and quality habitat for populations of native plants and animals. Adherence to these standards will ensure the health and biodiversity of rangeland ecosystems. Range improvements will be implemented on a priority basis for maximum effectiveness. Projects that improve livestock distribution and reduce grazing impacts will include, but are not limited to, fencing, gates, cattleguards, water developments, pipelines, and vegetation treatments–including prescribed fire.

Continuous, long-term monitoring will be conducted on priority allotments. This long-term data will be incorporated with compliance data and analyzed for use in gauging the effectiveness of current management and in the establishment of future management objectives. Allotment management plans will be developed based upon analysis of all monitoring data and future management objectives.

Grass banks would be established to provide alternative forage resources. This will enable BLM to work cooperatively with ranchers and other stakeholders to implement vegetative treatments and reduce juniper encroachment in sagebrush and grassland communities, restoring rangeland health and economic viability.

2.8.2 Goal

- Livestock grazing will be maintained as a recognized and economically viable use of public lands. Authorized use will be such that rangeland health standards are met and maintained, and the needs of other resources and resource users are adequately addressed.
- Treatments will effectively reduce invasive juniper while leaving sufficient herbaceous material to provide watershed protection as well as forage for livestock and cover for wildlife and other resource needs.

2.8.3 Objectives

- AMPs will be completed or revised for all priority (category 1) allotments, followed by lower category allotments as budget and time constraints allow.
- Livestock grazing will be adjusted to meet the requirements of BLM special status species and protect archeological sites/areas in consultation with grazing permittees and affected tribes.
- Grass banks will be established to provide forage reserves for conservation benefits and management flexibility, thus helping to maintain rangeland health standards.
- BLM will work cooperatively with ranchers and other stakeholders to implement juniper treatments and reduce juniper encroachment in sagebrush/grassland communities, thereby restoring rangeland health and economic viability.
- Range improvement will focus on optimizing forage utilization and livestock distribution to reduce grazing impacts and use available forage efficiently.

2.8.4 Legislative, Regulatory and Policy Direction

- The Federal Land Policy and Management Act (1976)
- Public Rangelands Improvement Act (1978)
- 43 CFR 4100 (Grazing Administration) and 4180 (Rangeland Health Standards) (1995)
- Taylor Grazing Act (1934)
- Approved Northeastern California and Northwestern Nevada Standards and Guidelines for Livestock Grazing, (S&Gs), (July, 2000)
- BLM Manual 1745 Supplement – California Native Plant Materials Policy

2.8.5 Proposed Management Actions

Livestock grazing would continue on 454,649 acres in 145 grazing allotments. Proposed fences for grazing exclosures would exclude livestock grazing from an additional 3,050 acres leaving a total of 48,396 acres unavailable for livestock grazing.

Livestock grazing would be managed primarily through adjustment of grazing systems, such as shortening season of use where rangeland health standards are not being achieved. Initial active AUM levels would be set at 54,881 AUMs. This level could be adjusted based on land health considerations. 27,000 AUMs would be authorized for actual use (that portion of the active AUMs actually utilized by grazing permittees in a particular year). Additional AUMs may be available in the future as vegetation treatments are accelerated under the sagebrush steppe restoration strategy.

Rangeland health evaluations necessitate assignment of livestock grazing allotments to appropriate management categories as defined under the rangeland health standards (i.e., improve, maintenance, or custodial allotments would be reclassified as category 1, 2, 3, or 4.) This having been done under present management, the Williams and Deep Canyon allotments would be re-categorized from "C" (custodial) management to "I" (improve) or "category 1" under the new system. In like manner, the Dry Cow, Westside, Rocky Prairie, and Nelson Corral allotments would also change; in this case from "M" (maintenance) to "I" (improve) or "category 1" management. AMPs would be completed or revised for all Category 1 allotments.

The Preferred Alternative emphasizes making adjustments and enhancements to existing grazing strategies in allotments that have made significant progress toward, or achieved, land health standards. These adjustments would be focused on improving the health, vigor, and reproduction of native rangelands and unique plant communities (aspen, curlleaf mountain mahogany, oak woodlands) and improving important wildlife habitat for identified species (e.g., sage-grouse, ungulates). On allotments where rangeland health standards are not met, and where livestock grazing is the identified cause, appropriate alterations to grazing practices will be introduced (as specified in the Standards and Guidelines) so that standards are met.

Grazing practices that degrade key wildlife habitats and alter the natural vegetation would be avoided. An especially important area is the eastern portion of the Likely Tablelands. Livestock grazing practices would be modified in applicable allotments to improve sage-grouse habitat, based on guidelines set forth in BLM conservation strategies for the *Sage-Grouse and Sagebrush Ecosystems in the Buffalo-Skedaddle, Likely Tablelands/Rocky Prairie, and Devil's Garden/Clear Lake Population Management Units.*

Typical modifications to grazing strategies are listed below.

- Season of use adjustments would be employed at times of the year when sensitive soils would be damaged by livestock and where forage is seasonally inadequate.
- Permitted grazing use—including reduction of animal numbers and/or season-of-use—would be assessed annually to reflect prevailing conditions. Conservative management of grazing would be especially needful during drought conditions, when there would not be enough water to support livestock for an entire grazing season.
- Conversely, AUMs or livestock numbers may be temporarily increased or season-of-use extended, when forage production is above average. Long-term or permanent increases in grazing would be considered where land health standards have been met or sustained significant progress has been made toward achieving those standards. However, increases must be based on a site-specific environmental assessment that confirms adequate and sustainable long-term forage production.

Utilization of key species (grasses, forbs, and shrubs) on native rangelands would not exceed moderate (40%-60%) levels. On allotments not meeting or making progress toward meeting land health standards due to current levels of livestock forage utilization, Guideline 16 (of the Standards and Guidelines for Livestock Grazing Management on BLM-Administered Lands in Northeastern California and

Northwestern Nevada [S&Gs]) allowing 30 to 40% would be implemented. This would reduce the maximum allowable utilization levels on key species specifically in areas that are not meeting standards.

Proposed actions for vegetation management are to prioritize vegetation manipulation to restore ecosystem processes. Efforts would focus on reducing invasive juniper in sagebrush-steppe ecosystems, and treating closed-canopy big sagebrush and cheatgrass-dominated communities. Juniper reduction efforts will be prioritized within grazing allotments to improve the ecological health of sagebrush communities, at a rate of up to 10,000 acres per year (see Chapter 2.6 Fuels Management). Treatment will focus on more degraded rangeland (primarily the 21%–35% juniper canopy cover class). Large-scale juniper treatments would be conducted in an effort to improve livestock distribution, benefit wildlife, and create a more diverse environment. Prescribed fire, mechanical and hand treatments would be aggressively employed under guidance from the *Draft Sagebrush Steppe Restoration Strategy*. Successful treatment of these areas would significantly improve land health and will also provide maintenance (or potentially an increase) of forage production of native grasses, forbs, and shrubs.

Decisions to resume livestock grazing on areas that have been mechanically treated or burned by wild or prescribed fire would be based on assessment of monitoring data. Generally, grazing would not resume for a minimum of two growing seasons. However, mechanically treated areas may be assessed for potential resumption of livestock grazing following one growing season of rest.

Meadows, aspen stands, and other habitats with significant value as wildlife habitat (particularly sage-grouse) and NRHP-quality archaeological sites would receive priority for additional livestock exclusion. When fencing natural water sources, water would be made available for livestock and wildlife outside the fenced area. Livestock salting would not be allowed within ¼ mile of springs, meadows, NRHP-quality archaeological sites, streams, and aspen areas. Location of salting stations would be determined by BLM in consultation with livestock permittees.

Rangeland health will be re-evaluated as necessary to ensure proper watershed function, nutrient cycling, and energy flow. Water quantity and quality will be assured and sufficient quality habitat provided for communities of native plants and animals, especially special status species.

Livestock grazing would only continue in riparian/wetland plant communities where grazing is compatible with the attainment of ‘Proper Functioning Condition’ (PFC) and other riparian and wetland objectives. Sensitive sites known to be important for native fisheries, wildlife habitat, and other beneficial uses would be protected or excluded. Livestock exclusion fencing would be constructed in areas that are ‘Functioning At Risk’ (FAR) and in areas where the vegetation is in early seral plant communities. Spring sources classified as FAR or ‘Not Functioning’ would be protected by exclosure fencing to prevent trampling by livestock and wild horses. Current meadow and riparian habitat enhancement projects will continue, and an additional 500 acres of riparian habitats will be fenced.

Quaking aspen, curlleaf mountain mahogany, and oak woodlands are unique plant communities that occur randomly throughout the field office area in small patches. Livestock would be excluded from non-regenerative aspen and pertinent curlleaf mountain mahogany stands. Stands would be protected from livestock and wildlife use until aspen saplings are six feet tall. Temporary fencing would be used to protect 300 acres of aspen stands from livestock grazing, and permanent fencing would protect an additional 200 acres, over the life of this PRMP. Livestock grazing would be managed to minimize damage to suckers in aspen clones by changing the class of livestock use (i.e., dry cows rather than cow-calf pairs.) Livestock salting sites would be located at least ¼ mile away from aspen groves.

In aspen stands burned by wildland or prescribed fire, and greater than ½ acre in size, a minimum of two years rest from livestock grazing would be required. Post-fire recovery criteria (e.g., sapling height, wildlife use, or sapling density) would be used to determine when livestock grazing could be resumed.

Changes in livestock grazing strategies (season of use, distribution, class of livestock, etc.) would be implemented to reduce browsing pressure on curlleaf mountain mahogany and oak woodlands. Livestock would not be permitted to graze or seek shade in early seral stage mountain mahogany stands. This would be accomplished by improving livestock distribution and providing shade in adjacent plant communities, such as post-settlement juniper. Browsing by livestock would be limited to 50–60% of current annual growth to maintain productivity and a vigorous, shrubby growth pattern.

Forage reserves or grass banks would be established where feasible, in cooperation with federal, state, and private agencies. Forage reserves would facilitate juniper treatment and other rangeland improvements by providing alternative areas for livestock grazing. When a grazing permit is voluntarily retired, the allotment will be considered for use as a forage reserve.

Range improvements would include various projects in addition to juniper removal, such as fencing, gating and cattleguards, prescribed fire, spring developments, exclosures, pipelines, treatment of noxious weeds, and limited road construction. See Appendix Q for a list of existing range improvements.

When water sources are developed for livestock grazing, the needs of wildlife and wild horses would also be considered. Water would be retained or provided at ground level on all naturally occurring sources developed for livestock use—including springs, seeps, and perennial or ephemeral streams. Natural riparian habitat and cover around a substantial portion of these sources would be protected for wildlife use. This would be accomplished by piping livestock water a sufficient distance to minimize livestock impact or by exclosure fencing. As funding and technology allow, existing water sources developed from wells or pipelines would be retrofitted (on a priority basis) to provide water at ground level.

The AFO Drought Management Policy (Appendix N) will be implemented to maintain long-term health and productivity of rangelands when dealing with drought conditions and issues.

2.9 Recreation and Visitor Services

Recreation is one of the most important uses of the management area. Continued population growth, exacerbated by urban expansion and suburban sprawl, continues to shrink wildlands while increasing demand for outdoor activities. Meeting this demand, while simultaneously protecting the environment, is a major challenge.

In the AFO management area, fishing (spring, summer, and fall) and hunting (late summer, fall, and early winter) are the most popular recreational activities. The majority of primitive or semi-primitive camping uses are associated with these activities. However, camping at the Pit River Campground has its own followers and uses associated with riverine activities. Other popular recreational activities are day hiking, backpacking, car camping, wildlife viewing, photography, pleasure driving and sightseeing, OHV driving, exploration of historic and archaeological sites, picnicking, and 'rock-hounding.'

2.9.1 Desired Future Condition

Lands and waters of the planning area would provide a range of outdoor activities that emphasize self-sufficient exploration and discovery. Directional and interpretive signing would be installed where necessary or desirable for safety or education. A full range of recreational environments—from primitive, undeveloped areas through intensively used and managed natural settings—would be available for visitor use. An adequate and well-maintained road network would serve visitors where this is appropriate. Non-motorized areas would be accessed by a functional trail network or user-established trails. The effects of heavy use would be minimized by public information and by measures that encourage dispersed activity. Such measures would generally be adequate to protect natural and cultural resources. Corrections to control erosion hazards would vary in methods to manage impacts related to visitor concentrations. However, where this is not the case, regulations, use limitations, and closures would be used when environmental degradation cannot be controlled by other means.

The (largely) undeveloped character and scenic beauty of northeastern California would be maintained on BLM-administered lands by applying VRM Class I, II, or III criteria to most of the planning area. Where use is concentrated around high-demand resources, SRMAs would be established to minimize environmental impacts and preserve quality recreation. The rest of the planning would be managed for self-sufficient, dispersed recreation.

Management actions in the extensive recreation management area (ERMA) (where recreation is dispersed) would be minimal and subtle to ensure that the undeveloped character of the landscape is maintained. Directional signage (primary routes only) and interpretive displays would be installed where necessary for safety or desirable for visitor education. Routes that are 'Closed' to motor vehicles would be marked as such and/or physically blocked. If needed, roads or trails would be realigned to enhance or protect resource values, and to reduce erosion and sediment caused by poor road design or location.

Visitors would have the option of enjoying a separate system of high-quality recreational trails. Some would be 'Open' to motorized use while others would be restricted to non-motorized activities. The trail system would be most extensive in SRMAs and other scenic areas. BLM would collaborate with Lassen and Modoc Counties to acquire the abandoned (Union Pacific) railroad line and modify it for a variety of trail uses. Trails would vary in length, terrain, difficulty, and purpose.

Interpretive information concerning natural and cultural resources would be developed and distributed to aid visitor understanding and appreciation of public land resources. Cultural resource information would be developed in consultation with affected tribes. Most would be informational brochures (distributed in

gateway communities, BLM offices, and over the internet). Public presentations would also be given by BLM staff and volunteers as time and opportunity allow. Facility development would be minimal; however, some high-quality interpretive exhibits would be developed for key areas.

2.9.2 Goal

Support a broad range of appropriate and sustainable recreational opportunities and minimize potential conflicts between user groups.

2.9.3 Objectives

Support developed (facility-based recreation) and undeveloped (self-reliant and unstructured) public recreational opportunities in suitable locations throughout the management area. Ensure that recreational facilities and recreational activities do not degrade ecosystems, natural and cultural resources, or scenic values.

2.9.4 Legislative, Regulatory, and Policy Direction

- The Federal Land Policy and Management Act (FLPMA) (1976)
- 43 CFR 8340 (2004), et seq.
- Management Policy and Guidelines for Lands Under Wilderness Review (USDI, Dec., 1979)
- Comprehensive Land Use and Management Plan for Federal and State Lands in Modoc County (May, 1995)
- National Park Service, Comprehensive Management and Use Plan (FEIS), "California National Historic Trail and Pony Express National Historic Trail" (1998)
- Emigrant Trails Scenic Byway Plan, Resource Conservation and Development (RC&D), Alturas, California (2003)

2.9.5 Proposed Management Actions

- Lands that are not within SRMAs would be assigned to the ERMA and managed for dispersed recreation.
- The Tablelands Integrated Resource Management Plan (1999) would remain in effect for that area.
- Commercial and non-commercial recreation activities that require a special recreation permit must be evaluated for impacts. Following evaluation, a permit would be issued for compatible activities; otherwise, the application would be modified or denied to protect resource values.
- Acquire (from Pacific Gas and Electric Company [PG&E]) segments of the Pit River (13 total miles) that support significant cold and warm water fisheries. Also acquire a five-mile stretch of Hat Creek (also from PG&E) to preserve world-class trout fishing.
- Implement a variety of boating, road, and access stipulations, as well as recreation opportunity spectrum (ROS) classifications to create and maintain diverse fishing opportunities on reservoirs, lakes, and streams of the planning area.
- Designate Pit River as non-motorized boating (i.e., a 16-mile stretch in the Pit River SRMA), and Delta Lake, Moon Lake, and the Nelson Corral and Bayley Reservoirs in the Infernal Caverns/Rocky

Prairie SRMA for limited motorized boating. Identify and protect premium fishing (i.e., specific areas, contexts, or species) by maintaining limited or difficult access.

- Any recreational use of ACECs, including commercial and non-commercial uses authorized under special recreation permits, will be evaluated and permitted, modified, or prohibited as needed to protect ACEC values.
- Limit camping to 14 consecutive days at a single location and 28 days per calendar year (for the Alturas, Surprise, and Eagle Lake management areas combined).
- Seasonally limit, establish safe boundaries, or (if necessary) prohibit activities that create health or safety hazards for public land users in or near developed recreation sites, high-use fishing areas, or other areas where human activity is concentrated.
- Provide public access (walk-in or drive-in) for water-related activities according to the ROS (recreation opportunity spectrum) classification for the area.
- Ensure that VRM classes are adequate to maintain high-quality scenic buffers around SRMAs, campgrounds, and other recreational projects as well as heavily-used travel routes (i.e., major roads and scenic vistas, bikeways, and trails).

The Infernal Caverns/Rocky Prairie SRMA and the Pit River SRMA (see Map SRMA-1) would be designated to improve delivery of services where high-density use is degrading resources and creating user conflicts or safety issues. The proposed SRMAs are outstanding for their geology, archaeology, abundant wildlife, interesting vegetation, impressive scenery, and exceptional recreational potential. This includes high-quality hunting, fishing, hiking, recreational driving and sightseeing, environmental education, and scientific study. The SRMAs would encompass the Pit River Canyon, Tule Mountain, and Lava WSAs. Separate management plans would be prepared for each SRMA. Facility-oriented and technology-based recreation would be de-emphasized. Self-contained, low-impact recreation and dispersed use would be favored throughout the planning area (including SRMAs), in order to minimize impacts on natural and cultural resources. Visitor information, education, and nature-friendly attitudes and behaviors would be stressed. Hunting and motorized boating would be allowed. However, personal watercraft (jet-skis and wave-runners) would not be permitted. Motor vehicles would generally be 'Limited to Existing and Designated Routes'. The following projects would enhance existing facilities or provide new recreational opportunities:

- Existing campgrounds and other facilities would be properly maintained throughout the planning area. Where need is evident, new facilities (e.g., boat ramps, trailheads, and handicapped-accessible nature trails or fishing piers) would be built—particularly in the SRMAs.
- Roads would be rehabilitated or upgraded when required to maintain public access or to control erosion and minimize resource degradation. Other roads would be closed to protect sensitive resources.
- The existing trail systems (motorized and non-motorized) would be properly maintained and new trails (motorized and non-motorized) would be built where needed. Trail maps and other practical, informative literature would be developed and disseminated.
- Commercial recreation and competitive outdoor events would be encouraged in suitable locations (i.e., where natural and cultural resources can be protected and health and safety standards can be maintained). Special recreation permits would be issued to meet demand for commercial white-water rafting, guided hunting and fishing trips, provided resource protection remains adequate and health and safety would be provided.

Recreational Fisheries

Public Access and Roads
Public access would be improved at three sites in the Infernal Caverns/Rocky Prairie SRMA. Road access to Moon Lake would be established along existing roads from two directions; one from the southeast (1 mile) and the other from the southwest (3 miles). The parking areas would be graveled if appropriate. Road access to Nelson Corral would be maintained at the present level, with partial-gravel in the worst locations, and the last mile of road to the dam would receive no maintenance to maintain a high quality fishery. The third improvement would be a trail, 2 miles in length, to the Williams Ranch step ponds (and possibly, a fishing pier accessible to the handicapped).

On the Likely Tables in the ERMA, 750 feet of existing road would be used as a trail, and a graveled parking area (if applicable) would be built (capable of accommodating vehicles with horse trailers) to provide a suitable trailhead for horse and hiking trails (to access California Department of Fish and Game (CDFG)-administered lands) leading to the upper reaches of the Fitzhugh Creek watershed.

Land and Water Right Acquisition and Facility Construction
Land would be purchased or exchanged (from willing sellers) at three locations in the Infernal Caverns/Rocky Prairie SRMA. These purchases would support fishing at Smith Reservoir (80 acres), Nelson Corral Reservoir (200 acres), and Delta Lake (200 acres). Minimum pool water rights would be obtained (from willing owners) at Bayley and Holbrook Reservoirs. The Williams Ranch step ponds (20 total acres) would be rebuilt to increase depth and size in order to produce a self-sustaining fishery and benefit wildlife. With respect to the ERMA, minimum pool water rights would be obtained (if the owner is willing) at Little Juniper Reservoir.

Day Use and Site Interpretation

Seven to nine graveled parking areas would be developed to serve popular recreational destinations. These lots would provide trailhead access for a host of recreational activities ranging from hunting to hiking, wildflower-viewing, and OHV recreation. Some areas would include interpretive displays or scenic vistas. Selected trails would be accessible to the handicapped. All parking areas and trails would be designed to accommodate heavy use. Recommended sites include:

- Centerville Road/Westside Grazing Allotment
- Crowder Flat Road/Rimrock Grazing Allotment
- US Highway 395/Battle-of-the-Infernal-Caverns
- Blue Door Flat
- Beaver Creek
- Kelly Reservoir
- Williams Ranch

Primitive Camping

Camping would not be permitted within 200 feet of waters (e.g., springs, lakes, and reservoirs—including stock-watering structures [water tanks, troughs, and dugouts]), sensitive or special status plant and wildlife habitats, cultural sites, or other areas identified as vulnerable to human occupancy. This restriction would apply to the entire management area (in order to preserve water quality, protect vegetation and soil, and avoid disturbing wildlife).

'Setbacks' (i.e., distance from a water source, 10 to 100 feet) would be variable for streams and rivers, depending on local topography and likely environmental impacts. If environmental degradation is sufficient, an area may be closed to camping. Campers would not be allowed to cut live trees within 200 feet of water; however, downed-and-dead material may be collected for firewood.

Campgrounds

Semi-primitive campgrounds, and/or day-use areas would be built at Knox Gulch Reservoir (15 acres) and Antelope Reservoir (10 acres), primarily for the convenience of fishermen. If campgrounds are developed, facilities could include graveled parking and campsite areas, picnic tables, fire-rings, sweet smelling toilets, and some trails accessible to the handicapped. If the upgrades are implemented, a fee could be charged for campground use. A semi-primitive campground or day-use area may also be built at Dry Creek Station. The old fire station facility and fenced areas would be used in construction, and the helipad would be converted to a horse corral. A four-mile hiking-and-equestrian trail would lead to the Nelson Corral Reservoir (see section 2.15.3 Non-Motorized Trails). If built, a fee would be charged for campground use.

2.9.6 Recreation Opportunity Spectrum

People want and need different recreational experiences that a given resource base has a varying potential to provide. The ROS is a management tool designed to characterize and quantify demand for various types of recreational opportunities while realistically evaluating the capability of the resource base to provide such experiences. Any combination of recreational settings, opportunities, and experiences may be arranged along a continuum or spectrum. Six ROS classes are recognized:

1. ***'Primitive'*** – Unmodified natural landscape; little use and no on-site management controls.
2. ***'Semi-Primitive Non-Motorized' (SPNM)*** – Predominantly natural landscape; low use and few management controls.
3. ***'Semi-Primitive Motorized' (SPM)*** – Largely natural landscape; some evidence of others and few management controls.
4. ***'Roaded Natural' (RN)*** – Natural appearance retained but modifications present; moderate use and visible management controls; proximity to improved and maintained roads.
5. ***'Rural' (R)*** – Substantially modified natural environment with resource modification, development, and obvious human presence; moderate to high use and management controls.
6. ***'Urban' (U)*** – Natural landscape dominated by human modifications; heavy use and numerous management controls; proximity to paved highways.

Each of these classes is defined in terms of a combination of settings, activities, and experiential opportunities. ROS classes are established through inventory and assessment, and are used as an analytical tool in the resource management planning process. A ROS inventory has been completed for the AFO management area (Map ROS-1). It would be used to develop OHV designations, set limits for special recreation permits, and would be utilized in planning for a range of recreational experiences on public lands.

An inventory of all OHV roads and trails was completed in 2004 (see Map TRAVEL-1). Roads were designated as 'Open,' 'Limited,' or 'Closed' on approximately 902 miles of BLM roads and trails in the AFO management area to properly manage the OHV program and reduce negative impacts on various resources.

In addition, pressure is mounting from the general public, environmental groups, and within BLM itself, for better monitoring and enforcement of existing OHV regulations.

'Open' areas allow the use of any kind of vehicle, at any time, anywhere in the area. 'Open' use areas have been designated in areas suitable for intensive OHV use. These are areas with no compelling resource protection needs, user conflicts, or public safety issues that warrant limiting cross-country use.

'Limited' areas pose restrictions at certain times, or in certain areas, or for certain types of vehicles. Examples include seasonal limitations, requirements restricting use to existing roads and trails, and requirements restricting use to 'designated' roads and trails. The intention in restricting vehicles to designated or existing roads and trails is to limit the impacts of vehicle use to established travel routes. Reasonable pull-off space (adjacent to the road or trailside) is permissible for parking and camping unless otherwise posted (in many areas terrain and vegetation would limit pull off distance.) In WSAs, all vehicle travel is 'Limited to Existing Roads and Trails' as identified in the BLM roadless-area inventory of 1979.

'Closed' areas are not open to any kind of motor vehicle entry. Areas are 'Closed' where required to protect natural and/or cultural resources, or to provide areas for non-motorized recreational experiences.

2.9.6.1 Desired Future Condition

Multiple-use management is a fundamental tenet of BLM policy; therefore, reasonable and appropriate compromises would be achieved between the demand for OHV access and enjoyment, conservation of the resource base, and the equally important demands of those seeking to enjoy a non-motorized experience. Therefore, the future would involve designation of certain areas as 'Open' to OHV use. However, OHV use would be 'Limited to Designated Routes' where required to meet land health objectives and other areas would be 'Closed' to motorized access and recreation to protect vulnerable natural and cultural resources. If needed, roads or trails would be realigned to enhance or protect resource values, and to reduce erosion and sediment caused by poor road design or location.

Visitors would be provided with a spectrum of outdoor opportunities emphasizing self-sufficient exploration and recreation in 'Primitive', SPNM, SPM, and more intensively managed and used roaded natural settings. A variety of methods would be used to manage the impact of visitor concentration, including dispersal of use through visitor information and, if required, regulation. Corrections to control erosion hazards would vary in methods to manage impacts of visitor concentration. Facilities such as campgrounds, trailheads, trails, wayside interpretive exhibits, and directional signing would be installed where needed to protect resources or improve customer service and meet the objectives of this land-use plan. The public would be provided with opportunity to experience a variety of motorized and non-motorized recreational experiences including: hunting, fishing, hiking, horseback riding, and wildlife viewing.

2.9.6.2 Goal

The recreation opportunity spectrum process would be used to inventory, assess, and classify recreational opportunities and would be an aid to management planning. ROS classifications would be applied to the land base in the RMP process and would be used to guide management decisions within each ROS class.

2.9.6.3 Objectives

- Appropriate recreation opportunity spectrum classes would be selected for use in planning efforts.

- Inventories would be conducted and ROS classifications assigned for the entire management area.
- Appropriate actions and infrastructure would be used to apply ROS decisions to the land base.
- Lands would be managed on the basis of guidance provided within defined ROS classifications.

2.9.6.4 Legislative, Regulatory, and Policy Direction

- 43 CFR 8340 - Off-Road Vehicles; et seq. (1979)
- Executive Order 11644 – Use of Off-Road Vehicles on Public Lands (1972), as amended by Executive Order 11989 (1977)
- BLM Handbook H-8550-1 – Interim Management Policy and Guidelines for Lands Under Wilderness Review, DOI (Dec, 1979)
- Comprehensive Management and Use Plan – California National Historic Trail and Pony Express National Historic Trail, DOI National Park Service (1998)
- Emigrant Trails Scenic Byway Plan, RC&D, Alturas, California (2003)
- BLM Handbook H-1601-1 – Land Use Planning (Mar., 2005)
- The National Management Strategy for Motorized Off-Highway Vehicle Use on Public Lands (Jan, 2001)

The last two items direct BLM to complete OHV designations as part of the land use planning process. Federal regulations (43 CFR 8340) and BLM planning guidance require BLM to designate all BLM-administered land as 'Open', 'Limited', or 'Closed' to off-road vehicle (now termed off-highway vehicle or OHV) use. These designations help meet public demand for OHV activities, protect natural resources, ensure public safety, and minimize conflicts between users.

2.9.6.5 Proposed Management Actions

- All WSAs, including those that form part of an ACEC, are governed by the Interim Management Policy for Lands under Wilderness Review, or IMP (DOI BLM, 1995b), therefore; OHVs are 'Limited to Existing Roads and Trails' at the time of WSA designation until such time as Congress makes a determination regarding wilderness designation. OHV designations in WSAs would remain in effect until congressional release of the WSA, or until such time as actual, unforeseeable use levels cause the non-impairment criteria to be violated, in which case more restrictive designations may be imposed. Areas released from WSA status would be managed as 'Limited to Designated or Existing Routes', or according to the OHV designation underlying WSA status.
- Where existing roads have an adverse ecological impact, they may be closed through the plan maintenance process in accordance with Northeast California Resource Advisory Council (RAC) Guidelines for OHVs (See RAC Guidelines for OHVs, Appendix C). Roads designated for closure may be signed, physically barricaded, and/or obliterated and the land restored. Priority sites for restoration are riparian areas, damaged watersheds, and sensitive plant or wildlife habitats.
- Final area sizes would be accurately determined, and figures modified, according to results of on-the-ground global positioning system (GPS) inventories, while taking into account new designations and resource constraints.
- The San Francisco State University visitor survey would be used to help formulate ROS decisions.

- Scenic qualities would be maintained, at a minimum, to the present level. A recent recreation survey by San Francisco State University confirms this to be the desire of most local residents and the vast majority of visitors. However, new scenic byways would be considered, providing they are consistent with OHV designations and resource concerns are adequately addressed. Additional environmental analysis and documentation would be required.
- Corridors would be established along existing roads in RN, SPM, and SPNM areas of sufficient width to allow for road maintenance, vehicle pull-offs, and camping.
- The largest total acreage identified with 'Primitive' ROS classifications are within WSAs; as such, management of these areas is prescribed by Congress and BLM policy. Motor vehicle travel in the Pit River Canyon (10,984), Tule Mountain (16,998), and Lava (10,770) WSAs would be 'Limited to Existing Roads and Trails'. Where roads exist in 'Primitive' or SPNM areas, vehicle travel is acceptable as long as the vehicles stay on existing roads and ways.
- Roads throughout the planning area may be seasonally closed to prevent damage to soils, sedimentation, and other resource damage.
- OHV travel is 'Limited to Existing Roads and Trails', unless otherwise designated.
- Information and education would be provided to off-highway enthusiasts concerning awareness and sensitivity to proper use of public lands.
- Once the record of decision is signed, maps would be prepared for all areas with OHV designations and roads would be posted (where required) as directed in the PRMP/FEIS.
- Any recreational use on BLM lands, including commercial and noncommercial uses authorized under special recreation permits, would be evaluated, modified, prohibited, or permitted as needed to protect recreation settings and ROS designations.

Management would focus on modification of areas where changes are obviously needed due to condition of the road network, major or minor modifications to the environment, and other management concerns. BLM would provide opportunities for OHV travel and actively manage their use on public lands. This would be done while protecting significant cultural and historic resources, trail traces and locations associated with national historic emigrant trails.

Significant wildlife populations, as well as wildlife habitat and other valued resources, would also be protected. ROS designations would provide a full range of recreational opportunities for OHV enthusiasts and non-motorized uses of the public lands. Refer to Map ROS-1 for all changes to ROS designations and areas.

- Development of new roads and trails would only be allowed in RN and SPM areas where required to meet management objectives of this RMP.
- Where needed, roads or trails would be realigned to reduce erosion and sedimentation caused by poor road location or design, or when required to enhance or protect other resource values.
- Routes within areas classified 'Primitive' or SPNM would be 'Closed' or removed where continued unauthorized use (off road travel) dictates aggressive management to maintain the ROS designation. Roads and trails in RN and SPM areas would be 'Closed' when adaptive management indicators show this to be necessary.
- 'Primitive' and SPNM areas are limited to non-motorized recreational activities. However, motorized entry would be allowed for permitted activities or range management purposes.

- Project work, permitted uses, and recreational activities within SPNM and SPM areas would require careful consideration and thoughtful design, as well as stipulations and mitigations, in order to maintain the integrity of ROS and VRM classifications.
- The Lower Pit River Canyon (800 acres) would be classified 'Primitive' to protect its historic value, vulnerable wildlife habitat, and its primitive, roadless recreational character as a potential WSR candidate.
- A portion of upper Sheep Mountain (2,000 acres) would be classified 'Primitive' to maintain its historic value, scenic quality, and remote character.
- A portion of upper McDonald Mountain (2,515 acres) would be classified 'Primitive' to maintain unique ecotypes, its scenic quality, and remote character.
- The upper portion of Mount Dome (1,510 acres) would be classified 'Primitive' to maintain unique ecotypes, sensitive plant and animal associations, scenic quality and remote character.

Table 2.9-1 Recreation Opportunity Spectrum Classes

ROS Class	Area (acres)
'Primitive'	55,594
'Semi-Primitive Non-Motorized'	63,472
'Semi-Primitive Motorized'	273,539
'Roaded Natural'	110,440
Total	503,045

2.10 Soil Resources

Soil is essential for the growth of vegetation. Without an intact base of healthy, productive soil, watershed management goals for vegetation, wildlife, and livestock are not achievable. Soils in the AFO management area are semi-arid, young, and poorly developed. Chemical and biological processes that form soils (e.g., weathering of rock, accumulation of organic matter, decomposition of plant materials and nutrient cycling) proceed slowly in this environment. Soil recovery processes are also slow. For these reasons, soil disruption can have long-term adverse effects on soil ecology and productivity.

2.10.1 Desired Future Condition

Soils would exhibit PFC and moisture infiltration and permeability rates appropriate for the climate, local landforms, and soil types. Soils would have desirable physical, chemical, and biological characteristics – including biological crusts. PFC means that soils are adequately protected from man-caused wind and water erosion and soil fertility is maintained at, or restored to, an appropriate level for the site. Where biological threshold conditions exist (i.e., areas in stable but non-natural or degenerate condition–such as sagebrush/cheatgrass sites), "appropriate characteristics" are those that one would expect under threshold conditions. Under such conditions, reestablishing natural, healthy soils could only be expected over an extended timeframe (up to 100 years, and possibly longer). Despite this, some visible progress should be made within the life of this RMP.

2.10.2 Goal

The long-term health and productivity of area soils would be assured, with no *net* loss of soil fertility. Sedimentation would be controlled, occurring at a rate that does not threaten sensitive resources, or human health and property. Lithic and earthen materials would be available for suitable uses (e.g., roads, gravel, and livestock watering facilities).

2.10.3 Objectives

Soils would be protected where they meet land health standards. Site stability and/or soil productivity would be substantially improved where soils do not currently meet these standards. Erosion and sedimentation would be prevented or eliminated in sensitive aquatic (or other sensitive) environments and would no longer pose a threat to property or human health. Development of any kind would be limited to suitable soils. Earthen materials would be sufficient for the needs of county and state road departments.

2.10.4 Legislative, Regulatory, and Policy Direction

- Standards and Guidelines for Livestock Grazing Management on BLM-Administered Lands in Northeastern California and Northwestern Nevada (S&Gs) (July 2000), particularly the Standards for Rangeland Health (Appendix B).[1]

[1] A portion of this document is concerned with the health standard for soil. This standard requires that upland soils exhibit infiltration and permeability rates appropriate for climate, landform, and soil type, and exhibit functional biological, chemical, and physical characteristics. It also requires that soil be adequately protected from man-caused wind or water erosion and fertility maintained at, or brought to, a pre-defined level. Although other standards guide and influence soil management decisions, the soil health standard are the basis for determining soil health, desired future condition, and the goals and objectives stated above.

2.10.5 Proposed Management Actions

Management practices will be implemented in order to achieve the desired future condition for soil. Management practices are generally applied as a system or set (rather than a single intervention), and are applied on a site-specific basis according to natural background conditions (i.e., climate, geology, landform, and ecology); current social, economic, and political considerations; and technical feasibility. Management practices will be used to achieve the following ends:

- Promote soil recovery on 10,154 acres known not to meet land health standards (see Map SOILS-1). Recovery practices would be formulated and applied on a site-specific basis at the project level.
- Employ bio-engineering projects to improve soil condition and achieve PFC on 200 acres of degraded soils.
- Ensure that management activities do not result in a *net* loss of soil productivity or productive potential.
- Developments and uses (e.g., roads and trails, stock ponds, and reservoirs) would be limited to soils with the most suitable characteristics or unproductive soils. (Soil survey reports are available for the entire management area at the local office of the Natural Resources Conservation Service (NRCS). Suitability determinations are included in these reports, which are also available on NRCS's website, currently at www.soils.usda.gov .)
- Manage livestock grazing to promote healthy soils and watersheds. This means preserving biological integrity (including biological crusts), ensuring proper hydrologic function, and maintaining soil productivity.
- Restrict wild horses to herd management areas (HMAs) and maintain numbers at or below appropriate management levels (AMLs). Reduce the AML if soil degradation is attributable to horses.
- Minimize activities and uses in perennial and intermittent drainages that would have adverse effects on watershed processes or function.
- Treat invasive plants and noxious weeds (or modify management) on sites where soil function and integrity are compromised. Medusahead and juniper-infested sites are of particular concern (except in areas where western juniper is a significant component of the ecological site description).
- Prevent damage to soils with high shrink-swell characteristics by limiting compacting activities (e.g., grazing, OHV use, and BLM maintenance activities) to periods when soil is dry and firm enough to resist compacting activities (i.e., when soil compression would be no greater than 2 inches for the sum of activities). Appraise and manage infrequent activities (i.e., those that occur at greater than 10-year intervals) on the basis of soil structural changes following the compacting activity (rather than using the compression standard).

Soil protection and management would primarily involve mitigation of soil-disturbing activities, conducted on a case-by-case basis. When altering uses and activities, by themselves, would not suffice to restore soil health – such as when threshold conditions have been exceeded – treatments would emphasize bio-engineering and other practices to rapidly achieve PFC and, ultimately, desired future condition. Practices will include:

- Construction of exclosures and upland fencing
- Intensive planting of woody riparian vegetation
- Vegetation manipulation

- Installation of in-stream structures
- Check dams and other erosion-control structures

Where significant progress is being made toward meeting land health standards, emphasis will be placed on natural recovery processes, including activity exclusion. Other important management actions are given below.

- Conduct road maintenance at the current rate.
- Rehabilitate or close roads where needed to protect or restore soils. Where necessary, relocate roads to more suitable locations. (See the "Travel Management" section of this RMP for details on proposed road relocations.)
- Limit development of roads, facilities, watering facilities, etc. to locations where soil would be most suitable for development, in order to avoid loss of soil productivity. Employ suitability data from soil survey reports and site investigations for this purpose.
- Plan and apply measures to ensure that no net loss of soil productivity occurs within 'sixth-level' (or larger) watersheds. (i.e., 10,000 to 40,000 acres).
- Establish properly constructed sediment intrusion buffer zones that extend for at least 50 feet beyond sensitive sites (e.g., bodies of water, vulnerable plants, and archaeological sites) and developed property. This primarily concerns roads and trails, but applies also to any soil-disturbing activity that would create significant wind or water-borne sediments that would threaten sensitive resources, property or human health.
- Restore and maintain soil health by emphasizing prescribed burns and other fuel-reduction projects. Follow this with reseeding or replanting, where indicated.
- Restrict heavy equipment to roads near perennial and intermittent drainages and wherever soils are not meeting land health standards—except where needed for rehabilitation or restoration.

2.11 Special Designations - Areas of Critical Environmental Concern

43 CFR and BLM policy require that environmentally sensitive areas be evaluated and considered for special management as ACECs during the PRMP planning process. Areas that contain high-value resources or critical natural systems, processes, or hazards are eligible for consideration if certain relevance and importance criteria are fulfilled. In order to meet these criteria, an area must contain significant historical, cultural, scenic, wildlife habitat, or other natural values. Furthermore, the site's importance must extend beyond the local level.

The designation of an ACEC is a BLM discretionary decision made through adoption of an RMP. In order to protect the resource values that justified designation of each ACEC in this PRMP (Appendix E "Relevant and Important Criteria"), BLM is required to develop and implement an ACEC management schedule or an activity plan (BLM ACEC Manual 1613.6). Each ACEC's management schedule or activity plan will be unique to the resources to be protected and are "management measures that would not be necessary and prescribed if the critical and important features were not present" (BLM ACEC Manual 1613.1.12).

RNAs are a special category of ACEC designated to protect examples of typical or unusual ecological communities, associations, phenomena, characteristics, or natural features or processes for scientific and educational purposes. They are established and managed to protect ecological processes, conserve their biological diversity, and provide opportunities for observational activities associated with research and education. Areas may consist of diverse vegetative communities, wildlife habitat, unique geological formations, cultural resources, and/or other values.

Designation of an ACEC does not automatically create land use restrictions that affect all ongoing or proposed land uses but, rather, requires development of a set of management prescriptions tailored to protect the unique resource values for which the ACEC is established. Following adoption of this PRMP, a management schedule or activity plan for each ACEC will subsequently be developed, involving affected stakeholders, to set future management direction for the area. An ACEC designation applies to BLM lands and does not apply to private property rights and privately held water rights.

In compliance with NEPA, all proposed management actions on BLM lands, must be evaluated for their impacts whether such proposed management actions are within or outside an ACEC (e.g., fencing, ROW corridors, events authorized under a special recreation permit, etc.). The type of NEPA document required depends on the type of possible impact(s) and the extent of public interest and/or controversy associated with the proposed project.The AFO planning area contains a diversity of landscapes. These range from dense mountainside forests of white fir and pine to open grasslands and sagebrush-steppe. These habitats are interspersed or divided by prominent geological features such as lava plateaus, cinder cones, and river canyons. Fall is especially beautiful; at this time of year the reds, oranges, and yellows of oak, redbud, and aspen contrast sharply with black lava fields. This rugged and beautiful country contains many interesting plants and animals that depend on uncommon or unique ecosystems. As is often the case in harsh climates or difficult terrain, many occur in low numbers, have very limited ranges or widely scattered habitats. Such habitats are easily damaged or destroyed. The planning area (and the region) also has an ancient and important human presence with many irreplaceable (and easily damaged) archaeological sites.

2.11.1 Desired Future Condition

Unique resources and important values within ACECs would be enhanced (where feasible) and protected from irreparable harm.

2.11.2 Goal

Designate ACECs where the relevance and importance criteria are met, and implement management actions to protect recognized values.

2.11.3 Objectives

Identify and protect all sites and resources that meet the relevance and importance criteria. Where necessary, take immediate steps to prevent irreparable damage to resources and natural systems. Promote safety and protect human life where natural hazards exist. Evaluate and consider designation for all areas that meet ACEC requirements. Formulate and implement management plans for designated ACECs.

2.11.4 Legislative, Regulatory, and Policy Direction

- The Federal Land Policy and Management Act, Sections 603, 201, and 202 (1976)
- Federal Cave Resources Protection (16 U.S.C. 4301-4310), (Nov., 1988), as amended (1990)
- Baker Cypress/Lava Rock Natural Area and Instant Wilderness Study Area (Feb., 1979)
- BLM Regulations: H-8550-1 (July, 1995)
- Comprehensive Management, Use Plan, and Final EIS; California National Historic Trail and Pony Express National Historic Trail; USDI-National Park Service (1998)
- BLM Manual 1621 (Supplemental Guidance for Environmental Resources) (1986)
- Emigrant Trails Scenic Byway Plan, RC&D, Alturas, CA (2003)
- The Mount Dome Planning Unit EIS (1980)
- Archaeological Resources Protection Act (1979)
- 43 CFR 1610
- BLM Manual 1613
- Land Use Planning Handbook, BLM H-1601-1, (2005)

2.11.5 Proposed Management Actions

BLM would maintain the existing Ash Valley ACEC (1,322 acres) and manage the Baker Cypress Natural Area (1,448 acres) as part of the new Timbered Crater ACEC.

Designate the following (proposed) ACECs, for a total of 29,171 acres, as shown on Map ACEC-1 and summarized in Table 2.11-3:

- Timbered Crater ACEC/RNA (17,896 acres)
- Mountain Peaks ACEC/RNA (3,500 acres)
- Old Growth Juniper ACEC/RNA (3,115 acres)
- Emigrant Trails ACEC (1,750 acres)
- Likely Tablelands/Yankee Jim/Fitzhugh Creek ACEC (1,400 acres)

- Mount Dome ACEC/RNA (1,510 acres)

Three of the proposed ACECs, and one instant study area (ISA) are wholly or partially within WSAs. These are listed for clarification in Table 2.11-1.

Table 2.11-1 Relationship between Wilderness Study Areas, Areas of Critical Environmental Concern, and Instant Study Areas

Wilderness Study Area	WSA Size (acres)	ACEC Title	ACEC Size (acres)	Instant Study Area	ISA Size (acres)
Timbered Crater WSA	17,896	**Timbered Crater ACEC**	within WSA 17,896	**Baker Cypress Natural Area**	within WSA 1,448
Pit River Canyon WSA	10,984	**Emigrant Trails ACEC**	within WSA 1,000 outside WSA 750	N/A	N/A
Tule Mountain WSA	16,998	**Mountain Peaks ACEC**	within WSA 985 outside WSA 2,515	N/A	N/A

The following table provides a summary of ACEC lands that are proposed and would exist outside WSA boundaries (see Maps ACEC-1 and WSA-1).

Table 2.11-2 ACECs Outside of WSA Boundaries

ACEC Name	Total Area (acres)
Emigrant Trails ACEC	750
Mountain Peaks ACEC	2,515
Old Growth Juniper ACEC	3,115
Mount Dome ACEC	1,510
Likely Tablelands/Yankee Jim/Fitzhugh Creek ACEC	1,400
Total	**9,290**

An ACEC (or portion thereof) that is encompassed by a WSA is governed under the wilderness IMP until such time as Congress makes a determination regarding wilderness designation. (ACECs are proposed and management plans developed without reference to WSA status since wilderness designation is uncertain.) Such an ACEC (or portion thereof), if released from wilderness study, would be managed under management actions prescribed in this PRMP.

In some cases, ACEC management is more restrictive than the wilderness IMP (e.g., limiting vehicles to designated routes or closing the area to livestock grazing). Under such circumstances, the more restrictive management would apply. Should an ACEC (or portion thereof) receive wilderness designation, management of that area would be determined by the authorizing legislation.

Recreational activities in ACECs—including (commercial and non-commercial) pursuits that require special recreation permits—will be evaluated for compatibility with the purposes for which the ACEC was created. The activity would then be allowed (a permit would be issued for certain activities), modified, or prohibited as necessary to preserve the resources and values within the ACEC.

ACECs would be managed under VRM Class II criteria (or Class I criteria where subject to the wilderness IMP).

Livestock grazing within ACECs would be managed according to permit stipulations, AMPs, and ACEC management plans.

Noxious weeds would be aggressively controlled in ACECs.

All ACECs are closed to new ROWs. This means that any applications for new ROWs or utility corridors would completely avoid all ACECs.

All ACECs or ACECs/RNAs would be 'Closed' to saleable minerals. Withdrawals would be recommended for locatable minerals. Leasable minerals would be restricted to NSO requirements.

Most ACECs would be closed to woodcutting and timber sales unless actions are required for maintenance or health of the ACEC and the associated values. Likely Tablelands/Yankee Jim/Fitzhugh Creek ACEC would be open to woodcutting with stipulations.

2.11.5.1 Timbered Crater ACEC/RNA

The Timbered Crater ACEC/RNA would be managed to protect the unique geological, botanical, and biological resources of this area under provisions of the existing WSA and the Baker Cypress Natural Area, with the following additions:

- Combine the Timbered Crater ACEC/RNA (17,896 acres) with the Baker Cypress Natural Area (1,448 acres-all within Timbered Crater) and designate the total area (17,896 acres) as the Timbered Crater ACEC/RNA.
- Protect the lava ecosystem, special status plant slender Orcutt grass (*Orcuttia tenuis*), and the unique stand of Baker cypress (*Cupressus bakeri*), and provide research related to the representation of a healthy vegetation community.
- Maintain fences so that livestock are excluded from the Orcuttia site, as well as OHVs, to prevent degradation of soil and vegetation.
- Manage vegetation (through prescribed fire treatments) to eliminate the threat of disease to this unique special plant community and promote the health and viability of the species.
- Continue current research and monitoring. Focus on recovery of the potential natural community; begin with determining characteristics of this unique botanical community.
- Designate OHV use as 'Limited to Designated Routes'.
- Implement fire protection and control methods appropriate for the maintenance of this unique ecosystem.
- Manage the ACEC under VRM Class I-as long as the area is under WSA status and VRM Class II if Congress elects not to designate the area as wilderness.
- Designate approximately 95% of the ACEC as a 'Primitive' classification under the ROS to ensure pristine, unspoiled conditions for hunting, hiking, wildlife observation, and geologic and scenic sightseeing (see ROS designations for this area shown on Map ROS-1).

2.11.5.2 Mountain Peaks ACEC/RNA

Create the ACEC by designating the a portion of the Tule Mountain WSA (985 acres) and a portion of McDonald Mountain (2,515 acres) as the Mountain Peaks ACEC/RNA (3,500 acres of BLM-administered land) to protect unique high mountain peak vegetation, scenic values, wildlife resources and habitat linkage.

- Designate approximately 75% of the ACEC as a 'Primitive' classification under the ROS to ensure pristine, unspoiled conditions for hunting, hiking, wildlife observation, and scenic sightseeing (see ROS designations for this area shown on Map ROS-1).
- Monitor livestock grazing to ensure compliance with permit stipulations. Emphasize meeting and maintaining land health standards and protection of wildlife habitats.
- Manage approximately 25% of the ACEC/RNA under VRM Class I criteria (i.e., preserve the existing character of the landscape within the Tule Mountain WSA), and the remainder as VRM Class II (i.e., retain the existing character of the landscape).
- Manage for undeveloped recreation opportunities such as primitive trails and scenic resources. Obtain legal access and establish non-motorized trails to McDonald Peak and non-motorized portions of Tule Mountain, subject to seasonal wildlife-protection requirements.
- Build or maintain non-motorized trails that cross scenic landscapes, provide wildlife viewing opportunities, and link recreation areas.
- Monitor mountain peaks use to ensure compliance with OHV restrictions ('Limited to Existing Roads and Trails) and camping regulations.

2.11.5.3 Old Growth Juniper ACEC/RNA

Create the Old Growth Juniper ACEC by designating two areas – Sheep Valley consisting of (2025 acres), and Ticker Springs (1090 acres), with a total of 3,115 acres – to protect botanical, cultural, biological and geological values, fish and wildlife resources, and scenic values.

- Preserve the ACEC's undeveloped character by acquiring internal or adjacent private lands from willing sellers that support the ACEC designation.
- Protect historic and prehistoric resources under Section 106 of the NHPA.
- Monitor stream channel conditions in Sheep Valley to detect changes that threaten the riparian community, sensitive soils, and wildlife and native fish habitat.
- Close the Sheep Valley portion (2025 acres) of the ACEC to motorized vehicles. The Ticker Springs area (1090 acres) would limit OHVs to designated roads and trails.
- Monitor water quality in Sheep Valley to ensure that state standards are upheld. Where problems are indicated, take steps to control bank degradation or other impacts that adversely affect water quality.
- Designate approximately 60% of the ACEC as a 'Primitive' classification under the ROS to ensure pristine, unspoiled conditions for hunting, hiking, wildlife observation, and scenic sightseeing (see ROS designations for this area shown on Map ROS-1).
- Manage the entire ACEC/RNA as VRM Class II to retain the existing character of the landscape.
- The ACEC would remain available for livestock grazing with the exception of a few areas of public land behind fences that exclude livestock from riparian areas, cultural resources, or sensitive soils. Improve and maintain riparian and aquatic habitats of Sheep Valley.

2.11.5.4 Emigrant Trails ACEC

Create the Emigrant Trails ACEC by focusing on three areas that have significant trail traces or resources associated with the Lassen and Applegate National Historic Trails (1750 acres), to protect cultural and historic, biological and geological values, fish and wildlife resources, and scenic values. The ACEC falls within portions of the Pit River Canyon WSA and incorporates segments of trails on the Lower Klamath Marsh and the Descent into Goose Lake areas.

- Manage portions of BLM-administered lands in the Pit River Canyon WSA and at the Descent into Goose Lake for non-motorized uses.
- As part of the Pit River Canyon WSA, manage the ACEC under the Wilderness IMP—including VRM Class I criteria (preserve the existing character of the landscape) —to protect its natural appearance and wilderness qualities. However, if the area is not designated wilderness by an Act of Congress and is released from WSA status, it will no longer be subject to the Wilderness IMP. If this happens, visual resources would be managed under VRM Class II criteria. VRM Class II is not quite as restrictive as Class I but still emphasizes management to retain the existing character of the landscape.
- Protect prehistoric and historic sites and artifacts under Section 106 of the NHPA.
- Monitor livestock use on historic trail resources and artifacts. If deemed necessary, modified grazing systems, changes to season of use, or fencing may be used to preserve and protect significant trail resources.
- Acquire private land (from willing sellers) that support the ACEC designation within and adjacent to the ACEC that would protect the Emigrant Trails ACEC values and provides legal public access.
- OHV use would be ‘Limited to Designated Routes’ in Lower Klamath marsh area, and ‘Limited to Existing Roads and Trails’ in the Pit River Canyon WSA and the Descent into Goose Lake.
- Acquire legal access (from willing sellers) from Highway 299 to Pit River WSA (T. 37 N. R 6 & 7 E) for the benefit of fishermen, hunters, and hikers.
- Provide and enhance opportunities for fishing, hiking, and archaeological/historic sightseeing.
- Designate approximately 40% of the ACEC as a ‘Primitive’ classification under the ROS to ensure pristine, unspoiled conditions for hunting, hiking, wildlife observation, scenic, and historical sightseeing (see ROS designations for this area shown on Map ROS-1).
- Monitor visitor impacts on cultural resources, wildlife, and scenic landscapes. If necessary, modify management to protect these resources.

2.11.5.5 Likely Tablelands/Yankee Jim/Fitzhugh Creek ACEC

Create the Likely Tablelands/Yankee Jim/Fitzhugh Creek ACEC by designating 1,400 acres of BLM-administered land as an ACEC, to protect cultural and historic, biological and botanical values, fish and wildlife resources, and scenic values.

- Improve cultural and riparian condition by maintaining existing or modified livestock grazing strategies, which limits livestock grazing to specific areas and seasons of use.
- Manage and protect prehistoric and historic sites and artifacts under Section 106 of the NHPA.

- As part of the Tablelands Integrated Resource Management Plan and proposed ACEC, manage this area under the VRM Class II criteria. Class II emphasizes management to retain the existing character of the landscape.
- Manage the ACEC for OHV use as 'Limited to Designated Routes'.
- Track management objectives by monitoring visitor impacts, recording, and evaluating water quality, riparian health, wildlife, scenic landscapes, and the condition of cultural resources. If necessary, modify management to protect these resources.
- Provide and enhance opportunities for primitive (self-contained) camping, hunting, hiking, and scenic and historic sightseeing.
- Provide a peaceful, undisturbed setting for cultural use by Native Americans.

2.11.5.6 Mount Dome ACEC\RNA

Create the Mount Dome ACEC/RNA by designating 1,510 acres of BLM-administered land within the Lower Klamath basin as an ACEC/RNA to protect vegetation, wildlife, and scenic values and the undeveloped setting of Mount Dome.

- In conjunction with the Mount Dome Habitat Management Plan, manage the Mount Dome ACEC/RNA under VRM Class II criteria (emphasizes management to retain the existing character of the landscape) in order to protect its natural appearance, wilderness like qualities, and bald eagle habitat.
- Designate the ACEC as a 'Primitive' classification under the ROS to ensure pristine, unspoiled conditions for hunting, hiking, wildlife observation, and scenic sightseeing (see ROS designations for this area shown on Map ROS-1).
- Monitor livestock grazing numbers. Manage so that land health standards and riparian objectives are achieved.
- OHVs would be 'Limited to Existing Roads and Trails'.
- Protect cultural resources under Section 106 of the NHPA.
- Protect raptor nesting sites under the Migratory Bird Treaty Act and the Bald Eagle Act (which also includes golden eagles).
- Acquire private land (from willing sellers) adjacent to the ACEC to provide legal public access and protection of wildlife habitat and cultural resources.

Table 2.11-3 Management Summary for Proposed Areas of Critical Environmental Concern

Acres	ROW	VRM	Grazing	OHV	Minerals			Timber Harvest/ Wood cutting	Wildland Fire Management
					Leasable	Saleable	Locatable		
Ash Valley ACEC									
1,322	Exclusion	II	Available	LE	NSO	Closed	Withdrawn	Closed	AMR
Baker Cypress Natural Area, ISA, and ACEC (entire ACEC is within Timbered Crater WSA)									
1,448	Exclusion	I	Available	LD	Closed	Closed	Rec. for Withdrawal	Closed	AMR
Timbered Crater ACEC/RNA (entire ACEC is within Timbered Crated WSA)									
17,896	Exclusion	I	Available, except in *Orcuttia* exclosure	LD	Closed	Closed	Rec. for Withdrawal	Closed	AMR
Emigrant Trails ACEC (1,000 acres are within Pit River Canyon WSA)									
1,750	Exclusion	I, II	Available	LE	NSO, Closed in Pit River WSA (1,000 acres)	Closed	Rec. for Withdrawal	Closed[2/]	AMR
Mount Dome ACEC/RNA									
1,510	Exclusion	II	Available	LD	NSO	Closed	Rec. for Withdrawal	Closed	AMR
Mountain Peaks ACEC/RNA (985 acres are within Tule Mountain WSA)									
3,500	Exclusion	I, II	Available	LE	NSO, Closed in WSA (985 acres)	Closed	Rec. for Withdrawal	Closed	AMR, WFU in Tule Mt WSA
Old Growth Juniper ACEC/RNA									
3,115	Exclusion	II	Available, except in Sheep Valley exclosure	Closed in Sheep Valley (2,025 acres) LD at Ticker Spring (1,090 acres)	NSO	Closed	Rec. for Withdrawal	Closed	AMR
Likely Tablelands/Yankee Jim/Fitzhugh Creek ACEC									
1,400	Exclusion	II	Available	LD 4/16–11/30 Seasonally Closed 12/1–4/15	NSO	Closed	Rec. for Withdrawal	Open with restrictions	AMR

OHV designations: LD = 'Limited to Designated Routes' LE = 'Limited to Existing Roads and Trails'

Leasable minerals: NSO = no surface occupancy

2.12 Special Designations – National Historic Trails

The first (known) explorers to enter this region were Hudson's Bay Company employees, chief-traders Peter Skene Ogden in 1826, followed by John Work in 1832. These men established a far-reaching beaver-trapping and trade route network based at Fort Vancouver (in what is now Washington State) that extended throughout the Pacific Northwest and into the great Basin, including the high-desert country of northeastern California. Ewing Young, together with other American trappers, followed shortly thereafter, competing with the Hudson's Bay Company for the lucrative trapping grounds of the Pacific Northwest.

In 1843, Joseph Chiles left the Oregon Trail (at the Hudson's Bay Company post of Fort Hall, in what is now Idaho) and entered this region with a party of men on horseback. This party was soon followed (1846) by settlers in wagons led by Levi Scott and the Applegate brothers. Two years later, Peter Lassen established the trail that bears his name. Both trails entered California through the Surprise Valley and traversed the Warner Mountains before separating at Goose Lake. The Lassen Trail followed the course of the Pit River to reach the Sacramento Valley and the main California goldfields. However, the Applegate Trail (a.k.a. the Southern Road to Oregon) pressed north to the fertile valleys of Oregon Territory. An offshoot, the Yreka Trail (established in 1852), left the Applegate near Lower Klamath Marsh and served miners and settlers bound for the Klamath River goldfields in northwestern California.

The first military expedition (The United States Exploring Expedition) to this region was led by Commander Charles Wilkes of the U.S. Navy (1841), follow by John Charles Fremont in 1843 and 1846. Fremont was present in the California/Oregon border region when, in 1846, news of the Bear Flag revolt arrived. Fremont was instrumental in taking northern California from Mexico. A short time later, the U.S. Army Topographical Corps played a major role in exploring the region, searching for routes that would unify the nation through an east-west railway link. A U.S. Army topographical engineer, R.S. Williamson, was a prominent figure in the exploration and early history of the Pit River country from 1849 through 1855.

Throughout the period of settlement the native Modocs, Pit Rivers, and Paiutes were at odds with the U.S. Army because of conflicts stemming from the wholesale invasion of their homeland by gold-seekers and emigrants. Hostilities commenced with the first wagon of settlers in 1846. Volunteer militia and the U.S. Army patrolled regional roads (such as the Lockhart Wagon Road and the Yreka, Lassen, and Applegate Trails) to protect emigrants from attack by native peoples. Hostilities escalated, culminating in the battle of the Infernal Caverns in 1867. The Modoc War of 1872-73 marked the end of significant armed conflict in northeast California.

2.12.1 Desired Future Condition

Visitors to lands administered by the AFO would increase their understanding and appreciation for local history by exposure to, and direct experience of (e.g., exploration of trail remnants), historic trails and associated locations, structures, and artifacts. Interpretive displays would identify important locales and explain their role in historical events. These efforts would lead to an increase in history-based tourism and greater understanding between peoples of Euro-American and native origin.

2.12.2 Goal

Provide or enhance history-based recreational opportunities related to historic trails (in developed and undeveloped settings), where appropriate. Ensure that history-related facilities and increased visitation will not threaten other resources.

2.12.3 Objectives

Protect historically important settings, including the physical traces and visual integrity of historic trail sites. Provide a range of recreational opportunities that encourage visitors to learn about and experience emigrant trails, military patrol routes, and trail-related historical sites.

2.12.4 Legislative, Regulatory, and Policy Direction

- The Federal Land Policy and Management Act (1976)
- 43 CFR 8340, (Federal Register 44:34836) (June, 1979)
- DOI BLM, H-8550-1, Rel. 8-17 (Interim Management Policy for Lands under Wilderness Review) (July, 1995)
- DOI BLM, Priorities for Recreation and Visitor Services (May 2003)
- BLM Land-Use Planning Handbook (H-1601-1) (Mar., 2005)
- Comprehensive Management and Use Plan, California National Historic Trail and Pony Express National Historic Trail, DOI National Park Service (1998)
- Emigrant Trails Scenic Byway Plan, RC&D, Alturas, California (2003)
- BLM Manual 8400 (Visual Resource Management) (1984)

2.12.5 Proposed Management Actions

The AFO will protect and manage significant national historic trails and associated locations, structures, and remnants, for public edification and enjoyment. BLM will emphasize off-site (historical) interpretation and compatible recreational development in three especially significant locations: Lower Klamath Marsh, Goose Lake, and the upper Pit River Canyon. Although these areas are very different in terms of ease of access and suitability for certain forms of recreation, together they offer a range of possibilities for exploring and enjoying historic trails that is compatible with trail preservation, if properly managed. Typical activities of this kind are hiking, horseback riding, and recreational driving/sightseeing (two-wheel drive [2WD] and four-wheel drive [4WD]) (Map HT-1).

An Emigrant Trails ACEC would be created to protect and intensively manage 1,750 acres of historic trail remnants and associated historical artifacts. (See the ACEC section for additional information.)

The following sites (and possibly others) would become part of the “Historic Sites Scenic Byway”:

- Bloody Point–County Road
- Madigan’s Rock
- Infernal Caverns–U.S. Highway 395

Individual recreation development packages would be implemented at key historic trail locations. Visitor conveniences may include hiking and horseback trails, (history-related) interpretive trails and panels, sweet-smelling toilets, and vehicle parking, pullouts, and barriers.

The following areas have been identified for such development:

Applegate Trail

- Lower Klamath Marsh (4WD)

- Applegate/Yreka Trail--Laird's Landing
- Sheep Mountain–Modoc War (4WD)
- Battle of the Infernal Caverns
- Baker Toll Road (4WD)

Lassen Trail

- Round Barn
- Crowder Flat Road

Additional management actions include:

- Provide or enhance recreational opportunities related to national historic trails, by establishing interpretive locations that specialize in history that fits the site, specific location and motif of the locale.
- Develop an interpretive package for and at the Descent into Goose Lake. This would include a 0.25-mile interpretive trail, picnic tables, waterless toilet, parking area, and access for viewing trail traces. On-site interpretive displays would feature regional exploration, emigrant trails, Native Americans, and native wildlife.
- Collaborate with the Sierra Pacific Power Company and the BLM California State Office to acquire fee title to a parcel of land (256 acres) associated with the Battle of the Infernal Caverns.
- Protect and maintain 29 miles of the following historic trails (Map HT-1):
  - Applegate Trail (4 miles)
  - Lassen Trail (20 miles)
  - Applegate/Lassen Trail (2 miles)
  - Yreka Trail (2 miles)
  - Burnett Cutoff (1 mile)
- Whenever possible, acquire important historical sites and historic trail segments (from willing sellers).
- Collaborate with federal, state, and county agencies, and private entities (e.g., Oregon-California Trails Association, Trails West, etc.) to develop a Historic Sites Scenic Byway to encourage rural tourism through off-site interpretive displays and history-related vista points. (On-site development would be minimized in order to reduce vandalism and vehicular impacts.)

2.13 Special Designations – Scenic Byways

Driving scenic byways has become a commonplace activity and an effective aid to rural tourism—especially where popular routes are conjoined. These routes may follow short, sinuous country roads or involve long-distance travel on major federal and state highways. They may include scenic vistas, points of interest, interpretive sites, and other attractions. Routes that qualify as national scenic byways have more rigorously defined parameters.

Qualifying routes must be suitable for ordinary passenger vehicles and, in addition to outstanding scenery, require points of interest and other high-quality, tourist-oriented attractions and conveniences adjacent to the byway.

As previously mentioned, shorter routes are often narrow, winding country roads that offer outstanding scenery and other roadside attractions—such as wildlife-viewing, photography, picnicking, and the opportunity to explore historical or archaeological sites. Some routes are relatively rough, and more suited to adventurous drivers and high-clearance vehicles.

Other routes access trailheads for hiking or horseback riding, or rugged terrain requiring 4WD. Such routes are associated with other recreational activities such as hunting, fishing, vehicular (self-contained) camping, rock-hounding, and caving. As one might expect, use is greatest on holiday weekends—particularly Memorial Day, the Fourth of July, and Labor Day. Peak use is in fall and summer; primarily for hunting and fishing (and self-contained camping associated with these activities) and, to a lesser degree, for sightseeing or hiking access.

2.13.1 Desired Future Condition

A wide range of scenic driving opportunities would be available to the public. Routes would vary in length and degrees of difficulty (from major highways to single-track, 4WD routes), roadside attractions, and travel amenities. The routes themselves, and associated facilities, would be appropriate to the ROS and VRM classifications for the area.

Well-traveled routes would feature identified scenic vistas, interpretive displays, developed (or basic) campgrounds and directional signing where required for visitor convenience and safety. Interpretive displays would provide basic information on natural history or cultural resources. Detailed information, maps, and brochures would be available at the AFO (or from the website), and from visitor's centers and businesses in gateway communities.

Trail systems (motorized and non-motorized) would be designed to show scenic potential to best advantage, particularly in SRMAs. As with hard-surfaced roads, trails would vary in distance, construction, design, and degree of difficulty. They would be built as return-routes ("loop trails") in most locations. Outside SRMAs, signs would generally be limited to primary routes and employed only for direction-finding, to preserve the undeveloped character of the extensive recreation management area. However, signs may be placed on secondary routes where necessary for resource protection or to minimize user conflicts. 'Closed' routes would be physically blocked according to site-specific requirements (in some instances trails would only be signed). The abandoned railroad line would be obtained from the Union Pacific and converted to recreation trails (in cooperation with Lassen County, Modoc County, and the Eagle Lake Field Office).

2.13.2 Goal

Enhance or modify existing routes, or maximize potential when planning new routes, to showcase scenic qualities and points of interest for roads and trails eligible as scenic byways. Ensure that development and use does not compromise natural or cultural resources.

2.13.3 Objectives

Ensure that scenic byway potential is recognized and developed for routes that vary in length, construction, user-suitability, and scenic attributes. Route planning, design, and construction must be compatible with ROS and VRM classes for the affected areas.

2.13.4 Legislative, Regulatory, and Policy Direction

General Direction

- The Federal Land Policy and Management Act (1976)
- 43 CFR 8340 (Off-Road Vehicles) (1979)
- DOI BLM, H-8550-1 (Interim Management Policy for Lands under Wilderness Review) (July 1995)
- Comprehensive Management and Use Plan, California National Historic Trail and Pony Express National Historic Trail; DOI National Park Service (1998)
- Emigrant Trails Scenic Byway Plan, RC&D, Alturas, California (2003) `

Planning and Management Documents for Adjacent Lands

- Comprehensive Land Use and Management Plan for Federal and State-Managed Lands in Modoc County (May 1995)
- DOI National Park Service; Comprehensive Management and Use Plan and Final Environmental Impact Statement, California National Historic Trail and Pony Express National Historic Trail (1998)
- Emigrant Trails Scenic Byway Plan, RC&D, Alturas, California (2003)

2.13.5 Proposed Management Actions

Designate and manage the following proposed scenic byways:

• U.S. Highway 395 - Alturas to Reno	190 miles
• State Highway 139 - Canby to Susanville	90 miles
• State Highway 299 - Adin to Redding	110 miles
• State Highway 139/Canby to U.S. Highway 395/Nevada state line	170 miles
• Total	560 miles

Continue work to add additional segments and interpretive locations to the Emigrant Trails Scenic Byway (U.S. Highway 395 and State Highways 299 and 139). The Modoc County Scenic Byways Committee recommends Highway 395 from Alturas to the Nevada border *or* Route 299/139 from Canby to Susanville for the next phase of development.

Assume responsibility for interpretive planning and development on the BLM-administered portion of the Emigrant Trails Scenic Byway at the Descent to Goose Lake. BLM would cooperate with the Northern California Resource Center for interpretive planning and development on the Applegate and Lassen National Historic Emigrant Trails (also at the Descent to Goose Lake). The site would encompass ten acres plus a one-quarter mile interpretive walking trail, as well as a one-mile hiking trail.

Modify or enhance existing routes to create new scenic roadways, driving loops, and vista points, where there is sufficient demand. Development and use must be consistent with VRM and ROS classes, and with OHV designations: site-specific planning would ensure harmonious integration with the surrounding area.

Cooperate with the Modoc County Scenic Byways Committee, adjacent BLM offices, and other agencies to include both sections recommended by the Committee into the Emigrant Trails Scenic Byway (i.e., State Highways 139/299, from Canby to Susanville, and U.S. Highway 395, from Alturas to Susanville to the Nevada border). Work with the same cooperators to add State Highway 299, from Adin to Redding, to the scenic byways system (see Map SB-1 for proposed locations).

Designate the Clark's Valley Road Driving Route for 21 miles. Encourage the development of additional routes in suitable locations, if justified by public demand.

2.14 Special Designations - Wild and Scenic Rivers

Lower and Upper Pit River Canyon and 18 other streams were initially examined for WSR eligibility. After detailed evaluation, portions of three waterways were found suitable for consideration by Congress, namely: lower Pit River Canyon, upper Pit River Canyon, and lower Horse Creek. (See Map WSR-1 for the location of these river and stream segments.)

The proposed **Lower Pit River Canyon WSR** is 2.5 miles in length and covers 400 acres. This portion of the canyon is impressive geologically and contains outstanding recreational assets. It also contains abundant fish and wildlife and areas of historical significance. This stretch of river is popular with kayakers and rafters as well as fishermen and hikers. Access is obtained over a deteriorated and badly-overgrown historic road from the east, the condition of which precludes motor vehicle access. (The road is not maintained.) From the west a better and more useable trail accesses the area. The area encompasses a near-pristine setting that is no great distance from Redding, CA and other northern California population centers. BLM, PG&E, Clearwater Lodge, and local residents have initiated plans for a recreational trail system (based on existing, but deteriorated routes) in an effort to provide healthful recreation and promote tourism.

The proposed **Upper Pit River Canyon WSR** is 13 miles in length and covers 1,500 acres of riparian and upland habitats. This portion of the canyon is also part of a WSA because of its pristine, natural state. In this region, the Pit River bisects a large volcanic plateau to form a deep and spectacular canyon containing many unique geological features and exceptional scenery. It also contains abundant fish and wildlife, largely untapped recreational potential, and areas of historical significance. The flats above the canyon are critical wintering habitat for deer and pronghorn. Canyon cliffs provide important nesting habitat for birds of prey. Two branches of the Lassen Emigrant National Historic Trail traverse the study area. There is also a warm-water fishery, but difficult access and rugged topography result in low-level participation for all recreational activities. Unfortunately, late-summer water volume is quite low due to agricultural water diversions in three upstream valleys. A fourth diversion provides water for a small hydro-power project downstream from the (proposed) WSR boundary. (The diversion, dam, reservoir, and powerhouse are outside the study area, on private property.) However, water is only diverted during high-water periods (winter and spring). A minimum flow requirement ensures that water will remain when river volume is low (summer).

The proposed **Lower Horse Creek Canyon WSR** is this creek's terminal portion and also part of the Pit River Canyon WSA. Three miles in length, it covers 400 acres of riparian and upland habitats before joining the (proposed) Upper Pit River WSR. The creek flows through a smaller, though equally unspoiled canyon, of exceptional scenic beauty and geological interest. It also contains abundant fish and wildlife, largely untapped recreational potential, and some areas of historical significance. Cold and warm-water fisheries exist, but difficult access and rugged topography result in low-level participation for all recreational activities.

2.14.1 Desired Future Condition

Assuming Congressional designation, these waterways, associated uplands, and sensitive resources would be preserved in a natural state. Public awareness and appreciation for these WSRs would be encouraged through (mostly off-site) interpretive signing and roadside scenic vistas (where feasible and appropriate).

Through these efforts, and the recognition WSR designation would bring, these areas would become more widely known, appreciated, and used for low-impact activities such as fishing, hunting, hiking and backpacking, rafting and kayaking, nature study, sightseeing, and photography.

Motor vehicles would be allowed within reasonable distance of canyon rims, on designated routes established and maintained for public access. However, non-motorized travel (e.g., walking, horseback, or mountain-bike) would be maintained where feasible within these WSR areas.

2.14.2 Goal

The free-flowing character, remarkable features, and outstanding natural beauty of these proposed WSR segments would be preserved until such time as Congress makes a determination regarding WSR designation. If designated, these same features and qualities would be permanently preserved for present and future generations.

2.14.3 Objectives

Manage three rugged canyonland waterways (a total of 18.5 miles), and associated uplands, so as not to impair their suitability for WSR designation. If designated, ensure that future planning, projects, and management actions maintain the free-flowing character and outstandingly remarkable values of these WSRs. Provide reasonable public access and encourage low-impact recreation. Ensure that hazard information is available to the public and encourage safe and responsible behavior for inherently dangerous activities—particularly whitewater kayaking and rafting.

2.14.4 Legislative, Regulatory, and Policy Direction

- The Federal Land Policy and Management Act (1976)
- The Wild and Scenic Rivers Act (PL 90-542) (1968)
- The Wilderness Act (PL 88-577) (1964)
- DOI, Management Policy and Guidelines for Lands Under Wilderness Review (Dec., 1979)
- Interim Management Policy and Guidelines for Lands Under Wilderness Review (1995)
- Comprehensive Land Use and Management Plan for State and Federal Lands in Modoc County, CA (May, 1995)
- DOI National Park Service, Comprehensive Management and Use Plan: California National Historic Trail and Pony Express National Historic Trail (1998)
- Emigrant Trails Scenic Byway Plan, RC&D, Alturas, CA (2003)

2.14.5 Proposed Management Actions

River and stream segments that are eligible and recommended suitable for protection under the Wild and Scenic Rivers Act will be managed to preserve their “outstandingly remarkable values”. River segments not recommended suitable would be released from further protection under the Act. The Wild and Scenic River Suitability Criteria for each eligible stream are listed in Appendix J. The following river segments have been found administratively suitable for WSR designation:

- The Upper Pit River Canyon (13 miles) and Lower Horse Creek Canyon (3 miles) WSRs are recommended as suitable under a ‘wild’ classification.
- A ‘scenic’ classification will apply to the Lower Pit River Canyon WSR (2.5 miles).

These classifications will better preserve the pristine, natural conditions that make these river segments so appealing. The free-flowing character and outstandingly remarkable values of rivers judged suitable for WSR designation would be fully protected under the interim protection afforded by WSR legislation until such time as Congress makes a determination.

Areas that receive WSR designation will be 'Closed' to leasable minerals and fluids, renewable energy, mining and mineral exploration (i.e., saleable and locatable mineral activity). Whenever possible, BLM would acquire privately owned land (from willing sellers), within study area canyons, on or near their rims, or in areas that—when seen from the river or nearby roads and trails—would expand, enhance, or provide additional protection or needed public access to these WSR study areas.

Management would emphasize visitor education and interpretation. The connection between historic trail remnants and early American exploration, military expeditions, settlement and conflict would be emphasized for the Lower Pit River Canyon WSR, along with Native American sites and culture, geology, and native fish and wildlife. Visitor education and interpretation for the Lower Horse Creek Canyon and Upper Pit River Canyon WSRs would focus on native wildlife, geology, emigrant trails and Native American culture.

The Upper Pit River Canyon and Lower Horse Creek Canyon WSR study areas are within the Pit River Canyon WSA; therefore, they are subject to the wilderness IMP. For this reason, the following requirements also apply to them:

- WSAs (and these WSR areas) are 'Closed' to mineral extraction.
- WSAs (and these WSR areas) are managed under Class I VRM stipulations to preserve an essentially unaltered landscape.
- OHVs are 'Limited to Existing Roads and Trails' in WSAs (and these WSR areas).

ROS 'Primitive' stipulations would apply to all three WSR areas.

OHVs are 'Limited to Existing Roads and Trails' in the Lower Pit River Canyon WSR study area

Except where constrained by other resource prescriptions (e.g., those governing WSAs and ACECs), visual resources would be managed according to prescriptions formulated during the visual inventory process (and subsequently identified on Map VRM-1). Barring wilderness designation for the Pit River Canyon WSA, all three WSRs (if designated) would be managed under VRM Class II objectives to preserve the existing landscape with minor alterations.

Appropriate locations and suitable means (literature, displays, or signage) would be used to interpret historic and prehistoric sites (including portions of the National Historic Lassen Emigrant Trail that pass through upper Pit River Canyon).

2.15 Special Designations - Wilderness Study Areas

AFO planning area landscapes and vegetation are remarkably diverse, ranging from dense highland forests of fir and pine to sagebrush-steppe, ancient lava fields and deep river gorges. Regional geology is predominantly volcanic, with lava plateaus, cinder cones, and other volcanic remnants much in evidence. Fall is an especially attractive time of year; then the brilliant reds, oranges, and yellows of oak, redbud, and aspen illuminate hillsides and streambanks, contrasting with darkly colored lava fields and precipitous, shaded canyons. Some of the most impressive country is found in the WSAs, along with important riparian vegetation, critical wildlife habitats, mountain mahogany and old-growth juniper woodlands, and highland forests of white fir and pine. Several WSAs are also associated with significant historical features, notably the National Historic Lassen Emigrant Trail, Lockhart Wagon Road, Baker Toll Road, and remnants of the Nevada, California, and Oregon Railway.

WSA designation is a Congressional decision, and is not discretionary to the local field office. WSAs do not create restrictions and/or buffers to adjacent private lands, or the right (directly or indirectly) to manage or otherwise influence uses of private property adjacent to the WSA.

2.15.1 Desired Future Condition

WSAs, and the unique features and ecosystems they contain, would be protected until such time that Congress acts to designate WSAs as wilderness, or release them from further consideration. The remote character, physical and scenic integrity, and unique plant, animal, and cultural resources would be protected under the Wilderness IMP.

2.15.2 Goal

Protect all potential wilderness areas (i.e., WSAs, ISAs), under BLM's IMP. Qualified additions (acquired since the wilderness inventory) within or adjacent to a WSA would be added to the associated WSA.

2.15.3 Objectives

Manage four WSAs, totaling 56,648 acres, so as not to impair their suitability for wilderness designation.

2.15.4 Legislative, Regulatory, and Policy Direction

- The Wilderness Act (Public Law 88-577), (1964)
- The Federal Land Policy and Management Act (1976) Sections 603, 201, and 202
- Federal Cave Resources Protection (16 U.S.C. 4301-4310), (Nov., 1988), as amended (1990)
- Interim Management Policy and Guidance for Lands under Wilderness Review (1979)
- California Statewide Wilderness Study Report (1990)
- Baker Cypress/Lava Rock Natural Area and Instant Wilderness Study Area (Feb., 1979)
- Wilderness Final Intensive Inventory (Dec., 1979)
- Wilderness Recommendations, Alturas Resource Area (1986)
- Wilderness Recommendations, North-Central California Study Areas (1986)

- BLM Regulation H-8550-1, (July 1995)
- Comprehensive Management and Use Plan, and Final Environmental Impact Statement, California National Historic Trail and Pony Express National Historic Trail; USDI-National Park Service (1998)
- BLM Manual 1621 (Supplemental Guidance for Environmental Resources), (1986)

2.15.5 Proposed Management Actions

Four WSAs (56,648 acres) will be managed under the BLM's Wilderness IMP until Congress makes a determination regarding wilderness designation (see Map WSA-1).

Under the Wilderness IMP, WSA objectives take precedence over other management objectives. However, a WSA (or any portion thereof) that is also part of another special management area would be subject to a *more* restrictive management prescription (where applicable). This situation applies, in whole or in part, to three WSAs. See Table 2.15-1 (below).

Table 2.15-1 Relationship between Wilderness Study Areas, Areas of Critical Environmental Concern, and Instant Study Areas

Wilderness Study Area	WSA Size (acres)	ACEC Title	ACEC Size (acres)	Instant Study Area	ISA Size (acres)
Timbered Crater WSA	17,896	**Timbered Crater ACEC**	within WSA 17,896	**Baker Cypress Natural Area**	within WSA 1,448
Pit River Canyon WSA	10,984	**Emigrant Trails ACEC**	within WSA 1,000 outside WSA 750	N/A	N/A
Tule Mountain WSA	16,998	**Mountain Peaks ACEC**	within WSA 985 outside WSA 2,515	N/A	N/A
Lava WSA	10,770	N/A	N/A	N/A	N/A

N/A = Not applicable.

Management of historic trails is slightly more complex, since they are also governed by MOUs with the National Park Service and the Forest Service. However, as with other special area designations, the more restrictive management applies. Therefore, any portion of a historic trail traversing a WSA will be managed under VRM Class I criteria.

WSAs that are denied wilderness status by Congress would be managed according to the RMP prescription governing adjacent lands at the time of release.

WSAs (and wilderness areas) are managed under VRM Class I criteria. If denied wilderness status by Congress, lands would be returned to their originally inventoried VRM class – unless reclassified due to inclusion as an ACEC (VRM Class II), RNA (VRM Class II), or WSR (VRM Class II).

All acquisitions within or adjacent to WSAs have been assessed for wilderness characteristics. To date, none have fulfilled the criteria. However, any new acquisition that does meet the criteria would be combined with the adjacent WSA and protected under the Wilderness IMP.

Any newly acquired lands within a WSA would be managed according to the management prescriptions for that WSA as described within this PRMP.

In reference to WSAs evaluated under Section 202 of FLPMA: "New and existing mining operations conducted under the 1872 mining law are required (under 43 CFR 3802) to avoid unnecessary or undue degradation of lands—not to necessarily prevent impairment of wilderness suitability." However, all other activities are managed under the Wilderness IMP.

According to the Wilderness IMP: "…mechanical transport, including all motorized devices as well as trail and mountain bikes, may only be allowed on existing ways and within 'Open' areas that were designated prior to the passage of FLPMA" (Oct., 1976). This means that—within WSAs—"existing ways" are roads and trails that were evident at the time FLPMA was passed *and* subsequently identified in the "California Wilderness Final EIS." (For the rest of the planning area, "existing ways" are those that were documented at the time the route inventory was completed.)

After publication of the record of decision, WSA roads and trails would be re-examined. Maps from the "California Wilderness Final EIS" (BLM, 1990) will be compared with digital ortho-photography (1994), aerial photos (2001), and current GPS data. Roads and trails that do not appear on the wilderness inventory maps from 1990 would be 'Closed' to comply with the Wilderness IMP.

Preservation of wilderness characteristics supplants all other objectives for WSAs. Facility and use proposals must not conflict with, or degrade, wilderness values. Therefore, all proposals must be reviewed to assess compliance with the non-impairment criteria. These criteria require that:

- The use, activity, or facility must be temporary. This means it must not create surface disturbance or become a permanent fixture. A new facility may be allowed if it could easily and immediately be terminated upon wilderness designation and also comply with the non-impairment criteria.
- When the use, activity, or facility is terminated, wilderness values must not have been degraded to the point where significant constraint is placed on wilderness suitability.
- The only exceptions to the non-impairment criteria are:
  - ✓ Emergencies associated with wildfire or search-and-rescue operations
  - ✓ Reclamation activities designed to minimize impacts created by violations and emergencies
  - ✓ Uses and facilities that are "grandfathered" as valid pre-existing rights under the wilderness IMP
  - ✓ Uses and facilities that clearly protect or enhance wilderness values and those that are necessary for public health and safety reasons
  - ✓ Reclamation of pre-FLPMA impacts

Any action approved within a WSA must employ the "minimum tool" concept. This means that the task must be completed with methods and equipment that would have the least possible impact on wilderness characteristics (the physical, biological, and cultural resources of the WSA) and the wilderness experience itself. Although pre-FLPMA facilities may remain, associated activities are limited to pre-FLPMA levels. Such facilities may also be maintained, but cannot be modified to the degree that their physical or visual impact would exceed pre-FLPMA levels. Pre-FLPMA structures such as waterholes, spring developments, guzzlers, and fences are also grandfathered and may be maintained using motorized equipment—where such equipment is the minimum tool necessary for maintenance activities.

Any new development must be temporary, easily removed, otherwise fulfill the non-impairment criteria and enhance wilderness values. New permanent development must also satisfy the non-impairment criteria, truly enhance wilderness values, and must not require motorized access if the area receives wilderness designation.

2.16 Travel Management

Travel management is concerned with selecting and designating suitable areas and routes for motorized travel, while reserving other areas for non-motorized uses. It also encompasses motorized and non-motorized water and snow travel. Reliable baseline data, combined with a logical and coherent system of route designation, will allow most roads and trails to remain open for public use. However, in some areas, seasonal road closures are necessary to protect vulnerable wildlife or archaeological sites, or to prevent excessive road degradation, soil erosion and sedimentation. Cross-country travel would be prohibited—except in specially designated areas—to protect natural and cultural resources and to provide a quiet and unspoiled environment for non-motorized recreation. The decision to create a designated system of roads and trails will provide suitable areas for recreational driving, protect natural resources, minimize user conflicts, and create a safer recreational environment.

Roads and trails throughout the management area (2,430 miles) were inventoried in 2004 using GPS technology. On-site characteristics were also noted. Information was stored and collated using the BLM's GIS. This technology has enabled BLM to produce the most accurate route map ever created for the AFO management area (map TRAVEL-1). When the record of decision is signed, routes identified on this map will be designated for appropriate uses according to criteria identified in the approved RMP document. Designations are designed to minimize road damage, weed dispersal, soil erosion and sedimentation from OHVs, protect sensitive natural and cultural resources, and preserve large roadless areas for 'Primitive' or SPNM recreation (according to the applicable ROS class).

2.16.1 Off-Highway Vehicle Designations

An ***off-highway (or off-road) vehicle*** (OHV) is any land-based motorized conveyance designed for, or capable of, travel on or immediately above land and, in some instances, water. Common vehicles of this type are 2WD or 4WD automobiles and trucks, all-terrain vehicles (ATVs), motorcycles, and amphibious vehicles. For practical and legal reasons the following uses are exempted from this definition: (1) non-amphibious registered motorboats; (2) BLM and other-agency vehicles while engaged in administrative activities; (3) emergency, fire, law enforcement, and military vehicles while engaged in official business; (4) combat or combat-support vehicles when in use for emergencies or national defense. Exceptions one through four above are applicable without special authorization (or further comment under the management alternatives). Under certain circumstances, individual exceptions may also be authorized.

'Open' areas are available for motor vehicle use anytime and anywhere within the designated area. These areas have been specially selected as suitable for intensive OHV use, because there are no compelling resource protection needs, user conflicts, or public safety issues that would justify limitations on cross-country travel.

'Limited' areas include seasonal or cross-country travel restrictions that limit OHVs to existing or designated ways, or disallow certain vehicle types. Such requirements are imposed where necessary to limit adverse impacts. Seasonal restrictions are imposed to preserve road surfaces and minimize soil erosion, or to protect vulnerable wildlife.

OHVs are 'Limited to Existing or Designated Routes' where necessary to confine impacts to established routes. However, reasonable route-deviation (i.e., vehicle pull-off space) is allowed for parking and camping (unless otherwise posted).

'Closed' areas may not be entered by any motorized vehicle. This restriction is imposed where necessary to provide year-round protection for natural or cultural resources, or to reserve certain areas for non-motorized recreation.

2.16.1.1 Desired Future Condition

A network of designated travel routes would provide motorized access to BLM-administered lands for recreation, permitted activities, and area administration. The route designation system would be used to limit motorized travel in areas deemed appropriate for such use. Areas 'Closed' would be so designated to provide for non-motorized activities under the recreation opportunity spectrum. Area designations would accommodate the requirements of motorized and non-motorized recreational pursuits. Designations would range from 'Open' areas where motorized cross-country travel is unrestricted (and resource concerns minimal) to areas where OHVs are 'Limited to Designated or Existing Routes' or 'Closed' altogether (to protect resources or ensure that an undisturbed, natural landscape is maintained). Such measures would ensure high-quality, non-motorized recreation (e.g., hunting, hiking, fishing, horseback riding, and wildlife viewing) by preventing user conflicts and protecting resources. The designated route network would not be static; with sufficient justification, it could be altered.

2.16.1.2 Goal

Manage motor vehicle use so that natural and cultural resources are protected, user conflicts minimized, and public safety maintained. Provide adequate motorized public access, and ensure that the area and route designations provide sufficient protection for non-motorized areas and non-motorized recreation, while accommodating motorized activities in suitable locations on appropriate routes.

2.16.1.3 Objectives

- Designate 'Open', 'Limited' and 'Closed' areas as required by Executive Order 11644 and amended by Executive Order 11989.
- Identify and map undocumented routes in areas that were not included in the 2004 route inventory, including areas not normally accessed by motor vehicles.
- Modify the travel route system on 902 miles of routes, where needed to improve access or protect resources.

The AFO will work with Lassen and Modoc Counties, the Eagle Lake Field Office, and the Union Pacific Railroad to acquire the abandoned Modoc Line ROW (40 miles on the AFO) for trail conversion.

2.16.1.4 Legislative, Regulatory, and Policy Direction

- Executive Order 11644 (Use of Off-Road Vehicles on Public Lands) (Feb. 1972), as amended by Executive Orders 11989 and 12608
- 43 CFR 8340 (Off-Road Vehicles) (1979)
- DOI BLM, H-8550-1 (Interim Management Policy for Lands under Wilderness Review), Rel. 8-17 (July, 1995)
- DOI BLM, Priorities for Recreation and Visitor Services (May 2003)
- DOI BLM, H-1601-1 (Land Use Planning) (Mar. 2005)

2.16.1.5 Proposed Management Actions

All OHV travel in the AFO management area would be 'Limited to Existing Roads and Trails' year-round, except where other designations are specifically assigned (e.g., 'Open', 'Closed,' 'Seasonally Closed',' or 'Limited to Designated Routes').

A total of 80 acres would be 'Open' to OHV use, 498,340 acres would be 'Limited to Designated or Existing Routes', and 4,625 acres would be 'Closed' to motor vehicles. Existing routes would be available for motorized travel, as described below, and shown on Map TRAVEL-2.

Where existing roads are having an adverse ecological impact, they may be 'Closed' (on a temporary or permanent basis) through plan maintenance in accordance with Northeast California RAC Guidelines for OHVs (Appendix C).

'Open'

The AFO would identify one area, and certain routes, as 'Open' specifically for recreational driving:

- Cinder Cone OHV Management Area (near Cassel), 80 acres.

In addition, the AFO would manage two other areas specifically for recreational driving on a system of designated routes:

- Fall River Trail (near Fall River Mills), managed as 'Limited to Designated Routes', and
- Barnes Grade/Crowder Flat OHV Management Area (near Alturas), managed as 'Limited to Existing Roads and Trails'.

Driving options would include areas and routes suitable for 2WD and 4WD vehicles, ATVs, and motorcycles.

'Limited to Designated Routes'

Motor vehicles would be 'Limited to Designated Routes' on the Likely Tablelands (56,800 acres) to prevent damage to pronghorn and deer habitat, and protect special status plants and cultural resources. This area includes the Likely Tablelands/Yankee Jim/Fitzhugh Creek ACEC of 1,400 acres. (A seasonal closure would also apply—see 'Seasonally Closed' below.)

Motorized travel on Williams Ranch would be 'Limited to Designated Routes' from the Ash Valley Road to the Step Ponds (600 acres) to protect riparian vegetation, sensitive fish and wildlife habitats, and cultural resources. (A seasonal closure would also apply—see 'Seasonally Closed' below.)

Motor vehicles would be 'Limited to Designated Routes' (on a total of 48,910 acres) in the Cold Springs area to protect sensitive sage-grouse habitat (especially brood-rearing areas) and old growth juniper. The Old Growth Juniper ACEC would be 'Limited to Designated Routes' (on a total of 1,090 acres) in the Ticker Spring area, and 'Closed' in Sheep Valley (2,025 acres).

Motor vehicles would be 'Limited to Designated Routes' in the Ash Valley ACEC (1,322 acres).

Motor vehicles would be 'Limited to Designated Routes' in the Westside Grazing Allotment (3,500 acres) to protect degraded or at-risk soils and special status plants.

Motor vehicles will be 'Limited to Designated Routes' in the Hogback Ridge area (1,800 acres) to prevent damage to sensitive soils and minimize the spread of noxious weeds.

Motor vehicles would be 'Limited to Designated Routes' in the Beaver Creek area (972 acres) to protect special status plants, sensitive wildlife and cultural resources.

Motor vehicles would be 'Limited to Designated Routes' in the Juniper Creek area (1,182 acres) to protect sensitive wildlife habitat (especially pronghorn winter range) and cultural resources.

Motor vehicles would be 'Limited to Existing Routes' from April 16 through November 14 on the Day Bench (3,000 acres). However, to reduce disturbance of deer on critical wintering habitat, OHVs would be 'Limited to Designated Routes' between November 15 and April 15 (the Day Cinder Pit Road would remain 'Open' yearlong).

Motor vehicles would be 'Limited to Designated Routes' in the Mount Dome/Tablelands area (1,500 acres) to protect degraded or at-risk soils and historic trail remnants.

Motor vehicles would be 'Limited to Designated Routes' in the Mahogany Mountain area (6,000 acres).

An OHV trail system would be created for the Fall River watershed. The area under consideration is roughly 15,000 acres in size, and vehicles would be 'Limited to Designated Routes'. (Trail design and final size would be determined after this RMP is approved.)

OHV travel in the Coyote Ridge area (2,500 acres) would be 'Limited to Designated Routes', to protect impaired and at-risk soils.

The OHV classification at Timbered Crater WSA/ACEC (17,896 acres) is 'Limited to Designated Routes', as its lands are classified 'Primitive' or 'Semi-primitive' under the ROS, and this is one of the best means of preserving wilderness characteristics, and still allowing use.

'Limited to Existing Roads and Trails'

OHV restrictions on the Nelson Corral Reservoir Road would be 'Limited to Existing Roads and Trails' on a year-round basis.

OHV restrictions on Bryant Mountain and Bloody Point would be 'Limited to Existing Roads and Trails' on a year-round basis.

Motor vehicle travel in the Pit River Canyon (10,984 acres), Tule Mountain (16,998 acres) and Lava (10,770 acres) WSAs would be 'Limited to Existing Roads and Trails' from Congressional action and BLM policy.

'Seasonally Closed'

The Likely Tablelands (56,800 acres) would be 'Seasonally Closed' to motor vehicles from December 1 through April 15 to minimize disturbance of pronghorn and deer on critical wintering habitat, and to protect special status plants, sensitive wildlife habitat and cultural resources. This area includes the Likely Tablelands/Yankee Jim/Fitzhugh Creek ACEC of 1,400 acres.

The Williams Ranch (600 acres) would be 'Seasonally Closed' to motor vehicles from November 15 through June 15 to protect riparian vegetation, sensitive fish and wildlife habitats, and cultural resources.

The Barnes Grade/Crowder Flat OHV Management Area (260 acres) would be 'Seasonally Closed' to motor vehicles from November 15 through April 15 (to coincide with the closing and opening dates of the Barnes Grade woodcutting area) to minimize disturbance of deer on critical wintering habitat. However, motorized travel would be allowed on the Crowder Flat Road during this period.

The Hayden Hill sage-grouse territory (200 acres) would be 'Seasonally Closed' to motor vehicles from March 1 through May 15 to protect sage-grouse breeding habitat. The area would be 'Limited to Existing Routes' during the remainder of the year.

'Closed'

The Timbered Crater WSA/ACEC slender orcutt grass exclosure is 'Closed' to motor vehicles to protect a special status plant (50 acres).

The area around the spring on the northwest corner of Nelson Corral Reservoir (120 acres), south to the road on the south end of the dam, would be 'Closed' to motor vehicles to protect the spring, trout-spawning habitat and riparian vegetation.

A 1,800-acre section of Fitzhugh Creek (1/4 mile buffer zone corridors on the north and south rims of the creek) would be 'Closed' to motor vehicles to protect sensitive wildlife and preserve critical habitats. Fitzhugh Creek (660 acres) would be 'Closed' to OHVs to protect the creek canyon and preserve vulnerable riparian plants and wildlife.

The Old Growth Juniper ACEC and Sheep Valley area (a total of 2,025 acres) would be 'Closed' to motor vehicles to protect rare fen-bog spring systems and riparian habitats, old growth juniper, and degraded or at-risk soils.

A 20-acre area surrounding the vernal pools in the Lava WSA would be 'Closed' to motorized travel to protect the Boggs Lake hedge-hyssop (a special status plant).

Other Management Actions

OHV events would be restricted to approved locations and designated routes.

Exceptions to off-road travel restrictions and seasonal road closures include, but are not limited to, the following permitted or authorized activities:

- **Woodcutting Areas:** These areas are generally adjacent to or near communities to provide fuel wood for home heating needs. All areas have Class III archaeological surveys; recorded sites are excluded from woodcutting or mitigated at the proper level with SHPO concurrence. Threatened and endangered plant and animal document searches and field surveys are conducted at the appropriate level. Boundary and fuel wood cutting signs are posted at entrance and exit points of the cutting units. Most woodcutting areas have been used historically for fuel wood and ranching needs for the last 60-70 years.
- **Noxious Weed Eradication:** Areas with noxious weed infestations are accessed by 4WD trucks and ATVs. With low-scale impacts associated with ATVs, BLM or contract weed crews will be able to reduce impacts to the landscape that are traditionally associated with large 4WD vehicles.
- **Permitted Flat Rock Collection:** All areas have Class III archaeological surveys. Recorded sites are excluded from collection areas or mitigated at the proper level with SHPO concurrence. Threatened and endangered plant and animal document searches, and field surveys are conducted at the appropriate level. Flagging is required on the boundary of the collection areas, and specific access

road(s) are identified. Compacted and disturbed soils are mechanically prepared and seeded with native vegetation, and closed with large rock placement to avoid proliferation of new roads. Most collection areas have been used historically for flat rock collection for the last 30 years.

- **Ranching Activities:** Traditional ranching activities usually involve horse access, but where off-highway travel is required, it is generally associated with fencelines, salting locations or water developments on existing two track roads. In the past 4WD trucks were the standard vehicle for accessing range needs, but with the popularity of ATVs, these low-impact vehicles are being used more throughout the ranching community.
- **Scientific Studies:** In the past, most scientific studies have been associated with existing roads and trails. Where off- highway travel was required it has generally been near or adjacent to existing roads.
- **BLM Administrative Activities:** Generally most BLM activities that require off-highway travel are a combination of 4WD truck, ATV, and foot. More use is being made of low impact ATVs for access needs rather than the large 4WD trucks with more associated impacts.
- **Private Property Access:** Generally private land owners access their property on existing roads, or obtain easements across unrouted short segments of public lands. Legal and non-easement access needs are discussed between BLM staff and private land owners for the least impacting route across public lands. Cultural and threatened and endangered surveys are conducted prior to establishment of access.
- **Big Game Retrieval:** Retrieval of big game is the only exemption of use for OHVs for hunting activities. It is expressly forbidden to use 4WD vehicles, ATVs, motorcycles etc., for hunting off-road. The sole purpose of this exemption is for big game retrieval only; no other hunting use is allowed. BLM law enforcement is expected to be heavily involved for compliance of this exemption to OHV travel.

Any portion of an ACEC (or other special management area) within a WSA is subject to the Wilderness IMP until Congress makes a determination regarding wilderness designation. This means that OHVs are 'Limited to Existing or Designated Routes' until a determination is made, or until actual and unforeseen use violates the (wilderness) non-impairment criteria—at which point a more restrictive designation would be imposed. Following wilderness designation, all routes would be closed and rehabilitated. If wilderness status is denied, the underlying travel designation would apply (generally that for adjacent areas).

OHV travel designation will be based on ROS classification (i.e., 'Primitive', SPNM, SPM, and RN).

Visual resource management considerations would also influence route designation decisions.
A trail would provide non-motorized access to Delta Lake from Bayley Reservoir during the annual spring closure of the Delta Lake Road (imposed yearly to minimize road damage, soil erosion, and sedimentation of the Pit River [an already-impaired watercourse]).

Land acquired after this RMP is approved would ordinarily receive the same travel designation as adjacent lands. However, if sensitive resources are involved, the acquired parcel may receive a more restrictive travel designation.

Route designations will be altered as GPS inventories are completed and GIS mapping is refined (Map TRAVEL-1).

Maps would be prepared for all areas with assigned OHV designations. 'Closed' roads would be posted according to management protocol.

Routes would be maintained, modified, created, or obliterated in order to meet land health standards, water quality standards, wildlife habitat needs, and changing public needs and desires.

2.16.2 Non-Motorized Travel

Non-motorized means walking, or land travel aided by (e.g., mountain bikes) or animals (e.g., horses, mules, or llamas). The management area includes a portion of the Pacific Crest Trail, which is restricted to non-mechanical travel (i.e., no mountain bikes or motor vehicles). However, three planning area OHV routes have been identified for mountain bikes (many more are also suitable in the AFO). Two areas receive substantial amounts of snow and are suitable for cross-country skiing or snowshoeing. Altogether, the management area has more than 900 miles of roads and trails, the majority of which are suitable for some form of non-motorized recreation. The Wilderness IMP limits mechanically aided travel (motor vehicles *and* mountain bikes) to existing routes in WSAs.

Otherwise, all forms of non-motorized travel are allowed throughout the management area, regardless of the presence or absence of roads or trails. Development of trails specifically for non-motorized use would focus on SRMAs, scenic back-country areas, and abandoned railway grades.

In most instances this would not involve new trail construction, but, rather, reserving some existing roads and trails for non-motorized travel.

Table 2.16-1 Existing and Proposed Routes for Motorized and Non-Motorized Travel

Route	Length or Size	Use Designation
Pacific Crest National Hiking Trail	2 miles	Non-mechanized (e.g., no mountain bikes)
Woodland Jurassic Mountain Bike Route	8.6 miles	Unrestricted—but identified for mountain bikes
Devil's Garden Mountain Bike Route	5.3 miles	Unrestricted—but identified for mountain bikes
Likely Mountain Challenge Bike Route	9.4 miles	Unrestricted—but identified for mountain bikes
Roads and trails on AFO-administered lands	902 miles	Unrestricted
BLM lands outside of WSAs	446,397 acres	Not specifically designated, but non-motorized travel allowed anywhere
BLM lands within WSAs	56,648 acres	Motorized travel 'Limited to Existing Roads and Trails'; non-motorized travel off existing roads and trails

2.16.2.1 Desired Future Condition

BLM resource specialists, trail enthusiasts, and other interested parties would collaborate to plan, design, and build, a network of trails for non-motorized use. This would be an ongoing process conducted throughout the life of this RMP. Trails would be suitable for walking/running, horseback riding, and mountain-biking. For the most part, they would incorporate return-trail design ("loop trails") to avoid back-tracking, thus making routes safer and more interesting. Thoughtful placement and sound construction would minimize erosion and maintenance. BLM-administered trails would connect with national forest and county trails wherever possible. Trail routing decisions would prioritize scenic vistas, diverse landscapes, and cultural features (e.g., trail traces, historic remnants, petroglyph sites, etc. in suitable locations where these occur).

2.16.2.2 Goal

Support community-based efforts to promote rural tourism and benefit local economies by creating a high-quality, non-motorized trail network. Trails would be designed, modified, or built according to applicable ROS and VRM classes. Trails would also vary in length and difficulty and cover a variety of diverse and scenic landscapes.

2.16.2.3 Objectives

Existing environmental assessments and trail plans would be used to complete trail projects already underway. Trail policies and procedures enumerated in this RMP will be used for future site selection and trail design. Route maps and literature of various kinds would be developed to stimulate interest and encourage use and enjoyment of the trail network.

2.16.2.4 Legislative, Regulatory, and Policy Direction

- DOI BLM, Priorities for Recreation and Visitor Services (May 2003)
- DOI BLM, H-1601-1 (Land Use Planning) (Mar. 2005)

2.16.2.5 Proposed Management Actions

More than 66 miles of new trails would be built (this could include conversion on portions of the 40-mile stretch of the abandoned Modoc Line railbed). The following projects could occur, subject to site-specific NEPA analysis:

- A collection of non-motorized trails would be built in the Pit River SRMA and in the Infernal Caverns/Rocky Prairie SRMA.
- Non-motorized cross-country travel would be emphasized in WSAs. New trails would be constructed within WSAs if and when necessary to protect resources and better serve visitors. Existing trails can and would be maintained, rebuilt or rerouted where necessary to protect resources or maintain trail serviceability and access.
- Basic, unimproved hiking trails (handicapped-accessible, where feasible) would be built to access areas identified in the Vista Peaks Management Plan.
- A walk-in trail (750 feet) would be built at Hershey/Poison Spring to access quality, cold-water fishing on Fitzhugh Creek.
- A two-mile circular trail would be built from Holbrook Reservoir to JOB Spring. The route would showcase scenic vistas, ecosystem processes and landscape rehabilitation.
- A four-mile hiking, birding, and horseback trail would be developed from Dry Creek Station to Nelson Corral Reservoir. The route would follow the existing livestock trail (with minor alterations) then join the Nelson Corral Road and the Likely Mountain Challenge Bike Route.
- A walk-in trail to Iverson Reservoir (750 feet) would be constructed along the south bank of Juniper Creek.
- Two handicapped-accessible trails would be built for fishing access and wildlife-viewing; one at Knox Gulch Reservoir, the other at Antelope Reservoir (1 mile in length at both locations).
- Development would also include unimproved trails to the summits of the following peaks (which offer superb scenic vistas):
    - McDonald Peak (3 miles)

  - Mahogany Peak (1 mile)
  - Sheep Mountain (1mile)

- Existing trails would be repaired, realigned, or extended—or new trails built—where necessary to reduce adverse impacts or user conflicts, or to conjoin and expand the trail network. For the most part, return-trail design ("loop trails") would be used to avoid back-tracking; thus making routes safer and more interesting. BLM-administered trails would connect with national forest and county trails wherever possible.
- Route maps and literature of various kinds would be developed to stimulate interest, and encourage use and enjoyment of the trail network.
- BLM would work with local communities and local and regional businesses (e.g., Clearwater Lodge and PG&E) to establish a series of walking, mountain-biking, and equestrian trails. Individual trails would be designed and built for primary uses such as fishing access, scenic vistas, access to historical or archaeological sites, and hiking for health.
- When necessary, legal access would be acquired from willing sellers or cooperators. Land or easement acquisition will be necessary where a BLM trail must cross private land in order to join another trail on BLM, national forest, or county lands.
- Trails would be of sufficient quality, and properly maintained, so that they attract visitors and produce economic benefits for local communities (while ensuring that natural and cultural resources are adequately protected). Trails would generally be available for any form of non-motorized travel, except where additional restrictions are specified.
- Way-finding signs and symbols would be placed and maintained, but only to the minimum necessary for clarity and safety.
- An interpretive trail (one-quarter mile) and site development package would be created for the Descent into Goose Lake.
- Cooperate with Lassen National Forest (under an existing MOU) for maintenance of the Pacific Crest Trail. Other actions would include directional signing or symbols for three mountain bike routes (the minimum necessary for clarity and safety).
- Develop a seven-mile (non-motorized) interpretive trail to the Infernal Caverns Overlook (which provides a panorama of the historic battleground). On-site interpretation would include details of the battle and additional information on area wildlife, geology, and scenery.
- Develop a one-mile birding and hiking trail at the Pit River campground that highlights riparian and upland habitats.
- Provide walk-in (or horseback) access to Delta Lake from Bayley Reservoir during the seasonal road closure.
- Reserve a two-mile section of the Williams Ranch Trail for non-motorized use. (This portion has exceptional, birding and wildlife-viewing.) .

2.16.3 Motorized and Non-Motorized Boating

Planning area waters (lakes, reservoirs, and rivers listed in the summary table) would be available for appropriate public uses. On some waters, motorized propulsion or certain types of watercraft would be prohibited. On others, certain engine types would be proscribed or power limitations imposed. Restrictions are necessary to ensure that boating activities are appropriate for the particular body of water. Such limitations protect wildlife and wildlife habitats and ensure variety-of-opportunity in boat-dependent

and other aquatic recreation. They may be necessary for public safety or to minimize user conflicts. As a general rule, regulation is only necessary on heavily-used waters; for this reason, boating on other waters is unrestricted.

The use of watercraft for fishing and whitewater sports is increasing statewide. Permits are now required for commercial use of the Pit River associated with the Pit River Campground. One commercial permit has been issued annually for the past eight years. However, drought conditions and flow-regime alterations in other watersheds have created a shortage of suitable waters. As a result, commercial queries and applications have increased dramatically. This has brought the issue of guiding permits to the forefront of recreational concerns.

BLM has always sought to assist local communities in maintaining economic viability by promoting rural tourism—including motorized boating. However, BLM also has a mandate to preserve the scenic and aesthetic qualities cherished by fishermen, hunters, river runners, and others who seek peace and natural beauty in aquatic recreation. On certain reservoirs, recreational boating is very popular. Craft range from silent (non-motorized) canoes, kayaks, and rowboats to low-powered boats used mostly for fishing and hunting. However, fast and noisy jet-skis, powerful runabouts, and waterskiing boats are also popular on these waters.

Not infrequently, this leads to conflict between individuals and user groups regarding appropriate watercraft. The bottom line is that public safety must be maintained, natural resources protected, and a variety of quality recreational opportunities preserved.

2.16.3.1 Desired Future Condition

Boating regulations for the Pit River and selected reservoirs would define and impose certain restrictions governing use of public waterways for recreation and BLM administrative activities. Restrictions would apply to heavily used waters for activities such as whitewater rafting and kayaking, power-boating and waterskiing, fishing, and hunting. Regulations would allow or facilitate these and other aquatic pursuits in appropriate locations and in a non-discriminatory manner and impose restrictions where these are necessary. Certain waters or areas would be reserved for non-motorized or low-powered boating (according to the ROS classification and quality recreation and fishing opportunities), to maintain the peace and aesthetics valued by so many, or where needed to protect wildlife or other resources. A range of high-quality, aquatic recreation opportunities (commercial and non-commercial) would be facilitated—where necessary through restrictions or prohibitions. Where this is unnecessary, boating and other uses would be unrestricted.

2.16.3.2 Goal

Provide high-quality aquatic recreation for a diversity of user groups while encouraging safety, minimizing conflict, and protecting wildlife and other resources through boating regulations that are appropriate, fair, and effective.

2.16.3.3 Objectives

- Assess the need for boating and waterway regulation throughout the planning area. Formulate logical, consistent, and non-discriminatory restrictions where these are required.
- Ensure that recreational quality and access are maintained for whitewater and recreational boating, fishing, hunting, wildlife viewing and other suitable activities.

- Allow modification of boating and waterway restrictions where needed to improve access or protect natural or cultural resources.

2.16.3.4 Legislative, Regulatory, and Policy Direction

- 43 CFR 8340 (Off-Road Vehicles) (1979)
- BLM Handbook H-8550-1 (Interim Management Policy for Lands Under Wilderness Review), Rel.8-17 (July 1995)
- DOI BLM, Priorities for Recreation and Visitor Services (May 2003)
- DOI BLM, H-1601-1 (Land Use Planning) (Mar. 2005)

2.16.3.5 Proposed Management Actions

- Motorized boating will be prohibited on certain segments of the Pit River (i.e., a 16-mile stretch in the Pit River SRMA). Boating would also have motor limitations on portions Delta Lake, Moon Lake, and the Nelson Corral, and Bayley Reservoirs (all in the Infernal Caverns/Rocky Prairie SRMA).
- A special recreation permit would be required for commercial sport-fishing and whitewater rafting in the lower Pit River Canyon (from Fall River Mills to the bridge on Highway 299). Boating must be non-motorized and the permit holder may engage in one or both activities.
- Commercial and non-commercial boating in the Pit River Canyon WSA (13 miles) must be non-motorized.
- Where motorized boating is limited, the following definitions are recognized and applicable:
  - *"Small outboards"* means small four-cycle gasoline engines or electric trolling motors.
  - *"Personal watercraft"* means boats powered by water-jet (also known as "jet-skis" or "wave-runners"); these craft are forbidden except where expressly allowed.
- Motorized boating would be unrestricted on West Valley Reservoir.

On Delta Lake and the Nelson Corral Reservoir (in the Infernal Caverns/Rocky Prairie SRMA) only electric trolling motors would be allowed. Propulsion on Bayley Reservoir would be limited to small outboards (i.e., 4-cycle engines [restriction to be phased in by 2012], electric trolling motors, or non-motorized craft) because of concerns over repeated disturbance and stress to wildlife concentrations, damage to wildlife habitats and riparian vegetation from wave action, and increased water pollution from large engines. Moon Lake would allow all types of engines for use, except *"personal watercraft."* The use of personal watercraft would not be allowed, except on West Valley Reservoir.

Three annual permits would be issued for commercial whitewater rafting and/or sport-fishing on the Pit River segment between Fall River Mills and Highway 299. Throughout the Pit River SRMA (which includes Upper and Lower Pit River), boating would be non-motorized (and the number of commercial recreation permits limited) to decrease disturbance of vulnerable wildlife, preserve riparian areas, and protect the wilderness character of the Pit River.

Table 2.16-2 Annual Guiding Permits Issued for Pit River Waterways[1/]

Commercial Permit Areas	Permits (No.) and Appropriate Uses
Lower Pit River Canyon and downstream	3 – White-water boating and/or fishing

[1/] Permit numbers are the total permits available for the Pit River, from Fall River Mills to SR 299 Bridge.

2.16.4 Motorized and Non-Motorized Snow Travel

Several fairly extensive, higher-elevation areas receive deep and reliable snowfall. In these locations, good to excellent snow-based recreation is available.

2.16.4.1 Desired Future Condition

The planning area would include selected areas (chosen on the basis of deep and reliable snowfall) where a network of snow trails (i.e., snowed-in roads) would be managed for snow-based recreation.

All areas would be managed for motorized travel (i.e., snowmobiling—although means of travel would be unrestricted), while some of the areas would be identified for non-motorized recreation (e.g., cross-country skiing and snowshoeing), according to the applicable ROS class. Non-motorized restrictions would apply were necessary to protect vulnerable wildlife (e.g., wintering ungulates), preserve natural or cultural resources

2.16.4.2 Goal

Identify areas for snow travel that will facilitate high-quality recreational experiences. Ensure that valued resources are protected, safe travel encouraged, and user conflicts minimized.

2.16.4.3 Objectives

Designate suitable portions of the Nelson Corral high country and Dead Horse Loop area (about 17,000 acres in total) for motorized and non-motorized snow travel. The route system may be modified where necessary to improve access or protect resources.

2.16.4.4 Legislative, Regulatory, and Policy Direction

- 43 CFR 8340 (Off-Road Vehicles) (June 1979)
- BLM Handbook H-8550-1 (Interim Management Policy for Lands Under Wilderness Review), Rel.8-17 (July 1995)
- BLM Priorities for Recreation and Visitor Services (May 2003)
- BLM Handbook H-1601-1 (Land Use Planning) (Mar. 2005)

2.16.4.5 Proposed Management Actions

There would be no restrictions on motorized snow travel to the Nelson Corral high country or the Dead Horse Loop area.

2.16.5 Road Maintenance

2.16.5.1 Goal

Ensure that an adequate network of roads and trails is maintained for public use, permitted and authorized activities, and administrative purposes.

2.16.5.2 Objectives

Maintain roads according to a prioritized schedule or transportation plan. BLM best management practices (BMPs) must be used for all road-building, including modification or maintenance of existing roads. Improperly situated or poorly designed roads that are responsible for chronic resource damage would be closed or relocated.

Close roads where unauthorized and persistent abuse has resulted in substantial degradation of natural or cultural resources (according to guidelines adopted by the Northeast California RAC in 2000 [Appendix C]).

2.16.5.3 Proposed Management Actions

The AFO would continue regular maintenance on 28 miles of currently prioritized roads to provide safe and adequate access for recreation, permitted uses, and BLM administrative activities. Meanwhile, a formal transportation plan would be developed to supersede current management and coordinate road construction and maintenance activities with the fire protection program, juniper-abatement activities, and access improvements in SRMAs.

Until this (transportation) plan is implemented, the following roads would be maintained (although subject to alteration for various contingencies):

1. Cinder Cone (7 miles)
2. Tule Access (12 miles)
3. Knox Mountain (3 miles)
4. Nelson Corral (5 miles)
5. Antelope Reservoir (1 mile)

If funding is available, construction of a stock trail adjacent to the Tule Mountain Access Road would be implemented, subject to site-specific NEPA analysis.

2.17 Vegetation

The vegetation resource includes terrestrial and aquatic plant communities, special status plants, noxious weeds, and other invasive species. There are 32 distinct vegetation types identified and mapped in the AFO management area. Sagebrush-steppe communities are the dominant native vegetation. Post-settlement encroachment of sagebrush-steppe communities by western juniper (i.e., juniper < 180 years old) has significantly altered the composition and function of these communities. (Refer to Map VEG-1 for a comprehensive list of vegetation types and their distribution in the planning area.)

The dominant vegetation alliances for the AFO planning area are:

Sagebrush-steppe	48%
Sagebrush-steppe/western juniper	21%
Annual grasses and forbs	8%
Conifers	7%
Old growth western juniper	7%
Mixed chaparral	5%
Riparian and wetland	2%
Woodlands	2%

Vegetation management is organized into five sections with management alternatives presented for each:

1. ***Native plant communities***: this includes shrub, shrub-steppe, western juniper and other woodland plant communities.
2. ***Rare plant communities***: This is further divided into three sub-sections, namely; *quaking aspen, curlleaf mountain-mahogany* and *oak woodland* communities.
3. ***Riparian and wetland communities***
4. ***Special status plants***
5. ***Noxious weeds and other invasive species***

2.17.1 Legislative, Regulatory, and Policy Direction

- The Federal Land Policy and Management Act (1976), as amended
- The Public Rangelands Improvement Act (1978)
- The Endangered Species Act (1973), as amended, (16 U.S.C 1531 et seq.)
- BLM Manual 4180--Rangeland (Land) Health Standards
- BLM Manual Supplement, California State Office Handbook H-1745--Native Plant Materials Handbook, release CA 1-243, (09/13/01)
- BLM Manual 1745--Introduction, Transplantation, Augmentation, and Re-establishment of Fish, Wildlife, and Plants

- Master MOU between the California Department of Fish and Game and the USDI-Bureau of Land Management

2.17.2 Native Plant Communities

2.17.2.1 Desired Future Condition

Native plant communities would exist in a diversity of plant associations—including multiple-aged stands of trees and shrubs as well as healthy understory vegetation, along with native and other desirable perennial grasses. Vegetation would demonstrate health and vigor, and be reproductively successful. The shrub overstory would be present in a variety of spatial arrangements and sizes across landscapes that include large contiguous blocks, islands, and corridors. Old growth western juniper would be healthy, vigorous and free of exotic annual grasses. Plant communities not meeting desired future conditions would show an upward trend in vigor and structural diversity. Plant cover and productivity would be present in sufficient quantities to satisfy the needs of wildlife, special status plants, and livestock.

Disturbance is reintroduced into vegetation communities to maintain or replace shrub canopies and to maintain health and vigor of the herbaceous understory. In those ecosystems that developed with fire, prescribed and AMR wildland fire would be utilized, within management constraints, to maintain healthy vegetation over the life of the plan. Other maintenance or restoration methods include grazing management, use of approved herbicides, brush beating and crushing (including mastication), seeding, and rehabilitation following wildfire (erosion control and natural and artificial reseeding with appropriate seed mixes).

2.17.2.2 Goal

Protect and enhance native plants and plant communities and provide for their continued existence, natural functioning, and successful reproduction. Restore degraded landscapes and decadent shrublands. Manage shrub communities to maintain or improve ecological conditions so as to make significant progress toward the desired future condition by fulfilling resource management objectives.

2.17.2.3 Objectives

- Classify plant alliances/associations not presently described (e.g., Wyoming big sagebrush and medusahead), refine descriptions of existing alliances, and improve the mapping of existing alliances/associations.
- Describe and classify all rare plant communities (as designated by the CDFG) as well as plant communities considered high priority by the AFO.
- Assess the distribution and density of rare plant communities, threats to their continued existence, and designate ACECs and/or RNA.
- Rehabilitate or restore shrub and shrub/grassland communities that are not meeting desired future condition due to invasion by western juniper, other decadent woody species, and exotic annual grasses or noxious weeds/undesirable species.
- Rehabilitate juniper woodlands (in contrast to sagebrush communities being invaded by western juniper) to maintain a mixed age class with a cover of no more than 25%.

2.17.2.4 Proposed Management Actions

Incorporate recommendations developed in the *Sagebrush Steppe Restoration Strategy* to manage juniper encroachment across the field office area.

Use prescribed fire as the preferred method for rehabilitation of plant communities; however; mechanical and manual methods would also be important. Prescribed fire and wildland fire use would be utilized to maintain healthy vegetation within ecosystems that have evolved with fire. Simulate natural disturbance processes through other methods, such as thinning and other mechanical and hand treatments, in order to restore shrub communities by stimulating seeding and sprouting.

Decisions to resume livestock grazing on areas that have been mechanically treated or burned by wild or prescribed fire would be based on assessment of monitoring data. Generally, grazing would not resume for a minimum of two growing seasons. However, mechanically treated areas may be assessed for potential resumption of livestock grazing following one growing season of rest.

Definitive mapping of about 38,000 acres of western juniper would continue in order to define the full extent of old growth. Old growth stands would be protected from timber harvesting and firewood cutting. Vegetation treatments would be designed to maintain and enhance old growth stands. Post-settlement juniper (i.e., less than 180 years old) that is contributing to undesirable fuel loads would be selectively removed. Academic research into the genetics of old growth woodlands would be encouraged.

Undisturbed, “pristine”, or otherwise late seral/climax stands of old growth juniper would be subject to an EA before any flat rock collecting is permitted. Extremely cobbly and very stony-type ecological sites with old growth juniper would not be included in flat rock collection permits.

Develop a “normal year fire rehabilitation plan” for the AFO.

Seeding for ES&R following wildfires, rangeland improvement projects, or efforts to enhance livestock forage would be conducted with a suitable mixture of seed from locally evolved native forbs and grasses and desirable non-local and introduced species. The precise mixture would be determined on a site-specific basis. It would consider the probability of success, risks associated with failure, and other considerations. A locally gathered native seed cache would be created to facilitate seeding projects.

Restore sagebrush communities on sites that have potential and where ecosystem fragmentation can be prevented. Incorporate guidelines from the sage-grouse conservation strategy in vegetation treatments and habitat restoration projects conducted in sage-grouse habitats.

Restoration, rehabilitation, or enhancement of plant communities by vegetation manipulation or fire would be based on current vegetation classifications and mapping. Sagebrush-steppe communities, in particular, would be mapped and classified so that management actions could target specific plant communities.

Classification and mapping would be conducted on 50 to 5,000 acres annually, focusing on native plant communities of local concern, rare plant communities, and special status plants. Currently mapped sagebrush and juniper communities would be further defined to aid in juniper management, sagebrush restoration efforts, sage-grouse conservation strategies, and the achievement of wildlife habitat goals. Lichen surveys would be conducted in old-growth juniper and low sage communities with rocky soils. If a decorative flat rock sale is proposed, the proponent is responsible for completing the required survey (as per existing BLM stipulations.)

Management actions would protect unique and special habitats; for example, old growth pine would be preserved as a seed source and protected from timber harvesting. Old growth trees would not be removed unless diseased or insect-infested.

Four new ACECs, with a total area of 26,021 acres, would be designated also as RNAs to protect vulnerable plant communities of local interest. These are the proposed Timbered Crater, Mount Dome, Old Growth Juniper, and Mountain Peaks ACECs. Use restrictions would apply to preserve protected resources, as listed in Table 2.11-4.

Restoration of plant communities dominated by invasive juniper and/or decadent shrubs would be a high priority and treated according to Table 2.17-1.

Table 2.17-1 Proposed Annual Restoration Treatments for Sagebrush Sites Encroached by Western Juniper

Treatment Method	Treated Area (acres/year)
Prescribed fire/WFU	75–10,000
Manual	50–5,000
Biological	75–2,000
Chemical	50–2,000
Mechanical	75–10,000
Seeding with competitive species	50–10,000

Stands of sagebrush, bitterbrush, ceanothus chaparral, Brewer's oak, skunkbush sumac, and birchleaf mountain-mahogany would be protected and maintained. Vegetation manipulation projects would direct vegetation toward desired future conditions and enhance forage/browse production for livestock and wildlife. Soil and water resources would be enhanced. Management actions would specifically aid the health and diversity of understory vegetation for the above-stated plant communities. Prescribed burns would be conducted in patches so as to create a mosaic of age classes in birchleaf mountain-mahogany stands, especially in the Fall River watershed.

On 10 to 500 acres annually, management actions, as described below, would be taken to create healthy, multi-aged stands of bitterbrush. Fuel loads would be reduced in this vegetation community to reduce the likelihood of high-intensity wildfires, and stands as identified by an interdisciplinary team would be excluded from late-season livestock grazing. Degraded or decadent stands would be rehabilitated and bitterbrush would be seeded in areas previously occupied by this species, or newly suitable areas. Seeding in burned areas would be done in the first year following wildfire. Exclosure fencing would be used to exclude livestock and deer for three to five years.

Livestock grazing strategies would be modified or created to protect microbial crusts and achieve a natural mixture of grasses, forbs, and shrubs. Grazing strategies in playas dominated by silver sagebrush would support the dominance of Nevada bluegrass.

Plant communities at risk from frequent fires or invasion by noxious weeds or invasive species, or from type-conversion to an early seral stage, would be seeded with native annual and perennial vegetation having the potential to out-compete or resist these negative trends. Desirable, non-native species may be used when better adapted to out-compete plant communities dominated by exotic annuals. In Wyoming sagebrush, mountain big sagebrush, and low sagebrush plant communities, perennial grasses would be seeded where these communities are invaded by annual grasses and also as an aid in the formation of microbial crusts.

In ceanothus mixed chaparral communities invaded by annual grasses (i.e., cheatgrass, Japanese brome, or medusahead), a combination of treatments would be implemented, including crushing, drill-planting competing native grasses and forbs, and prescribed fire. Proactive and aggressive eradication of recently established exotic annual grasses would be carried out on the Big Tablelands of Siskiyou County.

A local native seed cache would be developed in which locally gathered native seed would be collected from different "seed collections zones" within the management area. Collected seed would be grown locally for use in emergency fire stabilization and rehabilitation efforts, vegetation restoration, mining reclamation and livestock forage seeding projects.

Present non-native seeding projects where vegetation is in good to excellent condition would be managed to improve structural and species diversity, and better forage production. Non-native seeding projects in poor to fair condition would be managed to restore vigor and improve forage production in addition to improving species diversity.

Seeding projects in very poor condition due to invasion by cheatgrass or other noxious weeds or invasive species, (particularly star thistle) would be aggressively treated and converted to native grasses.

Aggressive restoration methods would generally be employed in seriously degraded plant communities (e.g., Wyoming big sagebrush dominated by medusahead.) Treatment procedures in this case would involve the following step-by-process: 1) Reduce medusahead (using grass-specific herbicides, nitrogen sequestration, prescribed fire, and inoculation with microbes and/or mycorrhizal fungi), 2) Seed affected lands with desirable grasses and forbs that can aggressively compete with medusahead, 3) Maintain the health and vigor of these seedings for a sufficient time, 4) Seed again with locally gathered, native species.

Firebreaks (20 to 25 feet in width) composed of fire-resistant vegetation would be established to protect shrub communities invaded by annual grasses (principally cheatgrass and medusahead.) In particular, up to 36 miles of firebreaks would be established on the lower bench of the Likely Tablelands. Additional firebreaks (up to 30 miles) would be constructed in the McDonald Mountain area, in the Westside, Juniper Creek, and Moon Springs Grazing Allotments, in Dixie Valley and the Beaver Creek areas, and in Oregon oak woodlands invaded by medusahead.

Closure to motor vehicles would be seriously considered in areas where OHV traffic is responsible for significant increases in infestation by annual grasses and noxious weeds. Two such areas are the mixed ceanothus chaparral communities of the Fall River watershed and the big sagebrush/desert peach associations near Alturas, CA.

2.17.3 Riparian and Wetland Plant Communities

Riparian plant communities are vital for proper hydrologic function, wildlife habitat, and for recreational purposes. Wetland and riparian plant communities found in the AFO management area include wet meadows (grass/sedge/rush), tule-cattail-sedge wetlands, willows, quaking aspen, and willow-quaking aspen. All of these plant associations are prevalent in the management area with the exception of tule-cattail-sedge communities. These are locally rare and generally found in slow-moving streams, inundated meadows, and silted livestock reservoirs.

There are 67 miles of perennial streams in the management area, of which 44 miles have been assessed for PFC—15 miles are not in PFC of which 13 are FAR and 2 miles (Crooks Canyon) are unknown. Also, there are 66 acres of natural springs in the AFO management area; 38 acres are in PFC and 22 acres are FAR. See Map WATER-1 for Riparian Functional Assessment Ratings.

Of the 300 acres of meadows and wetlands that have been assessed, 254 acres are in PFC and 46 acres are FAR. Miles of ephemeral and intermittent streams are unknown. In addition, not all springs and small meadows (less than one acre) have been inventoried and assessed.

Because many riparian and wetland areas have not historically been given equal weight with upland vegetation in activity plans and in landscape-level planning, these areas must now be specially managed for the recovery and restoration of riparian and wetland plant communities. Many have been severely impacted by livestock and other uses of public lands. Meadows have dried or have lower water tables. Many perennial grass and forb communities have been converted to expanses of silver sagebrush or to mountain big sagebrush/rabbitbrush communities. Some silver sagebrush/Nevada bluegrass communities have been converted to associations dominated by big sagebrush, exotic annual and perennial forbs, or exotic perennial grasses and rushes. Small (but important) springs and seeps (some of which could be fen bogs) have been severely damaged by livestock.

Heavy concentration of animals has resulted in hoof penetration of springs, where large hummocks now dominate the micro-topography. As a result, springs and seeps have been effectively drained and converted to upland vegetation. Roads through or adjacent to meadows and springs have altered the local hydrology, diverted sub-surface water, and caused erosion.

2.17.3.1 Desired Future Condition

Riparian and wetland areas would be in PFC; this means that erosion is controlled, stream banks stabilized, incised channels healed, shade-water is present where it would naturally occur, sediments are filtered, and suitable habitat is provided for wildlife, fish, and other aquatic species. Riparian plant communities would be dominated by healthy, native species that are vigorously reproductive and characterized by dense root masses. Woody riparian communities would be characterized by stands of native species in a variety of age classes, with abundant canopy volume and herbaceous ground cover.

2.17.3.2 Goal

Improve, restore, and/or maintain riparian vegetation, especially in terms of habitat diversity and hydrologic function to achieve healthy and abundantly productive riparian areas and wetlands.

2.17.3.3 Objectives

Establish site-specific riparian management objectives based on riparian ecological site inventory assessments or by classification of existing plant communities. Assess PFC in conjunction with the ecological status of the riparian area. Prescribe riparian/wetland management treatments based on site-specific physical, biological, and chemical condition and area potential.

2.17.3.4 Proposed Management Actions

Concurrent with assessment of PFC, existing or potential natural community would be determined for all riparian and wetland sites, according to guidelines specified in Riparian Area Management, Greenline-Riparian-Wetland Monitoring, Technical Reference 1737-8, (1993.) An ecological site inventory would also be conducted for riparian-wetland sites as specified in Riparian Area Management, *Procedures for Ecological Site Inventory—with Special Reference to Riparian-Wetland Sites*, (Steve Leonard, et al; BLM Technical Reference 1737-7, 1992.) Once the ecological potential of the riparian community is determined, specific riparian management objectives would be established.

Implement measures to make progress toward achieving PFC on 15 miles of streams, 22 acres of springs, and 46 acres of wetlands known not to be in riparian PFC. Additional riparian areas or streams segments identified (in the future) as not in compliance with land health standards would be included in restorative measures.

Livestock grazing would only continue in plant communities or on sites where grazing is compatible with the attainment of PFC and other riparian and wetland objectives. Sensitive sites known to be important for native fisheries, wildlife habitat, and other beneficial uses would be protected or excluded from commodity uses. Emphasis would be on the restoration of natural springs and riparian communities to their potential natural community (if known) or to the desired plant community.

As specific plans are developed, such as AMPs, livestock exclusion fencing would be constructed in areas that are FAR and in areas where the vegetation is in early seral plant communities. This would be accomplished through construction and maintenance of 500 acres of additional exclosures. These would also incorporate and overlap exclosures protecting important wildlife habitat and archaeological sites.

Spring sources classified as FAR or 'Not Functioning' would be protected by exclosure fencing to prevent trampling by livestock and wild horses. New water developments may be constructed only if they would not compromise special status species, adversely affect stream function, or degrade riparian plant communities to an early seral stage. No new water developments would be permitted in intact playas, lakebeds, and in plant communities dominated by silver sagebrush.

Coordinated resource management decisions would be encouraged for site-specific planning. The goal is to incorporate sustainable use of existing riparian/wetland areas, maintain wildlife habitat, and provide forage for livestock—where this is practical. Grazing utilization levels would be monitored to determine optimum grazing periods and times of rest in riparian areas.

BMPs typically selected to improve riparian and wetlands sites would include:

- Treat or remove undesirable woody upland vegetation using mechanical or manual methods, or prescribed fire.
- Rest burned areas and juniper treatment sites from livestock grazing for two growing seasons (or less if resource conditions warrant.)
- Reduce livestock use in riparian and wetland areas by improving livestock distribution (e.g., alter grazing system, herding) and construction of riparian pastures.
- Construct livestock water developments outside riparian and wetland area, and/or use water-gap fencing.
- Intensive planting of woody riparian vegetation would be conducted in willow-dominated communities.
- Install in-stream structures to control erosion and create suitable aquatic habitats.
- Plant native grasses in upland areas.

Bio-engineering projects would include intensive planting of woody vegetation along stream banks plus other forms of (riparian) vegetation manipulation and stream bank stabilization structures – such as placing downed juniper for erosion control. Such treatments would be conducted on 25 miles of perennial, intermittent, and ephemeral streams.

Invasive western juniper and undesirable woody vegetation would be removed from riparian areas, using a combination of treatment methods such as those described under native plant communities in Section 2.17.2.

Roads found to have an adverse impact on riparian areas would be properly maintained, re-routed, eliminated, and/or rehabilitated to reduce impacts.

Livestock salting sites would be located ¼ mile from riparian areas to discourage damage by livestock.

Riparian management would be conducted on a watershed basis, using an ecosystem approach. Interested landowners and other interested parties including affected tribes would be involved. Interdisciplinary teams would be used to inventory, monitor, and evaluate management of riparian/wetland areas, including fen bogs.

Inventory, delineation, and assessment of streams, springs, and meadows/wetlands would be completed. Inventory and subsequent mapping would include ephemeral and intermittent streams. Determination would be made as to which meadows/wetlands are fen bogs. All newly identified streams, springs, fen bogs, and meadows/wetlands would be mapped and incorporated into the present GIS database.

Roads through Little Buck Meadows and Big Buck Meadows would be re-routed around existing (riparian) pasture fencing and the old road would be rehabilitated with native herbaceous vegetation.

2.17.4 Rare and Unique Plant Communities: Quaking Aspen, Curlleaf Mountain Mahogany, and Oak Woodlands

2.17.4.1 Desired Future Condition

Rare and unique plant communities, particularly oak woodlands and stands of quaking aspen and curlleaf mountain mahogany, would be healthy and found throughout their historic ranges. Plants would demonstrate diversity in age-class and structure, and would be vigorous and reproductively successful. They would provide suitable forage and habitats for wildlife and show a tendency to spread into suitable but unoccupied habitats.

2.17.4.2 Goal

Protect, maintain, restore, and enhance rare and unique plant communities to achieve multi-aged stands that are healthy, structurally diverse, and reproductively successful. Rejuvenate older stands and enhance seedling recruitment.

2.17.4.3 Objectives

Protect all remaining quaking aspen, curlleaf mountain mahogany, Oregon white oak, and blue oak stands. Expand area occupied by existing stands, and achieve mixed age-classes over the life of this RMP. Establish programs and treatments to increase recruitment and seedling and sapling survival, and achieve a healthy and diverse understory. Increase knowledge of fire history and its effects on plants and soils in or to approximate the effects of a natural fire régime.

2.17.4.4 Proposed Management Actions

Use the aspen delineation project protocol (Bartos and Campbell, 1998) to classify remaining stands that have not been mapped. Assess soils in aspen stands for use in developing management objectives.

A natural disturbance regime would be approximated in quaking aspen stands using a combination of treatments, including prescribed fire, manual cutting, mechanical removal, root-ripping, and herbicides. Stands would be individually assessed and treated based on browsing impacts, encroachment of shrubs and conifers, the presence or absence of "suckering", and the wetness or dryness of the site. Treatment priority would be as follows: 1) non-regenerative clones, 2) mixed aspen/conifer communities, 3) mixed sagebrush/aspen communities, and 4) (successfully) regenerative clones.

Prescribed burns within rare and unique plant communities would strictly adhere to burn plan objectives. Fuel loading, fuel types, fuel moisture content (live and dead), and prevailing weather conditions (especially drought) would be carefully considered prior to a prescribed burn. During rehabilitation treatments, retain old-growth juniper and other conifers greater than 12 inches DBH.

Silvaglyphs (historical carvings and drawings) would be protected during treatment procedures. Livestock would be excluded from non-regenerative aspen and selected curlleaf mountain mahogany stands. Stands would be protected from livestock and wildlife use until aspen saplings are six feet tall. Locate livestock salting sites at least ¼ mile away from aspen groves.

Curlleaf mountain mahogany would be inventoried to assess seral stage, biologic integrity, and associated species. Management actions would be planned and conducted on the basis of seral stage.
Treat stands of curlleaf mountain mahogany according to the following priority: 1) decadent stands without seedlings, 2) stands invaded by conifers, 3) younger stands with (relatively) recent conifer invasion, 4) stands invaded by cheatgrass or other noxious weeds, and 5) stands heavily used by ungulates.

Priority treatment would be initiated in curlleaf mountain mahogany stands at risk of conversion to conifers. In juniper/curlleaf mountain mahogany and eastside pine/curlleaf mountain mahogany associations dominated by *pre-settlement* juniper, treatment would aim to achieve a conifer canopy cover of 25% or less.

Control noxious weeds and other invasive species in and adjacent to stands of curlleaf mountain mahogany prior to initiating treatment procedures.

Protect previously burned curlleaf mountain mahogany from wildlife until saplings are sufficiently mature to withstand browsing. This would be accomplished using temporary fencing or piling slash from cut, dead mahogany trees or using slash from nearby conifers that are cut.

Oak woodlands would be inventoried to assess biological integrity, fuel loading (conifers and understory shrubs), and invasion by exotic annual grasses.

Develop 'Desired Future Condition' specifically for Oregon white oak and blue oak associations. Treatment of oak woodlands would include prescribed fire (light to moderate intensity) and removal of invasive juniper and high-density pine by manual (chain saw) or mechanical (equipment such as fellerbunchers) methods.

Manage select stands of California black oak for a seral stage including conifers. Control saplings to favor establishment of merchantable pine timber.

Management treatments for oak woodlands would depend on recruitment success in individual stands. Treatments would be conducted where no seedlings or saplings are present and in stands at risk from high-intensity wildfires.

Regeneration of aspen stands would be accomplished by cutting dead or dying aspen trees, removing conifers from aspen stands using manual methods such as chain saws, "pushing over" mature trees, ripping of root systems, burning, herbicide application, and protection from browsing. Where thinning or browsing control do not result in suckering, mid to old-aged aspen stands would be bulldozed or the soil ripped. Mature trees would be pushed over with a bulldozer. Ripping around stems or the perimeter of stands (one pass with a bulldozer) would stimulate suckering in older stands. Quaking aspen would be introduced on sites with the potential to support this species.

Temporary fencing would be used to protect 300 acres of aspen stands from livestock grazing, and permanent fencing would protect an additional 200 acres, over the life of this RMP. Livestock grazing would be managed to minimize damage to suckers in aspen clones by changing the class of livestock use (i.e., dry cows rather than cow-calf pairs.)

In aspen stands burned by wildland or prescribed fire and greater than ½ acre in size, a minimum of two years rest from livestock grazing would be required. Post-fire recovery criteria (e.g., sapling height, wildlife use, or sapling density) would be used to determine when livestock grazing could be resumed. Improvement of decadent and young stands of curlleaf mountain mahogany would be conducted through shearing or selective bulldozing. Bulldozing, possibly combined with ripping, would be used to thin or remove old trees in small randomly placed and randomly shaped openings. Stand rejuvenation would involve thinning, leaving 40 to 60 clumps per acre. Pruning would be used to remove dead and decadent trees, open stands to enhance seedling survival, increase deer forage, and create mixed age-classes. Pruning would mostly be conducted on younger trees in spring or early fall. Mechanical treatments or prescribed fire would be used for maintenance of pruned stands. In mahogany stands dominated by conifers due to fire suppression, fuel loads may be too high for prescribed fire. Restoration on these sites would involve mechanical or manual removal of conifers (chain saws or shearing equipment) to reduce the threat of stand-replacing (high-intensity) fires.

Treatments would be designed to remove invasive conifers, create mixed-age stands, and generally rejuvenate these plant associations according to Table 2.17-2.

Table 2.17-2 Proposed Annual Vegetation Treatments for Woodland Communities

Plant Community	Primary Treatment Method(s)	Treatment Area (acres/year)
Quaking aspen	Prescribed fire, mechanical, chemical	5–100
Curlleaf mountain mahogany	Prescribed fire, WFU,manual, mechanical, chemical	10–1,000
Oak woodlands	Prescribed fire, WFU, manual, mechanical	10–5,000

Changes in livestock grazing strategies (season of use, distribution, class of livestock, etc.) would be implemented to reduce browsing pressure on curlleaf mountain mahogany and oak woodlands. Livestock would not be permitted to graze or seek shade in early seral stage mountain mahogany stands. This would be accomplished by improving livestock distribution and providing shade in adjacent plant communities such as post-settlement juniper. Browsing by livestock and deer would be limited to 50–60% of current annual growth to maintain productivity and a vigorous, shrubby growth pattern.

Light- to moderate-intensity fires would be prescribed for California black oak and Oregon white oak woodlands dominated by young trees. Stands with dead trees would be burned to create small openings.

Consumptive use of dead-and-downed oak would not be allowed, except to clear dead trees within 66 feet of open roads and in the WUI.

2.18 Noxious Weeds and Invasive Species

Alien invasive and noxious plants have been present in (what is now) the U.S. since the earliest days of European settlement, but have increased exponentially in the last half-century. Due to the vulnerable nature of native ecosystems, invasive plants have become a major threat to economic productivity and to the survival of native species and ecosystems. Displacement of native plant communities by alien species which are frequently unpalatable or toxic can be devastating to rangelands and other landscapes and to the activities for which they are managed. This section addresses both weeds that are legally defined as "noxious" and other invasive plants.

The state of California has identified more than 130 invasive, noxious plants that threaten croplands, rangelands, forests, and waterways. There are undoubtedly many others yet to be located and identified. It is clear that many invasive plants readily adapt to local conditions and rapidly disperse using a variety of methods. We can expect this trend to continue, and even worsen (Gimp et al, 2004.)

The Alturas integrated weed management (IWM) control program is designed to address the noxious weed problem in a dynamic manner. Problems include increasing numbers of rapidly reproducing alien species with different physiological characteristics (see Map VEG-2). Changing technologies and conditions of infestation also contribute to the spread and proliferation of weeds. Weed infestations change annually because of new introductions, the spread of existing infestations, and as a result of prior-year management activities and other factors. For these reasons, site-specific reviews of known locations are conducted annually prior to the initiation of weed treatment procedures. The noxious weed problem is currently managed in partnership with local working groups and adjacent weed management control programs, as well as with county, state, and federal agencies.

FLPMA and the Public Rangelands Improvement Act direct BLM to "…manage public lands according to the principles of multiple-use and sustained yield…" and "…manage the public lands to prevent unnecessary degradation…so they become as productive as feasible." The introduction and spread of noxious weeds and undesirable plants contributes to loss of rangeland productivity, increases soil erosion, reduces numbers of native plant species and their structural diversity, contributes to the loss of wildlife habitat, and in certain instances poses a threat to human health. The "Carlson-Foley Act" (Public Law 90-583) and the Federal Noxious Weed Act (Public Law 93-629) direct weed control procedures on public lands. Protection of natural resources depends on educating people about the devastating impacts of noxious weeds and actions agencies and individuals can take to prevent weeds from becoming established and proliferating, as well as methods of destroying existing infestations.

2.18.1 Desired Future Condition

The present condition of terrestrial and aquatic ecosystems reflects local economic conditions, widely held social values, and the effects of technology. Local economic and social values for biodiversity are tangibly presented in BLM's S&Gs. Description of the desired future condition is intended to describe attainment of the biodiversity standard for rangeland health described in these S&Gs.

The desired future condition is the attainment and maintenance of viable, healthy and diverse populations of native—and desirable non-native—plant species on a landscape free from noxious weed and other invasive species infestation. Where noxious weeds have been resistant to eradication, they will be contained and infestations reduced to an acceptable level (e.g., cheatgrass and medusahead sites.)

2.18.2 Goal

Minimize the likelihood of introducing new species of noxious weeds and other invasive species and, where this has already occurred, prevent weeds from becoming established. In areas where noxious weeds are established, maintain areas where infestations have been adequately controlled. Institute measures to substantially decrease the area and density of infestation where weeds have not passed an ecological threshold for site rehabilitation (e.g., cheatgrass and medusahead.)

2.18.3 Objectives

Apply recognized and proven IWM practices throughout the planning area to control the introduction and proliferation of noxious weeds and other undesirable invasive plants. The area and density of established populations will be reduced to acceptable levels. Maintain plant communities in such manner as to remain free of noxious weeds wherever possible. Where weeds are prevalent over a large area, use broad-scale IWM strategies to control infestations.

When control measures are completed, follow up with monitoring and re-evaluation at suitable intervals. Surveys and inventories for new infestations would be conducted throughout the growing season on a yearly schedule, covering the management area on a three-year rotation. When making plans for vegetation management, incorporate procedures for the early detection of non-native and highly aggressive species, such as cheatgrass, medusahead, and other non-native annual grasses.

Decrease and contain weed infestations in designated wilderness or WSAs within the life of this PRMP using the best combination of treatments consistent with “minimum tool” requirements and IWM principles and practices. Reinforce existing partnerships and cooperation with adjacent weed management areas.

2.18.4 Legislative, Regulatory, and Policy Direction

- The Federal Land Policy and Management Act (1976) as amended through Sept., 1999, (Public Law 94-579)
- Public Rangelands Improvement Act (1978)
- Food, Drug and Cosmetic Act (1938) and the Miller Amendment
- Carson-Foley Act (1968), (PL 90-583)
- The Federal Insecticide, Fungicide and Rodenticide Act (1972) as amended (1988)
- Federal Noxious Weed Act (1974) and amendment Sec 15 (Nov. 28, 1990) (PL 93-629)
- Executive Order 13112 – Invasive Species, section 2 (1)(ii)(iii)(v)(vi) (1999)
- Partners Against Weeds – An Action Plan for the Bureau of Land Management (Jan. 1996)
- BLM Manual 9011 and Handbook H-9011-1
- BLM Manual 9014
- BLM Manual 9015
- California Food and Agriculture Code: sections 403, 482, 5021, 5041 and 5405
- Bureau of Land Management Pesticide Applicators Certification Program

2.18.5 Proposed Management Actions

Preventing the introduction and establishment of noxious weeds and control of infestations would remain a priority. The AFO would use an integrated pest management approach, of which the IWM program is a part. This includes education and preventive measures plus physical, biological, chemical, and cultural treatments. The IWM program would be conducted in cooperation with the California Department of Food and Agriculture (CDFA); Modoc, Lassen, Shasta, Siskiyou and other nearby counties; affected private landowners and permittees; and various federal agencies and interested parties including affected Indian tribes. Qualified AFO personnel would provide education (including community education events) on the prevention and treatment of noxious weed infestations to BLM personnel and local community organizations and individuals according to the AFO prevention schedule.

Periodic inventories would be used to detect new infestations and monitor the condition of existing infestations. Prioritize noxious weed inventories in plant communities that are critical for wildlife habitat, in plant communities that are at risk, in high-use areas, and at recreation sites.

The use of certified noxious weed-free seed, hay, straw, and mulch is mandatory throughout the management area. Stipulations will be attached to use permits and emergency stabilization and rehabilitation plans to reduce the spread of noxious weeds through contaminated seed, hay, straw, and mulch.

Higher priority and a broader scope would be given to the inventory and control of noxious weeds. Areas that are less disturbed and more remote, or sites not previously inventoried, would be included in the weed management program. Inventories would be increased in areas where large projects are implemented – such as clearing of western juniper. The early detection of new infestations throughout the management area would be emphasized together with rapid response and control of *all* new infestations. However, aggressive control measures on "hot spots" (i.e., disturbed areas), such as roadsides, ROWs, livestock reservoirs, livestock trailing routes, and recreation sites would have the highest priority.

Treatments will focus on restoration of sites to native plant communities. Restoration of sites with compromised plant communities and/or sites where previous control efforts have had limited success would have the highest priority for control measures. Treated sites would be monitored to determine treatment effectiveness and impacts on non-target vegetation. Native species, or desirable non-native species, would be used to restore sites to their ecological potential.

Current science and research findings would be emphasized through increased cooperation with university agricultural extension programs, county agricultural departments, CDFA, and various federal agencies (including research conducted by BLM.) Areas of special interest would include new technologies in IWM (e.g., control of exotic annual grasses, restoration of sagebrush communities converted to annual grasslands.) Another area of interest would be investigations into use of the herbicide Plateau™ (imazapic) in conjunction with prescribed fire, nitrogen sequestration, and seeding native grasses as a treatment package for sites infested with medusahead and annual brome. These treatments would be part of restoration efforts in low sagebrush and Wyoming big sagebrush plant associations infested with or type-converted to medusahead grass.

Education efforts would be expanded to include public education and outreach programs outside the AFO planning area. This would be done to prevent or minimize the spread of noxious weeds into the management area. Public education within this and other weed management areas would also be increased by other means.

Plant communities at risk from frequent fires or invasion by noxious weeds or invasive species, or from type-conversion to an early seral stage, would be seeded with native annual and perennial vegetation having the potential to out-compete or resist these negative trends. Desirable, non-native species may be used when better adapted to out-compete plant communities dominated by exotic annuals. In Wyoming sagebrush, mountain big sagebrush, and low sagebrush plant communities, perennial grasses would be seeded where these communities are invaded by annual grasses and also as an aid in the formation of microbial crusts.

In ceanothus mixed chaparral communities invaded by annual grasses (i.e., cheatgrass, Japanese brome, or medusahead), a combination of treatments would be implemented, including crushing, drill-planting competing native grasses and forbs, and prescribed fire. Proactive and aggressive eradication of recently established exotic annual grasses would be carried out on the Big Tablelands of Siskiyou County.

Aggressive restoration methods would generally be employed in seriously degraded plant communities (e.g., Wyoming big sagebrush dominated by medusahead.) Treatment procedures in this case would involve the following step-by-process: 1) Reduce medusahead (using grass-specific herbicides, nitrogen sequestration, prescribed fire, and inoculation with microbes and/or mycorrhizal fungi), 2) Seed affected lands with desirable grasses and forbs that can aggressively compete with medusahead, 3) Maintain the health and vigor of these seedings for a sufficient time, 4) Seed again with locally gathered, native species.

Firebreaks (20 to 25 feet in width) composed of fire-resistant vegetation would be established to protect shrub communities invaded by annual grasses (principally cheatgrass and medusahead.) In particular, up to 36 miles of firebreaks would be established on the lower bench of the Likely Tablelands. Additional firebreaks (up to 30 miles) would be constructed in the McDonald Mountain area, in the Westside, Juniper Creek, and Moon Springs Grazing Allotments, in Dixie Valley and the Beaver Creek areas, and in Oregon oak woodlands invaded by medusahead.

Closure to motor vehicles would be seriously considered in areas where OHV traffic is responsible for significant increases in infestation by annual grasses and noxious weeds. Two such areas are the mixed ceanothus chaparral communities of the Fall River watershed and the big sagebrush/desert peach associations near Alturas, CA.

2.19 Special Status Plants

There are 54 known occurrences of special status plants, which includes 12 species, on lands administered by the AFO (see Map VEG-3). There are an additional ten species of special status plants which are suspected to occur on BLM administered lands; two of these species occur on adjacent private lands and four of them occur on adjacent Forest Service lands. Only eight of the suspected species have potential habitat that occurs on BLM.

Current risks to these species include grazing and trampling by livestock and wild horses, OHV damage, fire suppression, mining, flat rock removal, invasive and exotic plant species, and soil erosion.

2.19.1 Desired Future Condition

Populations and habitats of rare plant species – and associated plant communities – will be stable or improved in vigor and distribution throughout the AFO management area.

2.19.2 Goal

Manage public lands to maintain, restore, or enhance populations and habitats of special status plants. Priority for management treatment would be: (1) federally listed endangered or threatened species, (2) federal proposed species, (3) federal candidate species; (4) state-listed species, (5) BLM sensitive species, and (6) BLM special interest species.

2.19.3 Objectives

The reproductive viability of all species of special status plants will be maintained. Known occurrences/populations will be monitored to determine the health of the plants and associated plant communities. BLM will continue to survey for the presence of additional occurrences/populations of special status plants. Management guidelines will be developed for significant occurrences or known populations of special status plants and their associated habitats.

A modified grazing strategy or other suitable treatments would be developed under an integrated resource management plan, AMP, habitat management plan, or BMPs. A biological evaluation would provide baseline information for resource objectives developed for a special status plant, its habitat, and associated plant communities.

2.19.4 Legislative, Regulatory, and Policy Direction

- The Federal Land Policy Management Act, Public Law 94-579 (Oct. 21, 1976, as amended through Sept., 1999);
- Endangered Species Act of 1973 (16 U.S.C 1531 et seq.), as amended;
- Public Rangelands Improvement Act (1978);
- BLM Manual 6840 – Special Status Species Management, Release 6-121, (Jan. 19, 2001);
- Departmental Manual 632.1.1–1.6, Endangered Species Management;
- BLM Manual Supplement, California State Office, 6840.06 – Special Status Plant Management, Release 6-24 (Mar. 25, 1996);

- BLM Manual Supplement, California State Office, H-6840-1– Special Status Plant Management, Release 6-25 (April 15, 1996);
- BLM Manual Supplement, California State Office Handbook H-1745–Native Plant Materials Handbook, Release CA 1-243, (Sept. 13, 2001).
- MOU between USDA Forest Service; USFWS, BLM, National Park Service, and National Marine Fisheries Service (1994)
- Standards for Rangeland Health and Guidelines for Livestock Grazing Management on BLM-Administered Lands in Northeastern California and Northwestern Nevada (July, 2000)

2.19.5 Proposed Management Actions

Management would concentrate on providing habitat conditions suitable for the requirements of individual species. Conservation agreements or species management guidelines would be developed and implemented. BLM would ensure that other management actions do not contribute to the decline of a special status plant species.

All project proposals will be reviewed prior to implementation to ensure compliance with special status plant policies. Project proposals will incorporate recommendations of the California special status plant policy (CA BLM Manual Supplement H-6840-1, Special Status Plant Management) in order to avoid actions that would contribute to the listing of any species under the Endangered Species Act.

Prior to project implementation, surveys would be conducted for special status plants and their characteristic habitats (whether occupied or not.) Surveys would be conducted at the appropriate time of year, usually during flowering)—in order to locate and more positively identify special status plants. This may involve surveys in subsequent years.

Continue monitoring the “Green Place” vernal pool which is critical habitat for slender orcutt grass, *Orcuttia tenuis* (federally listed as threatened): monitoring is conducted jointly with Lassen National Forest for all vernal pools in northeastern Shasta County. Monitoring will also continue in the Ash Valley ACEC/RNA.

Work with Lassen and Modoc National Forests and BLM Eagle Lake Field Office to write a Conservation Strategy for slender Orcutt grass. The new strategy will replace the existing Species Management Guide.

Coordinate with USFWS to conduct grazing studies on habitat (both BLM and private lands) on slender Orcutt grass habitat.

Restoration and/or enhancement of populations and habitats would be conducted in areas where this is biologically sound and likely to succeed. Maintenance would be the goal where populations and habitats are at or near potential.

The following measures would be implemented for the recovery and conservation of special status plants:

- Analyze existing data and identify gaps in information.
- Organize data from inventories, monitoring, and management information using a standardized database.
- Determine actions and funding necessary to conserve, recover, and maintain special status plants.

- Conduct surveys for all special status and special interest plants—and their critical habitats—known or suspected to occur on BLM-administered lands.
- Ensure that management actions necessary to protect, conserve, and recover special status plants are implemented, monitored, and documented.
- Acquire lands (from willing sellers) where populations of special status plants are not currently protected.
- Populations of special status plants will be maintained on areas of five acres or less.
- Manage special interest plants (i.e., California Native Plant Society, List 2 and List 4 plants) so as to prevent the necessity of future listing as special status species.

Long-term monitoring would be conducted using permanent vegetation transects read according to the method chosen. Visual reconnaissance would be used to obtain general information on the habitats of special status plants. Individual special status plant species populations and habitats would be monitored annually or bi-annually and a CDFG native species field survey form filled out.

No more than a 20% reduction (threshold level) in population would be tolerated in a location containing more than 500 individual plants on an area greater than one acre (0.4 hectare.) When individual numbers or the area is less than the threshold level, a biological evaluation would be prepared to determine if the proposed action would result in loss of viability for the species. For widely distributed species, habitat elimination may be increased to 25% for that species. For a species of limited distribution or a species widely distributed in the AFO, but limited in other BLM field offices or on other federal lands, no more than 5% disposal of habitats containing that species would be permitted. Small and isolated parcels (160 acres or less) would not be available for disposal if a species only occurs on those lands and disposal would result in elimination of the species or cause listing of the species under the Endangerd Species Act.

Where a special status species has a conservation strategy, management prescriptions or standards and guidelines contained therein would be followed. If a special status plant or its habitat declines beyond the thresholds defined above, all management actions suspected of contributing to the decline of the species or its occupied habitat would be terminated. If a conservation strategy for a special status species does not exist, a biological evaluation would be prepared to determine likely effects on the special status plant and a monitoring program would be implemented.

Document and map the Alturas volcanic gravel plant community (i.e., plant association) on the Westside, North Graves, South Graves and Neer grazing allotments. Fence (20 acres) the volcanic gravel plant community on the Westside Allotment (which has failed to meet rangeland health standards) to protect it from unregulated OHV damage and livestock trampling (three special status plants and one special interest plant are presently impacted.)

OHVs would be ‘Limited to Designated Routes’ in the Ash Valley ACEC/RNA and the Westside grazing allotment to protect special status plants. All primitive 4WD trails and OHV tracks would be closed and rehabilitated to restore and protect special status plant populations.

Establish a long-term monitoring plot for the soldier meadows cinquefoil (*Potentilla basaltica*, a federal candidate species) in the Ash Valley ACEC/RNA. This species was newly discovered on the AFO management area in 2003 and studies are needed to determine the effects of livestock grazing. Because only 50 plants have been located on an area of approximately ¼ acre, BLM must ensure these plans are not inadvertently extirpated by management actions.

If data suggest a decline in numbers or reproductive viability, livestock would be excluded by means of fencing. Establish a grazing season and minimum stubble heights for the meadow system containing this species.

The effects of firewood cutting would be monitored in *Lupinus uncialis* habitats; known habitats include the North Graves, South Graves, and Westside grazing allotments. In any case, cutting would not be permitted until after Astragalus seed has matured and scattered. If monitoring shows a decline in Lilliput lupine due to firewood cutting and associated OHV use, habitats subjected to this damage will be 'Closed' to firewood cutting.

Establish monitoring for *Mimulus evanescens* at Moll Reservoir to study livestock trampling effects. Grazing at the reservoir could be limited until after Mimulus seed has matured, in order to allow natural reseeding to take place. Coordinate with Modoc National Forest and the Big Valley Ranger District. (The Modoc National Forest administers grazing lands surrounding Moll Reservoir.) Juniper reduction projects would be allowed with site-specific mitigation. (Studies are currently underway in the South Graves allotment to assess the effects of juniper removal on occupied and unoccupied Astragalus habitat.) Proposed mechanical treatment would be monitored by a botanist during project implementation. Initiate new research into the effects of fire on various special status plants, since little is known. Meanwhile, continue studying the effects of fire on *Ivesia paniculata* in the Ash Valley ACEC.

Cooperate with university researchers to determine which species of *Lomatium (hendersonii or roseanum*) is found on AFO-administered lands.

Conduct prescribed burns in ecotones where eastside pine/western juniper meets curl-leaf mountain mahogany in occupied and suitable unoccupied habitat for Baker's globemallow. Research is needed to determine whether prescribed burns under site-specific resource and ecological guidelines would enhance habitat. (This BLM and USDA Forest Service "special interest or watch species" is thought to require hot fires for regeneration.)

2.20 Visual Resource Management

The AFO management area contains landscapes of great beauty and diversity. There are hillside forests of pine and fir, extensive sagebrush-steppe, lava fields, and deep river canyons. Visual contrasts are striking—especially in fall when the vivid yellows, oranges, and reds of aspen, oak, and redbud lend added seasonal beauty. There are four WSAs. These contain many interesting volcanic features, such as cinder cones and lava plateaus. The WSAs also contain extensive riparian vegetation; this supports thriving wildlife populations. There are a number of exceptional roadside vista points. The most popular (west of Fall River Mills) provides a spectacular panorama, from which two historic roads (i.e., the Winters Toll Road at Pit River Falls and the military road to Fort Crook) may also be viewed.

Visual resources are the characteristic natural (land, water, and vegetation) and man-made features that typify landscapes. BLM uses a VRM system to assess scenic qualities and plan, guide or set limits on development and management activities. Existing scenic qualities, the likelihood of development, sensitivity to the effects of (proposed) development or management activities, and viewing distance are all considered in the classification process. BLM uses a visual contrast rating system to systematically analyze (using the basic design elements of form, line, color, and texture) and quantify expected visual impacts. The overall potential impact on the subject landscape may then be assessed and an appropriate VRM class (from I through IV) assigned.

VRM classes, and basic management strategies, are as follows:

Class I: The primary objective is to preserve the character of the existing landscape. Change is basically limited to natural forces, although management activities are permitted if unobtrusive and very limited in scale.

Class II: The objective is to preserve the character of the existing landscape. Management activities may be evident, but must not attract the attention of the casual observer. Visual change must be harmonious (i.e., must repeat the basic elements of form, line, color, and texture that characterize the natural features of the subject landscape), relatively unobtrusive, and limited in scale.

Class III: The objective is partial preservation of the existing landscape character. The level of change must be moderate. Development and/or management activities may attract attention, but must not dominate the view of the casual observer. Visual change must be harmonious (i.e., attentive to the basic design elements).

Class IV: Major modification of the existing landscape is permissible. The level of change may be high and development and/or management activities may dominate the view. However, visual impact must also be minimized through careful location, minimal disturbance, and harmonious development (i.e., attention to the basic design elements).

2.20.1 Desired Future Condition

The scenic beauty of planning area landscapes will have been preserved for present and future generations. Much of the area will exist in its current visual condition. Skillful management and ongoing attention to visual appearances will continue to improve other areas. Development may also exist in Class IV areas that significantly alter present visual appearances; however, any such development will also be relatively harmonious with the surrounding landscape.

2.20.2 Goal

Development of all kinds, management activities, and recreational events will remain consistent with established VRM class criteria throughout the planning area.

2.20.3 Objectives

Designate (BLM) visual resource management classes for all lands under the jurisdiction of the Alturas Field Office. Utilize the applicable VRM class criteria to preserve and enhance scenic quality for present and future generations.

2.20.4 Legislative, Regulatory, and Policy Direction

- The Federal Land Policy and Management Act (1976)
- BLM Manual 8400 (Visual Resource Management) (1984)
- BLM Manual Handbook H-8410-1 (Visual Resource Management Inventory) (1976)
- BLM Manual Handbook H-8431-1 (Visual Resource Contrast Rating) (1986)
- BLM Manual 1616 (Prescribed Resource Management Planning Actions) (1984)
- BLM Manual 1620 (Supplemental Program Guidance) (1986)
- BLM Manual 1621 (Supplemental Guidance for Environmental Resources) (1986)
- California Environmental Quality Act (1970)
- Tablelands Integrated Resource Management Plan (June 1999)
- Pacific Crest Trail Agreement; USDA-Forest Service, Lassen National Forest and USDI-BLM
- Comprehensive Land Use and Management Plan for State and Federally-Managed Lands in Modoc County (May 1995)
- California regulations governing Ahjumawi Lava Springs State Park
- California regulations governing Ash Creek Wildlife Management Area
- Comprehensive Management and Use Plan, California National Historic Trail and Pony Express National Historic Trail; DOI National Park Service (1998)
- Emigrant Trails Scenic Byway Plan, RC&D, Alturas, California (2003)
- Mount Dome Planning Unit Environmental Impact Statement (1980)
- DOI, Management Policy and Guidelines for Lands under Wilderness Review (Dec. 1979)

2.20.5 Proposed Management Actions

VRM classes would be designated as listed below (in Table 2.20.1) and as shown on Map VRM-1. All proposed actions must consider the importance of visual resources and must minimize the impacts the project may have on these values. While performing an environmental analysis for projects, the visual contrast rating system would be utilized as a guide to analyze potential visual impacts of the proposal. Projects would be designed to mitigate impacts and must conform to the assigned VRM class objective.

Table 2.20-1 Visual Resource Management Classes

VRM Class	Size (acres)
Class I (Applies to WSAs) [1/]	56,648
Class II	157,177
Class III	104,006
Class IV	185,214
Total (all classes)	503,045

[1/] VRM Class I objectives apply for all WSAs in the AFO management area. Class I objectives supersede other, underlying, class objectives. However, if a WSA is removed from wilderness study by Congress and returned to multiple-use management, the area will revert to its underlying VRM class.

Developments, land alterations, and vegetation treatments for all resource areas, and those actions conducted under permit (e.g., utility corridors and infrastructure) will be designed, built, or accomplished in a manner that will minimize visual intrusions and preserve scenic qualities, especially when viewed from towns (or nearby residential areas), high-use travel routes, and popular recreation areas (e.g., fishing streams and reservoirs, historic trails, archaeological and interpretive sites, and local, state, and national parks).

The Wilderness IMP requires Class I management for all WSAs. However, should a WSA be denied wilderness status (by Congress), the area would revert to its original (underlying) VRM class, unless reclassified due to inclusion in another special management area (e.g., an ACEC, or WSR). ACECs, rivers that are "eligible" or "suitable" as WSRs, historic trails, or other specially designated areas will normally be managed under VRM Class II criteria. VRM classes are illustrated on Map VRM-1.

VRM classifications will be used to create visual buffer zones (at least three miles in depth) around popular recreation areas and on either side of major travel routes. However, within these zones, areas that are not visible from recreation sites or major roads would not be held to as high a standard.

A general, but comprehensive brochure of "Premier Peaks, Panoramas, & Vistas" will be developed for visitor use according to ROS designations. An assortment of other brochures, containing detailed information on recreational opportunities associated with specific mountain peaks or scenic vistas will also be published and distributed. These brochures will feature McDonald Mountain, Tule Mountain, Widow Peak, Likely Mountain, Sheep Mountain, Mahogany Mountain, Cold Springs Mountain, Overlook Ridge, Haney Mountain, Rimrock Overlook, Whitinger Mountain, Anderson Mountain, Hogback Ridge, Three Peaks, and (possibly) other locations.

2.21 Water Quality and Hydrologic Function

Water quality is analyzed and discussed with respect to water quality indicators and bodies of water listed as "impaired". Primary indicators of water quality are: water temperature, nutrient levels, fecal coliform count, turbidity, sediment load, dissolved oxygen, and stream channel condition. These indicators are based upon standards and guidelines discussed in Section 4.22.

Generally speaking, bodies of water in the AFO management area do not meet state water quality standards with respect to temperature levels during summer and early fall. Livestock grazing, combined with high ambient air temperature, are thought to be the major contributing factors. BLM also has no control, and little influence, over grazing practices on private lands at the head of watersheds that subsequently flow through BLM-administered lands. Livestock impacts on stream banks and riparian vegetation play a significant role in lowering water quality and elevating water temperatures.

The only body of water listed as "impaired" (as defined under Section 303(d) of the Clean Water Act) in the AFO management area is the main channel of the Pit River from the town of Alturas to Shasta Lake. The river is impaired due to high nutrient levels, low dissolved oxygen, and high temperature. BLM does not manage a significant portion of lands adjacent to the Pit River, however; it does manage a large amount of land adjacent to its tributaries. Despite this, many tributaries also pass through significant stretches of private land before entering the Pit River. See Map WATER-1 for Water Quality Assessment Ratings and Map WATER-2 for Watershed Boundaries.

2.21.1 Desired Future Condition

Target values for hydrologic function and water quality are discussed in BLM's S&Gs. This document describes the 'Desired Future Condition'. It is intended to define measurable standards for the achievement of a quality water resource and addresses the health of stream and riparian ecosystems. Achievement of water quality standards (as defined in the S&Gs) is expected within 20 to 50 years, if objectives are achieved.

In order to achieve the 'Desired Future Conditon', hydrologic function and water quality must conform to parameters defined in the S&Gs for all beneficial present and potential uses. State law defines beneficial uses of California waters which must be protected from degradation to include—but are not limited to—"...domestic, municipal, agricultural, and industrial supplies; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves." [Water Code Section 13050 (f)] More generally, water quality on all natural bodies of water must meet state standards in order to achieve stable and productive riparian and aquatic ecosystems. For bodies of water that are not "waters of the state" (e.g., some stock ponds, waterfowl developments, guzzlers, etc.), water quality must be suitable for the beneficial uses for which they were developed. Upland, riparian, and aquatic ecosystems must achieve acceptable water quality standards so that they are sufficiently stable and productive for identified beneficial uses.

Soils will support healthy, native riparian and wetland vegetation to allow for water percolation, filtration, and storage. The structure and diversity of riparian and wetland vegetation will be such that erosion is controlled, stream banks are stabilized, incised channels are healed, and waters are shaded so that sediments are filtered, floodplains can develop, energy is dissipated, floodwaters are delayed, and groundwater is recharged appropriate to the climate, geology, and landform. Improvement will occur in stream channel integrity and the processes which have created riparian and aquatic systems.

Watersheds will have the stability to capture, store, and safely release water during normal seasonal flooding, i.e., streams must be capable of handling the discharge without significant damage to the watershed. Most, if not all, riparian and wetland areas will be in PFC and meet water quality and hydrologic function goals and objectives. Human use of natural resources will be such that water quality meets specified standards and is cool, clear, and clean. A year-round supply of water is sufficient to meet reasonable demands of fisheries, wildlife, livestock, and other beneficial uses.

2.21.2 Goal

Ensure that hydrologic function in streams, wetlands, springs, and uplands is natural and proper; state water quality standards are achieved, and the needs of beneficial uses are met.

2.21.3 Objectives

On a priority basis, take action to improve hydrologic function and/or water quality in areas not meeting state standards – especially where hydrologic function and/or water quality problems are major factors inhibiting the success of other resource programs. Ensure that hydrologic function and water quality are preserved in areas where standards have been met. Continue management efforts in coordination with the Pit River Watershed Alliance, local River Center, and Central Modoc Resource Conservation District.

Actions will be guided by the following objectives from the S&Gs:

- "Maintain the physical, biological, and chemical integrity of waters flowing across or underlying the lands it [BLM] administers".
- "Protect the integrity of these waters where it is currently threatened."
- "Insofar as is feasible, restore the integrity of these waters where it is currently impaired."
- "[BLM must] not contribute to pollution and take action to remedy any pollution resulting from its actions that violates California and Nevada water quality standards, tribal water quality standards, or other applicable water quality requirements." (e.g., requirements adopted by state or regional water quality control boards in California or the Environmental Protection Agency [EPA] pursuant to Section 303(d) of the Clean Water Act or the Coastal Zone Reauthorization Act)
- "Where action related to grazing management is required, such action will be taken as soon as practicable but not later than the start of the next grazing year (in accordance with 43 CFR 4180.1)."
- "Be consistent with non-degradation policies identified by the States."
- "Develop and execute a management agency agreement with the States of California and Nevada for the efficient protection of water quality associated with BLM's management."
- "Work with the State's water quality administrative agencies and the EPA to establish appropriate beneficial uses for public waters, establish appropriate numeric targets for 303(d)-listed water bodies, and implement applicable requirements to ensure that water quality on public lands meets objectives for the designated beneficial uses of this water."
- "Develop and implement best management practices (BMPs) approved by the States to protect and restore the quality and beneficial uses of water, and monitor both implementation and effectiveness of the BMPs. These BMPs will be developed in full consultation, coordination, and cooperation with permittees and other interests."

- "State or tribal approved variances or exceptions to water quality standards may be applicable within their "basin plans" for specific types of activities or actions. BLM will follow State or tribal administrative procedures associated with variances."

2.21.4 Legislative, Regulatory, and Policy Direction

- Approved Northeastern California and Northwestern Nevada Standards for Rangeland Health and Guidelines for Livestock Grazing Management on BLM-Administered Lands (2000).

  This includes the water quality health standard, which states that: "Water will have characteristics suitable for existing or potential beneficial uses. Surface and groundwater will comply with the objectives of the Clean Water Act and other applicable water quality requirements—including fulfillment of California and Nevada State standards—excepting approved variances".

- BLM Water Rights Policy:
  - BLM Water Rights Policy: Instruction Memorandum CA-2000-014 - "Interim Water Rights Policy for Public Lands in Nevada Administered by BLM-California" (December, 1999)
  - BLM Handbook H-7250, Water Rights and California Supplement H-7250-1, California Water Rights Procedures
- BLM Manual, Section 7200 - Water Resources Management
- BLM Manual, Section 7240 - Water Quality
- Unified Federal Policy for a Watershed Approach to Federal Land and Resource Management (2000)
- President's Clean Water Action Plan (1998)
- MOU between the DOI BLM and the California Water Resources Control Board (1993)
- Lahontan Water Quality Control Board Basin Plan (2004)
- Central Valley Water Quality Control Board Basin Plan (2004)
- Nevada Administrative Code—Water Quality Standards
- USDA Forest Service & BLM protocols for addressing 303(d)-listed waters
- Executive Order 12088 - Federal Compliance with Pollution Control Standards (1978)
- Executive Order 11988 - Floodplain Management (1977)
- Executive Order 11990 - Protection of Wetlands (1977)

2.21.5 Proposed Management Actions

Implement measures to make progress toward achieving PFC on 15 miles of streams, 22 acres of springs, and 46 acres of wetlands known not to be in riparian PFC (see Map WATER-1). Additional riparian areas or streams segments identified (in the future) as not in compliance with land health standards would be included in restorative measures. Prioritize restoration treatments to improve hydrologic function and water quality through natural recovery, improved livestock grazing strategies, and in-stream structures.

Implement measures to make progress toward achieving state water quality standards and the needs of beneficial users on 17 miles of streams known not to be in compliance. Additional riparian areas or streams segments identified (in the future) as not in compliance with State standards and beneficial use-needs shall be included in restorative measures.

2.5 miles (2 miles on Cedar Creek and 0.5 miles on Dry Creek) are known to have overlapping problems with water quality and riparian function. It is suspected there are additional overlapping water quality and riparian functional issues; however, site locations differ between the two types assessments and the linkage cannot be drawn. Moreover, a few sites exhibit PFC but still have water quality problems and so there is no overlap. Therefore, a total of approximately 30 stream miles are known to be in need of management for either riparian hydrologic function or water quality issues. An additional 1.5 miles of stream would be managed to limit livestock use due to designated critical habitat for Modoc Sucker on Ash Creek, Willow Creek, and potential critical habitat on Rush Creek (Refer to Section 2.24 "Wildlife" for details).

Amend basin plans to reflect suitable water quality standards for the AFO management area. Appropriate actions include cooperation with state water quality control regulatory agencies and participation in their triennial reviews.

All programs and activities having the potential to degrade water quality would include BMPs as an integral part of activity plans. BMPs would be chosen from various NEPA-approved documents including, but not limited to: Water Quality Management for National Forest System Lands in California Best Management Practices, (Sept 2002); Soil and Water Conservation Practices Handbook, USDA Forest Service Southwestern Region (FSH 2509.22 R-3 Transmittal), (effective 12/3/90); BLM AFO Tablelands Integrated Management Plan/Fitzhugh Creek Aquatic Habitat Management Plan, (June 1, 1999); California's Management Measures for Polluted Runoff, (Jan., 2000); The Practical Streambank Bioengineering Guide: Users Guide for Natural Streambank Stabilization Techniques in the Arid and Semi-Arid Great Basin and Intermountain West, USDA NRCS, (May, 1988); Streambank Soil Bioengineering Field Guide for Low Precipitation Areas, USDA NRCS, (Sept., 2002); Riparian Area Management, Riparian-Wetland Soils, Lisa Lewis, et al., Technical Reference 1737-19, (2003); Biological Soil Crusts: Ecology and Management, Jayne Belnap, et al., Technical Reference 1730-2, (2001).

Management actions with regard to grazing would include a range of actions, from implementing improvements to current grazing practices, to complete livestock exclusion where this is advisable. Current watershed uses of streams, riparian areas, and contributing uplands would continue, providing unimpeded progress is being made toward achieving state water quality standards, as well as riparian management objectives and riparian PFC.

As specific plans are developed—such as AMPs—they would incorporate suitable BMPs. Important BMPs would include protection of streams, wetlands, spring sources, and uplands from overgrazing by livestock through construction and maintenance of 500 acres of additional exclosures. These would also incorporate and overlap exclosures protecting important wildlife habitat and archaeological sites.

Bio-engineering projects would include intensive planting of woody vegetation along stream banks plus other forms of (riparian) vegetation manipulation and stream bank stabilization structures – such as placing downed juniper for erosion control. Such treatments would be conducted on 25 miles of perennial, intermittent, and ephemeral streams.

2.22 Water Supply

BLM employs many forms of water development in its resource management programs, especially in connection with livestock grazing. Surface water conditions have gradually changed over a period of many decades, primarily from historic livestock grazing and road-building activities. Relatively large irrigation dams have been built (under permit) on BLM-administered lands. Reservoirs are now the main instrument of hydrologic changes, and are important for livestock and irrigation; as well as for wildlife, recreation, and other purposes. Other hydrologic modifications include stock ponds, spring developments, and a few water diversions. These kinds of development are required for proper distribution of livestock (as well as wild horses and burros). However, many water developments are also designed to benefit wildlife. Some examples of the latter are wildlife guzzlers and various actions designed to enhance or reestablish riparian and wetland areas.

2.22.1 Desired Future Condition

Water supply (quantity and distribution) would be sufficient to meet beneficial uses and resource objectives in compliance with BLM land health standards. Major beneficial uses are livestock grazing, terrestrial and aquatic wildlife habitats, wild horses, and recreation. Where water supply is inadequate, distribution would be improved or new supplies developed.

2.22.2 Goal

Assure the availability of high-quality water to meet natural resource requirements and management needs.

2.22.3 Objectives

Determine in-stream flow requirements necessary to support healthy aquatic and riparian habitats. Acquire and maintain water rights needed to protect federal investments by ensuring an adequate and reliable water supply for BLM programs.

2.22.4 Legislative, Regulatory and Policy Direction

General Direction

- The Clean Water Act (1972), as amended
- Approved Northeastern California and Northwestern Nevada Standards and Guidelines for Livestock Grazing (July, 2000)

BLM Water Rights Policy for the AFO

- Instruction Memorandum no. CA-2000-014 - Interim Water Rights Policy for Public Lands in Nevada Administered by BLM-California (December, 1999)
- BLM Handbook H-7250 - Water Rights, and Supplement H-7250-1 - California Water Rights Procedures

2.22.5 Proposed Management Actions

- Manage and maintain water sources to ensure adequate water supply for the proper distribution of livestock and wild horses, and fulfill the needs of wildlife.
- Ensure that water sources are maintained for recreational and other activities.
- Selectively develop springs and protect riparian ecosystems.
- Projects that involve inter-basin transfer of water would be coordinated with local and regional governments.
- Assert BLM water rights on state waters (i.e., a body of water having a defined channel flowing off the property on which it is located) in order to protect the federal monetary investment in valued resources and infrastructure.
- Develop a reservoir management plan supporting wildlife and fisheries.
- Consider withdrawal of any water right permits and licenses on water sources that are not waters of the state.
- Apply to the State of California to acquire water rights now under state jurisdiction.
- Assert riparian rights in California on all perennial and important intermittent streams.
- The physical condition of stock ponds and reservoirs would be examined and inventoried on a regular basis to assure adequate and efficient storage of water.
- Emphasize the need to extend seasonal water availability for wildlife.
- Seventy-five new water developments of various kinds would be constructed.

2.23 Wild Horses and Burros

There are no burros within the AFO management area; however; there are two areas in which wild horses are found (see Map WHB-1). The first is the Emigrant HMA, which is a part of the Devil's Garden Wild Horse Territory (north of Alturas, CA.) The second is the Red Rock HMA near Macdoel, CA. The Emigrant HMA is 43,345 acres in size; however; only a small portion – BLM's "Strip Allotment", at 8,500 acres or 20% of this HMA – falls within the Bureau's administrative area. Since the BLM portion contains only about 38 horses, it is managed—along with the rest of the Emigrant HMA and the Devil's Garden Wild Horse Territory—by the USDA Forest Service under a 1980 MOU between the USDA Forest Service and BLM. BLM's only management involvement is to cooperate with the USDA Forest Service in periodic removal, adoption, and holding of animals from the Devil's Garden Wild Horse Territory to keep horse numbers within AMLs. Management actions that would increase or decrease the availability of forage such as changes in livestock numbers and/or season of use would be conducted by the Modoc National Forest. As BLM does not "manage" this herd, it is not considered in the PRMP.

The Red Rock HMA (CA-251) is much smaller, but is managed by BLM. It is 16,895 acres (12,475 acres under BLM jurisdiction and 4,420 acres in private hands). There are six grazing allotments within the HMA: Mahogany Mountain (#1316), Modoc Gulch (#1312), West Mahogany (#01323), No. Red Rock Lake (#01304), Big Tablelands (#01314), and Coyote Ridge (#01318).

The AML is 16 to 25 horses. Based on a 2003 aerial survey, the horse population of this HMA was estimated at 30-plus individuals. As a result, 12 horses were removed, leaving an estimated present population of 18-plus animals. Control of animal numbers is the principal management action. Also, horses are removed if they stray outside the boundaries of their HMA. Animal movement and distribution are controlled by fencing and the location of water sources; however; decisions regarding these tools are generally made through AMPs aimed at livestock management.

The need to gather animals is apparent when monitoring indicates that populations exceed AML criteria. Horse gathers will be supported by the NEPA process subsequent to this RMP. As previously mentioned, excess horses are gathered to prevent resource degradation and to safeguard the health of individual herd members. Generally, gathering is scheduled every three to five years depending on reproductive rates, death rates, funding, public concern, and other management considerations. Gathering is done outside the normal February-through-June breeding and foaling season. Usually, horses are gathered with the objective of reducing numbers to the lower end of the AML. This avoids the need for frequent and expensive gathers and the disruption of the herds. Excess animals are usually transported to the Litchfield Wild Horse Corral near Litchfield, CA for adoption by the public, but horses may go to other adoption sites throughout the U.S. Animals that are gathered are then assessed and either returned to the HMA or designated excess and placed into the adoption program or long-term holding.

2.23.1 Desired Future Condition

The area encompassed by the present Red Rock HMA will be maintained in a stable, ecologically healthy condition with respect to soils, vegetation, wildlife, and other resources with wild horses at the AML.

2.23.2 Goal

Manage wild horses at appropriate management levels within the established HMA.

2.23.3 Objectives

Ensure a thriving natural ecological balance between soils, vegetation, wildlife, livestock, and other valued resources by improving accessibility to the HMA to facilitate maintaining the Red Rock herd at the proper AML.

2.23.4 Legislative, Regulatory, and Policy Direction

- The Federal Land Policy and Management Act (1976)
- Wild Free-Roaming Horse and Burro Act (1971)
- Public Rangelands Improvement Act (1978)
- Northeastern California and Northwestern Nevada Standards for Rangeland Health and Guidelines for Livestock Grazing Management (1999)
- MOU, (Supplemental) between DOI BLM and USDA Forest Service ("…for the purpose of identifying joint responsibilities and instituting close cooperation toward the implementation and administration of the 1971 Wild Free-Roaming Horse and Burro Act," regarding management of the Emigrant HMA) (Mar., 1979)
- Red Rock Lake Herd Management Area Plan (1989)
- USDA Forest Service, Modoc National Forest, Land and Resource Management Plan (1991)
- Instruction Memorandum no. 2002-095, DOI BLM "Gather Policy and Selective Removal Criteria for Wild Horses" (February, 2002)

2.23.5 Proposed Management Actions

AFO would continue to protect and manage wild horses within the Red Rock Lakes HMA (16,895 acres) at the established AML of 16 to 25 horses. AML would be adjusted as required, based on the monitoring of vegetative and attainment of land health standards. Herd monitoring and data collection (aerial and/or ground monitoring) would be done at three-year intervals. Horses would be periodically removed to maintain the appropriate management level.

General management decisions regarding livestock and wild horses would be based on policy and response to practical problems and assessed needs. In order to manage wild horse and livestock forage allocation more equitably, access to the HMA may be improved in order to facilitate gathers and manage the Red Rock herd numbers within the proper AML.

Public education regarding the wild horse and burro program would be maintained. This would include printed materials (such as posters advertising adoptions), wild horse clinics, and participation in the National Wild Horse Show in Reno, NV. Additionally, public outreach activities would be pursued through county fairs, local children's fairs, and tours and adoptions held at the wild horse facility near Litchfield, CA.

BLM's Stip Allotment—which is part of the Devil's Garden HMA—would continue to be managed in cooperation with the USDA Forest Service under a 1980 MOU.

2.24 Wildlife And Fisheries

The larger species of wildlife are among the more visible and valued resources managed by BLM. Since the health and abundance of species populations are closely linked to resource condition—which is greatly influenced by human activities—management issues are often complex. For this reason, wildlife management is addressed under the following seven groups:

- Federally listed wildlife
- State-listed and BLM sensitive wildlife
- Wild ungulates
- Sagebrush ecosystems and sagebrush-obligate wildlife
- Other native terrestrial wildlife
- Native and non-native fish and other aquatic species
- Non-native wildlife

BLM is charged with protecting and maintaining wildlife habitats for public land it administers; however, the CDFG bears responsibility for wildlife populations. Because wildlife is reliant on the resources it administers, BLM must work closely with this agency for the benefit of wildlife populations. Population manipulation (including hunting and fishing regulations), and species introductions and removals are under the authority of state wildlife agencies. BLM cooperates with state wildlife agencies to facilitate their species management objectives, insofar as these agencies support multiple-use management and other BLM policies.

The AFO will aggressively tackle the extensive, and sometimes severe, habitat degradation that has occurred over the past century as a result of historic land use practices. This has resulted in destruction and extensive degradation of sagebrush habitats, encroachment by invasive western juniper, proliferation of noxious weeds (primarily cheatgrass and medusahead), and excessive accumulation of forest and woodland fuels. Particularly in regard to sagebrush ecosystems, the AFO will work diligently to achieve landscape-level restoration, in cooperation with other land management agencies (principally, adjacent BLM field offices and national forests). The intention is to achieve a regional restoration of this critical, and much-degraded, biome. This will require coordinated, interagency management of wildlife habitats. BLM's S&Gs will guide these efforts. A balanced, holistic approach is favored. This avoids the extremes of fixation on economic returns or Endangered Species Act-listing status, while honoring both. Projects will restore native vegetation and greatly improve structural and age-class diversity in shrub and understory vegetation. Management will embrace a three-tiered approach to ecosystem restoration:

1. Remaining intact habitats that retain viable wildlife populations will be preserved by maintaining natural ecosystems in a fully functional condition. This requires adequate protection from destructive influences and a "managed disturbance" regime that approximates the dynamic forces sustaining health native ecosystems.
2. Degraded habitats that are most easily restored—and isolated, intact habitats that can be reconnected—will be prioritized for restoration.

3. Interagency and community-based planning and coordinated action will gradually restore heavily degraded habitats through treatments that will restore large areas—especially sagebrush ecosystems—over time. Remnant wildlife populations within heavily degraded sagebrush habitats may require emergency action to restore biodiversity and create functional habitats. Such actions may include reestablishing native plants or establishing intermediate transition vegetation (to displace exotics), various forms of habitat manipulation and/or protective measures to prevent further losses (e.g., creating green strips to protect remnant habitats from catastrophic wildfires).

2.24.1 Legislative, Regulatory, and Policy Direction

- The Federal Land Policy and Management Act (1976), as amended (1984)
- The Endangered Species Act (1973), as amended (Federal Register 64:128 / Tuesday, July 6, 1999).
- The Sikes Act (1960), as amended (2000)
- The National Environmental Policy Act (1969)
- 43 CFR 4180 (Fundamentals of Rangeland Health and Standards and Guidelines for Grazing Administration) (1995)
- The Migratory Bird Treaty Act (1918), as amended (1989)
- The Bald and Golden Eagle Protection Act (1940), as amended (1978)
- Secretarial Order No. 3206 (American Indian Tribal Rites, Federal–Tribal Trust Responsibilities, and the Endangered Species Act), (1997)
- Executive Order 11987 (Exotic Organisms), (May 1997)
- Executive Order 13186 (Responsibilities of Federal Agencies to Protect Migratory Birds) (January 2001)
- California Endangered Species Act (1985)
- Standards for Rangeland Health and Guidelines for Livestock Grazing Management on BLM-Administered Lands in Northeastern California and Northwestern Nevada (2000)
- BLM Departmental Manual 235.1.1.A (General Program Delegation)
- BLM Departmental Manual 632.1.1-1.6 (Endangered Species Management)
- BLM Manual 6840 (Special Status Species Management)
- BLM Manual 6600 (Fish, Wildlife, and Special Status Plant Resources--Inventory and Monitoring)
- BLM Manual 6525 (Wildlife Programs Related to the Sikes Act)
- BLM Manual 1745 (Introduction, Transplantation, Augmentation, and Reestablishment of Fish, Wildlife and Plants)
- Master MOU between the DOI BLM and the CDFG
- MOU between the DOI BLM and the USFWS, DOI National Park Service, USDA Forest Service, and the National Marine Fisheries Service (1994)
- Partners in Flight, Western Working Group; “Birds in a Sagebrush Sea” (1990)
- BLM Nevada’s “Migratory Bird Best Management Practices for the Sagebrush Biome” (2004)

- California Partners in Flight and the Riparian Habitat Joint Venture: "Riparian Bird Conservation Plan" (2004)
- USFWS: Pacific Bald Eagle Recovery Plan (1986)

Section 102.8 of FLPMA requires that federal lands be managed to protect the environment and its ecosystems, where feasible under natural conditions. FLPMA also places fish and wildlife management on a par with traditional land uses and requires that a portion of grazing fees be spent for "range betterment." This means that habitats of terrestrial and aquatic wildlife must be adequately protected, enhanced, and maintained *on lands where livestock grazing occurs*. It also requires due consideration for preserving fish and wildlife habitats prior to any land exchanges.

Compliance with the Endangered Species Act involves a dual mandate. Land management agencies must use their authority to conduct programs that directly benefit endangered and threatened species, while simultaneously ensuring that other resource actions conducted, authorized, or funded by the agency do not jeopardize the continued existence of an endangered or threatened species. If the managing agency determines that a proposed action may affect a (federally) listed species or identified critical habitat, consultation with the USFWS is mandatory prior to any action.

Corollary to this is concern for special status species (i.e., state-listed and BLM sensitive species). Such species are limited in distribution, population, or habitat, and may be at risk in some geographical areas. Where evidence suggests that land use activities are adversely affecting a special status species not (currently) listed as threatened or endangered (by the federal government), it is in the public interest to prevent the possibility of future listing by proactive restoration and/or preservation of species habitats. BLM land health standards (43 CFR 4180) require that habitats of species protected under the Endangered Species Act (endangered, threatened, or candidate), as well as other special status species, be restored and properly maintained. While this is a difficult, long-term proposition, significant, sustained progress must be made toward this end. Restoration and maintenance of critical wildlife habitats may also be the preferred course of action where wildlife habitat is of unusually high-quality or uniquely important for a particular species.

BLM Manual 6840 (Management of Special Status Species) requires that state-listed species receive the same level of protection afforded to Endangered Species Act candidate species or the level of protection provided by state law—whichever would most effectively conserve the species. The protection afforded to Endangered Species Act candidate species is also the minimum level of protection for BLM sensitive species.

2.24.2 Group 1. Federally Listed Species

The following federally listed or candidate species, are of concern in the AFO planning area:

- **Bald eagle** (*Haliaeetus leucocephalus*)—the species is listed as 'threatened.' The management area is known to have two roosting areas and as many as 15 active nesting territories. There are also complete home ranges that include nesting, roosting, and foraging habitats.
- **Northern spotted owl** *(Strix occidentalis caurina)*—the subspecies is listed as 'threatened.' Although adults have been documented on Widow Peak, nests have not been located and the management area lies outside the known range of this species.
- **Modoc sucker** *(Catostomus microps)*—the species is listed as 'endangered.' There is potential habitat, but none appears to be occupied by this species. See Map WILD-1, "Occupied and Designated Critical Habitat for Modoc Sucker."

- **Shortnose sucker** *(Chasmistes brevirostris)*—the species is listed as 'endangered.' There is some potential habitat, but none appears to be occupied by this species.
- **Lost River sucker** *(Deltistes luxatus)*—the species is listed as 'endangered.' There is some potential habitat, but none appears to be occupied by this species.
- **Shasta crayfish** *(Pacifastacus fortis)*—the species is listed as 'endangered.' It is found in the Pit River, but known habitat is very small.
- **Yellow-billed cuckoo** *(Coccyzus americanus)*—the species is a candidate for listing. Surveys conducted by the Point Reyes Bird Observatory (2002 and 2003) failed to reveal any of these birds in the management area. Potential habitats include many cottonwood groves along the Pit River, as well as Cedar and Fitzhugh Creeks; unfortunately, their degraded condition cannot support the species.
- **Oregon spotted frog** *(Rana pretiosa)*—the species is a candidate for listing. Surveys conducted by the USDA Forest Service, universities, and private entities have failed to find this species in the management area.

2.24.2.1 Desired Future Condition

Habitats of federally listed (endangered, threatened, or candidate) wildlife would be protected, restored, and maintained so that healthy, stable populations occupy available species habitats.

2.24.2.2 Goal

Habitats of federally listed (endangered, threatened, or candidate) wildlife will be protected, restored, and maintained so that species populations increase in size and stability, and occupy available habitats. By so doing, the need for special management and protection will be reduced or eliminated.

2.24.2.3 Objectives

Endangered and threatened species, and their critical habitats, will be managed under regional conservation strategies, recovery plans, and habitat management plans, according to reasonable and prudent measures based on plan and project-level opinion. The mandate for these actions is provided in Sections 7(a) (1) and 7(a) (2) of the Endangerd Species Act and BLM Manual 6840.

2.24.2.4 Proposed Management Actions for Group 1

Bald eagle: Conduct annual nesting surveys to count individual birds and monitor reproductive success. Mid-winter population surveys will also be conducted annually, in conjunction with interested parties in Big Valley, the upper Pit River Valley, and the eastern shore of Goose Lake. Seasonal protective measures and buffer zones will also be implemented (Table 2.24-3). Habitat management plans will be developed for the Conrad Ranch and Timbered Crater nesting areas, and the Juniper Creek roosting site. In occupied bald eagle habitat, thinning and prescribed fire may be used to improve habitat conditions. In some locations, timber operations and woodcutters may be required to leave some large-diameter trees as potential nesting sites.

Shasta crayfish: Cooperate with state and federal agencies to locate additional populations and/or habitats on AFO-administered lands. Implement appropriate conservation measures for any newly discovered populations or habitats, using an action plan developed from the current Shasta crayfish recovery plan. Ensure that existing exclosure fencing is properly maintained so that it continues to

provide effective protection at springs occupied by this species. Regularly monitor known sites and add any newly acquired habitat to the action plan.

Modoc sucker: Potential habitat for this species is managed under the Modoc Sucker Recovery and Action Plans. Under these plans, Dutch Flat Creek has been fenced to exclude livestock from potential habitat. Inventories will continue to identify critical and suitable habitats and search for unknown populations. Suitable habitats will be periodically monitored to detect undiscovered populations or reoccupation by this species. All identified habitats on BLM-administered lands will be managed for optimum riparian function. A partnership will be maintained with the USDA Forest Service, CDFG, the USFWS, the Pit River Watershed Alliance, and private landowners to continue these efforts, and to encourage maintenance of suitable habitats on public and private lands. BLM will attempt to acquire any suitable habitat (from willing owners) that may be found on private lands.

Shortnose and Lost River suckers: The AFO will cooperate with state and federal agencies in conducting inventories to identify critical and suitable habitats, and search for populations on BLM-administered lands. Suitable habitats will be periodically monitored to detect undiscovered populations. An action plan will be developed (based on draft recovery plans for the shortnose and Lost River suckers) and conservation measures implemented if a population of either species is discovered.

Northern spotted owl: The AFO is outside the area circumscribed by the Northwest Forest Plan (a federal recovery plan encompassing the known habitat of this subspecies). Since neither a population, nor potential habitat, has been found in the management area, the AFO has not developed a recovery plan for this species. However, if a population or suitable habitat area were discovered, BLM would review present and future actions that may affect this species (in consultation with USFWS) and a local recovery plan would be developed.

Yellow-billed cuckoo and Oregon spotted frog: Though the management area contains potential (but badly degraded) habitat for the yellow-billed cuckoo and potential habitat for the Oregon spotted frog, repeated surveys have not revealed populations of either species. However, if a population (of either species) is discovered, a thorough inventory would be conducted, and conservation and action plans would be developed.

2.24.3 Group 2. State-Listed And BLM Sensitive Species

The following state-listed or BLM sensitive species are of concern in the AFO planning area:

California-listed species:

- Swainson's hawk *(Buteo swainsoni)*
- Bank swallow *(Riparia riparia)*
- Willow flycatcher *(Empidonax traillii)*
- Great gray owl *(Strix nebulosa)*
- Greater sandhill crane *(Grus canadensis tabida)*
- Sierra Nevada red fox *(Vulpes vulpes necator)*
- California wolverine *(Gulo gulo luteus)*

BLM sensitive species:

- Golden eagle *(Aquila chrysaetos)*

- Ferruginous hawk *(Buteo regalis)*
- California spotted owl *(Strix occidentalis occidentalis)*
- Tri-colored blackbird *(Agelaius tricolor)*
- Northern sagebrush lizard *(Sceloporus graciosus graciosus)*
- Pacific fisher *(Martes pennanti pacifica)*
- Southwestern river otter *(Lutra canadensis sonora)*
- Juniper titmouse *(Baeolophus griseus)*
- Fringed myotis *(Myotis thysandodes)*
- Long-eared myotis *(Myotis evotis)*
- Small-footed myotis *(Myotis ciliolabrum)*
- Long-legged myotis *(Myotis volans)*
- Yuma myotis *(Myotis yumanensis)*
- Pallid bat *(Antrozous pallidus)*
- Townsend's western big-eared bat *(Plecotus townsendii)*
- Greater sage-grouse (Centrocercus urophasianus) 1/
- Burrowing owl (Athene cunicularia) 1/

1/ These species are addressed in the "Sagebrush Ecosystems and Sagebrush-obligate Species" subsection.

2.24.3.1 Desired Future Condition

Habitats of state-listed and BLM sensitive wildlife would be protected, restored, and maintained so that healthy and stable populations occupy available species habitats.

2.24.3.2 Goal

Habitats of state-listed and BLM sensitive wildlife will be protected, restored, and maintained so that species populations increase in size and stability, and occupy available habitats. By so doing, there would be no need for future protection under the Endangered Species Act, and the (current) need for special protection and management would be reduced or eliminated.

2.24.3.3 Objectives

Critical habitats of state-listed and BLM sensitive wildlife will be managed under the provisions of 43 CFR 4180 (Part 24), BLM Manual 6840, the California Endangered Species Act, and other relevant state laws. A variety of recovery plans, conservation plans, habitat management plans, and conservation strategies will guide efforts to protect and improve species habitats.

Management actions will incorporate BLM BMPs and employ species-specific treatments.

There have been few surveys for state-listed and BLM sensitive species in the management area. However, surveys have been conducted for Swainson's hawk and ferruginous hawk. In the 1980s and 1990s, sightings and nests were documented in Modoc, Siskiyou, and Lassen Counties.

Surveys were also conducted (in 2000 and 2003) for the willow flycatcher; however, none were found. Other than this, local information on state-listed and BLM sensitive species is sparse. Available data for the AFO planning area are insufficient to indicate the presence or absence of species, or to reveal population trends for species thus far identified.

2.24.3.4 Proposed Management Actions for Group 2

The AFO will maintain an active partnership with CDFG, USFWS, USDA Forest Service, and other conservation partners to determine the status of state-listed and BLM sensitive species. Surveys for each state-listed and BLM sensitive species (other than those already inventoried) will determine species presence or absence, identify habitat (year-round or seasonal), and determine distribution and abundance. Data will be recorded on a GIS database (developed in cooperation with these partners), and action plans will be developed. When a population of any (special status) species is discovered, an interdisciplinary implementation plan will be developed according to the following procedure: (a) involve recognized experts; (b) review the species literature, as well as local studies and information; (c) formulate a list of potential actions and; (d) develop an implementation strategy. Implement seasonal protection measures and buffer zones, as suitable, for permitted activities when identified (see Table 2.24-3).

Restore critical habitats of state-listed and BLM sensitive species in degraded sagebrush associations. Implement measures from "Partners in Flight," "Birds in a Sagebrush Sea," and other applicable regional conservation plans. Collaborate with managing partners, private landowners, and other stakeholders to strategize and implement specific treatments. Cooperate with the CDFG (and other partners) to systematically monitor sage-grouse populations.

Specific measures to preserve or restore habitats of special status species include:

- Monitor the effects of landscape-level juniper removal to ensure that populations and habitats of special-status species are not degraded or destroyed.
- Restrict seasonal access to bank swallow nesting areas where human activities are detrimental to nesting.
- Restore riparian vegetation, especially deciduous shrubs, to benefit willow flycatchers (and other riparian wildlife).
- Ensure that meadow vegetation in greater sandhill crane nesting habitat remains at full height (i.e., is not grazed) during their breeding and nesting season (March to May).
- Enhance riparian and wetland habitats (especially cattails and tules) important to tri-colored blackbirds.

2.24.4 Group 3. Ungulates

Species addressed in this resource group are:

- mule and black-tailed deer (*Odocoileus hemionus*),
- pronghorn (*Antilocapra americana*),
- Rocky Mountain elk (*Cervus elaphus nelsoni*), and
- California bighorn sheep (*Ovis canadensis californiana*).

2.24.4.1 Desired Future Condition

The management area would provide sufficient year-round habitat (especially wintering and fawning/kidding areas) for the needs of wild ungulates and other big game. Deer and pronghorn, in particular, would be healthy and numerous. Vegetation—especially riparian areas and special habitats (e.g., aspen, mountain mahogany, bitterbrush, and oak woodlands)—would provide quality habitats of sufficient diversity (structure and age-class), health, and size to meet the seasonal requirements of these animals in all use areas.

2.24.4.2 Goal

Provide sufficient year-round habitat for the needs of wild ungulates and other big game. Ensure that vegetation, soil, and water resources—plus recreation—are managed in such a way that wild ungulate habitats are preserved, restored, enhanced, and maintained in healthy condition.

2.24.4.3 Objectives

The AFO will cooperate with CDFG to amend and update habitat management plans, when appropriate. A GIS database will be maintained, to identify important habitats and key seasonal use areas. Habitats for these ungulates will be managed to achieve desired conditions according to ecological site potential.

Mule/black-tailed deer seasonal use habitats are found throughout the management area (Map WILD-3). Spring, summer, and fall habitats encompass a landscape that is 55% foraging areas, 25% fawning and fawn-rearing areas, and 20% security/thermal cover. Winter habitats are 55% foraging areas, 25-30% thermal cover, and 15-20% security cover (Leckenby et al. 1982). Restoration of degraded bitterbrush is a priority because it is an important habitat type and relatively easy to treat. Fawning habitats are also priority treatment areas.

Pronghorn seasonal use habitats occur throughout the management area (Map WILD-4). Rangelands most favored by pronghorn contain a living vegetation component of 40% (or more) with a diversity of species in each forage class (i.e., grasses, forbs, and shrubs). Furthermore, an average plant height of 15 inches (38.1 cm) is clearly favored over vegetation that exceeds 30 inches (76.2 cm) (Yoakum 2004). Habitat improvement projects will focus on creating a diversity of treated and untreated mosaics.

Elk are a sporadic but (judging by incidental reports) increasing presence in the planning area. However, there are no resident populations. If a population does become established (i.e., a year-round presence with identified seasonal use areas), BLM will work with the CDFG to develop a coordinated habitat management plan.

2.24.4.4 Proposed Management Actions for Group 3

- Management plans and actions for all resource areas must support BLM land health standards. With respect to the wildlife resource, Standard 5 (biodiversity) has the greatest practical significance. This standard requires that:
    - Wildlife habitats must include seral stages, structural diversity, and (habitat) patch-size capable of supporting diverse and viable wildlife populations.
    - Variety in vegetation age class must be present for most species of wildlife.
    - Vegetation must be sufficiently vigorous to maintain desirable (wildlife) population levels, and ensure adequate reproduction and recruitment of plants and animals when favorable events occur.

  - Habitat areas must be of sufficient overall size to support diverse and viable populations and must also be sufficiently interconnected with other, similar habitat areas to ensure genetic exchange between populations.
  - Non-native plants and animals must not exceed acceptable levels.

- Update information on the GIS database for big-game and amend habitat management plans in consultation with CDFG—especially in regard to deer and pronghorn.
- Livestock grazing must be managed so that it does not degrade ecosystems. AMPs will be reassessed and (where necessary) updated to reflect realistic AUMs and reasonable seasonal use parameters. This will prevent overuse and maintain healthy vegetation. Grazing practices that degrade key wildlife habitats and alter the natural vegetation will be avoided. An especially important area is the eastern portion of the Likely Tablelands
- Existing livestock exclosures will be maintained to protect important ungulate habitat. Current meadow and riparian habitat enhancement projects will continue, and an additional 500 acres of riparian habitats will be fenced. Permanent fencing will protect 200 acres of high-risk aspen and 300 additional acres will be protected with temporary fencing. Natural springs that fail to meet land health standards will also be fenced. Other habitat areas that are especially vulnerable to livestock grazing—particularly meadows and wetlands—will also be fenced where need is apparent. All fencing will be built and maintained to BLM-approved wildlife fencing specifications (to minimize injury and permit freedom of movement to wildlife). .
- Artificial water sources (guzzlers) must be properly maintained (responsibility for maintenance will be identified in implementation plans) and additional sources will be added in habitats that are important for big game (and other wildlife) where natural sources have been depleted or water is otherwise limited. Water must be left in cattle troughs (regardless of whether it is used by livestock) from June through October to provide water for wild ungulates (and other wildlife).
- Invasive juniper will be eliminated or substantially reduced where encroachment has affected the carrying capacity of wild ungulate habitats. Rehabilitation will require a combination of treatments, such as prescribed fire, mechanical treatments, and seeding, to create favorable canopy cover and forage/cover ratios (Table 2.24-1).
- Management efforts will also focus on producing healthy shrubs and trees in priority wild ungulate habitats by improving structural and age-class diversity in bitterbrush, mountain-mahogany, aspen, oak woodlands, and sagebrush-steppe habitats. Additional important habitat areas would be identified for deer and pronghorn. Habitat improvement projects would specifically target critical deer habitats on 128,000 acres and critical pronghorn habitats on 60,145 acres. An additional 130,000 acres of low sagebrush, and other high-quality pronghorn habitats, would also be improved (Maps WILD-3 and WILD-4).
- Major emphasis will be placed on eliminating or controlling (where elimination is not feasible) exotic annual grasses—particularly cheatgrass and medusahead—and other noxious weeds using IWM protocols so that native plant associations are restored in important big-game habitats.
- Locally gathered native seed and/or plants will usually be used for seeding and planting areas burned by wild or prescribed fire, juniper treatment areas and other disturbed areas. However, non-local native seed may be used when local seed is unavailable. For some uses, under certain circumstances, non-native seed or plants may also be employed.
- The AFO will acquire lands (from willing) owners or cooperators in priority habitats and other key areas (e.g., springs, meadows, and riparian areas) that would benefit deer and pronghorn.

Table 2.24-1 Juniper Management Strategy for Wildlife Habitat

Management Area		Desired Ratio: Forage/Cover[1/]	Desired Canopy Cover[2/]	Management Focus
1	Likely Tablelands	99/1	Old growth	Sage-grouse and big game
2	Tule Mountain	75/25	Less than 20%	Wildlife diversity
3	McDonald Mountain	90/10	Old growth	Sage-grouse and sagebrush-steppe
4	Likely Mountain	70/30	Less than 20%	Big game and biodiversity
5	Rocky Prairie	85/15	Old growth	Sage-grouse and sagebrush-steppe
6	Adin	95/5	Old growth	Sagebrush-steppe
7	Butte Creek	80/20	Old growth	Big -game
8	Sheep Valley	70/30	Less than 20%	Big game and biodiversity
9	Fall River[3/]	80/20	Old growth	Big game and shrubland health
10	Juniper Creek	70/30	Less than 10%	Big game
11	Widow Mt./Baldy Mt.	80/20	Old growth	Big game and biodiversity
12	Timbered Crater	60/40	Less than 20%	Biodiversity
13	Mount Dome/Sheep Mt.	80/20	Old growth juniper	Big game
14	Scanlan Butte/Carr Butte	100/0	None	Big game and sagebrush-steppe
15	Alturas Rim	60/40	Less than 20%	Scenic and biodiversity
16	East of Highway 395	90/10	Old growth	Sage-grouse and pronghorn

[1/] Desired Ratio: Forage/Cover = percent wildlife foraging area versus juniper cover. For example; if a hypothetical unit contains 1,000 acres of juniper-covered land, and the desired forage-to-cover ratio is 60/40, then juniper would be treated to achieve the desired canopy cover.

[2/] Desired Canopy Cover = percent of area left with juniper on site. For example; if juniper cover in a hypothetical unit is 30%, and the desired canopy cover is 15%, then the stand would be thinned by half to achieve a 15% canopy cover. "Old growth" signifies a site where juniper is naturally dominant and cutting or thinning is not indicated.

[3/] Old growth juniper will be left in WSAs and in large, lava-covered areas.

- California bighorn sheep (a species native to the planning area) may naturally re-occupy former habitats. Reintroduction—natural or artificial—is favored. In any case, the AFO will cooperate with CDFG to reintroduce this species and to develop a management plan prior to any reintroduction effort. Badly degraded habitats in historic bighorn range would be restored or improved prior to any reintroduction attempt.
- If Rocky Mountain elk reestablish themselves, BLM will coordinate with CDFG and other interested parties—including livestock operators—to develop and implement a management plan.
- AFO recreation specialists will coordinate with CDFG and sportsman's groups to solve hunter access problems, improve camping, and develop "special hunt" opportunities.
- Roads and trails will be seasonally 'Closed' to OHVs in the following big game wintering areas: Likely Tablelands (12/1 thru 4/15), Barnes Grade (11/15 thru 4/15), and Day Bench (11/15 thru 4/15). OHV travel designations and closures that are designed to protect big game habitats are presented in Table 2.24-2.

Table 2.24-2 Travel Designations and Closures to Protect Big-Game Habitats

OHV Travel Designations	Area (acres)
'Open'	0
'Limited to Existing Roads and Trails'	4,260
'Limited to Designated Routes'	74,000
'Closed'	860

2.24.5 Group 4. Sagebrush Ecosystems and Sagebrush-Obligate/Associated Species

This group focuses on the management of the sagebrush ecosystem to provide habitats for populations of native wildlife that depend on it (for at least some of their habitat needs), specifically sage-grouse, sage sparrow, and (potentially) pygmy rabbit.

2.24.5.1 Desired Future Condition

Sagebrush ecosystems would be restored and fully functional in a regional context, not just in the AFO planning area. Encroachment by invasive western juniper would be arrested and reversed, and substantial progress would be evident in combating exotic annual grasses and other noxious weeds. Sagebrush habitats would be diverse in structure and age class. Understory vegetation would be abundant and robust. Sagebrush-obligate wildlife would increase and prosper according to the potential of local shrubland ecosystems.

2.24.5.2 Goal

Restore and maintain sagebrush ecosystems that are important for sagebrush-obligate wildlife. Ensure that sagebrush habitats are sufficiently healthy and diverse to provide year-round sustenance, water, and cover (security and thermal).

2.24.5.3 Objectives

In order to fulfill the year-round requirements of sage-grouse and other sagebrush-dependent or associated wildlife, sagebrush plant associations and wildlife habitats must be sufficiently diverse in height, density, age class, and patch size, and also contain healthy and equally diverse understory vegetation.

Core areas of critical habitat must be maintained (or created) in large contiguous blocks; however, they must also interconnect in a variety of irregular arrangements (e.g., islands, corridors, and quasi-mosaic patterns) over extended areas. Management planning and actions will focus on species that are currently at risk (i.e., sage-grouse, pygmy rabbit, burrowing owl, and certain plants), as recognized nationally and regionally, and at the state and local level.

2.24.5.4 Proposed Management Actions for Group 4

Management plans and actions for all resource areas must support BLM land health standards. With respect to the wildlife resource, Standard 5 (biodiversity) has the greatest practical significance. This standard requires that:

- Wildlife habitats must include seral stages, structural diversity, and (habitat) patch size capable of supporting diverse and viable wildlife populations.

- Variety in vegetation age class must be present for most species of wildlife.
- Vegetation must be sufficiently vigorous to maintain desirable (wildlife) population levels, and ensure adequate reproduction and recruitment of plants and animals when favorable events occur.
- Habitat areas must be of sufficient overall size to support diverse and viable populations and must also be sufficiently interconnected with other, similar habitat areas to ensure genetic exchange between populations.
- Non-native plants and animals must not exceed acceptable levels.

Species-specific management for sagebrush-obligate wildlife would be as follows:

- **Sage-grouse:** Specific conservation measures have been developed for local sage-grouse populations and habitats; i.e., "Conservation Strategies for Sage-grouse and Sagebrush Ecosystems in the Buffalo-Skedaddle, Likely Tablelands/Rocky Prairie, and Devil's Garden/Clear Lake Population Management Units." The actions specified in this plan will be implemented, and some populations will be augmented following habitat rehabilitation.
- **Burrowing owl:** The planning area will be inventoried for suitable and occupied habitats, and population size will be estimated. (Habitat recognition and assessment parameters will also be refined and standardized for future use.) A conservation strategy will be developed to protect burrows and other seasonal habitats (occupied and potential) and a list of BMPs developed to guide resource management actions. Supportive measures such as artificial burrows, water developments, prey enhancement schemes, etc. will also be considered.
- **Pygmy rabbit:** The planning area will be inventoried for suitable and occupied habitats, and population size will be estimated. (Habitat recognition and assessment parameters will also be refined and standardized for future use.) A conservation strategy will be developed to protect occupied and potential habitats and a list of BMPs developed to guide resource management actions.
- **Other sagebrush-obligate or associated wildlife:** A general survey would reveal the presence, distribution, and abundance of other sagebrush-associated wildlife. Particular attention will be paid to habitat utilization and demographic trends. The information will be used in local, regional, and national strategic planning for sagebrush-obligate wildlife. All pertinent legal authority, especially Executive Order 13186 (Responsibilities of Federal Agencies to Protect Migratory Birds), will be used to justify species-specific range assessments and site-specific conservation measures for all sagebrush-obligate wildlife.

Seasonal protective measures and buffer zones (Table 2.24-3) would be implemented for permitted activities when identified.

Livestock grazing would be managed so that it does not destroy understory vegetation and otherwise degrade sagebrush ecosystems. AMPs will be reassessed and (where necessary) updated to reflect realistic AUMs and reasonable seasonal use parameters. This will prevent overuse and maintain healthy vegetation. Grazing practices that degrade key wildlife habitats and alter the natural vegetation will be avoided.

A substantial amount of habitat improvement will focus on reducing invasive juniper. Prescribed fire and a combination of other treatments will be used to reduce invasive juniper, regenerate understory vegetation, and create species, structural, and age-class diversity in degraded sagebrush associations. Desired canopy cover and forage/cover ratios for sagebrush habitats degraded by invasive juniper are presented in Table 2.24-2.

Sagebrush habitats that contain a thriving component of native understory vegetation will be identified and maintained by allowing—or simulating (e.g., prescribed fire)—natural disturbance processes. Mismanaged grazing and other practices that convert sagebrush habitats to non-native grassland (or to agricultural land) will be avoided. Activities that contribute to (further) fragmentation of sagebrush habitats will be actively discouraged.

Unfortunately, many sagebrush-steppe habitats are heavily degraded. These require emergency action and long-term treatment to control exotic grasses, weeds, and invasive plants, plus action to reduce shrubland fuels, reestablish native species, and regenerate senescent sagebrush. Prescribed fire, and other fuel and vegetation treatments, will be used to restore degraded sagebrush and reduce the likelihood of catastrophic wildfires.

Green strip vegetation will also be planted in priority habitats (to reduce fire intensity and control its spread).

Major emphasis will be placed on eliminating or controlling (where elimination is not feasible) exotic annual grasses, particularly cheatgrass and medusahead, and other noxious weeds using IWM protocols so that native sagebrush-steppe plant associations can (eventually) be restored.

Locally gathered native seed and/or plants will usually be used for seeding and planting areas burned by wild or prescribed fire, juniper treatment areas, and other disturbed areas. However, non-local native seed may be used when local seed is unavailable. For some uses, under certain circumstances, non-native seed or plants may also be employed.

Habitats and populations of sagebrush-associated wildlife will be carefully monitored. Particular attention will be paid to habitat utilization and demographic trends. This information will be used in local, regional, and national strategic planning for sagebrush-obligate wildlife.

2.24.6 Group 5. Other Native Wildlife Species

The major species groups covered in this group are:

- terrestrial mammals,
- raptors,
- migratory birds (neo-tropical migrants),
- waterfowl and shorebirds,
- upland game birds, and
- bats.

Most of the species, or groups of species, addressed in this group had little or no protective measures relating directly to them or their habitats, in previous land use plans. However, several species known or suspected to occur in the field office management area are now on the BLM sensitive species list or are state-listed (these species are addressed in a previous management group).

2.24.6.1 Desired Future Condition

AFO-administered lands would satisfy the standards and guidelines for livestock grazing and fulfill BLM land health standards. Local habitats would be sufficient to sustain healthy populations of all resident and seasonal wildlife according to the nature, ecological potential, and abundance of species habitats native to the planning area.

2.24.6.2 Goal

Protect, restore, and maintain naturally occurring habitats for all species of resident and seasonal native terrestrial wildlife.

2.24.6.3 Objectives

Naturally occurring habitats for all wildlife species native to the planning area will be managed in such a way that food, water, thermal and escape cover, and reproductive territory is readily available and in satisfactory condition to meet the year-round (or seasonal) requirements of native terrestrial wildlife.

2.24.6.4 Proposed Management Actions for Group 5

- Management plans and actions for all resource areas must support BLM land health standards. With respect to the wildlife resource, Standard 5 (biodiversity) has the greatest practical significance. This standard requires that:
  - Wildlife habitats must include seral stages, structural diversity, and (habitat) patch size capable of supporting diverse and viable wildlife populations.
  - Variety in vegetation age class must be present for most species of wildlife.
  - Vegetation must be sufficiently vigorous to maintain desirable (wildlife) population levels, and ensure adequate reproduction and recruitment of plants and animals when favorable events occur.
  - Habitat areas must be of sufficient overall size to support diverse and viable populations and must also be sufficiently interconnected with other, similar habitat areas to ensure genetic exchange between populations.
  - Non-native plants and animals must not exceed acceptable levels.
- Management of critical habitats for other native terrestrial wildlife will follow current conservation plans, BMPs, and MOUs with other agencies. Important conservation plans include “Partners in Flight,” “Birds in a Sagebrush Sea,” and NV-BLM’s “Migratory Bird Best Management Practices for the Sagebrush Biome” and the “Nevada Bat Conservation Plan.” A variety of habitat improvement projects (associated with this and other subsections and other resource areas) will directly or indirectly benefit native terrestrial wildlife.
- Rehabilitate habitats through juniper reduction projects, modified grazing regimes, riparian fencing and habitat enhancement, and seeding/planting of perennial and annual species. Native and non-native shrubs, forbs, grasses and seeds would be utilized to provide multiple use opportunities. Good foraging habitat would be protected from catastrophic fire by implementing specific fuels treatment methods. Green strip firebreaks would be constructed to reduce fire impact on important habitats.
- Livestock grazing must be managed so that it does not degrade ecosystems. AMPs will be reassessed and (where necessary) updated to reflect realistic AUMs and seasonal use parameters. This will prevent overuse and maintain healthy vegetation. Grazing practices that degrade key wildlife habitats and alter the natural vegetation will be avoided.

- Existing livestock exclosures will be maintained to protect important vegetation. Current meadow and riparian habitat enhancement projects will continue, and an additional 500 acres of riparian habitats will be fenced. Permanent fencing will protect 200 acres of high-risk aspen and 300 additional acres will be protected with temporary fencing. Natural springs that fail to meet land health standards will also be fenced. Other habitats that are especially vulnerable to grazing—particularly meadows and wetlands—will be fenced where need is apparent.
- Artificial water sources (guzzlers) must be properly maintained (responsibility for maintenance will be identified in implementation plans) and additional sources will be added in habitats that are important for upland game birds (and other wildlife) where natural sources have been depleted or water is otherwise limited. Water must be left in cattle troughs (regardless of whether it is used by livestock) from June through October to provide water for native wildlife.
- Special habitats would be managed to maintain or enhance biodiversity and sustain healthy multi-aged stands of aspen, mountain mahogany, oak woodlands, bitterbrush, riparian and wetland areas, springs, and a variety of mountain shrub communities.
- Major emphasis will be placed on eliminating or controlling (where elimination is not feasible) noxious weeds and undesirable invasive plants. IWM and juniper-reduction programs will help restore native plant associations for the benefit of native wildlife.
- Brush piles will be built to provide cover for upland game birds and small mammals near water sources and in other suitable area. These will be augmented or replaced when necessary.
- Populations of upland game birds and other native wildlife may be augmented or reestablished (in coordination with CDFG) where this is likely to be beneficial, as described in BLM Manual 1745 (Introduction, Transplantation, Augmentation, and Reestablishment of Fish, Wildlife, and Plants).
- Table 2.24-3 lists birds (and one bat) that are exceptionally vulnerable to disturbance from permitted activities in specific locations at certain times of the year. Most are not federal or CA-listed or BLM sensitive species, but all require distance buffers or other seasonal protective measures to prevent excessive disruption of breeding, roosting, or hibernation. The annual nest-monitoring program will be expanded to evaluate the success of these measures.
- Waterfowl nesting islands will be maintained on 12 reservoirs, and new islands constructed on 26 reservoirs. Up to 19 reservoirs will be fenced to protect waterfowl habitats (this will only withdraw 500 acres from livestock use). Exclosure fencing will also be used to protect other special habitats. (Refer to Maps WILD-2A and 2B, and Table 2.24-4.)

Table 2.24-3 Seasonal Restrictions and Distance Buffers for Wildlife[1/]

Species	Locations	Distances	Dates
Bald eagle	nests	¼ mile non-los, ½ mile los, 1 mile blasting	Jan. 1–Aug. 31
	winter roosts	½ mile	Dec. 1–Apr. 1
Golden eagle	nests	¼ mile non-los, ½ mile los	Feb. 1–Aug. 31
Northern goshawk	nests	¼ mile occupied, ½ mile previous year nest	Mar. 1–Aug. 31
Cooper's hawk	nests	¼ mile	Mar. 1–Aug. 31
Sharp-shinned hawk	nests	¼ mile	Mar. 1–Aug. 31
Ferruginous hawk	nests	¼ mile non-los, ½ mile los	Mar. 1–Aug. 1
Red-tailed hawk	nests	¼ mile	Mar. 1–Aug. 31
Swainson's hawk	nests	¼ mile non-los, ½ mile los	Apr. 15–Aug. 15
Peregrine falcon	nests	1 mile	Jan. 1–Aug. 15
Prairie falcon	nests	¼ mile non-los, ½ mile los	Mar. 15–Aug. 15
Osprey	nests	¼ mile	Mar. 1–Aug. 31
Burrowing owl	nests	¼ mile	Mar. 1–Aug. 31
Flammulated owl	nests	¼ mile	Apr. 1–Sept. 30
Great gray owl	nests	¼ mile	Mar. 1–July 31
Great blue heron	nests	660 feet non-los, ¼ mile los	Mar. 15–July 15
Greater sandhill crane	nests	¼ mile	April 1–July 1
Townsend's big-eared bat	nurseries hibernaculae	n/a n/a	Apr. 15–Oct. 31 Nov. 1–Apr. 15

[1/] These are typical restrictions and general guidelines--specific dates and distances may vary depending on the nature of the proposed permitted activity, local breeding chronology, and yearly local weather patterns.

Note: los = line-of-site

Table 2.24-4 Waterfowl Management Areas and Proposed Actions

	Reservoir	Existing Nest Islands	Build New Islands	Islands Require Maintenance	Existing Fences	Build Island Fences	Build Reservoir Fences
1	Nelson Corral	X	X	X			X
2	Bayley	X		Unknown		X	X
3	Graven	X		Unknown		X	
4	Lower Roberts		X			X	
5	Little Juniper[1/]	X	X	X		X	
6	Payne	X	X	X		X	
7	French	X		X		X	X
8	Danhauser	X	X	X		X	
9	Dobe Swale	X			X	X	
10	Iverson		X			X	
11	Juniper Lake		X			X	X
12	Snider	X	X	X		X	X
13	Van Sickle	X	X	X		X	
14	Coyote		X			X	
15	Moon		X			X	
16	Williams Ponds				X		X
17	WFKVL		X			X	X
18	Rimrock		X			X	X
19	West Valley						X[2/]
20	Said Valley		X			X	
21	Antelope		X		X		
22	Knox Gulch		X		X		
23	Red Rocks	Goose	X		Unknown	X	X
24	Wild horse		X		Unknown	X	X
25	Bonner Ravine		X			X	
26	Mud	Goose	X			X	X
27	Kelly		X			X	X
28	Sec 22		X			X	X
29	Catfish		X			X	X
30	Buckhorn		X			X	X
31	Cow Lake		X			X	X
32	Bowman						X
33	Blue Door Flat		X			X	X

[1/] Coordinate with CDFG and Alturas Farms to ensure that water is sufficiently deep and persistent for successful waterfowl nesting.

[2/] Only the northeast corner of the reservoir would be fenced to exclude livestock.

2.24.7 Group 6. Native and Non-Native Fish and Other Aquatic Species

Native fish include redband trout, mountain whitefish, tui chub, Tahoe sucker, mountain sucker, speckled dace, and Paiute sculpin. Non-native fish include brown trout, rainbow trout, brook trout, and a variety of warm-water game and non-game fish.

2.24.7.1 Desired Future Condition

Ecosystem conditions in aquatic and riparian habitats would satisfy BLM standards for livestock grazing, riparian PFC, and BLM land health standards. Therefore, springs, streams, lakes, and reservoirs would support thriving populations of native (and desirable non-native) fish and other aquatic species. Quality public fishing would be readily available, and reasonable public access would be assured.

2.24.7.2 Goal

Aquatic ecosystems (and associated riparian and wetland habitats) will be restored, enhanced, and protected from degradation, so that native (and desirable non-native) fish and other aquatic species will thrive.

2.24.7.3 Objectives

Systematically inventory the macroscopic life of streams and natural springs. Identify as to species (or species group), document, and assess the need for special management. Ensure that all streams and fish-bearing springs are rehabilitated and protected (from renewed degradation), so that suitable habitats for native fish and other aquatic species are sustained. Attention will be focused on restoring and protecting habitats of native redband trout; management actions will increase populations and reintroduce this native fish in suitable locations throughout its former range. Where appropriate to support recreational fishing (primarily reservoirs), habitats will also be improved for non-native game fish. These and other activities regarding recreational fishing and management of native and non-native fish populations will be coordinated with state wildlife agencies.

2.24.7.4 Proposed Management Actions for Group 6

- Management plans and actions for all resource areas must support BLM land health standards. With respect to native fish and aquatic ecosystems, Standards 2 (streams) and 4 (riparian areas and wetlands) have the greatest practical significance. These standards require that:
    - Standard 2: All streams and fish-bearing springs must be managed to recover and maintain habitats for native fish. Gravel bars and other coarse-textured stream deposits must be successfully colonized and stabilized with woody riparian plants. Streambank vegetation must be vigorous and diverse, mostly perennial, and able to protect streambanks from erosion during high-flow events. Stream surfaces must be generously shaded, so that waters remain (relatively) cool in summer and winter icing is minimized.
    - Standard 4: Riparian vegetation must be vigorous, mostly perennial (and largely woody), diverse (in terms of species, structure, and age-class) and appropriate for the site. Riparian vegetation and large woody debris must also be well-anchored and robust to withstanding high-flow events and protect streambanks and shorelines. Erosion resulting from human activities must be negligible.

- Management plans and actions for all resource areas must employ BMPs and maintain PFC of riparian and aquatic ecosystems. However, uses and activities would generally be allowed if they do not interfere with steady, significant progress toward BLM land health standards and State water-quality standards.
- Many springs and streams are not in PFC. Those that have been identified thus far—and others as identified—will be rehabilitated by altering grazing practices, fencing, re-vegetation and other site-specific measures to protect and restore native vegetation, stabilize streambanks, create shade, and benefit native fish and other aquatic life.
- Systematically inventory the macroscopic life of springs, riparian areas, wetlands, and streams. Identify as to species (or species group), document, and assess need for special management.
- Implement a regularly scheduled program of riparian and streamside monitoring using macro-invertebrate sampling, streamside vegetation assessment, and other measures to detect riparian trends, and assess water quality and hydrologic function.
- Maintain currently established dams and reservoirs to provide a safe environment for public activities.
- Livestock grazing must be managed so that it does not degrade springs, riparian vegetation, wetlands, streams—and habitats of native fish. AMPs will be reassessed and (where necessary) updated to reflect realistic AUMs and seasonal use parameters. This will prevent overuse and maintain healthy vegetation, stable embankments, and adequate water quality.
- Explore the present capacity of planning area waterways to support native fish and (in suitable waters) non-native gamefish. The potential of these waterways—when properly rehabilitated—for natural dispersal, successful reintroduction (or augmentation), and maintenance of healthy fish stocks will be assessed. Native fish will be prioritized in most cold-water streams. The most attention will focus on restoring native redband trout; management actions will restore degraded habitats, improve water quality, increase populations, and reintroduce this native subspecies in suitable locations throughout its former range. (This and other actions regarding introductions or augmentations—and issues related to sportfishing—will be coordinated with CDFG and must be in accord with their management plans.)
- Stream rehabilitation and habitat improvements will include injection of clean spawning gravels and placement of root wads, boulders, or other natural structures in suitable locations. Artificial structures will also be employed for habitat improvement in streams and reservoirs (e.g., artificial nest cavities, water circulation systems, fish bypass structures, etc.).
- Various habitat improvements for warm-water fish will be made at the following reservoirs: Iverson, Lower Roberts, Coyote, Romero, Little Juniper, Knox Gulch, Popcorn #1, Antelope, West Valley and Moon Reservoirs. Minimum pool depths will be established and enforced at these reservoirs to ensure that fish stocks survive low-water periods. New reservoirs, developed for economic reasons, will also provide additional waters for fishing and other recreational activities.
- Public fishing will be allowed on all waters, unless special restrictions are necessary (as determined by BLM or CDFG). BLM will work with CDFG to develop diversified fishing opportunities. This will include waters that only contain native fish, catch-and-release areas, and fly-fishing only areas. Current fishing access points will be maintained, and additional access will be developed where needed. BLM will coordinate with county fish and game commissions and local sportsman's groups to determine management priorities and enhance recreational fishing opportunities.

2.24.8 Group 7. Non-Native Species

The AFO provides habitat for a variety of desirable non-native species, including chukar, turkey, brown trout, and brook trout. There are also several undesirable wildlife populations that may compete with habitat elements for native wildlife. Some of these include starling, brown-headed cowbird, and bullfrog.

2.24.8.1 Desired Future Condition

Populations of desirable non-native wildlife (i.e., game species) will be healthy and abundant within their current area of distribution. Populations of undesirable non-native wildlife and feral animals will be gone, or adequately controlled where elimination is not feasible.

2.24.8.2 Goal

Manage habitats of desirable non-native wildlife (e.g., chukar partridge, turkey, brown trout, and brook trout) to maintain healthy and abundant populations within current (species) range and eliminate (or control) undesirable non-native wildlife and feral animals.

2.24.8.3 Objectives

Evaluate introduction and augmentation proposals for (desirable) non-native wildlife according to habitat management plans and BLM policy (the likelihood of range extension must be low). Coordinate any such action, or other issues concerning desirable non-native wildlife, with state wildlife agencies (under existing MOUs). Eliminate or control (where elimination is not feasible) undesirable non-native wildlife and feral animals.

2.24.8.4 Proposed Management Actions for Group 7

- Management plans and actions for non-native wildlife must follow BLM Manual 1745 (Introduction, Transplantation, Augmentation, and Reestablishment of Fish, Wildlife, and Plants). Section .06 (A) requires use of native species; unless (through the NEPA process) it is determined that:
    - Suitable native species are not available.
    - The biological diversity of the (proposed) species management area would not be diminished.
    - The exotic or naturalized species can be confined to the (proposed) species management area.
    - Analysis of the ecological site inventory indicates that present conditions would not support reestablishing a native species that was formerly present in the (proposed) species management area.
    - Resource management objectives cannot be approximated with a native species.
- Although undesirable non-native wildlife and feral animals would normally be eliminated, BLM Manual 1745 does permits exceptions. Section .06 (F) of the manual allows exemption for any wild or feral species specifically protected by federal or state law, under terms imposed by these entities.
- Eliminate or (where elimination is not feasible) control populations of undesirable non-native wildlife (both exotic and invasive) and feral animals to protect habitats and benefit populations of native wildlife as specified in current conservation plans, BMPs, and MOUs with other agencies. Important plans in this regard include “Partners in Flight,” “Birds in a Sagebrush Sea,” and NV-BLM’s “Migratory Bird Best Management Practices for the Sagebrush Biome” and the “Nevada Bat Conservation Plan.”

ALTERNATIVES SUMMARY TABLE

AIR QUALITY

Management Common to All Alternatives:

- All prescribed fire projects would be completed in accordance with the Clean Air Act and would comply with all federal, state, and local air pollution requirements.
- Prescribed fire projects and wildland fire use will be timed and/or managed to comply with federal, state, and local particulate matter standards.
- An approved prescribed fire burn plan would be in place prior to the ignition of any prescribed fire, and adhered to throughout the project.

Management Actions	No Action Alternative	Alternative 1 Economic	Alternative 2 Ecosystem	Alternative 3 Traditional	Preferred Alternative
Manage prescribed fires to reduce impacts to air quality (acres/year)	50–5,000	500–10,000	500–25,000	75–7,500	75–10,000

CULTURAL & PALEONTOLOGICAL RESOURCES

Goal #1- Preserve and Protect

Management Common to All Alternatives:

- Consult with Native American tribes regarding culturally significant areas, including TCPs and culturally significant economic resources.
- Regularly patrol and monitor cultural and paleontological sites to prevent illegal artifact and fossil collecting. Evaluate enforcement success.
- The BLM–CA SHPO Protocol Agreement will be implemented.
- All livestock grazing allotments will be evaluated for cultural and paleontological sites according to an existing schedule between the AFO and the CA SHPO.
- Additional, more intensive, cultural resource surveys will focus on Category 1 grazing allotments.
- Yankee Jim Ranch will be nominated to the NRHP.
- Cultural resource data will be maintained in GIS format.
- All archaeological sites will be evaluated and placed into use categories according to DOI IB No. 2002-101.

Management Actions	No Action Alternative	Alternative 1 Economic	Alternative 2 Ecosystem	Alternative 3 Traditional	Preferred Alternative
Propose archaeological ACECs (number/acres)	0	1 proposed 3,200 acres	3 proposed 5,350 acres	1 proposed 1,400 acres	1 proposed 1,400 acres
Propose cultural interpretive sites (number/acres)	0	12 proposed 20.5 acres	3 proposed 7.5 acres	0	3 proposed 7.5 acres

CULTURAL & PALEONTOLOGICAL RESOURCES (continued)					
Goal #1- Preserve and Protect (continued)					
Develop CRMPs for interpretive sites, SRMAs, NRHP districts, and TCPs	3 exist: Tule Mountain, Juniper Creek, and Mount Dome. Develop new CRMP only when a problem is identified	Develop for all TCPs and NRHP districts	Develop for all interpretive sites and SRMAs	3 exist: Tule Mountain, Juniper Creek, and Mount Dome. Develop new CRMP only when a problem is identified	Develop for Rocky Prairie/ South Graves, Tule Mountain, Likely Tablelands/ Yankee Jim Ranch, and Beaver Creek, and three interpretive sites.
Exclosure fences would be used (in consultation with permittees and tribes) to protect important cultural sites from damage by OHVs and livestock (acres)	0	0	3,750	200	**2,750**
Apply OHV restrictions to culturally sensitive areas	1 area 'Limited to Designated Routes': Nelson Springs (60 acres.)	Close high-sensitivity areas only as recommended by sensitivity model	Close 3 areas (3,554 acres) OHVs 'Limited to Existing Roads and Trails' in 4 areas	OHVs 'Limited to Existing or Designated Routes' in all areas	OHVs 'Limited to Existing or Designated Routes' in all areas
Survey and protect paleontological sites	No	Yes, survey and protect currently recognized sites; No inventory, survey, or protection of new sites	Survey and protect all sites; Inventory new sites	No	Survey and protect all sites; Inventory new areas within geologically suitable soils
Goal # 2 – Survey and Inventory					
Management Common to All Alternatives: • Categorize all lands managed by the AFO according to high, medium or low cultural sensitivity ratings. • Consult with Native American tribes regarding culturally significant areas. • Evaluate the effects of juniper harvest on areas of "light lithic scatter".					
Management Actions	**No Action Alternative**	**Alternative 1 Economic**	**Alternative 2 Ecosystem**	**Alternative 3 Traditional**	**Preferred Alternative**
Use sensitivity model to structure surveys	No	Yes	No	No	Yes

CULTURAL & PALEONTOLOGICAL RESOURCES (continued)

Goal #3 - Education and Interpretation

Management Common to All Alternatives:

- All interpretive sites will be developed in consultation and partnership with Native American tribes and individuals.
- Site stewards will be actively recruited.

Management Actions	No Action Alternative	Alternative 1 Economic	Alternative 2 Ecosystem	Alternative 3 Traditional	Preferred Alternative
Develop new educational publications	No	Yes, general in nature and applicable to all cultural sites	Yes, site-specific for 3 proposed cultural sites	No	Yes, general in nature and applicable to all cultural sites except for interpretive sites which would be site specific
Develop new interpretive sites (number)	0	12	3	0	3

Goal #4 – Consult with Native American Tribes

Management Common to All Alternatives:

- Consultation with Native American tribes would be documented.
- All identified and qualifying TCPs would be managed for Native American use but will remain under federal management and ownership.

Management Actions	No Action Alternative	Alternative 1 Economic	Alternative 2 Ecosystem	Alternative 3 Traditional	Preferred Alternative
Identify and protect potential TCPs and culturally significant economic resource sites	No	Yes, all TCPs	Yes, but only within 8 SRMAs	No	Yes, all TCPs

ENERGY AND MINERALS

Management Common to All Alternatives:

- WSAs are 'Closed' to mineral leasing, saleable mineral activities, and renewable energy development pending Congressional action on wilderness status.
- When not proposed for withdrawal, WSAs are 'Open' to exploration and development of locatable minerals. However, use would be limited to activities that do not require reclamation, unless the operation had established "grandfathered" uses or valid existing rights on or before October 21, 1976.
- Acquired lands would be managed according to the purpose of acquisition and/or by management practices on adjacent lands. For instance, the 640 acres of mining mitigation lands in Section 2 T36N R9E (to be acquired from Lassen Gold), would be recommended for mineral withdrawal.
- Mineral and energy activities will be monitored to ensure compliance with stipulations, terms and conditions, and reclamation plans.
- Adequate remedial action will be taken when abandoned mine hazards are identified.

Management Actions	No Action Alternative	Alternative 1 Economic	Alternative 2 Ecosystem	Alternative 3 Traditional	Preferred Alternative
LEASABLE MINERALS					
'Open' to leasing (acres)	446,397	445,997	400,022	438,675	445,997
'Closed' to mineral leasing (acres)	56,648	57,048	103,023	64,370	57,048
LOCATABLE MINERALS					
'Open' to locatable minerals (acres)	501,723	500,545	418,326	495,323	470,052
'Closed' (withdrawn) to locatable minerals (acres)	1,322	2,500	84,719	7,722	32,993
SALEABLE MINERALS					
'Open' to mineral material pit establishment (acres)	446,397	445,997	124,447	438,675	435,385
'Closed' to mineral material pit establishment (acres)	56,648	57,048	378,598	64,370	67,660
'Open' to flat rock collection (acres)	422,241	445,997	0	438,675	435,385
'Closed' to flat rock collection (acres)	80,804	57,048	503,045	64,370	67,660
RENEWABLE ENERGY					
'Open' to renewable energy development (acres)	446,397	445,997	124,447	438,675	435,385
'Closed' to renewable energy development (acres)	56,648	57,048	378,598	64,370	67,660

FIRE MANAGEMENT

Management Common to All Alternatives:

Wildland Fire Management:

- When fire intensity levels are severe, aggressive initial attack and full suppression is the AMR, especially in the WUI.
- When fire intensity levels are low, response actions will be determined by resource management objectives for the area – typically containment.
- Suppression efforts in initial attack may include engines, aircraft, retardant, and heavy equipment. Use of heavy equipment will be avoided in ACECs, RNAs, WSAs, and known NRHP-eligible sites. Such use requires line officer approval.
- Local resources, contractors, and personnel will be used as much as possible in suppression efforts.

Risk Mitigation and Education:

- Educational programs will be given in local schools concerning fire prevention as well as the natural role of fire in the ecosystem.
- BLM representative(s) will attend local fire safety council meetings to present programs on the risks of fuel accumulation and wildland fire, as well as information on basic fire ecology and its beneficial role in local ecosystems.
- Hazard assessment and identification of high-risk areas will be ongoing. Once identified, fuel mitigation projects will be formulated.
- Local volunteer fire departments will receive yearly assistance and safety training, and will be issued equipment as funding permits.
- BLM fire managers will work with local communities to develop community wildfire protection plans.

Fire Rehabilitation:

- Hay, straw, mulch, and seed used for emergency stabilization and rehabilitation projects must be certified noxious weed free.
- Areas burned by wildland fire will be rested from livestock grazing for a minimum of two growing seasons.

Management Actions AMR:	No Action	Alternative 1 Economic	Alternative 2 Ecosystem	Alternative 3 Traditional	Preferred Alternative
WFU (acres/year)	0	69,000	222,000	16,998	16,998
Full range of AMR suppression options used (acres/year)	0	434,045	281,045	486,047	486,047
Mandatory full suppression (acres/year)	503,045	0	0	0	0
Develop locally gathered native seed caches	No	Yes	Yes; limit re-seeding to native species	No	Yes
Prioritize post-fire rehabilitation, stabilization, and restoration actions based on the following objectives:	Rehabilitate to support ecosystem health	Maximize production of commodity resources	Rehabilitate to enhance natural restoration processes	Rehabilitate to support ecosystem health and commodity resources	Rehabilitate to support ecosystem health

FIRE MANAGEMENT (continued)					
Select types of plants used for post-fire ES&R	Native perennials	Native and non-native annuals and perennials	Locally-grown native perennials	Native and non-native perennials	Native and non-native annuals and perennials
Allow post-wildfire timber salvage	Yes, with stipulations	Yes, with stipulations	No	Yes, with stipulations	Yes, with stipulations

FORESTRY

Management Common to All Alternatives:

- Forestlands will be managed for multiple-use objectives using appropriate silviculture practices.
- Forty percent of commercial timberlands would be managed as late-succession forests. Substantial late-succession forests would also be maintained on low-site forestlands.
- A combination of treatments--including prescribed fire--would be used to accomplish resource objectives on 13,800 acres of commercial and low-site forests.
- Commercial forestland on Mount Dome would be managed as a bald eagle roosting area where no timber harvesting would be allowed.

Management Actions	No Action Alternative	Alternative 1 Economic	Alternative 2 Ecosystem	Alternative 3 Traditional	Preferred Alternative
Prioritize forest activities based on selected management objectives	Employ mechanical harvesting of commercial timber and reforestation efforts at a modest level	Produce and harvest the highest sustainable volume of timber	Create and maintain healthy forests	Apply over-story removal and commercial thinning on high-site forestlands	Create and maintain healthy forests; Produce and harvest a sustainable volume of timber
Implement timber production and mechanical harvest of commercial and low-site forestlands (acres)	500	13,800	0	4,800	12,000
Implement fuels reduction and stand improvement through a combination of prescribed fire, manual, chemical (herbicide and pesticide),and biologic treatments (acres)	100	13,800	13,800	13,800	13,800
Implement reforestation efforts (acres)	500	8,000	6,000	4,800	8,000
Construct permanent roads for timber management and harvesting activities (miles)	2	20	0	30	10
Construct temporary roads for timber management and harvesting activities (miles)	10	100	0	20	50

FUELS MANAGEMENT

Management Common to All Alternatives:

- Treatment of excessive fuels within the WUI is the highest priority: methods will include mechanical, prescribed fire, chemical, and biological alternatives.
- Hazardous fuels reduction plans, project locations, and treatment actions will be determined through resource specialist input, RAMS software, and local community protection requirements.
- Plans and projects will reduce fuels over a wide area, with priority given to degraded forest and rangeland (especially where encroached by western juniper), important wildlife habitats, and important archaeological or historic sites.
- Projects will mimic naturally occurring wildfire effects for the purpose of restoring plant communities and approximating the biological diversity of naturally occurring local ecosystems.
- Prescribed fire will be integral to fuels reduction efforts. Its use will be based on community protection requirements, resource specialist input, and approved burn plans. Burn plans will be designed and approved on a project-specific basis by qualified resource specialists.
- Classes will be given at local schools regarding fire protection and hazard reduction, and the natural role of fire in the ecosystem. BLM will present in-depth programs on these topics at local fire safety council meetings.
- Hazardous fuels reduction projects will be implemented by BLM fuel module crews and/or contract hand crews.

Management Actions	No Action	Alternative 1 Economic	Alternative 2 Ecosystem	Alternative 3 Traditional	Preferred Alternative
Implement hazardous fuels reduction treatments using various methods:					
• **Prescribed fire (acres/year)**	50–5,000	500–10,000	500–25,000	75–7,500	75–10,000
• **Mechanical treatment (acres/year)**	50–100	100–25,000	100–5,000	75–2,500	75–10,000
• **Biological treatment (acres/year)**	0	50–1,000	100–2,000	75–1,250	0–1,250
• **Chemical treatments (acres/year)**	0	50–1,000	50–4,000	50–500	50–2,000

LANDS AND REALTY

Management Common to All Alternatives:

- The Alturas LTAP would serve as the basis for future land tenure adjustment actions.
- A list of priority land tenure adjustments derived from the LTAP and this RMP would serve as the basis for action. This list would be reviewed and updated annually.
- Under the LTAP, newly acquired parcels would initially be managed in a manner similar to adjacent parcels—unless the site-specific analysis and decision record for the exchange specifies a different management prescription. In particular; Section 2, T36N, R9E, MDM is approved for donation from Lassen Gold, Inc. It would be managed to preserve wetlands and is recommended for mineral withdrawal.
- Access would be secured to public lands, resources, and facilities. Roads may be constructed around private lands where access is needed and easement acquisition is not feasible.
- Access easements will be acquired from willing sellers or partners.

Management Actions	No Action Alternative	Alternative 1 Economic	Alternative 2 Ecosystem	Alternative 3 Traditional	Preferred Alternative
Implement the Alturas Land Tenure Adjustment Plan of 2002	Implement as written	Implement and modify to include conservation easement projects	Implement and modify to partially convert Madeline disposal area to a retention/ acquisition area	Implement as written	Implement and modify to include conservation easement projects and the Madeline retention/ acquisition area proposal
Locatable Minerals					
'Open' to locatable minerals (acres)	501,723	500,545	418,326	495,323	470,052
'Recommended for Withdrawal' for locatable minerals (acres)	1,322	2,500	84,719	7,722	32,993

LANDS AND REALTY (continued)

RIGHTS-OF-WAY

Management Common to All Alternatives:

- Current linear ROWs and communication sites would be authorized, providing continued compliance with the terms and conditions of grants or permits.
- New utility lines or communication sites would be excluded in all WSAs (56,648 total acres), the Ash Valley ACEC (1,322 acres), and the Baker Cypress Natural Area (1,448 acres within the Timbered Crater ACEC/WSA.)
- Preservation of fish and wildlife habitat, management requirements of sensitive species, and protection of cultural or paleontological resources would limit or modify locations of ROWs and other land use authorizations.
- The use of existing utility corridors and communication sites would be encouraged where space is available and this is otherwise feasible.
- Additional utility corridors may be designated as future needs dictate, subject to on-site environmental reviews and clearances, in accordance with The West-wide Energy Corridor PEIS, 2005.

Management Actions	No Action Alternative	Alternative 1 Economic	Alternative 2 Ecosystem	Alternative 3 Traditional	Preferred Alternative
Identify lands potentially available for new telecommunication sites and utility ROWs (acres)	445,065	445,065	0	445,065	435,385
Manage special designations as ROW exclusion areas (acres)[1/]	WSAs, Ash Valley ACEC, Baker Cypress Natural Area	WSAs, Ash Valley ACEC, Baker Cypress Natural Area	All ACECs and WSAs, and proposed Lower Pit River WSR corridor	WSAs, Ash Valley ACEC, Baker Cypress Natural Area	All ACECs and WSAs, and proposed Lower Pit River WSR corridor
	57,980	57,980	95,849	57,980	67,660
Allow maximum utility corridor width (feet)	250	500	0	500	500

[1/] **Total acres of ACECs include only those portions outside of respective WSAs, to avoid duplication of the same acres.**

LIVESTOCK GRAZING

Management Common to All Alternatives:

- Manage allotments to adhere to the standards set out in the 2000 S&Gs.
- Implement range improvements as they benefit wildlife, watersheds and livestock producers, including but not limited to fencing, gates, cattleguards, water developments, pipelines, and vegetation treatments and limited road construction.
- Decisions to resume livestock grazing on areas that have been mechanically treated or burned by wild or prescribed fire would be based on assessment of monitoring data. Generally, grazing would not resume for a minimum of two growing seasons. However, mechanically treated areas may be assessed for potential resumption of livestock grazing following one growing season of rest.
- Maintain the long-term health and productivity of the rangelands when dealing with drought conditions and issues by implementing the BLM Drought Management Policy for Alturas and Surprise Field Offices.
- Adjust grazing systems and timing as necessary for sensitive wildlife species and archeological concerns.
- When a permit is voluntarily retired, consider utilizing the allotment as a forage reserve.
- Livestock salting would not be allowed within ¼ mile of springs, meadows, NRHP-quality archaeological sites, streams, and aspen areas. Location of salting stations would be determined by BLM in consultation with livestock permittees.
- Utilization of key species (grasses, forbs, and shrubs) on native rangelands would not exceed moderate (40%-60%) levels. On allotments not meeting or making progress toward meeting land health standards due to current levels of livestock forage utilization, Guideline 16 of the S&Gs (30 to 40%) would be implemented.
- Exclude livestock from non-regenerating aspen stands until saplings reach a minimum height of six feet.

Management Actions	No Action	Alternative 1 Economic	Alternative 2 Ecosystem	Alternative 3 Traditional	Preferred Alternative
Public lands available for grazing (acres)	457,519	456,919	448,719	457,519	454,649
Public lands unavailable for grazing (acres)	45,526	46,126	54,326	45,526	48,396
Authorized annual AUMs **[1/]Active AUMs – Portion of total grazing preference for which grazing use is authorized.** **[2/]Actual Use – Portion of active AUMs actually utilized by grazing permittees in a particular year.**	54,881 active AUMs [1/] 27,000 AUMs authorized for actual use [2/]	95,000 active AUMs Authorized for actual use 47,000 AUMs	54,881 active AUMs 18,294 AUMs authorized for actual use (15% decrease) authorized in any one year)	54,881 active AUMs 27,000 AUMs authorized for actual use	54,881 active AUMs 27,000 AUMs authorized for actual use
Construct and/or maintain livestock exclosures in riparian/wetland areas to protect early seral stage plant communities and those 'Functioning at Risk'	No	Yes; emphasize temporary fencing	Yes; fence areas not meeting PFC	No	Yes, 500 acres
Exclude livestock from aspen stands using:					
• **Permanent fencing (acres)**	0	100	500	50	200
• **Temporary fencing (acres)**	0	400	0	200	300
Exclude livestock from aspen stands larger than ½ acre for 2 years following fire	No	No	Yes	No	Yes

RECREATION & VISITOR SERVICES

Management Common to All Alternatives:

- Manage lands not designated as SRMAs, WSAs, or ACECs as ERMA.
- Any recreational use of ACECs, including commercial and non-commercial uses authorized under special recreation permits, will be evaluated and permitted, modified, or prohibited as needed to protect ACEC values.
- Issue special recreation permits to meet demand while ensuring the protection of natural and cultural resources and operating within reasonable public safety parameters.
- Recreational camping would be limited to 14 consecutive days at a single location and 28 days per calendar year, for all three (Alturas, Surprise, and Eagle Lake) field office management areas taken as a whole.
- Seasonally limit, geographically restrict, or prohibit if necessary, activities which create health or safety hazards for public land users in and near developed recreational sites, high-use recreational fisheries, and areas of concentrated activity.
- Suitable VRM classes would be assigned to maintain high-quality scenic buffer zones for SRMAs and all recreational projects, as well as high-use travel routes, throughout the management area.
- Acquire (from PG&E) segments of the Pit River (13 total miles) that support significant cold and warm water fisheries. Also acquire a 5-mile stretch of Hat Creek (also from PG&E) to preserve world-class trout fishing.

Management Actions	No Action	Alternative 1 Economic	Alternative 2 Ecosystem	Alternative 3 Traditional	Preferred Alternative
Designate SRMAs	None	Infernal Cavers/Rocky Prairie and Pit River SRMAs	Infernal Cavers/Rocky Prairie and Pit River SRMAs	Infernal Cavers/Rocky Prairie and Pit River SRMAs	Infernal Cavers/Rocky Prairie and Pit River SRMAs
Develop improved parking areas in recreational sites (number)	0	7–9	3–5	5–6	7–9

RECREATION OPPORTUNITY SPECTRUM

Management Common to All Alternatives:

- All management actions for WSAs, including those which form part of an ACEC, are governed by the Interim Management Policy for Lands under Wilderness Review.
- Roads may be closed by reason of plan maintenance if they are producing adverse ecological impacts.
- Area sizes were obtained from GIS mapping. After the record of decision is signed, final area sizes will be accurately determined by on-the-ground GPS inventories modified according to new designations and resource constraints.
- The San Francisco State University visitor survey will be used to help formulate Recreation Opportunity Spectrum designations.
- Scenic qualities will be maintained at the present level, as supported by the recent survey of local residents and visitors.
- Corridors will be established along existing roads and trails in RN, SPM, and SPNM areas of sufficient width to permit road maintenance, vehicle pull-offs, and camping use.
- Roads throughout the planning unit may be closed during the winter and early spring to prevent damage to roads and the resource base.
- OHV travel will be 'Limited to Existing Roads and Trails', unless otherwise designated.
- Information and education will be provided to off-highway enthusiasts concerning awareness and sensitivity to proper use of public lands.
- Once the record of decision is signed, maps will be prepared for all areas with OHV designations, and roads will be posted as directed in the PRMP/FEIS.

Management Actions		No Action Alternative	Alternative 1 Economic	Alternative 2 Ecosystem	Alternative 3 Traditional	Preferred Alternative
ROS Class Designations:						
'Primitive'	**(acres)**	46,784	39,429	75,143	33,860	55,594
SPNM	**(acres)**	64,972	23,172	82,942	148,766	63,472
SPM	**(acres)**	283,949	211,159	244,061	219,520	273,539
RN	**(acres)**	107,340	229.285	100,899	100,899	110,440

SOIL RESOURCES

Management Common to All Alternatives:

- Implement measures to affect the recovery of 10,154 acres of degraded upland soils.
- Management activities and other uses of perennial and important intermittent drainages will be minimized where such activities would adversely affect watershed processes or function.
- Programs and activities will be managed to ensure no net loss of soil productivity.
- Management programs on sites where undesirable invasive plants and/or noxious weeds are a problem will incorporate measures to ensure the continued health and stability of soils together with treatment régimes for control of invasive plants or weeds.
- Prevent damage to high shrink-swell soils by limiting compacting activities (e.g., grazing, OHV use, maintenance activities) to periods when soils are sufficiently dry to resist compaction.

SOIL RESOURCES (continued)					
Management Actions	**No Action Alternative**	**Alternative 1 Economic**	**Alternative 2 Ecosystem**	**Alternative 3 Traditional**	**Preferred Alternative**
Employ active bioengineering methods (i.e., juniper scattering) in upland areas to protect soils from erosion (acres)	100	6000	1000	0	200
Construct exclosures around degraded or sensitive soils (acres)	0	10,154 (temporary)	10,154 (permanent)	0	Evaluated on case-by-case basis
Apply sediment intrusion buffer zones around sensitive resources (radius, in feet)	50	50	≥ 50	30 - 50	50

SPECIAL DESIGNATIONS

AREAS OF CRITICAL ENVIRONMENTAL CONCERN

Management Common to All Alternatives:

- Maintained the (existing) Ash Valley ACEC/RNA (1,322 acres) and Baker the Cypress Natural Area (1,448 acres).
- Management for any portion of an ACEC within a WSA would be governed by the Wilderness IMP until such time as Congress makes a determination regarding wilderness designation.
- Visual resource management for portions of an ACEC within a WSA is Class I. Otherwise, ACECs would be managed as VRM Class II.
- Recreational activities in ACECs—including commercial and non-commercial uses authorized under special recreation permits—would be evaluated, modified, permitted, or prohibited, as appropriate to preserve the resources and values for which the ACEC was created.
- Livestock grazing would be managed according to permit stipulations, AMPs, and ACEC management plans.
- Noxious weeds would be aggressively controlled in ACECs.

Management Actions	**No Action Alternative**	**Alternative 1 Economic**	**Alternative 2 Ecosystem**	**Alternative 3 Traditional**	**Preferred Alternative**
Designate ACECs: (acres)					
• **Pit River Canyon**	0	6,703	6,703	0	0
• **Lava**	0	10,770	10,770	0	0
• **Timbered Crater**	0	17,896	17,896	0	17,896
• **Emigrant Trails**	0	0	9,924	5,000	1,750
• **Mountain Peaks**	0	0	3,500	0	3,500
• **Old Growth Juniper**	0	0	3,115	0	3,115
• **Mount Dome**	0	1,510	1,510	0	1,510
• **Juniper Creek**	0	0	1,182	0	0
• **Beaver Creek**	0	0	972	0	0
• **Likely Tablelands/Yankee Jim/Fitzhugh Creek**	0	3,200	27,435	1,400	1,400
• **Total acres**	0	40,079	83,007	6,400	29,171
Manage ACECs as ROW exclusion zones	Ash Valley ACEC	Ash Valley ACEC	All ACECs	Ash Valley ACEC	All ACECs

SPECIAL DESIGNATIONS (continued)

NATIONAL HISTORIC TRAILS

Management Common to All Alternatives:

- Provide recreational opportunities focused on national historic emigrant trails.
- Build an interpretive package at "Descent into Goose Lake" including a 0.25 mile interpretive trail, picnic tables, waterless toilet, parking area, and a 1.0-mile access trail for viewing trail traces.
- Work with Sierra Pacific Power and the BLM California State Office to acquire fee title to a portion of land associated with the Battle of the Infernal Caverns.
- Protect and maintain approximately 29 miles of national historic emigrant trails.
- Acquire sites and trails of historic significance from willing sellers.
- Develop a "Historic Sites Scenic Byway" with off-site interpretive locations, in cooperation with county, state, federal, and private entities.

Management Actions	No Action Alternative	Alternative 1 Economic	Alternative 2 Ecosystem	Alternative 3 Traditional	Preferred Alternative
Develop recreation development packages for sites of historic significance (number)	2	9-11	4	5	7-8
Designate an Emigrant Trails ACEC to protect National Historic Trails (acres)	0	0	9,924	5,000	1,750

SCENIC BYWAYS

Management Common to All Alternatives:

- New designations of scenic byways would be considered providing they are consistent with OHV designations and address resource concerns.

Management Actions Designate proposed scenic byways: (miles)	No Action Alternative	Alternative 1. Economic	Alternative 2. Ecosystem	Alternative 3. Traditional	Preferred Alternative
• **U.S. Highway 395 - Alturas to Reno**	0	190	0	0	190
• **State Highway 139 - Canby to Susanville**	0	90	0	0	90
• **State Highway 299 - Adin to Redding**	0	130	0	0	130
• **State Highway 139/ Canby to U.S. Highway 395-Nevada-State-Line**	0	0	0	170	170
• **Total miles of designated scenic byways**	0	410	0	170	580
Designate Clarks Valley Road Driving Route (miles)	0	21	0	0	21

SPECIAL DESIGNATIONS (continued)

WILD AND SCENIC RIVERS

Management Common to All Alternatives:

- Strict interim protection would be provided for rivers that are eligible and administratively suitable for WSR determination.
- Upper Pit River Canyon and Lower Horse Creek WSR study areas are in the Pit River Canyon WSA and are managed under the terms of the Wilderness IMP. Therefore, they would be managed as VRM Class I, 'Closed' to mineral extraction, and OHVs would be 'Limited to Existing Roads and Trails'. (OHVs in the Lower Pit River Canyon WSR Study Area would also be 'Limited to Existing Roads and Trails'.)
- WSR study areas would be managed as ROS class 'Primitive'.
- Lower Pit River Canyon would be designated VRM Class II, and Upper Pit River Canyon and Lower Horse Creek would revert to Class II if denied wilderness status by Congress.
- Suitable interpretation of prehistoric and historic resources (including portions of Lassen National Historic Emigrant Trail) would be implemented.

Management Action	No Action Alternative	Alternative 1 Economic	Alternative 2 Ecosystem	Alternative 3 Traditional	Preferred Alternative
Recommend portions of the Upper Pit River Canyon as suitable for designation as a 'wild' river (miles)	0	13	13	0	13
Recommend portions of the Lower Horse Creek Canyon as suitable for designation as a 'wild' river (miles)	0	3 — 'Recreational'	3	0	3
Recommend portions of the Lower Pit River Canyon as suitable for designation as a 'scenic' river (miles)	0	2.5 — 'Recreational'	2.5	0	2.5
Lower Pit River Canyon WSR	Open to mineral extraction	Closed to mineral extraction with variance for recreational mining	Closed to mineral extraction	Open to mineral extraction	Closed to mineral extraction

SPECIAL DESIGNATIONS (continued)

WILDERNESS STUDY AREAS

Management Common to All Alternatives:

- Four WSAs and one ISA would be governed by the Wilderness IMP until such time as Congress makes a determination regarding wilderness designation. These include Pit River Canyon WSA (10,984 acres), Lava WSA (10,770 acres), Timbered Crater WSA and Baker Cypress ISA (17,896 acres), and Tule Mountain WSA (16,998 acres).
- Resource objectives for WSAs generally have priority over other management objectives under the wilderness IMP. However, when a WSA overlaps another special management area (e.g., an ACEC, SRMA, etc.), the more restrictive management prescription would apply. In the AFO management area, three proposed ACECs and one RNA are incorporated within, coincide with, or overlap three WSAs, and one ISA is found within a WSA.
- Any WSA denied wilderness status by Congress would be managed according to RMP direction governing adjacent lands at the time of release.
- If denied wilderness status, a WSA would return to its originally inventoried VRM class, unless reclassified due to overlap with a special management area.
- To date, all lands acquired adjacent to or within WSAs have been assessed for wilderness characteristics. None of these lands fulfill the wilderness criteria. Any future acquisition possessing wilderness characteristics would be included in the adjacent WSA where its wilderness character would be protected.
- For WSAs evaluated under Section 202 of FLPMA, existing and new mining operations under the 1872 mining law would be regulated under 43 CFR 3802 to prevent unnecessary or undue degradation of these lands – not to prevent impairment of wilderness suitability. All other activities will be managed under the Wilderness IMP.
- According to the Wilderness IMP; the use of mechanized and motorized transportation (including mountain bicycles, ATVs, and motorcycles), will only be allowed on existing roads and trails or within ‘Open’ areas designated prior to the passage of FLPMA (Oct., 1976.)
- All proposals for uses and/or facilities within WSAs will be reviewed to determine if the proposal meets the non-impairment criteria.
- The “minimum tool” concept will be applied to all approved activities in WSAs.

TRAVEL MANAGEMENT

Management Common to All Alternatives:

- All OHV travel in the AFO management area would be 'Limited to Existing Roads and Trails' year-round, except where other designations are specifically assigned (e.g., 'Open', 'Closed,' 'Seasonally Closed',' or 'Limited to Designated Routes'). (See text for definitions.)
- Organized OHV events would only be allowed on designated routes in approved locations or in OHV management areas.
- Exceptions for off-road travel and seasonal road closures include, but are not limited to the following authorized or permitted activities: woodcutting in designated firewood-gathering areas, noxious weed eradication, flat rock collecting in designated areas, ranching activities, scientific studies, BLM administrative activities, private property access, and big game retrieval.
- Management actions for portions of ACECs associated with WSAs and the WSA itself are governed by the Wilderness IMP.
- The ROS will be employed to provide the following range of travel classifications and settings: 'Primitive', SPNM, SPM, and RN.
- The present travel restriction on the Nelson Corral Reservoir Road (i.e., 'Limited to Existing Roads and Trails' for six weeks only) would be expanded to a year-round 'Limited to Existing Roads and Trails' designation.
- Where existing roads are having an adverse ecological impact, they may be 'Closed' (on a temporary or permanent basis) through plan maintenance in accordance with Northeast California RAC Guidelines for OHVs (Appendix C).
- The Cinder Cone OHV management area would be 'Open' to OHV travel year-round on a designated area of 80 acres.
- The Pit River Canyon (10,984 acres), Tule Mountain (16,998 acres), and Lava (10,770 acres) WSAs would be designated 'Limited to Existing Roads and Trails' to maintain their pristine natural character. OHV travel is permanently 'Closed' around vernal pools (20 acres) in the Lava WSA to protect the Boggs Lake hedge-hyssop (a special status plant.).
- The following travel designations would apply for all alternatives: Coyote Ridge—'Limited to Designated Routes' on 2500 acres, and Fitzhugh Creek—660 acres 'Closed.'
- A trail would be designated for non-motorized access to Delta Lake from Bayley Reservoir during annual spring closure of the Delta Lake Road.
- Land acquired after approval and implementation of this RMP would receive the same designation as surrounding or adjacent areas. However, if acquired land has sensitive resources, it would receive a designation that protects those resources.

Management Action	No Action Alternative	Alternative 1 Economic	Alternative 2 Ecosystem	Alternative 3 Traditional	Preferred Alternative
Assign OHV use designations: (acres)					
• **'Open'**	441,077	80	80	80	80
• **'Limited to Existing or Designated Routes'**	41,982	502,285	472,768	502,285	498,340
• **'Closed'**	19,986	660	30,197	660	4,625

TRAVEL MANAGEMENT (continued)					
Implement OHV travel designations: (acres) **(Note: The following is a list of the most notable routes and their designations; it is not a complete listing of all OHV designations.)**					
Roads and Trails in the Mount Dome Area					
Bryant Mountain	Open (2,300) Limited to Designated (1,700)	Limited to Existing (4,000)	Limited to Designated (4,000)	Limited to Existing (4,000)	Limited to Existing (4,000)
Roads and Trails in the Mount Dome Area (continued)					
Mahogany Mountain	Open (6,000)	Limited to Existing (6,000)	Limited to Designated (6,000)	Limited to Existing (6,000)	Limited to Designated (6,000)
Bloody Point	Open (240)	Limited to Existing (240)	Limited to Designated (240)	Limited to Existing (240)	Limited to Existing (240)
Mount Dome – Tablelands	Limited to Existing (1,500)	Limited to Existing (1,500)	Limited to Designated (1,500)	Limited to Existing (1,500)	Limited to Designated (1,500)
Roads and Trails in Proposed Areas of Environmental Concern					
Old Growth Juniper ACEC (3,115 acres, in total) • **Ticker Spring section:**	Open (1,090)	Limited to Existing (1,090)	Limited to Designated (1,090)	Limited to Existing (1,090)	Limited to Designated (1,090)
• **Sheep Valley section:**	Open (1,675) Closed (350)	Limited to Existing (2,025)	Closed (2,025)	Limited to Designated (2,025)	Closed (2,025)
Beaver Creek ACEC	Open (972)	Limited to Existing (972)	Closed (972)	Limited to Designated (972)	Limited to Designated (972)
Juniper Creek ACEC	Open (1,182)	Limited to Existing (1,182)	Closed (1,182)	Limited to Designated (1,182)	Limited to Designated (1,182)
Timbered Crater ACEC/WSA (& Baker Cypress Natural Area)	Closed (17,896)	Limited to Existing (17,896)	Closed (17,896)	Limited to Existing (17,896)	Limited to Designated (17,896)

TRAVEL MANAGEMENT (continued)					
Roads and Trails in Proposed Areas of Environmental Concern (continued)					
Fitzhugh Creek	Open (1,800)	Limited to Designated 4/16-11/30 (1,800)	Closed (1,800)	Limited to Designated (1,800)	Fitzhugh creek closure includes (1,800) setback on rims
Likely Tablelands/ Yankee Jim/ Fitzhugh Creek ACEC	Closed (660) Fitzhugh Creek, and (200) of meadows on Yankee Jim Ranch (see measures common to all alternatives)	Limited to Designated 4/16-11/30 (26,800) Closed 12/1-4/15 (26,800)	Closed (3,200)	Yankee Jim Ranch (1,400) Limited to Designated	Yankee Jim Ranch Closed 12/1-4/15 (1,400), Limited to Designated 4/16-11/30
Ash Valley ACEC	Open (1,322)	Limited to Existing (1,322)	Closed (1322)	Limited to Designated (1,322)	Limited to Designated (1,322)
Roads and Trails in Remainder of AFO Management Area					
Likely Tablelands (excluding ACEC)	Limited to Designated (60)	Limited to Designated on Upper Bench (26,800)	Limited to Designated from 4/16–11/30 (56,800)	Limited to Designated (56,800)	Limited to Designated from 4/16–11/30 (56,800)
Seasonal Closure Dates	No Closure	12/1– 4/15	12/1–4/15	No Closure	12/1–4/15
Barnes Grade OHV Management Area	Open (260)	Limited to Existing (260)	Limited to Designated (260)	Limited to Existing (260)	Limited to Existing (260)
Seasonal Closures Dates	No Closure	11/15–4/15	11/15–4/15	No Closure	11/15–4/15
Nelson Corral Reservoir Dam Site	Open (120)	Limited to Existing (120)	Closed (120)	Limited to Existing (120)	Closed (120)
Cold Springs/North Springs	Open (48,910)	Limited to Existing (48,910)	Limited to Designated (48,910)	Limited to Existing (48,910)	Limited to Designated (48,910)
Seasonal Closure Dates	No Closure	No Closure	4/15–7/15	No Closure	No Closure
Day Bench	Open (3,000)	Limited to Existing (3,000)	Limited to Designated (3,000)	Limited to Existing (3,000)	Limited to Existing (3,000)
Seasonal Closures Dates	No Closure	No Closure	11/15–4/15	11/15–4/15	11/15–4/15

TRAVEL MANAGEMENT (continued)					
Roads and Trails in Remainder of AFO Management Area (continued)					
Westside Allotment	Closed (20) Open (3480)	Limited to Existing (3500)	Limited to Designated (3500)	Limited to Existing (3500)	Limited to Designated (3500)
Williams Ranch Seasonal Closure Dates	Open (600) No Closure	Limited to Existing (600) No Closure	Closed (600) No Closure	Limited to Existing (600) No Closure	Limited to Designated (600) 11/15-6/15
Hayden Hill Seasonal Closure Dates	Open (200) No Closure	Limited to Existing (200) No Closure	Closed (200) No Closure	Limited to Existing (200) 3/1-5/15	Limited to Existing (200) 3/1-5/15
Fall River OHV Trail	Open (15,000)	Limited to Existing (15,000)	Limited to Designated (15,000)	Limited to Existing (15,000)	Limited to Designated (15,000)
Hogback Ridge	Open (1,800)	Limited to Existing (1,800)	Limited to Designated (1,800)	Limited to Existing (1,800)	Limited to Designated (1,800)

NON-MOTORIZED TRAVEL

Management Common to All Alternatives:

- Create trails of a quality to attract visitors and stimulate trail-based tourism while protecting natural and cultural resources. In addition to walking, non-motorized travel will include the use of bicycles, animals, or other non-motorized use unless specified otherwise.
- Trail segments crossing private land that connect BLM land with other public routes will require acquisition of property or easements from willing sellers or cooperators.
- Way-finding signs would be placed and maintained on all trails, but only to the degree necessary to ensure public safety and enjoyment.
- Build an interpretive package at ”Descent into Goose Lake” including a 0.25-mile interpretive trail picnic tables, waterless toilet, parking area, and a 1.0-mile access trail for viewing trail traces.
- Pursue acquisition of the Union Pacific rail line between Wendell and Alturas (85 miles) for the rail bank program.
- Develop 40 miles of the Union Pacific’s abandoned Modoc Line railway for non-motorized and motorized use, if acquired.
- Cooperate with Lassen National Forest (under an existing MOU) for maintenance of the Pacific Crest Trail.
- Develop seven miles of interpretive trail to the Infernal Caverns Overlook for non-motorized use.
- Designate two miles of trail at Williams Ranch for non-motorized use.
- Designated one mile looped hiking trail at Pit River Campground.

TRAVEL MANAGEMENT (continued)

NON-MOTORIZED TRAVEL (continued)

Management Action: Designate proposed non-motorized trails (miles)	No Action Alternative	Alternative 1 Economic	Alternative 2 Ecosystem	Alternative 3 Traditional	Preferred Alternative
McDonald Peak	0	3	0	3	3
Cold Springs Mountain	0	1.5	0	1.5	0
Mahogany Peak	0	1	0	1	1
Sheep Mountain	0	1	0	0	1
Holbrook Trail	0	2	0	0	2
Dry Creek Station	0	4	0	4	4
Knox Gulch	0	1	0	1	1
Antelope Trail	0	1	0	1	1
Fitzhugh Creek	0	0	0.25	0.25	0.25
Other trails	11	12.5	12.25	12.25	12.25
Total miles of non-motorized trails	11	27	12.5	23	25.5

BOATING

Management Common to All Alternatives:

- Permit(s) would be required for non-motorized commercial boating on the Pit River from Fall River Mills to the (State) Route 299 bridge.
- Permits for commercial boating on the Pit River within the Pit River Canyon WSA (13 miles) would be for non-motorized boating. Non-commercial boating would also be non-motorized.
- Where motorized boating limitations apply, the following definitions are recognized: (1) small outboards--limited to 4-cycle gasoline engines and electric trolling motors (no personal watercraft unless expressly permitted) and (2) personal watercraft—meaning “jet-skis” or “waverunners.”
- Motorized boating would be unrestricted on West Valley Reservoir.
- Develop a permit system to regulate commercial boating that balances this activity with the need for resource preservation.

Management Action: Implement restrictions to watercraft use for the following areas:	No Action Alternative	Alternative 1 Economic	Alternative 2 Ecosystem	Alternative 3 Traditional	Preferred Alternative
Bayley Reservoir	No restrictions	No restrictions	Non-motorized & 4-cycle outboard	Non-motorized & 4-cycle outboard	Small outboard (restriction phased in by 2012)
Nelson Corral Reservoir	No restrictions	No restrictions	Non-motorized & 4-cycle outboard	Non-motorized & 4-cycle outboard	Electric motors & non-motorized
West Valley Reservoir	No restrictions	No restrictions	No restrictions	No restrictions	No restrictions
Delta Lake	No restrictions	No restrictions	Non-motorized & 4-cycle outboard	Non-motorized & 4-cycle outboard	Electric motors & non-motorized

TRAVEL MANAGEMENT (continued)					
BOATING (continued)					
Moon Lake	No restrictions	No restrictions	Non-motorized & 4 cycle Outboard	No restrictions	No personal watercraft (jet skis)
Pit River—below Pit River Campground	No restrictions	No restrictions	Non-motorized	Non-motorized	Non-motorized
Pit River—Lower Pit River Canyon	No restrictions	No restrictions	Non-motorized	Non-motorized	Non-motorized
OVER- SNOW TRAVEL					
Management Common to All Alternatives: • Restrictions on motorized over-snow travel apply when significant snow is present from December 1 to March 15.					
Management Action: Proposed Motorized Over-Snow Travel Restrictions	**No Action Alternative**	**Alternative 1 Economic**	**Alternative 2 Ecosystem**	**Alternative 3 Traditional**	**Preferred Alternative**
Nelson Corral High-Country (acres)	No Restrictions	Motorized & Non-motorized on 5,000	Non-Motorized on 10,000	Motorized & Non-motorized on 3,000	No Restrictions
Dead Horse Loop (acres)	No Restrictions	Motorized & Non-motorized on 7,000	Non-motorized on 7,000	Motorized & Non-motorized on 3,000	No Restrictions
ROAD MAINTENANCE					
Management Action:	**No Action Alternative**	**Alternative 1 Economic**	**Alternative 2 Ecosystem**	**Alternative 3 Traditional**	**Preferred Alternative**
Implement annual road maintenance (miles)	28	32	0	19	28

VEGETATION

NATIVE PLANT COMMUNITIES

Management Common to All Alternatives:

- Use prescribed fire as the preferred method for rehabilitation of plant communities; however; mechanical and manual methods would also be important. Employ natural disturbance processes, particularly prescribed fire, WFU, and thinning to restore shrub communities by stimulating seeding and sprouting.
- Incorporate recommendations developed in the *Sagebrush Steppe Restoration Strategy* to manage juniper encroachment.
- Decisions to resume livestock grazing on areas that have been mechanically treated or burned by wild or prescribed fire would be based on assessment of monitoring data. Generally, grazing would not resume for a minimum of two growing seasons. However, mechanically treated areas may be assessed for potential resumption of livestock grazing following one growing season of rest.
- Old growth juniper would be protected from timber harvesting and firewood cutting. Late seral/climax stands of old growth juniper would be subject to an EA before any flat rock collecting is permitted.
- Develop a "normal year fire rehabilitation plan" for the Alturas Field Office.
- Develop a locally gathered native seed cache for all rehabilitation projects.
- Incorporate guidelines from the *Sage-Grouse Conservation Strategy* in vegetation treatments and habitat restoration projects conducted in sage-grouse habitats.

Management Action	No Action Alternative	Alternative 1 Economic	Alternative 2 Ecosystem	Alternative 3 Traditional	Preferred Alternative
Designate areas as both ACEC and RNA **Size (acres)**	None 0	Designate 2: Timbered Crater Mount Dome 19,406	Designate 4: Timbered Crater Mount Dome Mountain Peaks Old Growth Juniper 26,021	None	Designate 4: Timbered Crater Mount Dome Mountain Peaks Old Growth Juniper 26,021
Classify and map: • **Rare plant communities** • **Plant communities achieving or approaching potential natural community** • **Plant communities of local concern** **(acres/year)**	When addressed in activity or project-level plans N/A	When addressed in activity or project-level plans N/A	Emphasis: Communities at or approaching PNC; communities of local concern 100–5,000	Emphasis: Communities at or approaching PNC 50–500	Emphasis: Communities of local concern; rare plant communities; special status species 50–5,000

VEGETATION (continued)					
NATIVE PLANT COMMUNITIES (continued)					
Rehabilitate plant communities by removing invasive juniper and decadent shrubs utilizing the following treatment methods (acres/year)					
• **Prescribed fire / WFU**	50–5,000	500–20,000	500–25,000	75–7,500	75–10,000
• **Manual**	50–300	50–2,000	50–5,000	50–2,500	50–5,000
• **Biological**	0	50–1,000	100–2,000	0–250	75–2,000
• **Chemical**	0	50–1,000	0	50–500	50–2,000
• **Mechanical**	50–1,000	100–40,000	100–5,000	75–2,500	75–10,000
• **Seeding**	0–200	50–5,000	100–10,000	0–5,000	50–10,000
Use green strips as firebreaks in degraded native plant communities on the Likely Tablelands (miles)	0	21	36	0	36
Create healthy, multi-aged stands of bitterbrush using specified treatments (acres/year)	Remove invasive juniper using mechanical treatments 0–50	Reduce late-season grazing; seed bitterbrush in poor-condition stands; remove invasive juniper and decadent woody fuels 0–15	Emphasize natural recovery; institute grazing restrictions and seed degraded areas 10–75	Remove invasive juniper and decadent woody fuels; seed and plant bitterbrush; reduce late-season grazing 0–50	Utilize all tools and methods; replant bitterbrush in first year following wildfire 10–500
Exclude livestock from seeded areas in bitterbrush stands following treatment (years)	2	2	3–5	2–4	3–5

VEGETATION (continued)

RIPARIAN AND WETLAND COMMUNITIES

Management Common to All Alternatives:

- Assess riparian areas for PFC, existing or potential natural community, and ecological site description.
- Establish PFC on 15 miles of streams, 22 acres of springs, and 46 acres of wetlands.
- Remove invasive western juniper and undesirable woody vegetation from riparian areas.
- Maintain, re-route, eliminate, and/or rehabilitate roads having a negative impact on riparian areas.
- Livestock salting sites would be located ¼ from riparian areas to discourage damaged by livestock.
- Manage riparian/wetland areas using a watershed basis. Involve interested landowners and effected parties.

Management Action	No Action Alternative	Alternative 1 Economic	Alternative 2 Ecosystem	Alternative 3 Traditional	Preferred Alternative
Construct livestock water developments outside riparian and wetland areas	No	Yes	Yes	No	Yes
Construct and/or maintain livestock exclosures to protect early seral stage plant communities and those FAR	No	Yes; emphasize temporary fencing	Yes; fence areas not meeting PFC	No	Yes, 500 acres
Plant woody riparian vegetation in plant communities dominated by willows	No	No	Yes	Yes	Yes
Construct new water developments in intact playas, lakebeds, and silver sagebrush communities	Allowed if no adverse impact on special status species	Allowed if no adverse impact on special status species	Not allowed	Allowed if no adverse impact on special status species	Not allowed
Re-route roads through Little and Big Buck Meadows; rehabilitate existing roads with native herbaceous vegetation	No	No	Yes; and close all routes in riparian areas	No	Yes
Improve riparian vegetation for native fish; install in-stream structures for habitat improvement	No	No	Yes	No	Yes

VEGETATION (continued)

ASPEN COMMUNITIES

Management Common to All Alternatives:

- Use the aspen delineation project protocol (Bartos and Campbell, 1998) to classify remaining stands that have not been mapped.
- Approximate a natural disturbance regime in selected aspen stands using a variety of treatment methods (e.g., fire, mechanical, root-ripping, herbicides.)
- During rehabilitation treatments, retain old growth juniper and other conifers greater than 12 inches DBH.
- Protect all silvaglyphs (historical carvings and drawings) during treatment procedures.
- Exclude livestock from non-regenerating aspen stands until saplings reach a minimum height of six feet.
- Locate livestock salting sites at least ¼ mile away from aspen groves.

Management Action	No Action Alternative	Alternative 1 Economic	Alternative 2 Ecosystem	Alternative 3 Traditional	Preferred Alternative
Remove invasive conifers to create healthy, multi-aged aspen stands **Area treated (acres/year)**	Use prescribed fire and mechanical treatments 0–15	Use prescribed fire, mechanical, and chemical treatments 5–100	Use prescribed fire and mechanical treatments 5–15	Use prescribed fire, mechanical, and chemical treatments 1–15	Use prescribed fire, mechanical, and chemical treatments 5–100
Exclude livestock from aspen stands using:					
• **Permanent fencing (acres)**	0	100	500	50	200
• **Temporary fencing (acres)**	0	400	0	200	300
Exclude livestock from aspen stands larger than ½ acre for 2 years following wildland or prescribed fire	No	No	Yes	No	Yes

CURLLEAF MOUNTAIN MAHOGANY

Management Common to All Alternatives:

- Inventory curlleaf mountain mahogany stands to assess biologic integrity, associated species, and seral stage. Develop management actions based on seral stages.
- Treat stands according to the following priority: 1) decadent stands without seedlings, 2) stands invaded by conifers, 3) younger stands with (relatively) recent conifer invasion, 4) stands invaded by cheatgrass or other noxious weeds, and 5) stands heavily used by ungulates.
- Achieve a conifer canopy cover of 25% or less in stands of pre-settlement juniper/curlleaf mountain mahogany and eastside pine/curlleaf mountain mahogany.
- Control noxious weeds in and adjacent to curlleaf mountain mahogany stands prior to any treatment procedure.
- Protect previously burned curlleaf mountain mahogany from wildlife until saplings are sufficiently mature to withstand browsing.

VEGETATION (continued)					
CURLLEAF MOUNTAIN-MAHOGANY (continued)					
Management Action	**No Action Alternative**	**Alternative 1 Economic**	**Alternative 2 Ecosystem**	**Alternative 3 Traditional**	**Preferred Alternative**
Rejuvenate or maintain stands of curlleaf mountain mahogany through selected treatments	Use prescribed fire and removal of conifers	Use prescribed fire, grass-specific herbicides, and removal of conifers	Use prescribed fire and WFU, plus removal of conifers	Use prescribed fire and removal of conifers	Prescribed fire, WFU, manual, mechanical, and chemical treatments; protection from browsing
(acres/year)	0–1,000	10–4,000	10–500	50–1,000	10–1,000
OAK WOODLANDS					
Management Common to All Alternatives: • Inventory oak woodlands to assess biologic integrity, fuel loading of conifers and shrubs in the understory, and presence of exotic annual grasses. • Develop 'Desired Future Condition' specifically for Oregon white oak and blue oak associations. • Treatments would include prescribed fire (light to moderate intensity), and removal of invasive juniper and high-density pine. • Initiate treatments in stands where no seedlings or saplings are present and where trees are at risk from high intensity wildfires.					
Management Actions	**No Action Alternative**	**Alternative 1 Economic**	**Alternative 2 Ecosystem**	**Alternative 3 Traditional**	**Preferred Alternative**
Rejuvenate or maintain oak woodlands with abundant saplings and in mixed age classes through selected treatments	Use prescribed fire	Use prescribed fire and manual removal of conifers	Use prescribed fire and WFU, plus manual removal of conifers	Use prescribed fire, fuels reduction, and juniper removal	Use prescribed fire and WFU, plus mechanical and manual removal of conifers
(acres/year)	0–100	10–1,500	10–500	0–5,000	10–5,000
Manage select stands of California black oak for a seral stage including conifers	No management planned	Control saplings to favor establishment of merchantable pine timber	Employ natural regeneration	Control saplings to favor establishment of merchantable pine timber	Control saplings to favor establishment of merchantable pine timber
Allow consumptive uses of dead-and-downed oak trees	Yes	Yes	Yes	Yes	No; except to clear dead trees within 66 feet of open roads and the WUI

NOXIOUS WEEDS and INVASIVE SPECIES

Management Common to All Alternatives:

- Eliminate or control the spread/density of noxious weed infestations using the IWM program. The program would be implemented in cooperation with CDFA; the counties of Modoc, Lassen, Shasta, Siskiyou, and other nearby counties; private landowners; and other interested parties.
- Periodic inventories would be used to detect new infestations and monitor the condition of existing infestations. The highest priority for noxious weed inventory would be critical wildlife habitat, at-risk plant communities, high-use areas, and recreation sites.
- Hay, straw, and mulch used for any purpose must be certified noxious weed free.
- Develop a training program for BLM employees. Develop and conduct a public outreach plan to educate the public regarding the importance of preventing the introduction, establishment, and proliferation of noxious weeds.

Management Actions: Integrated Weed Management	No Action Alternative	Alternative 1 Economic	Alternative 2 Ecosystem	Alternative 3 Traditional	Preferred Alternative
Prioritize areas for noxious and invasive weed control using IWM:					
Employ treatments on disturbed areas: roads, ROWs, livestock watering sites and trailing routes, recreation sites	Yes	No	Yes	Yes	Yes
Emphasize sites that produce commodity resources	No	Yes	No	No	No
Emphasize early detection and rapid response to new infestations	No	No	Yes	No	Yes
Emphasize restoration of infested sites to native vegetation	No	No	Yes	No	Yes
Conduct IWM inventories in coordination with adjacent weed management areas for early detection of new infestations	Yes	Yes, emphasize infestations with high potential to affect production of commodity resources	Yes, emphasize less-disturbed, more remote, and previously inventoried areas	Yes	Yes, emphasize less-disturbed, more remote, and previously inventoried areas

SPECIAL STATUS PLANTS					
Management Common to All Alternatives: • Develop conservation agreements or species management guidelines for special status plants. • Project proposals would be reviewed prior to implementation to determine if they would affect BLM special status species. Projects would incorporate recommendations of the California Special Status Plant Policy (CA-BLM Manual Supplement H-6840-1, Special Status Plant Management) to ensure that BLM actions would not contribute to the necessity of listing a species under the Endangered Species Act. • Ensure the maintenance of viable populations of endangered, threatened, and BLM special status plant species.					
Management Actions	**No Action Alternative**	**Alternative 1 Economic**	**Alternative 2 Ecosystem**	**Alternative 3 Traditional**	**Preferred Alternative**
Prioritize management actions to protect individual populations of special status plants	Maintain existing populations	Maintain existing populations	Restore and enhance special status species habitats; Maintain populations on ≤ 5 acres and allow 20% maximum reduction in numbers or occupied habitat	Maintain existing populations and allow 25% maximum reduction in numbers throughout species range	Restore and enhance special status plant habitats; Maintain populations on ≤ 5 acres and allow 20% maximum reduction in population in locations with >500 plants on >1 acre.
Acquire lands from willing sellers to protect special status plant habitats	No	No	Yes	No	Yes
Limit disposal of lands that support special status plant habitats: • **Maximum disposal of 25% of lands supporting a special status plant** • **Maximum disposal of 5% of lands supporting a special status plant with limited distribution**	No	No	Yes	Yes, but no land disposals where action would result in listing under Endangered Species Act	Yes
Manage special interest species similar to special status plants to prevent deterioration and future listing	No	No	Yes	No	Yes
Manage OHV use in Ash Valley ACEC/RNA and the Westside Grazing Allotment to protect special status plants **(acres)**	Open (1,322)	Limited to Existing Routes (1,322)	Closed in Ash Valley; Limited to Designated Routes in Westside Allotment	Limited to Designated Routes (1,322)	Limited to Designated Routes (1,322)

VISUAL RESOURCE MANAGEMENT

Management Common to All Alternatives:

- Public land would be managed to achieve VRM objectives by VRM classification.
- WSAs would be managed under VRM Class I. Should Congress decline to designate a WSA as wilderness, the area would return to the original inventoried VRM class, unless it has been reclassified due to overlap with a special management area.
- ACECs, WSRs, historic trails, or other special designations would be managed as VRM Class II, unless the area is managed as Class I under other resource prescriptions.
- All developments, land alterations, and vegetation manipulations would be designed to minimize visual impacts. All projects would be designed to maximize scenic quality while minimizing scenic intrusions.
- Assign Visual Resource Management Classes as follows:

VRM Class	Acres
Class I	56,648
Class II	157,177
Class III	104,006
Class IV	185,214

WATER RESOURCES

HYDROLOGIC FUNCTION AND WATER QUALITY

Management Common to All Alternatives:

- Establish PFC on 15 miles of streams, 22 acres of springs, and 46 acres of wetlands.
- Achieve state water quality standards and the needs of (state-designated) beneficial users on 17 miles of streams.
- Amend CA basin plans to reflect appropriate water quality standards.
- All resource management programs would use recognized BMPs for water resource protection.

Management Actions	No Action Alternative	Alternative 1 Economic	Alternative 2 Ecosystem	Alternative 3 Traditional	Preferred Alternative
Prioritize restoration treatments to improve hydrologic function and water quality:					
• **Allow natural recovery of sites**	No	No	Yes	No	Yes
• **Improve livestock grazing strategies**	Yes	No	No	Yes	Yes
• **Reduce wild horse levels**	Yes	No	No	Yes	No
• **Install in-stream structures**	Yes	Yes	Yes, natural structures only	Yes	Yes
Implement bio-engineering projects for erosion control (miles)	5	25	2	10	25
Construct exclosures to protect streams, wetlands, and spring sources from excessive grazing by livestock and wild horses					
• **Permanent exclosures (acres)**	500	500	3,000	200	500
• **Temporary exclosures (acres)**	0	500	0	0	0
Restrict uses and activities in riparian areas, streams, and contributing upland watersheds	Uses allowed as long as there is progress toward attaining water quality and riparian objectives	Uses allowed as long as there is progress toward attaining water quality and riparian objectives, PFC, and land health standards	Uses allowed as long as there is unimpeded progress toward attaining state water quality standards, riparian objectives, and PFC	Uses allowed as long as there is progress toward attaining water quality and riparian objectives	Uses allowed as long as there is progress toward attaining state water quality standards, riparian objectives, and PFC

WATER RESOURCES (continued)

WATER SUPPLY

Management Common to All Alternatives:

- Maintain existing water sources and manage to promote wildlife habitat, improve distribution of livestock and wild horses, and maintain recreational uses.
- Selectively develop springs and protect associated riparian ecosystems.
- Protect federal investments by asserting water rights on waters of the state.
- Projects that involve inter-basin transfer of water would be coordinated with local and regional governments.
- Develop a reservoir management plan to support wildlife and fisheries.

Management Actions	No Action Alternative	Alternative 1 Economic	Alternative 2 Ecosystem	Alternative 3 Traditional	Preferred Alternative
Prioritize development of new water sources based on the following objectives:					
• **Improve water availability for recreation uses**	No	Yes	No	No	No
• **Improve livestock distribution**	Yes	Yes	No	Yes	Yes
• **Provide water for wild horses**	Yes	No	No	No	Yes
• **Extend seasonal water availability for wildlife**	No	Yes	Yes	No	Yes
• **Provide water for commercial energy development**	No	Yes	No	No	No
Construct new water developments e.g., reservoirs, stock ponds, dugouts (number)	75	100	20	50	75
Consider withdrawal of state-appropriated water rights on waters that are not "waters of the state"	No	Yes	Yes	Yes, on stock pond permits	Yes
Assert riparian rights on all perennial and important intermittent streams	No	No	Yes	No	Yes

WILD HORSES AND BURROS

Management Common to All Alternatives:

- Horses will be periodically removed to maintain established AML.
- Monitor herd(s) and collect data (aerial and/or ground monitoring) at 3-year intervals. AML would be reduced if monitoring data indicates wild horse populations cannot be sustained at the established level and a thriving, ecological balance maintained.
- The Strip Allotment—which is part of the Devil's Garden Horse and Burro Territory—would continue to be managed in cooperation with the USDA Forest Service under a 1980 MOU.

Management Actions	No Action	Alternative 1 Economic	Alternative 2 Ecosystem	Alternative 3 Traditional	Preferred Alternative
Manage wild horses within established HMAs					
(number)	1	0	0	1	1
(acres)	16,895	0	0	16,895	16,895
Maintain populations within AMLs:					
(AML range)	16-25	0	0	16-25	16-25
Prioritize selection of animals returned after gathers based on specific traits	Numbers only; no particular characteristics selected	Not applicable	Not applicable	Numbers only; no particular characteristics selected	Numbers only; no particular characteristics selected

WILDLIFE AND FISHERIES

FEDERALLY LISTED SPECIES

Management Common to All Alternatives:

Bald Eagle:

- Manage in accordance with Section 7(a)(1) and Section 7(a)(2) of the Endangered Species Act, the Pacific Bald Eagle Recovery Plan, BLM Manual 6840, existing habitat management plans, and terms and conditions contained in plan and program-level biological opinions.
- Expand coordinated annual surveys monitoring bald eagle nesting sites to determine the presence of individuals and monitor reproductive success.
- Conduct annual mid-winter surveys with cooperators. Surveys would be conducted in Big Valley, the upper Pit River Valley, and the eastern portion of the Goose Lake area.
- Implement seasonal protective measures and buffer zones appropriate for permitted activities. (Refer to Table 2.24-3 in the text.)
- Develop habitat management plans for the Conrad Ranch and Timbered Crater nesting areas, as well as the Juniper Creek roosting site.

Modoc, Shortnose, and Lost River Suckers, and Shasta Crayfish:

These species and their habitats (where and when found) will be managed according to existing recovery plans and the terms and conditions of plan and program-level biological opinion.

Northern Spotted Owl:

The AFO does not have a recovery plan for this species, since neither populations nor suitable habitats have been found. Northern spotted owl and its habitat will be managed per existing terms and conditions contained in plan and program-level biological opinions. The AFO lies outside the Northwest Forest Plan area (which incorporates the federal contribution to recovery of this species.) However, if a population and/or suitable habitat were to be discovered, it would be managed according to the terms and conditions of plan and program-level biological opinion.

Yellow-Billed Cuckoo and Oregon Spotted Frog:

These species have not been found in the management area. However, the AFO will contribute to appropriate survey efforts and – if a population of either species is discovered – would develop conservation and action plans.

WILDLIFE AND FISHERIES (continued)

STATE-LISTED AND BLM SENSITIVE SPECIES

Management Common to All Alternatives:

- The AFO will remain an active partner with CDFG, USFWS, the USDA Forest Service, and other conservation partners to determine the status and improve conditions for state-listed and BLM sensitive species and their critical habitats.
- Cooperate with partners to obtain information regarding the occurrence, abundance, and distribution of state-listed and BLM sensitive species.
- A GIS database would be developed (in cooperation with conservation partners) to document and track information on these species.
- For populations found on BLM-administered lands, develop an interdisciplinary plan with the following components: (a) involvement of recognized experts, (b) thorough review of literature and information-gathering from local or other relevant studies, (c) list all potential actions, (d) develop an implementation strategy.
- Where appropriate, seasonal protective measures and buffer zones would be enforced where permitted activities compromise utilization of critical habitat by any of these species. (Refer to Table 2.24-3).

UNGULATES

Management Common to All Alternatives:

- Meet the criteria for Standard 5, the land health standard for biodiversity (as applicable to wildlife.)
- Management will focus on priority habitats to maintain and improve ecological conditions.
- Management tools would include seeding and planting of shrubs, forbs, and grasses as part of fire rehabilitation or in other situations to maintain or enhance ungulate habitats. Vegetation manipulation (e.g., willow thinning or enhancement) would also be used to improve or maintain terrestrial and aquatic habitats.
- Eliminate or significantly reduce medusahead, cheatgrass, and other exotic annual grasses and noxious weeds using IWM protocols.
- Cooperate with state agencies to amend and update HMPs and GIS databases for ungulates.
- Maintain existing exclosures to protect important vegetation and other biological resources.
- If Rocky Mountain elk become established in the management area, coordinate with state wildlife agencies and other stakeholders, including livestock owners, to develop and implement a management plan.
- The AFO would coordinate with CDFG in the development of a management plan prior to reintroduction of California bighorn sheep. Reintroduction, transplantation, and natural expansion of bighorn sheep populations would be allowed. Where needed, poor-quality habitat in historic sheep range would be improved.
- Provide artificial water sources (guzzlers) in areas with high potential for wildlife use or where natural water sources are depleted or limited. Leave water in cattle troughs for wildlife use from June through October of each year.
- Eliminate or reduce invasive juniper where encroachment has reduced the ecological potential of ungulate habitats.

WILDLIFE AND FISHERIES (continued)					
UNGULATES (continued)					
Management Action	**No Action Alternative**	**Alternative 1 Economic**	**Alternative 2 Ecosystem**	**Alternative 3 Traditional Use**	**Preferred Alternative**
Prioritize management areas for improvements to mule deer and black-tailed deer habitats	Follow guidelines from current Herd Management Plans on 503,045 acres	Focus management on Priority Habitat Areas - 128,000 acres	Focus management on Priority Habitat Areas and all identified winter ranges - 148,000 acres	Follow guidelines from current Herd Management Plans on 503,045 acres	Focus management on Priority Habitat Areas - 128,000 acres
Prioritize management areas for improvements to pronghorn habitats by maintaining healthy low sagebrush habitat	Follow guidelines from current Herd Management Plans on 384,000 acres	Focus on Priority Habitat Areas - 60, 145 acres, and important habitat - 190,000 acres	Focus on Priority Habitat Areas - 60, 145 acres, and identified high quality habitat - 220,000 acres	Manage 18,000 acres of important pronghorn habitat by reducing medusahead on the Likely Tablelands	Focus on Priority Habitat Areas - 60,145 acres, and identified high quality habitat - 130,000 acres
Construct fences to protect important ungulate habitats: aspen, bitterbrush, oaks, mahogany, riparian areas, and springs:	Construct new fencing on a case by case basis	Protect springs and other habitats case-by-case	Fence all springs; fence other habitats case-by-case	No maintenance of existing fencing; fence other habitats case-by-case	Fence springs not meeting land health standards; fence other habitats case-by-case
• **Temporary fencing for aspen groves (acres)**	0	400	0	200	300
• **Permanent fencing for aspen groves (acres)**	0	100	500	50	200
• **Temporary fencing for riparian areas (acres)**	0	500	0	0	0
• **Permanent fencing for riparian areas (acres)**	0	500	250	60	500
Assign OHV designations to protect wintering ungulates: (acres)					
• **'Open'**	442,767	0	0	0	0
• **'Limited to Existing Routes'**	2,500	14,260	0	14,260	4,260
• **'Limited to Designated Routes'**	5,780	34,000	78,260	64,000	74,000
• **'Closed'**	860	860	860	860	860

WILDLIFE AND FISHERIES (continued)					
UNGULATES (continued)					
Assign seasonal road closures to protect wintering ungulates on the following areas: • **Likely Tablelands** • **Barnes Grade** • **Day Bench**	 No Closure No Closure No Closure	 12/1-4/15 11/15-4/15 No Closure	 12/1-4/15 11/15-4/15 11/15-4/15	 No Closure No Closure 11/15-4/15	 12/1-4/15 11/15-4/15 11/15-4/15
Control invasive juniper to benefit wildlife • **Create diverse & healthy conditions in multiple habitat types using the following treatment methods**	Implement treatments on a project basis	Use mechanical harvest for biomass and woodcutting	Use mechanical treatments and prescribed fire	Use woodcutting on a project basis	Use a combination of treatment types
Establish sustainable livestock grazing use and adjust as necessary to benefit ungulate habitat: • **Establish grazing use levels for each pasture in priority habitats** • **Manage livestock grazing on the Likely Tablelands to reduce conflicts with fawning deer and kidding antelope**	 No, follow grazing guidelines Follow AMPs	 Yes Exclude grazing in May and June Yes	 Close the eastern portion to livestock grazing	 No, follow grazing guidelines Follow AMPs	 Yes Leave adequate forage for wintering ungulates

WILDLIFE AND FISHERIES (continued)

SAGEBRUSH ECOSYSTEMS AND SAGEBRUSH-OBLIGATE/ASSOCIATED SPECIES

Management Common to All Alternatives:

- Meet the criteria for Standard 5, the land health standard for biodiversity (as applicable to wildlife.)
- Identify and maintain sagebrush habitats that have a thriving understory of native vegetation.
- Implement juniper reduction to enhance sagebrush ecosystems; focus on providing diversity in shrub age class and composition and healthy understory vegetation.
- Restore natural disturbance processes (such as fire) by implementing fuels treatments, including prescribed fire and thinning projects, in accordance with *Conservation Strategies for Sage-grouse etc.*
- Especially in sagebrush habitats; use locally gathered (when available) native seeds and plants in all seeding, re-vegetation and rehabilitation projects, in accordance with BLM-California's native seed policy.
- Eliminate, reduce, or control alien weeds and invasive native plants using the IWM program.
- Avoid practices that permanently convert sagebrush habitat to non-native grasslands or agricultural uses.
- Implement seasonal protective measures and buffer zones appropriate for permitted activities. (See Table 2.24-3.)

Sage-grouse:

Implement locally developed strategies found in *Conservation Strategies for Sage-Grouse and Sagebrush Ecosystems within the Buffalo-Skedaddle, Likely Tablelands/Rocky Prairie and Devil's Garden/Clear Lake Population Management Units*. Utilize translocation to augment low populations in conjunction with habitat management projects.

Burrowing Owl:

Inventory and map suitable habitat. Attempt to detect and quantify species occurrence. Develop a conservation strategy to protect identified nesting burrows and other seasonal habitats. Develop assessment parameters for habitat needs and range assessment. Develop BMPs for other resource management activities effecting burrowing owl habitat. Protect identified or potential habitat while considering proactive management such as artificial burrows, water developments, prey enhancement projects, etc.

Pygmy Rabbit:

Inventory and map suitable habitat and determined species abundance. Develop a conservation strategy to protect occupied habitat. Develop assessment parameters for habitat needs and range assessment. Develop best management practices for other resource management activities effecting pygmy rabbit habitat. Extend management considerations into all potential habitat areas.

Other sagebrush-obligate species:

Survey to determine use of sagebrush habitats by sagebrush-obligate species. Determine demographic trends and habitat utilization for these species for utilization in medium- and large-scale area, regional, and national strategies for managing sagebrush-obligate species. Use all existing legal authority, including Executive Order 13186, to direct site-specific management, including assessment parameters for species-specific range assessments and habitat needs for all sagebrush-obligate species.

WILDLIFE AND FISHERIES (continued)

OTHER NATIVE WILDLIFE SPECIES

Management Common to All Alternatives:

- Meet criteria for Standard 5 in Standards for Rangeland Health: Wildlife Biodiversity
- Utilize plantings, seedings, or other vegetation management to maintain and improve terrestrial and aquatic habitats.
- Follow BLM policy, guidelines, current conservation plans, MOUs. Plans include Partners in Flight "Birds in a Sagebrush Sea", the Nevada BLM "Migratory Birds Best Management Practices for the Sagebrush Biome" and the Nevada Bat Conservation Plan (2002), BLM Manual 1745 -Introduction, Transplant, Augmentation, and Reestablishment of Fish, Wildlife and Plants. Coordinate with state wildlife agencies.
- Manage special habitats to maintain or enhance biodiversity and sustain healthy multi-aged stands of aspen, mountain mahogany, oak woodlands, bitterbrush, riparian and wetland areas, springs, and a variety of mountain shrub communities.
- Provide sufficient water distribution to meet the needs of upland game birds and other wildlife. Maintain current guzzlers and construct new in areas where natural water sources are limited.
- Construct brush piles for upland game birds and small mammal habitat.
- Implement seasonal buffers and protections measures to reduce or avoid disturbance to nesting raptors, cranes, herons, and important caves used by sensitive bats (see Table 2.24-3).

Management Actions	No Action Alternative	Alternative 1 Economic	Alternative 2 Ecosystem	Alternative 3 Traditional	Preferred Alternative
Implement maintenance and enhancement projects to protect meadows, springs, and riparian areas	Maintain current projects; All projects implemented on a case by case basis	No new meadows would be fenced; Protect springs and other habitat types on a case by case basis	Meadows would be fenced on a case by case basis; Fence all springs	No regular maintenance on existing structures; All projects implemented on a case by case basis	Meadows would be fenced on a case by case basis; Fence all springs not meeting the Land Health Standards
Construct fences to protect important riparian and/or meadow habitats:					
• **Temporary fencing (acres)**	0	500	0	0	0
• **Permanent fencing (acres)**	0	500	3000	200	500
Manage reservoirs to improve spring waterfowl production by maintaining existing nesting islands (see Table 2. 24-4).	Maintain the 12 reservoirs where nesting islands exist	Maintain the 12 reservoirs where nesting islands exist	Maintain the 12 reservoirs where nesting islands exist	No regular maintenance on existing structures	Maintain the 12 reservoirs where nesting islands exist
Create new waterfowl nesting islands on reservoirs (number)	0	26	26	0	26

WILDLIFE AND FISHERIES (continued)					
OTHER NATIVE WILDLIFE SPECIES (continued)					
Construct new waterfowl nesting islands to protect nesting areas (number)		27	17	0	26
Fully fence select reservoirs to exclude all grazing in order to protect and enhance waterfowl nesting habitat (number)	0	2	12	0	19
Promote good foraging habitat and protect it from catastrophic fire by implementing specific fuels treatment methods	All methods allowed	Utilize prescribed fire and mechanical methods	Utilize prescribed fire	Utilize prescribed fire and mechanical methods	All methods allowed
Implement brush mowing to enhance habitats	No	Yes	No	No	Yes
Establish green strips to reduce fire impact on habitat	No	No	Yes	No	Yes
Rehabilitate plant communities through planting and re-seeding of perennial and annual species	Use native shrubs, forbs, grasses and seeds in accordance with Native Seed Policy	Use native and non-native shrubs, forbs, grasses and seeds to provide multiple use opportunities	Use only native shrubs, forbs, grasses and seeds in accordance with Native Seed Policy	Use native and non-native shrubs, forbs, grasses and seeds. Including single species seedings of crested wheatgrass and other similar grasses	Use native and non-native shrubs, forbs grasses and seeds to provide multiple use opportunities

WILDLIFE AND FISHERIES (continued)

NATIVE / NON-NATIVE FISH AND OTHER AQUATIC SPECIES

Management Common to All Alternatives:

- Meet criteria for Standards 2 and 4 in Standards for Rangeland Health: Streams, Riparian and Wetlands.
- Use planting, seeding, or other vegetation management methods to maintain and improve aquatic habitats.
- Perform a comprehensive inventory of riparian habitat to identify fish species and populations.
- Improve streams and springs not meeting PFC. Design and implement projects based on BMPs for restoration and rehabilitation. Projects include but are not limited to maintaining or improving minimum pool depths, increasing clean spawning gravels, and implementing bank stabilization measures where needed
- Maintain native fish-bearing streams in proper water quality and riparian function, in accordance with BLM Land Health Standards, Guidelines for Livestock Grazing, PFC, and BMPs.
- Coordinate with state wildlife agencies to implement management actions in accordance with their plans, including planting of fish in appropriate waters.
- Maintain currently established dams and reservoirs to provide a safe environment for public activities.
- Coordinate with local county fish and game commissions and local sportsmen's groups to determine management priorities and enhancement opportunities.
- Develop additional reservoirs as appropriate. Explore development of waterways to emphasize fisheries based on biological potential and habitat capabilities.
- Native fish would have priority management in most cold water streams. These streams would be managed to maintain distribution of native species that would promote natural dispersal and re-colonization among populations and allow species interactions that are part of the ecosystem processes.

NON-NATIVE SPECIES

Management Common to All Alternatives:

- Manage for exotic or domesticated species according to BLM Manual 1745—Introduction, Transplant, Augmentation, and Reestablishment of Fish, Wildlife, and Plants.
- Manage to reduce or eliminate populations of non-native or invasive species that are impacting native species and/or habitats in a manner consistent with state and federal policies, procedures, and regulations.
- Implement management measures from state plans and other conservation plans (Partners in Flight, Intermountain West Joint Venture, etc.) to manage, control, or eliminate non-native or invasive species.

Impacts Summary Table

Air Quality				
No Action Alternative	**Alternative 1**	**Alternative 2**	**Alternative 3**	**Preferred Alternative**
Overall negligible impacts due to the relatively low acreage annually burned (5,000 acres). Negligible to minor long-term beneficial effects would result from actions implemented to reduce wildland fire potential.	Overall moderate beneficial effect. Smoke from wildland fires, annual prescribed burning (10,000 acres), and WFU (69,000 acres) would result in minor short-term adverse affects. A moderate long-term beneficial effect would result from actions implemented to reduce wildland fire potential.	Overall moderate beneficial effect. This alternative would result in the highest adverse impacts to air quality from smoke from prescribed burning on up to 25,000 acres annually, and WFU on 220,000 acres. Results would be minor to moderate short-term adverse affects. Moderate to major long-term beneficial effect would result from actions implemented to reduce wildland fire potential.	Same as No Action Alternative, except 7,500 acres would be treated annually with prescribed fire.	The Preferred Alternative would result in negligible adverse impacts and moderate beneficial effects to air quality. Smoke from wildland fires, annual prescribed burning (10,000 acres), and WFU (16,998 acres) would result in minor short-term adverse affects. A moderate long-term beneficial effect would result from actions implemented to reduce hazardous fuels and wildland fire potential.

Cultural and Paleontological Resources				
No Action Alternative	**Alternative 1**	**Alternative 2**	**Alternative 3**	**Preferred Alternative**
Overall impacts would be moderately high. There would be minor to major adverse impacts to unprotected/unrecorded resources from actions associated with fire suppression, fuels reduction, OHV use, mineral leasing, 'Open' fuel wood cutting, wild horse grazing and the range program. OHV restrictions/closures in resource sensitive areas and WSAs would have minor to major beneficial effects. The construction of exclosures for wildlife and riparian protection would have minor to major beneficial effects.	Overall impacts would be the highest. There is potential for major adverse impacts due to the large number of acres designated for treatment through fuels projects, juniper and timber harvesting and biomass projects and the construction of new roads. The increased numbers of permitted livestock would have minor to major adverse effects. The use of WFU on 69,000 acres and AMR on 486,047 acres would have minor to moderate benefits for cultural and paleontological resources. The increased development of recreational facilities would result in minor to moderate short- and long-term effects, both adverse and beneficial.	Overall impacts would be the lowest. This lower potential for adverse effects would be due to the relatively low numbers of acres to be treated through juniper and timber harvesting, biomass projects, and the construction of new roads. Increased acres designated for exclosures and ACECs would have negligible to major beneficial effects. Reduction in overall numbers of livestock would have minor to major beneficial effects. The use of prescribed fire on 222,000 acres and AMR on 281,045 acres would have minor to moderate benefits for cultural and paleontological resources.	Impacts would be moderately low and similar to Alternative 2 for Fire and Fuels management, road construction and fuel wood cutting management actions. The relative lack of mechanical harvesting of juniper would have effects similar to the No Action alternative. Grazing and wild horse and burro management would have the same impacts as the No Action alternative. Energy and Minerals management, OHV, and recreational management actions would have impacts similar to Alternative 1.	The Preferred Alternative would result in moderate to major adverse impacts and moderate beneficial effects to cultural resources. There is potential for major averse impacts due to the large number of acres designated for fuels projects, juniper and timber harvesting, and the construction of 60 miles of new roads. Livestock grazing and wild horse use could impact cultural resources through trampling and pawing that mixes depositional associations and accelerates erosional processes, wallowing and trailing that results in the dispersion breakage and/or loss of artifacts and other data, rubbing against standing structures, and chemical reactions to urine and feces that result in the accelerated deterioration of historic properties. Minor to moderate beneficial effects would be achieved through the designation of six ACECs and culturally significant properties by promoting management goals focused on preserving cultural resources. OHV use would be mostly 'Limited to Existing or Designated Routes', which would reduce damage to sites from cross-country travel.

Energy and Minerals – Leasable, Locatable, Saleable				
No Action Alternative	**Alternative 1**	**Alternative 2**	**Alternative 3**	**Preferred Alternative**
Overall negligible effects due to the small area 'Closed' to energy and mineral development.	Minor adverse effects due to new surface use and occupancy restrictions. These would outweigh the minor beneficial effects resulting from new road construction.	Overall major adverse effects. The adverse effects relate to surface use restrictions. 79% of the area would be 'Open' to leasing, however, 57% of this area would be subject to an NSO restriction. Increased costs for mineral or energy development would be substantial.	Moderate impacts are due to the increased area subject to the NSO restriction along with other surface use and occupancy requirements.	The Preferred Alternative would result in minor adverse impacts and minor beneficial effects to energy and mineral development from surface use and occupancy restrictions. 84% of the AFO would be 'Open' to leasable minerals, 93% would be 'Open' to locatable minerals, and 86% would be 'Open' to saleable minerals. Minor beneficial effects would result from realty actions and new road construction.
Energy and Minerals – Renewable Energy				
No Action Alternative	**Alternative 1**	**Alternative 2**	**Alternative 3**	**Preferred Alternative**
Overall impacts would be minor to moderate resulting from WSAs (11% of the AFO management area) excluded from new development. In addition, 63% of the field office would be managed to meet VRM Class I, II, and III objectives.	Overall impacts would be minor to moderate resulting from WSAs and five ACECs (19% of the AFO management area) excluded from new development. In addition, 63% of the field office would be managed to meet VRM Class I, II, and III objectives. Minor beneficial effects may accrue from realty actions and if Congress releases WSAs from wilderness study.	Overall impacts would be minor to moderate, resulting from WSAs and ten ACECs (28% of the AFO management area) excluded from new development. In addition, 63% of the field office would be managed to meet VRM Class I, II, and III objectives. Minor beneficial effects may accrue from realty actions and if Congress releases WSAs from wilderness study.	Overall impacts would be minor to moderate resulting from WSAs and two ACECs (12% of the AFO management area) excluded from new development. In addition, 63% of the field office would be managed to meet VRM Class I, II, and III objectives. Minor beneficial effects may accrue from realty actions and if Congress releases WSAs from wilderness study.	Overall impacts would be minor to moderate. Lands within WSAs, the Lower Pit River WSR corridor, and six ACECs would be excluded from renewable energy development (17% of the AFO management area). 63% of the field office would be managed to meet VRM Class I, II, and III objectives. Minor beneficial effects may accrue from realty actions and road development.

Environmental Justice				
No Action Alternative	**No Action Alternative**	**No Action Alternative**	**No Action Alternative**	**No Action Alternative**
Impacts on environmental justice communities from proposed management actions are not expected to be significant.	Impacts on environmental justice communities from proposed management actions are not expected to be significant.	Impacts on environmental justice communities from proposed management actions are not expected to be significant.	Impacts on environmental justice communities from proposed management actions are not expected to be significant.	Impacts on environmental justice communities from proposed management actions are not expected to be significant.

Fire and Fuels				
No Action Alternative	**Alternative 1**	**Alternative 2**	**Alternative 3**	**Preferred Alternative**
The No Action Alternative would have negligible to minor adverse impacts to the fire and fuels program. 100% of the field office area would use full suppression management, resulting in the continuation of the buildup of fuels, increasing the probability of large wildfires. Juniper and other fuels reduction treatments would occur at a rate of about 5,000 acres annually. This would result in restoration of 100,000 acres of native plant communities over the life of the plan. Livestock grazing would occur at present levels, resulting in negligible beneficial effects of restoring natural fire regimes. Routes within 491,845 acres would be 'Open' for OHV use, which would pose an increased risk of human-induced wildfire.	This alternative would result in minor beneficial impacts to the fire and fuels program. Most of the field office area would use AMR fire suppression reducing the buildup of fuels. Up to 200,000 acres could be treated with fire and other fuels reduction treatments over the life of the plan. Livestock grazing would occur at present levels, resulting in negligible beneficial effects of restoring natural fire regimes. The entire field office area would be 'Open' to OHV travel, posing greater risk of human-induced wildfire than any of the other alternatives.	This alternative would provide moderate beneficial impacts, as the use of adaptive management and the AMR for wildland fire suppression is emphasized. OHV use is restricted. Negligible adverse effects would result from increased fine fuels due to reductions in livestock grazing.	Overall minor beneficial effects resulting from fuels treatments on up to 150,000 acres over the life of the plan. However, the predominant fire management strategy in the field office would continue to be full suppression.	The Preferred Alternative would result in negligible adverse impacts and moderate to major beneficial effects to fire and fuels management. The use of adaptive management and AMR for wildland fire suppression would help to restore fire regime condition classes. Hazardous fuels reduction would be emphasized on up to 23,000 acres per year, in order to reduce the risk of catastrophic wildfire. Improvements to livestock grazing strategies and vegetation restoration treatments would help to restore natural fire regimes. Only 80 acres would be 'Open' to OHV use, which would reduce the risk of human-caused ignitions.

Forestry				
No Action Alternative	**Alternative 1**	**Alternative 2**	**Alternative 3**	**Preferred Alternative**
Major short- and long-term adverse effects would be associated with high catastrophic fire potential under the No Action Alternative. Treatments could result in major long-term beneficial effects.	Major long-term beneficial effects to forestry would outweigh any short-term adverse effects through the use of AMR, WFU, and treatments. There would be a reduced potential for catastrophic fire.	Moderate long-term beneficial effects to forestry would outweigh any short-term adverse effects through the use of AMR, WFU and treatments. The result would be reduced potential for catastrophic fire.	Moderate long-term beneficial effects to forestry would outweigh any short-term adverse effects through the use of AMR, and treatments which would result in reduced potential for catastrophic fire.	The Preferred Alternative would result in negligible adverse impacts and moderate to major beneficial effects to forestry management. The use of AMR for fire suppression, combined with aggressive fuels reduction, would result in moderate to major long-term beneficial effects to forestry by reducing the potential for catastrophic wildfire. Benefits would outweigh any short-term adverse effects. Mechanical thinning on 12,000 acres would remove canopy fuels, decrease the risk of catastrophic wildfires, improve forest health, and yield saleable logs. A 5,000-acre decrease in severe, stand-replacing wildfires is possible under this alternative, primarily due to increased emphasis on fuels management.

Lands and Realty				
No Action Alternative	**Alternative 1**	**Alternative 2**	**Alternative 3**	**Preferred Alternative**
Overall negligible effects to the lands and realty program. Existing LTAP will continue to be implemented focusing on consolidating ownership patterns, disposing of scattered parcels and acquiring significant natural and biological resources.	Overall minor beneficial effects to the lands and realty program. Potentially minor beneficial modifications to the LTAP include the conservation easement pilot project. Negligible impacts are expected due to historic trail and other site development.	Overall minor beneficial effects to the lands and realty program. Potentially minor beneficial modifications to the LTAP include partial conversion of the Madeline disposal area into a retention/ acquisition area.	Overall negligible effects to the lands and realty program. Existing LTAP will continue to be implemented focusing on consolidating ownership patterns, disposing of scattered parcels and acquiring significant natural and biological resources.	Overall minor beneficial effects to the lands and realty program. Potentially minor beneficial effects would result from modifications to the LTAP, including both the conservation easement pilot project and the Madeline retention/acquisition area proposal.

Lands and Realty – Rights-of-Way				
No Action Alternative	**Alternative 1**	**Alternative 2**	**Alternative 3**	**Preferred Alternative**
Overall effect would be negligible. Existing utility corridor and communication site ROWs would continue to be used. Additional proposals would be analyzed on a case by case basis. This approach would result in the greatest amount of land available for ROW applications of all the alternatives.	Overall effect would be negligible. Slight increase in acreage 'Closed' to ROW development would result in a minor adverse effect. Expansion of existing ROW corridors up to a maximum of 500 feet would result in a minor beneficial effect. BLM would continue current uses and expand new ones at the existing designated communications sites. BLM would maintain total of 32 miles of roads, which is the most road maintenance under any alternative resulting in a minor beneficial effect.	Overall major adverse effects. No additional communication sites or large utility lines would be authorized resulting in a major adverse effect. Residential distribution lines would continue on a case-by-case basis. BLM would provide no maintenance, reconstruction, or modification of roads resulting in a minor adverse effect.	Overall moderate adverse effect. BLM would maximize use of the existing space in transmission lines and no new projects would be authorized independent of existing projects except for residential distribution lines which would be authorized on a case-by-case basis. This would result in a moderate adverse effect. BLM would seek to consolidate existing communication site ROWs and would grant no additional communication site ROWs. This would also result in a moderate adverse effect. BLM would limit road maintenance to 19 miles and would provide no reconstruction or modification of roads resulting in a minor adverse effect.	Overall negligible effect. 435,385 acres would be 'Open' to new ROWs. Slight increase in acreage 'Closed' to ROW development resulting in a minor adverse effect. Preferred Alternative would expand existing transmission line and pipeline project width up to a total of 500 feet and designate existing lines as utility corridors, resulting in a minor beneficial effect. BLM would seek to maximize existing communication sites before opening new ones.

Livestock Grazing				
No Action Alternative	**Alternative 1**	**Alternative 2**	**Alternative 3**	**Preferred Alternative**
Overall negligible effects would occur under the No Action Alternative. AUMs that are available annually would remain unchanged. Negligible to minor effects may occur from managing designated sage-grouse habitat such as change in season of use and livestock grazing systems. Additional use of dispersed recreation areas would also impact livestock grazing at minor to moderate levels.	Overall, moderate beneficial effects would occur to livestock operators as a result of reinstating the Suspended AUMs thus increasing the number of Actual AUMs. Overall vegetation treatments would be twice that of the No Action Alternative and have minor beneficial effects for livestock Additional forage would be made available through a forage reserve during implementation of juniper treatments and would provide minor beneficial effects to livestock operations. Negligible to minor effects may occur from managing designated sage-grouse habitat such as changing season of use and livestock grazing systems.	Overall, major adverse impacts would occur to livestock operators as a result of emphasizing natural values and processes over livestock grazing. AUMs would be reduced by two-thirds as grazing areas would be rested two out of every three years resulting in a significant reduction in available forage. It is anticipated that a large portion of the smaller operations would become uneconomical and go out of business. The loss of AUMs would also directly impact county revenue through reductions in possessory interest tax. Overall vegetation treatments would be five times that in the No Action Alternative but have negligible effects for livestock.	Overall negligible effects would occur under Alternative 3 and would be similar to the No Action Alternative. Actual use AUMs would remain the same. Overall vegetation treatments would be three times that in the No Action Alternative and have minor beneficial effects for livestock. Negligible to minor effects may occur from managing designated sage-grouse habitat such as changing season of use and livestock grazing systems.	The Preferred Alternative would result in minor adverse impacts and minor beneficial impacts to livestock grazing operations. Active AUMs would remain at 54,881. Vegetation restoration treatments, including removal of invasive juniper, would occur on up to 10,000 acres/year, resulting in restoration of native plant communities and a more productive and higher quality forage base. Additional forage would be made available through a forage reserve program during implementation of juniper treatments. Negligible to minor adverse effects may occur from new grazing exclosures, short-term rest required for vegetation treatments, and managing grazing within designated sage-grouse habitat (e.g., changing season of use and livestock grazing systems).

Recreation				
No Action Alternative	**Alternative 1**	**Alternative 2**	**Alternative 3**	**Preferred Alternative**
Overall adverse effects are negligible to minor for recreation when all impacts are considered.	Overall benefits effects are negligible for Recreation when all impacts are considered.	Overall benefits effects are minor to moderate for Recreation when all impacts are considered.	Overall benefits effects are minor to moderate for Recreation when all impacts are considered.	Overall adverse effects are negligible to minor for recreation, and moderate beneficial impacts.
Recreation – Energy and Minerals				
Minor to major adverse effects could occur from mineral and energy development on recreation opportunities. Mineral leasing would be available on 89% (446,397) of public lands with standard terms and conditions. Surface use and occupancy would be on a case by case basis. (continued on next page)	Overall, minor adverse effects would occur to recreation from mineral development. Mineral leasing restrictions would increase substantially with surface use and occupancy requirements applied to 200,000 acres with sensitive resources. (continued on next page)	Overall, negligible adverse effects would occur to recreation from mineral development. Mineral leasing would have surface use and occupancy requirements applied to 50,000 acres which is a moderate decrease from other Alternatives, but NSO stipulations would dramatically increase to 228,000 acres for protection of sensitive resources. All ACECs/RNAs and WSRs would be 'Closed' (103,023) which is a significant increase in resource protection and enhancement of recreation values. (continued on next page)	Overall, minor adverse effects would occur to recreation resources from mineral development. This Alternative is similar to Alternative 1 with the following variations: Mineral leasing has 37,253 acres with NSO stipulations, and 200,000 acres of surface use and occupancy requirements. (continued on next page)	Overall, minor adverse effects would occur to recreation from mineral development. Mineral leasing NSO stipulations would apply to 18,580 acres. (continued on next page)

Recreation – Energy and Minerals (continued)				
No Action Alternative	**Alternative 1**	**Alternative 2**	**Alternative 3**	**Preferred Alternative**
Locatable minerals 501,723 acres would be available for mineral development with 1322 acres in the Ash Valley ACEC/RNA withdrawn. Saleable minerals have 446,397 acres available for development. Flat rock collection has 84% of field office lands 'Open', and mineral materials are 'Open' on 89% of public lands. Mineral and energy development, could have adverse effects on recreation opportunities, but mineral potential is low in the area, and development would generally be site-specific and on a case-by-case basis.	Locatable minerals would slightly decrease recreation opportunities with the Ash Valley ACEC/RNA revocation, but a slight increase in wild land protection would occur from the Lower Pit River WSR withdrawal of 2,500 acres. Saleable minerals would have a moderate decrease of 'Closed' acres (23,756) with only WSAs and WSRs 'Closed' to Saleable minerals. Renewable Energy would have a slight benefit to natural settings and recreation with an additional closure of 400 acres for WSRs. Recreation experiences that rely on the natural landscape and key settings would diminish slightly. Mitigation and protection measures would provide buffers, and development would generally be site specific.	Locatable minerals 12 ACECs/RNAs encompassing (84,319) and the Lower Pit River WSR would be 'Closed' to mineral entry which is a substantial decrease in acres available for mining. Saleable minerals availability is reduced substantially, with only 124,000 acres 'Open' for mineral materials, and flat rock collection is 'Closed' on 503,045 acres. Renewable Energy development is 'Closed' on WSAs, WSRs, ACECs/RNAs and all NSO areas encompassing 378,958 acres which represent a dramatic reduction in acres available for wind energy, but benefits for recreation values and natural settings. The major reduction in available acres, closures, and restrictions on leases and development would increase substantially throughout the field office. These actions would maintain the existing character of the area and minimize potential disturbance for enhancement of all recreation activities.	Locatable minerals would have 7,722 acres 'Closed' to mineral entry. Saleable minerals No special stipulations or restrictions on mineral materials or flatrock collection. Renewable Energy Same as Saleable minerals in Alternative 3. Recreation experiences that rely on the natural landscape and key settings would diminish slightly. Mitigation and protection measures would provide buffers, and development would generally be site specific.	Locatable minerals Withdrawals on ACECs/RNAs and WSRs (32,993 acres) would have a significant decrease from Alternative 2, but a modest increase over all other alternatives for closure to mineral entry. Saleable minerals WSRs, WSAs, and ACECs/RNAs outside of WSAs would be 'Closed' to development on 66,670 acres. This would be an insignificant increase over other alternatives except for Alternative 2, which has substantially more acres 'Closed' to Saleable minerals. Renewable Energy Same as Saleable minerals in the Preferred Alternative. Recreation experiences that rely on the natural landscape and key settings would diminish slightly. Mitigation and protection measures would provide buffers, and development would generally be site-specific.

Recreation – Utilities and Rights-of-Way				
No Action Alternative	**Alternative 1**	**Alternative 2**	**Alternative 3**	**Preferred Alternative**
Minor to moderate adverse effects would occur to recreation resources from utility corridors and facilities. Recreation opportunities and activities associated with natural settings and aesthetics would be by slightly reduced. The fewest restrictions to minerals, energy and utilities occur in this alternative, whereas the potential for additional impacts is greatest on 445,000 acres. Infernal Caverns/Rocky Prairie SRMA Minor to moderate adverse effects occur to scenic quality and the Infernal Caverns/Rocky Prairie SRMA, due to the existing Alturas Intertie project which crosses trails and roads which lead to the Battle of the Infernal Caverns. Impacts to VRM, context and setting occur to this significant historical resource.	Minor to moderate beneficial effects to recreation would occur due to more restrictions on utilities, i.e., encourage the use of existing lines, expand existing corridors up to 500 feet, or designate existing lines as corridors. With new utility ROWs and associated roads, this alternative would be similar in acres to the no action alternative with 441,000 acres available for ROWs, although the potential for additional impacts to recreation would be slightly decreased. Infernal Caverns/Rocky Prairie SRMA If the Alturas Intertie project would be designated as a "corridor" major adverse effects would occur to the Infernal Caverns/Rocky Prairie SRMA. The existing alignment is within the high use recreation area and would also cause major adverse effects to the setting and context of the Battle of the Infernal Caverns, and the recreation experiences associated with hiking and viewing significant historical resources.	Major beneficial effects would occur to recreation by prohibiting new utility ROWs and associated roads, as well as the removal of abandoned utilities and facilities. The potential for additional roads and visual impacts to scenic quality would be eliminated. Key recreation sites and natural landscapes would be maintained. These actions would maintain the existing character of the area and minimize potential disturbance, and enhance all recreation activities. Infernal Caverns/Rocky Prairie SRMA Without "corridor" designation of the Alturas Intertie project, no further impacts would occur to the Battle of the Infernal Caverns or recreation activities within the Infernal Caverns/Rocky Prairie SRMA.	Moderate to major beneficial effects would occur to recreation by limiting new utility ROWs and associated roads to 10,000 acres and maximizing available space within existing corridors. The potential for additional roads and utilities with impacts to visual resources, aesthetics, key settings, and natural landscapes associated with recreation activities would be reduced significantly. Infernal Caverns/Rocky Prairie SRMA Without "corridor" designation of the Alturas Intertie project, no further impacts would occur to the Battle of the Infernal Caverns or recreation activities within the Infernal Caverns/Rocky Prairie SRMA	Moderate beneficial effects would occur to recreation, scenic quality, and natural settings due to increased restrictions to utilities, a reduction of acres in ROWs, encouraging use of existing lines, expanding existing corridors up to 500 feet, and designating existing lines as corridors. 435,385 acres would be available for new utility ROWs and associated roads. The potential for additional roads for recreation travel would be moderately decreased from No Action. Infernal Caverns/Rocky Prairie SRMA Major adverse effects would occur to scenic quality and the Infernal Caverns/Rocky Prairie SRMA if the Alturas Intertie project were to be designated as a "corridor". The existing proposed alignment is within this recreation area. Moderate to major adverse effects would result to the setting and context of the Battle of the Infernal Caverns, and the recreation experiences associated with hiking and viewing these significant historical resources.

Recreation – Non-Motorized Travel				
No Action Alternative	**Alternative 1**	**Alternative 2**	**Alternative 3**	**Preferred Alternative**
Minor beneficial effects on recreation opportunities associated with natural landscapes and settings would occur with construction of eleven miles of new non-motorized trails. These trails are identified in existing management plans, and would provide better access for public use and benefits.	Moderate beneficial effects would occur to recreation non-motorized use opportunities. Non-motorized trail development would include 27 miles of BLM-administered trails, which represents a significant increase beyond trails identified in existing plans.	Negligible beneficial effects would occur to recreation in natural settings with development of 12.5 miles of trails in high use areas such as the Infernal Caverns/Rocky Prairie SRMA. Under Alternative 2 only a slight benefit would occur for trail users in these areas.	A moderate beneficial effect would occur on non motorized recreation trail use in natural settings. Development of 23 miles of non-motorized trails would have a significant increase of miles for this resource.	A minor to moderate beneficial effect would occur for recreation in natural settings. New recreation opportunities would be available with the development of 25.5 miles of non-motorized trails.

Recreation – Livestock Grazing				
No Action Alternative	**Alternative 1**	**Alternative 2**	**Alternative 3**	**Preferred Alternative**
Minor to major adverse effects would occur due to the continued loss and degradation of riparian and aquatic habitats in sensitive aquatic environments. Recreational fisheries, wildlife viewing, and scenic quality are impacted in reservoirs, streams, and lakes that lack protection from the effects of livestock grazing.	Moderate to major beneficial effects would occur to recreational fisheries, wildlife viewing, and scenic quality that are associated with water resources. Protection measures for sensitive aquatic environments and recreational fisheries include fencing and modification of grazing systems to benefit water resources. Moderate to major beneficial effects would occur to Nelson Corral reservoir which would be fenced to enhance recreational fishing, riparian resources, and aquatic habitat, while maintaining livestock water. Recreational fisheries which are not protected from livestock grazing would continue to have minor to major adverse effects to recreational fisheries and scenic quality. Whereas, protected recreational fisheries would have moderate to major beneficial effects for the fisheries, wildlife viewing, and scenic quality.	Dramatic moderate to major beneficial effects on recreational fishing opportunities would occur when protected from livestock grazing. Public lands would be grazed once every 3 years. The effects of reduced grazing would have increased benefits to recreational fishing and scenic quality in areas associated with riparian and water resources. Nelson Corral reservoir would have the same actions and impacts as Alternative 1.	Same as the No Action Alternative for unprotected recreational fisheries. However, reservoirs, streams, and lakes that have protection would have moderate to major beneficial effects for recreational fisheries, wildlife viewing, and scenic quality.	Livestock grazing under the Preferred Alternative would result in minor adverse impacts and moderate beneficial impacts to recreation and visitor services. Recreational activities would continue to be pursued in conjunction with livestock grazing on most BLM-administered lands; therefore, continuation of this practice is not expected to have additional adverse effects. Recreational fishing would benefit, as livestock grazing is managed to meet land health and water quality standards. 500 acres of riparian/wetland exclosures would be constructed to improve riparian conditions along stream banks. These actions would improve the natural appearance of the landscape, preserving wildlife and fish habitats, and minimizing visitor/livestock interactions.

Recreation – Special Recreation Management Areas				
No Action Alternative	**Alternative 1**	**Alternative 2**	**Alternative 3**	**Preferred Alternative**
Negligible to minor adverse effects would occur to recreation opportunities in high use areas. Without SRMA designation, recreational experiences and resources would continue to degrade with a gradual loss of recreation opportunities.	Moderate beneficial effects would occur with the designation of two new SRMAs. Both the Pit River SRMA (76,000) acres and the Infernal Caverns/Rocky Prairie SRMA (117,000) acres would provide additional emphasis and priority for management of all recreation opportunities and resources within these two popular recreation areas.	SRMA designation, Same as Alternative 1.	SRMA designation, Same as Alternative 1.	Moderate beneficial effects would occur with the designation of two new SRMAs. The Pit River SRMA (76,000 acres) and the Infernal Caverns/Rocky Prairie SRMA (117,000 acres) would provide additional emphasis and priority for management of all recreation opportunities and resources within these two popular recreation areas.
Recreation – Health and Safety				
No adverse effects on hunting, but negligible to minor adverse effects on recreational fishing, wildlife viewing, health and safety. No restrictions on shooting or hunting at high use recreation sites or reservoirs. Conflicts and health and safety issues can arise with hunting on the water's edge, between fishermen, other recreation enthusiasts, and hunters discharging guns.	Same as No Action Alternative.	Moderate adverse effects to hunting activities at the 2 reservoirs, and negligible adverse effects management-area-wide. Other recreation uses (fishing, wildlife viewing, and hiking) would have moderate beneficial effects on health and safety with no shooting activities adjacent to the reservoirs. Nelson Corral and Bayley reservoirs would be 'Closed' to shooting within ¼ mile of waters edge. Both reservoirs are used for migratory waterfowl hunting, fishing, and wildlife viewing.	Minor adverse effects to hunting activities at the 2 reservoirs, and negligible adverse effects management-area-wide. Minor to moderate beneficial effects to recreational fishing, other activities, and health and safety. Nelson Corral and Bayley reservoirs would be 'Closed' to shooting April 1-November 15th.	The Preferred Alternative would result in negligible adverse effects to hunting, health and safety. No restrictions would be implemented on the season of use or distance from waters edge for hunting activities. Nelson Corral and Bayley reservoirs would be designated as official recreation sites.

Recreation – Recreation Opportunity Spectrum				
No Action Alternative	**Alternative 1**	**Alternative 2**	**Alternative 3**	**Preferred Alternative**
Moderate beneficial effects would occur to motorized recreation with areas classified as SPM. The highest acreage in all alternatives for this ROS setting occurs in this alternative (283,949 acres). Also, SPM and SPNM, which provide a mix of non-motorized and motorized opportunities, would have 69% of public land allocated to these settings and have a minor beneficial effect for these recreation activities.	Moderate beneficial effects would occur to motorized recreation throughout the Alturas Field Office. ROS RN classification would increase to 45%. The SPM and SPNM settings provide a mix of opportunities, and 50% of the landscape is allocated to these settings, and would have no effect on non motorized and motorized recreation activities.	Moderate to major beneficial effects would occur for enhancement of non-motorized opportunities on public lands. Under Alternative 2, there is an increased emphasis on maintaining primitive landscapes in ROS. About 15% of the field office would be managed as a primitive setting. The 'Primitive' areas, coupled with about 16% of the field office area managed as SPNM would result in approximately one-third of the lands managed for non-motorized recreation opportunities. SPNM and SPM combined together at 65% provide a mix of non-motorized and motorized opportunities, with a minor beneficial effect for these activities.	Moderate beneficial effects would occur over all other alternatives for this type of recreation experience with the highest number of acres identified in SPNM at 148,766. Minor to moderate beneficial effects would occur from the combined settings of SPNM and SPM allocated at 73% of the landscape, and provide a mix of non-motorized and motorized opportunities.	Negligible adverse impacts and minor to moderate beneficial effects would result to non-motorized recreation experiences. 11% of public lands within the AFO would be managed under ROS classification of 'Primitive'. These areas are located within roadless portions of WSAs. Minor beneficial effects would also occur as 67% of the field office landscape would be classified as SPNM and SPM. These classes would provide a mixture of opportunities for non-motorized and motorized recreation activities on public lands..

Social and Economic Conditions				
No Action Alternative	**Alternative 1**	**Alternative 2**	**Alternative 3**	**Preferred Alternative**
Effects on current social conditions more beneficial than adverse. Beneficial effects include increased recreational opportunities and protection of resources that are of critical concern, native to the area, or are valuable to rural lifestyles. Adverse effects generally would be short-term or temporary, except for permanent closure of facilities (e.g., roads) or access restrictions to recreation. Expected to generate approximately 2 new jobs and $57,100 in annual personal income. Total personal income would increase by approximately 0.015%. The proposed management actions would result in a very small increase in regional economic activity.	Effects on current social conditions more beneficial than adverse. Beneficial effects include increased recreational opportunities and protection of resources that are of critical concern, native to the area, or are valuable to rural lifestyles. Adverse effects generally would be short-term or temporary, except for permanent closure of facilities (e.g., roads) or access restrictions to recreation. Expected to generate approximately 192 new jobs and $5.0 million in annual personal income. Total employment within the two-county study area would increase by approximately 1.1%. Total personal income would increase by approximately 0.7%. Proposed management actions would result in a very small increase in regional economic activity.	The effects on current social conditions more beneficial than adverse. Beneficial effects include increased recreational opportunities and protection of resources that are of critical concern, native to the area, or are valuable to rural lifestyles. Adverse effects generally would be short-term or temporary, except for permanent closure of facilities (e.g., roads) or access restrictions to recreation. Expected to result in a loss of 348 new jobs and a loss of $1.9 million in annual personal income. Total employment within the two-county study area would decrease by approximately 1.8%. Total personal income would decrease by approximately 0.2%. The proposed management actions would result in a loss in regional economic activity.	The effects on current social conditions more beneficial than adverse. Beneficial effects include increased recreational opportunities and protection of resources that are of critical concern, native to the area, or are valuable to rural lifestyles. Adverse effects generally would be short-term or temporary, except for permanent closure of facilities (e.g., roads) or access restrictions to recreation. Expected to generate approximately 24 new jobs and $644,600 in annual personal income. Total employment within the two-county study area would increase by approximately 0.1%. Total personal income would increase by approximately 0.08%. Proposed management actions would result in a very small increase in regional economic activity.	The effects on current social conditions more beneficial than adverse. Beneficial effects include increased recreational opportunities and protection of resources that are of critical concern, native to the area, or are valuable to rural lifestyles. Adverse effects generally would be short-term or temporary, except for permanent closure of facilities (e.g., roads) or access restrictions to recreation. Expected to generate approximately 85 new jobs and $2.2 million in annual personal income. Total employment within the two-county study area would increase by approximately 0.5%. Total personal income would increase by approximately 0.3%. Proposed management actions would result in a small increase in regional economic activity. The potential reduction of in-lieu payments to the counties as a result of the sale or transfer of federal lands in the AFO area would not be substantial, and losses in county revenues may be offset by a potential increase in property tax revenues.

Soils				
No Action Alternative	**Alternative 1**	**Alternative 2**	**Alternative 3**	**Preferred Alternative**
Overall impact would be moderate beneficial and adverse effects. Major short- and long-term adverse effects would be associated with high catastrophic fire potential under the No Action Alternative. Mechanical treatments could result in major long-term beneficial effects. Lack of OHV restrictions currently has the potential for major adverse effects to soil resources.	Overall impact would be major beneficial and adverse effects. AMR, WFU and treatments would result in reduced potential for catastrophic fire and major long-term beneficial effects to soil that would outweigh any short-term adverse effects. OHV use could result in major adverse effects in the Barnes Grade area. Exclosures and roads gated or 'Closed' would result in moderate long-term beneficial effects. Grazing practices may result in major short and long-term adverse impacts.	Overall impact would be major and primarily beneficial. AMR, WFU, and treatments would result in reduced potential for catastrophic fire and moderate long term beneficial effects to soil that would outweigh any short-term adverse effects. Exclosures, OHV restrictions and grazing restrictions would result in major short and long-term beneficial effects.	Overall impact would be moderate beneficial and adverse effects. AMR and treatments would result in reduced potential for catastrophic fire and moderate long-term beneficial effects to soil that would outweigh any short-term adverse effects. Reduced acreages for ACEC designations and exclosures may result in moderate short- and long-term adverse effects to soils.	The Preferred Alternative would result in minor adverse impacts and moderate beneficial impacts to soil resources. AMR and fuels reduction treatments would result in reduced potential for catastrophic wildfire, resulting in moderate to major long-term beneficial effects to soil that would outweigh any short-term adverse effects. Livestock grazing and wild horse use in areas with sensitive soils could degrade soils in both the short and long term through soil compaction, erosion, sedimentation, and degrading of stream channel condition. Managing grazing to meet land health standards and the construction of new livestock exclosures for the protection of 500 acres of riparian areas and vegetation restoration treatments would result in moderate beneficial impacts. OHV use would be largely 'Limited to Existing or Designated Routes', which would reduce disturbance to soils in areas suitable for cross-country travel. BLM would close 4,625 acres to OHV use, providing soil protection.

Special Designations – Areas of Critical Environmental Concern				
No Action	**Alternative 1**	**Alternative 2**	**Alternative 3**	**Preferred Alternative**
Negligible to minor beneficial effects would result from the No Action Alternative. Two existing ACECs would be retained for a total of 2,770 acres (less than 1% of BLM field office Area). No ACECs would be designated.	Minor to moderate beneficial effects would result from the designation of five new ACECs (40,079 acres) proposed to protect sensitive species, cultural resources, and pristine natural environments. Specific impacts from resource uses on individual ACEC values and associated sensitive resources are listed below.	Major beneficial effects would result from the designation of ten new ACECs (83,007 acres) proposed to provide recreation opportunities and protect wildlife habitat, sensitive species, cultural resources, and pristine natural environments. Specific impacts from resource uses on ACEC values and associated sensitive resources are listed below	Negligible to minor beneficial effects would result from the designation of two new ACECs (6,400 acres) proposed to protect cultural resources, and historic trails. Specific impacts from resource uses on ACEC values and associated sensitive resources are listed below	Moderate to major beneficial effects would result from the designation of six new ACECs (29,171 acres) proposed to protect historic trails, sensitive species, cultural resources, old growth juniper, wildlife habitats, and pristine natural environments. Specific impacts from resource uses on ACEC values and associated sensitive resources are listed below

Special Designations – Ash Valley ACEC/RNA				
No Action	**Alternative 1**	**Alternative 2**	**Alternative 3**	**Preferred Alternative**
The No Action Alternative would result in minor adverse impacts, and moderate benefits to the existing Ash Valley ACEC/RNA (1,322 acres). The ACEC would continue to be managed for the protection of sensitive resources, and the preservation of critical habitat for special status plants. The area's scenic qualities would be protected under VRM Class II criteria. There would be no impacts from new ROWs, timber harvesting, woodcutting, locatable minerals, or flat rock collection, as these uses would remain 'Closed'. The Ash Valley ACEC/RNA would remain 'Open' to leasable minerals, with potential moderate impacts. Negligible adverse effects have been documented from motor vehicle traffic and livestock grazing in the ACEC, and similar effects are expected in future. Therefore, livestock grazing and OHV use would continue as they are currently practiced, unless future monitoring reveals substantially greater adverse effects. Full fire suppression activities could contribute to minor adverse impacts as natural fire regimes are required for successful reproduction in some of the special species plants within the ACEC.	Same as No Action, except that minor to moderate adverse impacts would result from potential locatable and saleable mineral development. However, additional benefits would result from requiring no surface occupancy restrictions to potential leasable mineral development. Minor benefits would result from OHV restrictions to existing routes.	Alternative 2 would result in negligible adverse impacts and major benefits to the existing Ash Valley ACEC (1,322 acres). Most impacts are the same as No Action, except additional benefits would result from OHV use, livestock grazing, and all mineral development being 'Closed' within the ACEC. WFU within the ACEC would help restore the natural fire regime and benefit habitat for special status plants.	Alternative 3 would result in negligible adverse impacts, and moderate benefits to the existing Ash Valley ACEC (1,322 acres). Most impacts are the same as No Action, except that additional benefits would result from restricted OHV use, and all mineral development being 'Closed' within the ACEC.	Same as No Action, except additional benefits would result from requiring NSO restrictions to potential leasable mineral development. The use of AMR for fire activities could contribute to beneficial impacts as natural fire regimes are returned.

Special Designations – Baker Cypress Natural Area				
No Action	**Alternative 1**	**Alternative 2**	**Alternative 3**	**Preferred Alternative**
The No Action Alternative would result in minor adverse impacts, and moderate benefits to the existing Baker Cypress Natural Area (1,448 acres). The area would continue to be managed for the most part according to the wilderness IMP because the ACEC falls within the Timbered Crater WSA. The ACEC would continue to be managed for the protection of sensitive resources, and the preservation of critical habitat for special status plants. The area's scenic qualities would be protected under VRM Class I criteria. There would be no impacts from new ROWs, timber harvesting, woodcutting, OHV use, or mineral development, as these uses would remain 'Closed'. Livestock grazing would continue to result in negligible adverse impacts, as the area receives very little use due to no water availability. Minor to moderate adverse effects would occur to Baker cypress due to the suppression of fire in the ecosystem. Cones of this unique specie will not open without fire.	Alternative 1 would result in minor adverse impacts, and moderate to major benefits to the existing Baker Cypress Natural Area (1,448 acres). Most impacts are the same as No Action, except that additional benefits would result from the use of AMR for fire activities. This would contribute to beneficial impacts as natural fire regimes are returned, and assist Baker cypress reproduction as this species requires fire for adequate regeneration. OHV use would be 'Limited to Existing Roads and Trails', and impacts would be negligible.	Alternative 2 would result in minor adverse impacts, and moderate to major benefits to the existing Baker Cypress Natural Area (1,448 acres). Most impacts are the same as No Action, except that additional benefits would result from the use of WFU. This would contribute to beneficial impacts as natural fire regimes are returned, and assist Baker cypress reproduction as this species requires fire for adequate regeneration. Additional benefits would result from the closure of all energy and mineral development, especially locatable minerals.	Same as No Action, except that OHV use would be 'Limited to Existing Roads and Trails' and impacts would be negligible.	The Preferred Alternative would result in minor adverse impacts, and moderate to major benefits to the existing Baker Cypress Natural Area (1,448 acres). Most impacts are the same as No Action, except that additional benefits would result from the use of AMR for fire activities. This would contribute to beneficial impacts as natural fire regimes are returned, and assist Baker cypress reproduction as this species requires fire for adequate regeneration. Additional benefits would result from the closure of all energy and mineral development, especially locatable minerals. OHV use would be 'Limited to Designated Routes', and impacts would be negligible.

Special Designations – Pit River Canyon ACEC				
No Action	**Alternative 1**	**Alternative 2**	**Alternative 3**	**Preferred Alternative**
Moderate adverse and beneficial impacts to the Pit River Canyon area. The area would not be designated as an ACEC and would continue to be managed for the most part according to the Wilderness IMP because most of the area falls within the Pit River Canyon WSA. Riparian and upland areas would be managed to meet land health standards. Scenic qualities would be preserved under VRM Class I objectives. Negligible adverse impacts would result from OHV use, as this area is 'Limited to Existing Roads and Trails'. Development of new right-of-ways and mineral and energy development are 'Closed', also because of the wilderness study status of surrounding lands. Therefore, negligible impacts would affect the ACEC. Minor to major adverse effects would result from livestock grazing (depending on the location, extent, and nature of the site) due to damage to cultural resources, recreation, and other ACEC resources and values.	Minor adverse and major beneficial impacts to the Pit River Canyon area. 6,703 acres would be designated as the Pit River Canyon ACEC. WSR designation is also recommended for 16 miles under Alternative 1. A 'wild' classification would apply to 13 miles and 3 miles would be classified 'recreational.' WSR designation would preserve the free-flowing character of this river segment and preclude construction of a dam or water diversion, adding additional protection to the area's relevant and important ACEC criteria. Management would focus on protecting scenic, geological, and cultural resources in the Upper Pit River Canyon and Lower Horse Creek Canyon by preserving natural settings for recreational purposes. Enhancement of river-related recreational opportunities has the potential to attract additional visitors. This would have negligible to minor adverse effects from increased noise, litter, and potential user conflicts. However, adverse impacts would be easily outweighed by benefits to riparian and river ecosystems, wildlife, and visual resources from preserving these river segments in an unaltered, free-flowing state. Moderate beneficial effects would result from juniper removal and prescribed fire. Effects from livestock grazing, OHV use, and energy and minerals would be the same as No Action.	Same as Alternative 1, except that livestock grazing would be restricted to one out three years, resulting in only minor adverse effects to cultural resources. Additional benefits would also result from increased vegetation restoration treatments.	Same as No Action Alternative.	Minor adverse and major beneficial impacts to the Pit River Canyon area. The area would not be designated as an ACEC and would continue to be managed for the most part according to the Wilderness IMP because most of the area falls within the Pit River Canyon WSA. Riparian and upland areas would be managed to meet land health standards. Scenic qualities would be preserved under VRM Class I objectives. WSR designation is recommended for 16 miles, under a 'wild' classification. WSR designation would preserve the free-flowing character of this river segment and preclude construction of a dam or water diversion, adding additional protection to the area's relevant and important ACEC criteria. Moderate beneficial effects would result from juniper removal and prescribed fire. Effects from livestock grazing, OHV use, and energy and minerals would be the same as No Action.

Special Designations – Lava ACEC				
No Action	**Alternative 1**	**Alternative 2**	**Alternative 3**	**Preferred Alternative**
The No Action Alternative would result in minor adverse and moderate beneficial impacts to the Lava ACEC area. The area would not be designated as an ACEC and would continue to be managed for the most part according to the wilderness IMP because most of the area falls within the Lava WSA. Scenic qualities would be preserved under VRM Class I objectives. Negligible adverse impacts would result from OHV use, as this area is 'Limited to Existing Roads and Trails', and 20 acres 'Closed' in vernal pool areas. Development of new ROWs and mineral and energy development are regulated by wilderness study status of surrounding lands. Therefore, negligible impacts would affect the area. Adverse impacts on vegetation, soils, and water quality from livestock grazing would be negligible to minor.	Alternative 1 would result in minor adverse and moderate beneficial impacts to the Lava ACEC area. 10,770 acres would be designated as the Lava ACEC. Moderate beneficial effects would result from increased use of AMR and fuels reduction treatments. Impacts from VRM, livestock grazing, OHV use, and energy and minerals are the same as No Action.	Same as Alternative 1, except that livestock grazing would be restricted to one out three years, resulting in only negligible adverse effects. Additional benefits would also result from increased vegetation restoration treatments.	Same as No Action Alternative.	The Preferred Alternative would result in minor adverse impacts and moderate benefits to the Lava ACEC area. Impacts are similar to No Action Alternative, except that additional beneficial effects would result from increased use of AMR and fuels reduction treatments. .

Special Designations – Timbered Crater ACEC/RNA				
No Action	**Alternative 1**	**Alternative 2**	**Alternative 3**	**Preferred Alternative**
Minor adverse and minor beneficial impacts to the area. The area would not be designated as an ACEC and would continue to be managed for the most part according to the Wilderness IMP because the entire area lies within the Timbered Crater WSA. Scenic qualities would be preserved under VRM Class I objectives. Negligible adverse impacts from OHV use, as this area is 'Closed'. Timber harvesting, development of new ROWs, and mineral and energy development would remain regulated by wilderness study status; therefore, negligible impacts would affect the area. Adverse impacts on vegetation, soils, and water quality from livestock grazing would be negligible. Special status plants are largely protected by a livestock exclusion fence, and grazing outside the fenced area is limited to the periphery of the proposed ACEC due to vast lava fields and lack of water.	Negligible adverse and moderate beneficial impacts to the area. 17,896 acres would be designated as the Timbered Crater ACEC. Wildland fire management would employ AMR. Juniper treatments and prescribed fire would primarily enhance ACEC resources and values (i.e., Baker cypress, soils, scenic quality, and wildlife), with negligible short-term adverse effects and minor to moderate long-term benefits. Negligible adverse impacts from OHV use, as the ACEC would be 'Limited to Existing Roads and Trails', and no cross-country travel would be allowed. Timber harvesting, development of new ROWs and mineral and energy development would remain regulated by wilderness study status; therefore, negligible impacts would affect the area. Negligible impacts from livestock grazing, as described in No Action.	Minor adverse and moderate beneficial impacts to the area. 17,896 acres would be designated as the Timbered Crater ACEC. WFU would be employed in the area to permit fire to play a natural and significant role in improving vegetation conditions. Juniper treatments and prescribed fire would primarily enhance ACEC resources and values (i.e., Baker cypress, soils, scenic quality, and wildlife), with negligible short-term adverse effects and minor to moderate long-term benefits. Additional benefits from the ACEC being 'Closed' to locatable minerals. Negligible adverse impacts from OHV use, as the area would remain 'Closed'. Negligible impacts from livestock grazing, as described in No Action, except that grazing in periphery areas would occur only 1 out of 3 years. Timber harvesting and development of new ROWs would remain regulated by wilderness study status, with negligible impacts.	Same as No action Alternative, except that OHV use would be 'Limited to Existing Roads and Trails', and no cross-country travel would be allowed.	Same as Alternative 1, except that additional benefits may occur as OHV use would be 'Limited to Designated Routes', and from the ACEC being 'Closed' to locatable minerals.

Special Designations – Emigrant Trails ACEC				
No Action	**Alternative 1**	**Alternative 2**	**Alternative 3**	**Preferred Alternative**
The No Action Alternative would result in moderate adverse and negligible beneficial impacts to the Emigrant Trails ACEC area. The area would not be designated as an ACEC and would continue to be managed for the most part for protection of portions of the historic Lassen, Applegate, and Yreka Trails. Scenic qualities would be preserved under VRM Class I and II objectives. Timber harvest and woodcutting would remain 'Closed'. The area would be 'Open' to new ROWs. The area is currently 'Open' to off-highway vehicles, except within the Pit River Canyon WSA, which is 'Limited to Existing Roads and Trails'. Moderate adverse effects could occur from cross-country travel. The area is also 'Open' to all types of mineral development, except within the Pit River Canyon WSA.	Same as No Action, except minor benefits would result from designating OHV travel to existing routes.	Alternative 2 would result in minor adverse and major beneficial impacts to 9,924 acres associated with the Emigrant Trails ACEC. Designation would enhance and protect the natural setting, vegetation, wildlife; and trail viewing opportunities. The ACEC would be 'Closed' to ROWs, mineral activities, and other development. OHVs would be 'Limited to Existing Roads and Trails', so impacts would be negligible. Livestock grazing would be available in the area, but grazed areas rested two out of three years, resulting in minor to adverse effects on vegetation and wildlife habitat. ROS would have 'Primitive' and SPM classifications, and would result in minor beneficial effects on natural settings which are a large part of the experience associated with historic trails.	Same as Alternative 2, except moderate benefits would result from 5,000 acres being designated as the Emigrant Trails ACEC.	The Preferred Alternative would result in minor adverse and moderate beneficial impacts, and would protect and provide interpretive information and recreational opportunities on 29 miles of historic trail remnants. It would encompass 1,750 acres of BLM-administered lands (in three locations) on portions of the historic Lassen, Applegate, and Yreka Trails. Protection would enhance trail-related recreation and visitor understanding and enjoyment of historic trails. Impacts from ROWs, OHV use, and mineral development are similar to those listed under Alternative 2, except on fewer acres, and no surface occupancy requirements would be followed for leasable minerals. Impacts to scenic quality, and from livestock grazing are similar to Alternative 1, except greater emphasis would be placed on land health standards and protecting sensitive resources from adverse grazing effects. ROS 'Primitive' classification would have moderate beneficial effects for protection of historic resources and natural settings.

Special Designations – Mountain Peaks ACEC/RNA				
No Action	**Alternative 1**	**Alternative 2**	**Alternative 3**	**Preferred Alternative**
The No Action Alternative would result in minor adverse and minor beneficial impacts to the Mountain Peaks ACEC area. The area would not be designated as an ACEC. 985 acres are located in the Tule Mountain WSA, and would continue to be managed according to the Wilderness IMP. Scenic qualities would be preserved under VRM Class I objectives in the WSA, and Class II objectives outside the WSA. Minor to moderate adverse impacts would result from livestock grazing, 'Open' OHV use outside of the WSA, and potential energy and mineral development outside the WSA.	Same as No Action, except minor benefits would result from designating OHV travel to existing routes, and the use of AMR for wildfires.	Alternative 2 would result in minor adverse and major beneficial impacts. The Mountain Peaks ACEC (3,500 acres) would be designated to enhance and protect unique vegetation, wildlife habitat continuity, and visual resources of high-elevation mountain habitats. A 'Primitive' ROS designation already applies. OHVs would be 'Limited to Existing Roads and Trails'. Development of new ROWs and mineral and energy development would be 'Closed' through the ACEC process, and because of the wilderness study status of surrounding lands. Impacts from livestock grazing would be minor, as grazing would only be conducted one year of every three.	Same as No Action, except minor benefits would result from designating OHV travel to existing routes.	This alternative would result in minor adverse and moderate beneficial impacts. Impacts are the same as Alternative 2, except that livestock grazing would be available every year. Greater emphasis would be placed on land health standards and protecting sensitive resources from adverse grazing effects, to lessen impacts.

Special Designations – Old Growth Juniper ACEC/RNA				
No Action	**Alternative 1**	**Alternative 2**	**Alternative 3**	**Preferred Alternative**
The No Action Alternative would result in moderate adverse and minor beneficial impacts to the Old Growth Juniper ACEC area. The area would not be designated as an ACEC and would continue to be managed under general BLM policies. The area is currently 'Open' to new ROWs, livestock grazing, timber harvesting, woodcutting, and all energy and mineral development. However, the Sheep Valley grazing exclosure protects culture resources, wildlife habitat, water, and soils. Impacts to scenic quality would potentially be moderately adverse, as the area is managed under VRM Class III and IV objectives. Impacts from OHV use would be moderate as the area is 'Open' outside of Sheep Valley.	Same as No Action, except additional minor benefits would result from designating OHV travel to existing routes, and the use of AMR for wildfires.	Alternative 2 would result in negligible adverse and major beneficial impacts. The Old Growth Juniper ACEC (3,115 acres) would be designated to enhance and protect old-growth juniper and associated vegetation and habitats. Livestock grazing would be conducted only one year of every three, resulting in moderate beneficial effects. The ACEC would be 'Closed' to new ROWs, timber harvesting, woodcutting, and all energy and mineral development, resulting in no impacts from these uses. OHV use would be 'Closed' on 2,025 acres, and 'Limited to Designated Routes' in the remaining area, eliminating impacts from cross-country travel. Scenic qualities would be preserved under VRM Class II objectives. AMR would be employed for wildfires.	Same as No Action Alternative, except that additional minor benefits would result from designating OHV travel to designated routes in Sheep valley, and restricting leasable minerals to no surface occupancy requirements.	The Preferred Alternative would result in minor adverse and moderate beneficial impacts. Impacts are similar to Alternative 2, except that livestock grazing would be available every year. Greater emphasis would be placed on land health standards and protecting sensitive resources from adverse grazing effects, to lessen impacts. Leasable minerals would be restricted to no surface occupancy requirements, and impacts would be minor.

Special Designations – Mount Dome ACEC/RNA				
No Action	**Alternative 1**	**Alternative 2**	**Alternative 3**	**Preferred Alternative**
The No Action Alternative would result in moderate to major adverse and minor beneficial impacts to the Mount Dome ACEC area. The area would not be designated as an ACEC and would continue to be managed under general BLM policies. The area is currently 'Open' to new rights-of-way, livestock grazing, and all energy and mineral development. However, the ACEC is on the upper slopes of the mountain where water is scarce and livestock use severely limited. Timber harvesting is also not an issue since it is 'Closed' to protect bald eagle nesting habitat. Therefore, livestock grazing and timber harvest would have no adverse impacts. Scenic qualities would be preserved under VRM Class II objectives. Mount Dome is a major roost area for wintering birds of prey. The mountain (and its environs) is also very important to raptors during the nesting season. Wind-powered energy development would result in major, long-term adverse impacts for these birds. Large wind turbines, transmission lines, and service roads would also have obvious visual drawbacks and would seriously compromise recreational experiences that rely on a natural landscape for enjoyment. Despite the fact that OHVs are 'Limited to Existing Roads and Trails', there would be no OHV impacts because the upper slopes of Mount Dome lack roads and trails; hence vehicles are limited to established routes on the lower slopes.	Alternative 1 would result in moderate adverse and moderate beneficial impacts. 1,510 acres would be designated as the Mount Dome ACEC to protect the area for raptor habitat. Vegetation treatments and restoration would be conducted for ACEC resources and values and would have minor to moderate long-term benefits, principally for bald eagles. Other impacts would be similar to No Action, except that some adverse impacts would be reduced by closing the area to new rights-of-way. Additional minor benefits would result from the use of AMR for wildfires.	Alternative 2 would result in negligible adverse effects and moderate to major beneficial impacts. 1,510 acres would be designated as the Mount Dome ACEC to protect the area for raptor habitat. Vegetation treatments and restoration would be conducted for ACEC resources and values and would have minor to moderate long-term benefits, principally for bald eagles. Utility ROW and all energy and mineral development would be 'Closed'. This would result in moderate to major benefits to raptors by preventing damage to habitats for wintering birds-of-prey. Additional minor benefits would result from the use of AMR for wildfires.	Same as No Action, except all OHV use would be 'Limited to Existing Roads and Trails', and impacts would be negligible.	Same as Alternative 2, except leasable minerals would fall under no surface occupancy requirements, resulting in negligible adverse impacts.

Special Designations – Juniper Creek ACEC				
No Action	**Alternative 1**	**Alternative 2**	**Alternative 3**	**Preferred Alternative**
The No Action Alternative would result in moderate adverse and minor beneficial impacts to the Juniper Creek ACEC area. The area would not be designated as an ACEC and would continue to be managed under general BLM policies. This area has unique cultural resources and wintering wildlife habitat. The area is currently 'Open' to new ROWs, and all energy and mineral development. Impacts from these activities would be minor to moderate. Scenic qualities would be managed under VRM Class III objectives, so some visual obstructions would be allowed. Livestock grazing would continue, and adverse effects from this activity would be minor to moderate. There are prehistoric sites within the ACEC area and livestock grazing would potentially affect individual archaeological sites and artifacts.	Same as No Action, except additional minor benefits would result from designating OHV travel to existing routes, and the use of AMR for wildfires.	Alternative 2 would result in negligible adverse and major beneficial impacts. The Juniper Creek ACEC (1,182 acres) would be designated to enhance and protect unique cultural resources and wintering wildlife habitat. The ACEC would be 'Closed' to new ROWs, livestock grazing, OHV use, and all energy and mineral development, resulting in negligible impacts from these uses. Moderate beneficial effects would result from increased use of AMR and fuels reduction treatments. Scenic qualities would be protected under VRM Class II objectives.	Same as No Action, except additional minor benefits would result from designating OHV travel to designated routes.	The Preferred Alternative would result in minor adverse and minor beneficial impacts to the Juniper Creek ACEC area. The area would not be designated as an ACEC and would continue to be managed under general BLM policies. Minor benefits would result from designating OHV travel to designated routes, and the use of AMR for wildfires. Greater emphasis would be placed on land health standards and protecting sensitive resources from adverse grazing effects, to lessen impacts.

Special Designations – Beaver Creek ACEC				
No Action	**Alternative 1**	**Alternative 2**	**Alternative 3**	**Preferred Alternative**
The No Action Alternative would result in moderate adverse and minor beneficial impacts to the Beaver Creek ACEC area. The area would not be designated as an ACEC and would continue to be managed under general BLM policies. This area has unique cultural resources and wintering wildlife habitat. The area is currently 'Open' to new ROWs, and all energy and mineral development. Impacts from these activities would be minor to moderate. Scenic qualities would be managed under VRM Class III objectives, so some visual obstructions would be allowed. Livestock grazing would continue, and adverse effects from this activity would be minor to moderate. There are prehistoric sites within the ACEC area and livestock grazing would potentially affect individual archaeological sites and artifacts.	Same as No Action, except additional minor benefits would result from designating OHV travel to existing routes, and the use of AMR for wildfires.	Alternative 2 would result in negligible adverse and major beneficial impacts. The Beaver Creek ACEC (972 acres) would be designated to enhance and protect unique cultural resources and wintering wildlife habitat. The ACEC would be 'Closed' to new ROWs, livestock grazing, OHV use, timber harvest, and all energy and mineral development, resulting in negligible impacts from these uses. Moderate beneficial effects would result from increased use of AMR and fuels reduction treatments. Scenic qualities would be protected under VRM Class II objectives.	Same as No Action, except additional minor benefits would result from designating OHV travel to designated routes.	The Preferred Alternative would result in minor adverse and minor beneficial impacts to the Beaver Creek ACEC area. The area would not be designated as an ACEC and would continue to be managed under general BLM policies. Minor benefits would result from designating OHV travel to designated routes, and the use of AMR for wildfires. Greater emphasis would be placed on land health standards and protecting sensitive resources from adverse grazing effects, to lessen impacts.

Special Designations – Likely Tablelands/Yankee Jim/Fitzhugh Creek ACEC				
No Action	**Alternative 1**	**Alternative 2**	**Alternative 3**	**Preferred Alternative**
Moderate to major adverse and minor beneficial impacts to the area. The area would not be designated as an ACEC and would continue to be managed under general BLM policies, and the Tablelands Integrated Resource Management Plan. Moderate to major impacts from livestock grazing and recreational uses. This area contains unique prehistoric and historic resources, and important riparian and meadow vegetation within the 27,435 acres. The area is currently 'Open' to new ROWs and all energy and mineral development. Impacts from these activities would be to moderate to major, should development occur. Scenic qualities would be preserved under VRM Class II objectives, so impacts to visual resources would be negligible to minor. Livestock grazing and OHV use are 'Open', except for within the 660-acre Fitzhugh Creek portion. Livestock grazing would result in moderate adverse impacts on the unique prehistoric, riparian, and biological resources of the area.	Moderate adverse and minor beneficial impacts to the area. The total area of this ACEC under Alternative 3 is 3,200 acres. Would close the ACEC to new ROWs, resulting in minor benefits. Scenic qualities would be preserved under VRM Class II objectives, so impacts to visual resources would be negligible to minor. OHV use would be seasonally 'Closed' from December 1 through April 15. Seasonal road closure would help maintain soil stability, protect vegetation and cultural sites, and benefit wildlife and have moderate beneficial effects. All energy and mineral development within the ACEC would be 'Open', resulting in potential moderate adverse effects. Livestock grazing would be available in the ACEC, and impacts would be minor to moderate.	Moderate adverse and major beneficial impacts to the area. The total area of this ACEC under Alternative 3 is 27,435 acres. Major benefits would result to natural resources, recreation, and ACEC values from the restriction of grazing to every third year. Livestock exclusion would be implemented on 3,860 acres, and other areas would also be protected. Prehistoric sites within the ACEC associated with lithics, artifacts, and middens would be protected, as would be significant historic sites. NRHP-eligible sites would receive priority protection. OHVs would be 'Limited to Designated Routes' from April 16 through November 30 and 'Closed' from December 1 through April 15. Seasonal road closure would help maintain soil stability, protect vegetation and cultural sites, and benefit wildlife and have moderate beneficial effects. Utility ROW grants and all forms of mineral and energy development would be 'Closed'; hence, impacts would be negligible. Additional minor benefits would result from the use of AMR for wildfires.	Moderate adverse and moderate beneficial impacts to the area. The total area of this ACEC under Alternative 3 is 1,400 acres. Impacts are similar to the Preferred Alternative except OHVs would be 'Limited to Designated Routes' all year, resulting in benefits to resources by restricting cross-country travel. However, no seasonal road closures would be implemented to benefit soil stability, protect vegetation, cultural sites, and benefit wildlife.	Moderate adverse and moderate beneficial impacts to the area. The total area of this ACEC is 1,400 acres (primarily Yankee Jim portion). The 1,400-acre ACEC area is one of the most archaeologically important and sensitive areas in the AFO. ACEC designation would protect the area from primary impact agents such as livestock and the illegal collection of artifacts. ACEC designation would place greater emphasis on meeting land health standards and protecting sensitive resources from adverse grazing effects, to lessen impacts. Negligible impacts from utility ROWs and energy and mineral development, as these uses would be 'Closed' (or NSO for leasable minerals). Scenic qualities would be preserved under VRM Class II objectives, so impacts to visual resources would be negligible to minor. The remainder of the Likely Tablelands area would be managed according to the Tablelands Integrated Resource Management Plan. Minor to moderate impacts from livestock grazing and recreational uses. OHV use would be 'Limited to Designated Routes', and 'seasonally 'Closed'' during winter months to lessen impacts to soils and other resources. Additional minor benefits from the use of AMR for wildfires.

Special Designations – Historic Trails				
No Action	**Alternative 1**	**Alternative 2**	**Alternative 3**	**Preferred Alternative**
Overall adverse effects are negligible to minor for historic trails when all impacts are considered. Minor to moderate adverse impacts would occur from OHV activities with indiscriminate riding on linear features and trail traces associated with historic trails. 89% of the field office would be 'Open' to OHV and cross country travel. Major adverse effects would result from ground disturbance and infrastructure associated with locatable minerals development adjacent to historic trails. (continued on next page)	Overall beneficial effects are negligible to minor for historic trails when all impacts are considered. Minor to moderate beneficial effects would occur related to OHV management and activities, as only 80 acres would be 'Open' to cross country travel with three associated OHV management areas. OHVs are 'Limited to Existing or Designated Routes'. Protection of historic trail resources would be at a higher level with OHV restrictions in place. Moderate to major adverse effects from locatable minerals development would be similar to the No Action Alternative, except it would occur on 500,545 acres. 2,500 acres of mineral withdrawals would provide negligible beneficial effects on trail resources. (continued on next page)	Overall beneficial effects are negligible to minor for historic trails when all impacts are considered. Moderate beneficial effects would occur related to OHV management and activities, as only 80 acres are 'Open' to cross country travel with two associated OHV management areas. Restrictions include OHV 'Limited to Existing or Designated Routes', seasonal and permanent closures. The greatest level of protection from OHV would occur due to more closures in areas with a higher incidence of historic trails. Moderate adverse impacts would occur in localized areas, from locatable minerals development, which would be reduced overall from all other alternatives, with fewer acres available for mineral extraction. Moderate to major beneficial effects would occur from mineral withdrawal on 84,719 acres, which denies mineral entry and eliminates adverse impacts to resources and historic trails on 17% of the public lands. (continued on next page)	Overall beneficial effects are negligible for Historic Trails when all impacts are considered. Same as Alternative 1 for OHV. Moderate to major adverse impacts from locatable minerals development would occur and would be similar to Alternative l, but would only occur on 495,323 acres. 7,722 acres of mineral withdrawal would provide negligible to minor beneficial effects for historic trail resources. (continued on next page)	Overall minor adverse impacts and beneficial effects for historic trails when all impacts are considered. Minor to moderate benefits would result from acquisition of portions of historic trails (including railroad grades), securing public access, and establishing protection. Minor to moderate beneficial effects would occur related to OHV management, as only 80 acres are 'Open' to cross country travel. OHV restrictions include 'Limited to Existing or Designated Routes' and seasonal and permanent closures. Minor adverse impacts would occur from potential locatable minerals development on 470,052 acres, but moderate beneficial effects would also occur from mineral withdrawal on 32,993 acres. (continued on next page)

Special Designations – Historic Trails (continued)				
No Action	**Alternative 1**	**Alternative 2**	**Alternative 3**	**Preferred Alternative**
Minor beneficial effects by maintaining VRM Class II objectives along all trails, they would gain some limited protection from a class II designation VRM. Negligible beneficial effects would occur to vegetation and trails on (50-250) treated acres from prescribed fire. The use of fire would assist in reestablishment of the natural ecological condition which existed during the time of original trail use. Negligible beneficial effects would occur to vegetation and trails from mechanical treatment on (10-25) treated acres. Mechanical treatment would assist in the reestablishment of the natural ecological condition which existed during the time of original trail use.	Moderate adverse effects to VRM and trail resources would occur from minerals development due to ground-disturbing activities throughout the field office. All lands not associated with WSAs would be 'Open' to leasable and locatable minerals, as well as renewable energy development. However, Surface Use and Occupancy Requirements on leasable minerals development would limit potential visual impacts within sensitive areas. The potential for most large-scale minerals development is generally low; however, planning projects to meet VRM and trail objectives would ensure that potential impacts were minimized. Minor beneficial effects would occur by maintaining VRM Class II objectives along all trails. Minor beneficial effects would occur to vegetation and trails on (500-3200) treated acres from prescribed fire. The use of fire would assist in reestablishment of the natural ecological condition which existed during the time of original trail use. Minor beneficial effects would occur to vegetation and trails from mechanical treatment on (100-5000) treated acres. Mechanical treatment would assist in the reestablishment of the natural ecological condition which existed during the time of original trail use.	Moderate beneficial effects would occur by maintaining VRM Class II objectives along all trails, and would provide the most protection from mineral development, habitat conversion projects, and OHV. This alternative has the largest number of acres with limitations and restrictions for surface disturbing activities on public lands. Additionally, 9,924 acres containing historic trails would be included in the Emigrant Trails ACEC to ensure the preservation of setting and context associated with historic trails and would provide major benefits for historic trails. Overall this alternative provides the greatest benefit to the protection of historic trails. Moderate beneficial effects would occur to vegetation and trails from prescribed fire. The use of fire would assist in reestablishment of the natural ecological condition which existed during the time of original trail use on (500-8200 treated) acres. Same as the No Action Alternative for mechanical treatment.	Minor to moderate beneficial effects would occur to VRM associated with historic trails. 5000 acres of historic trails would be protected in the Emigrant Trails ACEC to maintain the setting and context of historic trails. Same as the No Action Alternative for prescribed fire. Same as the No Action Alternative for mechanical treatment.	Minor beneficial effects would occur by maintaining VRM Class II objectives along all trails, and would maintain the setting and context of historic trails. VRM Class II would protect the trails from disturbance and ensure that mineral development, habitat conversion projects, OHV use, and the removal of juniper biomass would be planned to protect and enhance trail corridors. The Emigrant Trails ACEC would ensure the preservation of historic trails on 1750 acres in three key locations. Same as Alternative 2 for prescribed fire. Same as Alternative 1 for mechanical treatment.

Wild and Scenic Rivers				
No Action	**Alternative 1**	**Alternative 2**	**Alternative 3**	**Preferred Alternative**
Negligible beneficial effects would result from river segments identified as eligible. The Upper Pit River Canyon, Lower Pit River Canyon and Lower Horse Creek Canyon would not be recommended for designation as WSRs, but suitability studies would continue. BLM would continue to manage the eligible river segments to protect the outstandingly remarkable values, free flowing nature and tentative classification. The Lower Pit River Study Area would be 'Open' to energy and minerals development, as well as utility rights of ways. Disruption associated with development and infrastructure would result in moderate to major adverse impacts to scenic, free flowing rivers, and recreational values.	Moderate to major beneficial effects would occur to all three eligible river segments recommended for designation into the Wild and Scenic River System for their; scenic resources, free flowing river values, and recreational opportunities. Recommended areas would be 'Closed' to energy and mineral development and new utility ROWs. The 13-mile segment of the Upper Pit River Canyon would be classified as "Wild", offering the highest degree of protection. 2.5 miles of the Lower Pit River Canyon and 3 miles of Lower Horse Creek Canyon would be classified as 'Recreational'. BLM would protect the outstandingly remarkable values, tentative classification, and free-flowing nature of these rivers in perpetuity.	Major beneficial effects would result for WSR values. All three rivers would be recommended for designation into the Wild and Scenic River System. Classifications of two river segments would have higher levels of preservation. Lower Horse Creek would become "Wild", and Lower Pit River Canyon would become "Scenic". The Upper Pit River Canyon would remain classified as "Wild", same as Alternative 1. Recommended areas would be 'Closed' to energy and mineral development and new ROWs. BLM would protect the outstandingly remarkable values, tentative classification, and free-flowing nature of these rivers in perpetuity.	Moderate adverse effects would occur to scenic and free-flowing river values in these segments. No recommendations for designation would occur. No studies would take place to determine suitability for designation. Lower Pit River Canyon would be subject to the same adverse impacts as under The No Action Alternative, as there would be no protection from energy and minerals development and utility ROWs.	Major beneficial effects would result for WSR values. All three rivers would be recommended for designation into the Wild and Scenic River System. Classifications of two river segments would have higher levels of preservation. Lower Horse Creek would become "Wild", and Lower Pit River Canyon would become "Scenic". The Upper Pit River Canyon would remain classified as "Wild". Recommended areas would be 'Closed' to energy and mineral development and new ROWs. BLM would protect the outstandingly remarkable values, tentative classification, and free-flowing nature of these rivers in perpetuity.

Wilderness Study Areas				
No Action	**Alternative 1**	**Alternative 2**	**Alternative 3**	**Preferred Alternative**
Minor to moderate beneficial impacts to wilderness characteristics would result. Protective management of wilderness values would continue in the four existing WSAs under the Wilderness IMP. 17,896 acres within Timbered Crater WSA and Baker Cypress Natural Area would be 'Closed' to motorized travel resulting in moderate benefits to wilderness characteristics and natural landscapes. OHV travel is restricted to existing roads and ways within Tule Mt. (16,698 acres), Pit River (10,984 acres), and Lava (10,770 acres) WSAs with no effects, these three WSAs have been 'Limited to Existing Roads and Trails' since 1979.	Minor to moderate adverse impacts would result from overall emphasis on development of recreation and commercial opportunities. This alternative proposes the fewest restrictions on motorized travel, resulting in moderate adverse effects to wilderness values. The Wilderness IMP would continue to provide some protection of Wilderness values.	Same as the No Action Alternative.	Same as Alternative 1	Negligible adverse or beneficial effects would occur to wilderness characteristics, naturalness, and solitude in the Timbered Crater WSA (17,896 acres), with motorized travel 'Limited to Designated Routes'. No change would occur to the other three WSAs, where OHVs are restricted to existing roads and ways. All four WSAs would continue to be managed under the Wilderness IMP for non-impairment of wilderness values.

Travel Management				
No Action Alternative	**Alternative 1**	**Alternative 2**	**Alternative 3**	**Preferred Alternative**
Overall benefits are minor for Travel when all impacts are considered.	Overall adverse effects are negligible to minor for Travel when all impacts are considered.	Overall adverse effects are moderate to major for Travel when all impacts are considered.	Overall adverse effects are negligible to minor for Travel when all impacts are considered.	Overall adverse effects are negligible to minor for Travel when all impacts are considered.
Travel Management – Off-Highway Vehicle (OHV) Designations				
A moderate beneficial effect would occur to motorized travel in the Alturas Field Office. 87% of the public lands would be 'Open' for OHV and cross country travel, 4% are 'Closed', and 9% of the landscape is restricted to existing or designated roads and trails.	Moderate to major adverse effects would occur to OHV activities and negatively affect travel in the Alturas Field Office. Travel would be restricted to established travel routes, resulting in the elimination of off road motorized travel access opportunities. Overall less than 1% (880) of the public lands would be 'Closed', (80) acres would be 'Open', and 99%, or (502,085) of public lands would be designated as 'Limited to Existing or Designated Routes'. Two OHV management areas would be designated in the field office area, and would have a moderate beneficial effect on OHV by providing opportunities for travel access activities at site specific locations.	A major adverse effect would occur to OHV activities, with more restrictions and closures that would negatively affect travel in the AFO on 503,045 acres of public lands. OHV travel would be restricted to designated or existing roads and trails on (472,768) acres, or 94% of public lands, 6% (30,197) of the landscape is 'Closed' to OHV, and 120 miles of roads are 'Closed' seasonally. Travel on 83,007 acres of the 10 new ACECs would be affected due to management restrictions. OHV use would be excluded on 25,275 acres of 5 new ACECs, and 1322 acres of the existing Ash Valley ACEC.	Same as Alternative 1, except with minor beneficial effects to travel opportunities and OHV travel access, as only one OHV management area would be established.	The Preferred Alternative would result in moderate to major adverse effects and moderate beneficial impacts to travel management. 99% of the AFO would be 'Limited to Existing or Designated Routes'. Seasonally, 81 miles of roads would be 'Closed', and less than 1% (4,625) would be 'Closed' yearlong to motorized vehicles. 80 acres would be designated as 'Open'. Three OHV management areas would be designated in the field office area, and would have a moderate beneficial effect on OHV by providing opportunities for travel access and activities.

Travel Management – Energy and Minerals				
No Action Alternative	**Alternative 1**	**Alternative 2**	**Alternative 3**	**Preferred Alternative**
Negligible to major beneficial impacts could occur to travel and access from new roads for exploration, mineral sites or facilities. This would occur on a case-by-case basis and be tied to a specific geographic area. Leasable minerals 89% of public lands would be 'Open' to leasing with standard terms and conditions. Surface use and occupancy on case by case basis. Locatable minerals Ash Valley ACEC withdrawn from entry Saleable minerals 89% of field office 'Open' to material pits, 84% is 'Open' to flat rock collection, but the Cinder Cone Planning Unit, WSAs and ACECs are 'Closed'. Renewable Energy 89% of the field office would be 'Open'; WSAs are 'Closed'.	Minor adverse effects would occur to travel. Due to more restrictions on minerals, fewer roads and trails would be established or maintained which would decrease the potential amount of roads for OHV recreational opportunities. Leasable minerals Surface use and occupancy requirements would apply on 200,000 acres for protection of sensitive resources. NSO on Ash Valley ACEC, WSAs and Lower Pit River Canyon WSR 'Closed' to leasing. Locatable minerals WSRs would be withdrawn. Ash Valley ACEC mineral withdrawal revoked on 1322 acres. 89% of the field office is 'Open' to Saleable minerals and Renewable Energy, WSAs and WSRs are 'Closed'.	Minor to moderate adverse effects would occur to travel, due to the decrease in maintenance and new road construction associated with mineral exploration and development. The most restrictions and closures on travel are present in this alternative, which would negatively affect road use for travel and OHV recreational opportunities. Leasable minerals 80% of landscape would be 'Open' to lease, all leases would have surface use and occupancy requirements, 228,000 acres with significant natural resources would have NSO stipulations, all ACECs and WSRs 'Closed' to leasing. Locatable minerals All ACECs/RNAs and WSRs are 'Closed', 17% of the field office would be withdrawn from mineral entry. All ACECs/RNAs, NSO areas, and WSAs are 'Closed' to Saleable minerals and Renewable Energy.	Minor adverse effects on travel would occur with restrictions on mineral exploration and development; these actions would reduce the potential for additional roads for travel opportunities. Leasable minerals 87% of lands would be 'Open' to leasing; WSAs and ACECs would be 'Closed' to leasing. NSO stipulations and surface use and occupancy requirements would apply. Locatable minerals All ACECs/RNAs would be withdrawn, 2% of the field office would be withdrawn from mineral entry. Saleable minerals All ACECs/RNAs and WSAs would be 'Closed', 89% of the field office area would be 'Open' to mineral materials. Renewable Energy All ACECs/RNAs and WSAs would be 'Closed', 87% of the field office 'Open' for development.	Minor adverse effects would occur to travel by removing or restricting much of the potential for additional roads that would be associated with mineral and energy exploration and development. Leasable minerals 89% of public lands would be 'Open' to leasing; NSO would apply to ACECs outside of WSAs. Leasing 'Closed' on WSAs and WSRs. Locatable minerals All ACECs/RNAs and WSRs would be 'Closed'. 7% of the field office lands would be withdrawn from mineral entry. Saleable minerals and Renewable Energy would be 'Open' on 86% of the field office lands, WSAs, WSRs, and ACECs/RNAs outside WSAs would be 'Closed' to development.

Travel Management – Utilities and Rights-of-Way				
No Action Alternative	**Alternative 1**	**Alternative 2**	**Alternative 3**	**Preferred Alternative**
Moderate beneficial effects by providing the greatest opportunities to travel with the fewest restrictions to minerals, energy, utility corridors, and facilities. The potential for additional roads for recreation travel would be enhanced substantially on 445,000 acres. .	Minor adverse impacts due to more restrictions on minerals, energy, utility corridors, and facilities. This alternative would be similar in acres to the no action alternative with 441,000 acres available for ROWs. However, would be different by, e.g., encouraging the use of existing lines, expanding existing corridors up to 500 feet, or designating existing lines as corridors. The potential for additional roads for recreation travel would be slightly decreased.	Major adverse effects by prohibiting new utility ROWs and associated roads, as well as the removal of abandoned utilities and facilities. The potential for additional roads for recreation travel would be eliminated.	Moderate adverse effects by limiting new utility ROWs and associated roads to 10,000 acres within existing corridors. The potential for additional roads for recreation travel would be reduced significantly.	Minor to moderate adverse effects due to more restrictions, i.e., minimize acres of impacts by ROWs, encourage use of existing lines, expand existing corridors up to 500 feet, or designate existing lines as corridors. 435,385 acres would be available for new utility ROWs and associated roads.
Travel Management – Non Motorized Travel				
Minor beneficial effects from eleven miles of new non-motorized trails that could be constructed, based on trails identified in existing management plans. These trails would provide better access for non-motorized uses in high-use recreation areas.	A moderate beneficial effect by increasing non-motorized opportunities. Trail development would include 27 miles of BLM-administered trails, which represents a significant increase beyond trails identified in existing plans.	Minor beneficial effects in natural settings by development of 12.5 miles of trails in high-use areas such as the Infernal Caverns/Rocky Prairie SRMA. Due to the small amount of trail development, only a slight benefit would occur to trail users in these areas.	A moderate beneficial effect in natural settings. Development of 23 miles of non-motorized trails would have a significant increase of miles for this resource under this Alternative and would benefit trail users on public lands.	Moderate beneficial effects would include a significant number of new non-motorized recreation opportunities within the field office. Development of 25.5 miles of trails in high-use areas such as the Infernal Caverns/Rocky Prairie SRMA would benefit trail users. With a moderate increase in trail development within these high use areas, it would serve a large portion of the recreating public.

Travel Management – Watercraft Travel and Boating				
No Action Alternative	**Alternative 1**	**Alternative 2**	**Alternative 3**	**Preferred Alternative**
Minor to moderate adverse effects from overuse on the Lower Pit River, affecting scenic quality, fishing, and white water experiences. One commercial permit is issued annually with no restrictions on total number available. Currently there are no adverse effects, but with growing recreation tourism and low water conditions on other river systems, commercial outfitters can adversely affect resources with increased visitor use.	Moderate adverse effects to the quality of the recreation experience by a significant increase in commercial and visitor use. Issuance of 10 commercial permits on the Lower Pit River would have a decrease the non commercial user's enjoyment of white water activities. Solitude, fishing opportunities, and scenic quality would decrease significantly with a significant increase in commercial visitor use.	Moderate adverse effects to the recreation experience for white water commercial recreation opportunities. No commercial activities would take place on the river, as 0 commercial permits would be issued for use on the Lower Pit River. A moderate decrease in commercial visitor use would enhance personal enjoyment of aesthetics, fishing and scenic quality for non commercial white water activities and users.	Minor beneficial effects to the recreation experience by issuance of 4 commercial permits and establishing relatively low commercial visitor use on the Lower Pit River. White water recreation opportunities would be enhanced by increasing the quality of experience on the river; for fishing, rafting, and scenic quality.	Moderate beneficial effects to the recreation experience on the Lower Pit River. Issuance of 3 commercial permits would establish and maintain low commercial visitor use on the River. White water recreation opportunities would be enhanced by increasing the quality of experience on the river for fishing, rafting, solitude, and scenic quality. .
Travel Management – Road Maintenance				
Negligible to minor adverse impacts, and moderate beneficial impacts. AFO would continue regular maintenance on 28 miles of currently prioritized roads to provide safe and adequate access for recreation, permitted uses, and BLM administrative activities.	Negligible to minor adverse impacts, and moderate beneficial impacts. AFO would continue regular maintenance on 28 miles of currently prioritized roads to provide safe and adequate access for recreation, permitted uses, and BLM administrative activities.	Negligible to minor adverse impacts, and moderate beneficial impacts. AFO would continue regular maintenance on 28 miles of currently prioritized roads to provide safe and adequate access for recreation, permitted uses, and BLM administrative activities.	Negligible to minor adverse impacts, and moderate beneficial impacts. AFO would continue regular maintenance on 28 miles of currently prioritized roads to provide safe and adequate access for recreation, permitted uses, and BLM administrative activities.	Negligible to minor adverse impacts, and moderate beneficial impacts. AFO would continue regular maintenance on 28 miles of currently prioritized roads to provide safe and adequate access for recreation, permitted uses, and BLM administrative activities.

Vegetation				
No Action Alternative	**Alternative 1**	**Alternative 2**	**Alternative 3**	**Preferred Alternative**
Negligible to moderate adverse impacts on vegetation from unregulated OHV use, spread of noxious weeds, wildfire from altered fire regimes, fire suppression, and continued moderate to heavy livestock grazing. Restoration activities and construction of facilities would cause short-term negligible to minor direct adverse impacts, but they would result in long-term indirect minor to major beneficial effects as a result of vegetation restoration. The management approach is largely reactive and this alternative would not allow BLM to take a proactive approach to achieve land health.	Moderate to major adverse impacts from continued deterioration of plant community function and structure, increased livestock grazing, OHV activities, and potential energy and mineral extraction. This is due to the larger number of acres subject to surface disturbance and increased impact from livestock grazing and commodity production. Greater possibility of plant community fragmentation, increased risk of noxious weed spread, and greater risk of human-caused fire due to increased recreational use and access and more road and trail maintenance. Restoration acreage would be slightly greater than in the No Action Alternative, with short-term minor adverse impacts and long-term moderate to major beneficial effects.	Least adverse impacts and the most benefits to vegetation. Minor adverse effects would occur from disturbances caused by OHV use and potential energy and mineral extraction. Maintenance and restoration of native vegetation and special habitats would be emphasized. Moderate beneficial effects from prescribed fire and wildland fire use. Reintroduction of fire to the landscape on a large scale is considered a beneficial effect under this alternative. Minor to major beneficial effects from resting grazing allotments and accelerating progress toward meeting land health standards and PFC. However, resting of annual (exotic) rangelands could result in long-term moderate to major adverse effects to vegetation communities.	The most significant adverse impacts. Similar to Alternative 1, moderate to major adverse impacts would occur from disturbances caused by increased livestock grazing, OHV activities, potential energy and mineral extraction, increased stack water development, and recreational development. Additional adverse effects would result from reduced restoration efforts. The use of AMR and WFU would be similar to the level proposed under Alternative 1. Generally, the introduction of a natural or semi-natural fire regime is considered to result in a beneficial effect on vegetation resources. Grazing management and anticipated effects would be identical to those described for the No Action and Alternative 1.	Minor to moderate adverse effects to vegetation, and moderate to major beneficial impacts. Efforts towards achievement of land health standards would be less successful than under Alternative 2, but an improvement over the remaining three alternatives. Would restore a higher total acreage of unhealthy lands than the other alternatives. Restoration activities would have effects similar to Alternatives 2 and 3; beneficial impacts would be the greatest under the Preferred Alternative. The use and reintroduction of fire on the landscape (AMR, WFU, and prescribed burning) would have beneficial effects similar to those that would be realized under Alternative 3. Mitigation for adverse grazing effects would be increased.

Noxious Weeds				
No Action Alternative	**Alternative 1**	**Alternative 2**	**Alternative 3**	**Preferred Alternative**
Negligible to minor adverse and beneficial effects to the control of noxious weeds. Short- and long-term minor to major adverse impacts from new weed infestations in the AFO, primarily from sources outside the field office boundary. IWM methods would be incorporated to enhance, restore, rehabilitate, or maintain plant communities and to improve wildlife habitat, rangeland health, and watershed function. Emphasis would be detection and control in existing disturbed areas. Inventory would primarily be conducted for proposed ground-disturbing projects (i.e., vegetation management or manipulation), as well as in coordination with wildlife managemnet areas and other government agencies. OHV and other vehicle use would have minor to moderate adverse effects by introducing new weeds from outside the planning area. Potential for increased adverse effects because all of the field office is 'Open' to cross-country travel.	Minor to major adverse effects due to impacts from substantial ground-disturbing activities. An exception would be more emphasis to protect high quality natural resources for commodity production. IWM practices would continue to be implemented but low priority areas (low potential for commodity production) would have minor to moderate adverse impacts. Inventory would emphasize early detection of new infestations; priority would be for commodity production and juniper management projects. Designating OHV use to existing roads and trails would result in beneficial effects to resources but the increased opportunities for recreation use would result in minor to moderate adverse effects to vegetation and soil.	Under Alternative 2, the impacts from implementing the IWM program would be the same as the No Action Alternative with the addition that the AFO would emphasize the restoration of noxious weed sites to native vegetation. The aggressive approach to IWM would significantly benefit vegetation and soil resources. The resting of annual grasslands from livestock, however, could increase the cover of exotic annuals and increase the potential for wildfire and shorter fire-return intervals. An increase in fire frequency could harm adjacent healthy communities by converting them to annual grass-dominated communities. Limits on OHV travel would be greater than the No Action Alternative and Alternative 1, reducing risk of noxious weed establishment from OHV travel. Beneficial impacts from weed inventories would be the same as the No Action Alternative.	The projects and activities proposed are similar to those under the No Action Alternative and would have the same impacts to the weeds program, Impacts from OHVs would be the same as Alternative 1.	Negligible to minor adverse impacts and moderate to major long-term beneficial impacts. Vegetation resources would continue to be managed to achieve land health standards using site-specific management techniques. In addition, there would be increased emphasis on early detection and rapid response (control) of new infestations—this would be a moderate to major long-term beneficial impact. Beneficial impacts fro weed inventories would be the same as the No Action Alternative. Limitations on OHV travel would be greater than those in the No Action Alternative, but less restrictive than Alternative 2.

Special Status Plants				
No Action Alternative	**Alternative 1**	**Alternative 2**	**Alternative 3**	**Preferred Alternative**
Negligible to minor adverse effects and moderate benefits to special status plants. Maintenance of special status plants and their habitats is emphasized, not restoration or enhancement. All project proposals are reviewed prior to implementation. Project recommendations are incorporated into the project if necessary to avoid or minimize impacts. Fire management would result in few beneficial impacts to special status plants. Due to the relatively small size of vegetation rehabilitation/ restoration treatments (prescribed fire, mechanical treatments, or seeding), benefits would be short-term. Long-term adverse impacts from the continued expansion of exotic annual grasslands into and adjacent to habitats of special status plants. Minor to major adverse effects from increased OHV use and minimal regulation (including enforcement).	Effects are same as No Action Alternative. Due to size of vegetation treatments, some special status plants could be overlooked which would result in adverse impacts. Benefits from fire management would be same as the No Action Alternative. WFU and prescribed fire would have moderate to major beneficial impacts by re-introducing the natural fire regime back into plant communities. Increased livestock use would have short-term and possibly long-term adverse impacts to special status plants. Recreation use would have slight to moderate adverse impacts to special status plants. Impacts from recreation and OHV use would be beneficial, both in the short and long-term. Adverse impacts would be minor.	Negligible adverse effects and moderate benefits to special status plants due to increased inventories, long-term studies, restoration, and enhancement projects. Vegetation treatment impacts would be similar to Alternative 1; however, there would be less short-term adverse impacts from prescribed fire and more from mechanical treatments. Impacts from fire management would be similar to the No Action Alternative. Resting of grazing allotments and reductions in livestock AUMs would result in the greatest beneficial impacts on vegetation communities and special status plants. Impacts from recreation and OHV use would be beneficial, both in the short and long-term. Adverse impacts would be negligible to minor.	Beneficial and adverse effects are the same as the No Action alternative. Impacts from fire management would be similar to No Action and Alternative 1. Grazing impacts, both beneficial and negative would be similar to the No Action alternative. Long-term adverse impacts would be similar to Alternative 1. Impacts from recreation and OHV use would be the same as Alternative 1.	Negligible adverse effects and moderate benefits to special status plants due to increased inventories, long-term studies, restoration, and enhancement projects. Recovery of special status plants would take longer than under Alternative 2, however. WFU and prescribed fire would have moderate to major beneficial impacts by re-introducing the natural fire regime back into plant communities. Impacts from grazing on special status plants would mostly be adverse; however, grazing might benefit some plants by removing or reducing the vigor of competing plants and by preventing the growth of shrub cover in open herbaceous habitats. Fencing would be required in some areas to protect special status plants from grazing by wild horses and livestock. Special status species management objectives would be incorporated into allotment monitoring and evaluation processes. Grazing would use site-specific management to reduce adverse impacts. Impacts from recreation and OHV use would be beneficial, both in the short and long term. Adverse impacts would be negligible to minor.

Visual Resource Management				
No Action Alternative	**Alternative 1**	**Alternative 2**	**Alternative 3**	**Preferred Alternative**
Overall adverse effects are minor to moderate for VRM when all impacts are considered. Minor to major adverse effects would occur from new corridors and communication sites depending on size and location of the facilities. These adverse effects would be site-specific, but would negatively affect visual resources and the natural landscape. (continued on next page)	Overall adverse effects are minor to moderate for VRM when all impacts are considered. Moderate adverse effects would occur to VRM on a site-specific basis with growth of specific utility corridors and the expansion of existing utility ROWs of up to 500 feet and designating existing transmission lines as utility corridors. Area-wide visual resources would benefit by encouraging the siting of new facilities in locations with existing visual intrusions. (continued on next page)	Overall beneficial effects are minor to moderate for VRM when all impacts are considered. Moderate beneficial effects to visual resources would occur by eliminating new visual intrusions on the landscape, removing abandoned utility lines, and prohibiting authorization of additional utility lines and communication sites. (continued on next page)	Overall beneficial effects are negligible for VRM when all impacts are considered. Minor beneficial effects to visual resources would be realized by prohibiting authorization of additional utility lines and communication sites. Maximize space of existing corridors on 10,000 acres. This would assist in eliminating potential visual intrusions into undisturbed areas from new facilities. (continued on next page)	The Preferred Alternative would result in minor adverse and moderate to major beneficial impacts to scenic quality. 42% of the field office area would be managed as VRM Class I and II. 21% would be managed as Class III and 37% would be managed as Class IV. Moderate beneficial effects would occur from requiring ROW holders to remove abandoned facilities from public lands. New corridors would have minor to moderate adverse effects. Expansion of existing utility ROWs of up to 500 feet, designation of existing transmission lines as utility corridors would benefit area wide visual resources by encouraging the siting of new facilities in locations with existing visual intrusions. Moderate adverse effects would occur to VRM on a site-specific basis with growth of specific utility corridors. (continued on next page)

Visual Resource Management (continued)				
No Action Alternative	**Alternative 1**	**Alternative 2**	**Alternative 3**	**Preferred Alternative**
Moderate to major adverse effects would occur to visual resources in this alternative with the highest amount of acres of field office lands 'Open' to mineral development and leasing, with the fewest restrictions. The potential for most large-scale minerals development is generally low; however, planning projects to meet VRM objectives would minimize potential visual impacts. No buffer zones would be established for visual resources except on a case-by-case basis. Overall adverse effects would be negligible to moderate depending on project location and size.	Moderate adverse effects to visual resources would occur due to potential ground-disturbing activities, and is similar to the No Action alternative with a large number of acres available for mineral development and leasing on field office lands. However, 200,000 acres would have surface use and occupancy requirements on leasable minerals for protection of the natural resources. Moderate adverse effects would occur to VRM on a site-specific basis with mineral development at various locations. VRM objectives would help minimize potential visual impacts. Same as No Action Alternative for establishment of buffer zones.	Minor to moderate adverse effects would occur from mineral development to VRM. All ACECs would be 'Closed' to leasables, locatable mineral entry, flat rock collection, and renewable energy development. These actions would have minor to moderate beneficial effects to visual resources on 83,007 acres of public lands, by reducing the potential for ground-disturbing activities. Available acres for minerals and energy development would be significantly reduced within the entire field office area. Major beneficial effects on visual resources would result by establishing a 5-mile buffer zone along major travel routes. All projects would be required to minimize visual impacts, and possible restriction of projects in areas of high scenic quality would enhance the preservation of the natural landscape in highly visible areas.	Moderate adverse effects to visual resources would occur from potential development of leasable and locatable minerals, flat rock collection, and renewable energy due to the large amount of acres available for development. These impacts would be similar to those effects under Alternative 1—except that; only 7,722 acres in the Ash Valley, Likely Tablelands/Yankee Jim/Fitzhugh Creek, and Emigrant Trails ACECs would also be 'Closed' to such activities. These actions would have minor beneficial effects for VRM associated with resources in sensitive areas. Minor to moderate beneficial effects would occur to visual resources from establishing a 3-mile buffer zone along major travel routes—where all projects would be required to minimize visual impacts—and possible restriction of projects in areas of high scenic quality. The management of these buffer areas would enhance the preservation of the natural landscape in highly visible areas.	OHV use within most of the field office area would be 'Limited to Designated or Existing Routes', reducing visual impacts from cross-country travel. Continued livestock grazing under this alternative would result in some adverse impacts on riparian areas, soils, and vegetation, creating site-specific visual intrusions. However, major improvements to livestock grazing strategies and land health would be made, resulting in the restoration of native plant communities and the natural setting. Energy and mineral development would have minor to moderate adverse effects at site- specific locations where development occurs. These adverse impacts to visual quality would be mitigated somewhat by meeting VRM Class objectives to minimize potential impacts. ROWs would be excluded from Lower Pit River WSR, WSAs and ACECs.

Water Resources				
No Action Alternative	**Alternative 1**	**Alternative 2**	**Alternative 3**	**Preferred Alternative**
Overall impact would be moderate with beneficial and adverse effects. Major short- and long-term adverse effects to water quality and hydrology would be associated with high catastrophic fire potential under the No Action Alternative. Lack of OHV restrictions currently has the potential for major adverse effects to water resources.	Overall impact would be major with beneficial and adverse effects. Improvements to coldwater and warmwater habitat and WSR designation are anticipated to generate localized long-term benefits to water quality and stream channel condition. AMR, WFU. and treatments would result in reduced potential for catastrophic fire and major long-term beneficial effects to water quality and hydrology that would outweigh any short-term adverse effects. Exclosures would result in moderate long-term beneficial effects to water quality and hydrology. Grazing practices may result in major short- and long-term adverse impacts to water resources.	Overall impact would be major and primarily beneficial. AMR, WFU, and treatments would result in reduced potential for catastrophic fire and moderate long term beneficial effects to water quality and hydrology that would outweigh any short-term adverse effects. Exclosures, OHV restrictions and grazing restrictions would result in major short- and long-term beneficial effects to water resources.	Overall impact would be moderate with beneficial and adverse effects. Improvements to coldwater and warmwater habitat are anticipated to generate localized long-term benefits to water quality and stream channel condition. AMR and treatments would result in reduced potential for catastrophic fire and moderate long-term beneficial effects to water quality and hydrology that would outweigh any short-term adverse effects. Reduced acreages for ACEC designations and exclosures may result in moderate short- and long term adverse effects to water resources.	Overall impact would be moderate and primarily beneficial. Improvements to coldwater and warmwater habitat and WSR designation are anticipated to generate localized long-term benefits to water quality and stream channel condition. AMR and hazardous fuels treatments would result in reduced potential for catastrophic fire. This would result in moderate to major long-term beneficial effects to water quality and hydrology that would outweigh any short-term adverse effects. Livestock exclosures would be constructed on 500 acres of riparian/ wetland sites, reducing effects to water quality from soil trampling and nutrients. OHV management would offer moderate beneficial effects to water resources.

Wild Horses and Burros				
No Action Alternative	**Alternative 1**	**Alternative 2**	**Alternative 3**	**Preferred Alternative**
Overall negligible effects would occur under the No Action Alternative. Viable populations of horses would be maintained at AML	Overall negligible effects would occur under the No Action Alternative. Emphasis on commodity values would increase pressure on wild horses resulting in increased pressure on surrounding private ranches.	Overall major adverse effects would result from removing the Red Rock herd. Emphasis would be on ecosystem health.	Same as No Action Alternative.	Overall negligible effects would occur under the Preferred Alternative. Viable populations of horses would be maintained at AML.

Wildlife and Fisheries				
No Action Alternative	**Alternative 1**	**Alternative 2**	**Alternative 3**	**Preferred Alternative**
Wildlife—Fire & Fuels				
In general, moderate to major adverse impacts from the fire and fuels programs, due to build-up of fuels that would promote large catastrophic fires and/or allowing plant communities to age to late succession. Climax plant communities contribute to a decrease in species bio-diversity. Minor adverse impacts from fire suppression activity are expected to be short-term impacts. Minimal fire and fuels activity could cause further habitat degradation from increase juniper invasion.	Moderate to major adverse impacts from the fire and fuels programs, due to build up of fuels that would promote large catastrophic fires and/or allowing plant communities to age to late succession, which contributes to a decrease in species bio-diversity. Minor adverse impacts from fire suppression activity are expected to be short-term impacts. Increased acres treated under the fuels program would have greater benefits to wildlife, especially where projects designed to diversify sagebrush habitat and decrease juniper would have long-term beneficial impacts. Mechanical treatments may need follow-up rehabilitation to speed up vegetative recovery.	Use of AMR offers the best potential for benefiting wildlife habitat. Allowing for natural fires to burn in many areas could provide major long-term benefits by improved diversity, reduced invasive juniper, and improvement of sagebrush habitats. Emphasis on fire rehabilitation would have long-term benefits for wildlife. Large acres planned for fuels treatment utilizing all tools available would maximize the ability to improve priority habitat areas for big game, diversity shrub habitats, control juniper invasion, and improve sagebrush habitat for sage-grouse. The above actions would have long-term minor to major benefits for many species and habitat conditions.	Major adverse impacts from fire suppression is expected due to build of fuels that would promote large catastrophic fires and is some habitat types cause further habitat degradation from increase juniper invasion. Minor benefits to big game and other wildlife where emphasis is placed on protection of commodity habitat types. Provides for a mixed use of fuels treatments, but mechanical treatment is emphasized. Treatment of up to 12,000 acres per year would moderately contribute to habitat improve for most it wildlife, but only if implemented at a high acreage rate per year. Short-term minor adverse impacts from fuels treatment would out weigh the long-term minor to moderate benefits.	Overall, moderate beneficial impact would occur from AMR implemented over most of the field office. Aggressive fire suppression would result in short-term adverse impacts from the activity but would contribute to long-term minor to moderate benefits to habitats that rely on fire to maintain health, diversity and more natural conditions. “Let burn” emphasis would have more beneficial impacts over the long term and could be significant in promoting healthy sage steppe habitat for big game, sage-grouse, and other sagebrush-obligate species. Prescribed fire emphasis would result in long term beneficial impacts. Mechanical treatments of juniper could have lasting and major beneficial impacts on sage-grouse habitat and seasonal big game ranges, and benefit special habitats by creating diverse and healthy age classes.

Wildlife—Soil Resources				
No Action Alternative	**Alternative 1**	**Alternative 2**	**Alternative 3**	**Preferred Alternative**
Long-term but minor beneficial conditions for aquatic and terrestrial wildlife from 100 acres of protected soils. Minor to moderate adverse impacts to those areas where soils would not be protected or enhanced to reduce erosion.	Soil protection of 6000 acres would result in long-term moderate beneficial conditions for aquatic and terrestrial wildlife. Moderate benefits to riparian areas would also occur by implementation of a 50-foot buffers.	Long-term moderate beneficial conditions for aquatic and terrestrial wildlife would result from soil protection of 10,154 acres of sensitive soil areas. Moderate benefits to riparian areas would also occur by implementation of a 50-foot buffers.	Soil protection of 1000 acres would result in long-term minor beneficial conditions for aquatic and terrestrial wildlife. Moderate benefits to riparian areas would also occur by implementation of a 50-foot buffers.	Minor long-term impacts for terrestrial and aquatic wildlife would occur from soil erosion prevention measures on 200 acres. Moderate benefits to riparian areas would also occur by implementation of a 50-foot buffers.
Wildlife—Wildlife & Fisheries				
Negligible benefits to most aquatic and terrestrial wildlife. Actions to improve habitat on a small scale and maintenance of existing structures and exclosures as well as actions to meet land health standards, would continue to have positive long-term benefits. Implementing actions and recommendations from sage-grouse conservation strategies would have lasting minor to major benefits for grouse and other sage obligates.	Moderate to major benefits to big game habitat are expected from management of designated priority habitat areas. Actions within priority habitat areas would also benefit many other wildlife species. Creating new water fowl structures would benefit production of waterfowl during spring. Implementing actions and recommendations from sage-grouse conservation strategies would have lasting minor to major benefits for grouse and other sage obligates.	Moderate to major benefits to big game habitat are expected from management of priority habitat areas and designated emphasis areas identified by BLM and CDFG. Actions within priority habitat areas would also benefit many other wildlife species. Creating new waterfowl structures would benefit production of waterfowl. Sage-grouse plans implemented would have long-term major benefits to grouse, other sagebrush-obligate species, and important big game habitat.	Similar to the No Action Alternative, only slight benefits to most aquatic and terrestrial wildlife. Actions to improve habitat on a small scale, maintenance of existing structures and exclosures, and actions to meet land health standards would continue to have positive long-term benefits. Implementing actions and recommendations from sage-grouse conservation strategies would have lasting minor to major benefits for grouse and other sage obligates.	Moderate to major benefits to big game habitat from management of designated priority habitat areas. Major long-term benefits for terrestrial and aquatic species from actions to improve special habitats, and sage steppe habitat through sage-grouse conservation plans. Actions within priority habitat areas for big game would also benefit many other wildlife species. Creating new waterfowl structures would benefit production of waterfowl.

Wildlife—Vegetation				
No Action Alternative	**Alternative 1**	**Alternative 2**	**Alternative 3**	**Preferred Alternative**
Under the vegetation program, minor to moderate benefits are expected from fire rehabilitation and actions designed to improve land to Land Health Standards. Low-volume juniper treatment would cause long-term moderate adverse impacts to do continued degradation of habitat encroached by juniper. Actions to improve 5 miles of riparian habitat would have moderate benefits to aquatic and terrestrial wildlife in those areas. Other riparian habitats that are not identified for improvement could be impacted from other land activities and would result in adverse minor to major impacts on riparian areas.	Minor to moderate benefits are expected from actions designed to improve land to land health standards. Small juniper treatment would cause long-term moderate adverse impacts. Creating diverse shrub habitats would have long-term moderate benefits wildlife. Actions to improve 25 miles of riparian habitat would have major benefits to aquatic and terrestrial wildlife in those areas. Permanent and temporary exclosures would create minor to major beneficial impacts on water quality and riparian vegetation, and improve fisheries.	Vegetation program would emphasize improving natural vegetation communities, diversifying shrub habitats, reducing noxious weeds, and using rehabilitation to improve habitat. Short- and long-term and minor to major level benefits would be expected from healthy and diverse shrub habitats. Actions to improve only 2 miles of riparian habitat would have minor benefits to aquatic and terrestrial wildlife in those areas. Permanent exclosures of 3,000 acres to protect riparian habitats would create minor to major beneficial impacts on water quality and riparian vegetation, and improve fisheries.	Minor to major benefits are expected from fire rehabilitation and actions designed to improve land to land health standards. Low-volume juniper treatment would cause long term major adverse impacts to do continued degradation of habitat encroached by juniper. Little to no emphasis on stream bank protection and in stream water work could allow for degradation of aquatic habitat and water quality for aquatic species. Protective fences constructed on a case-by-case basis would add minor to moderate benefits locally to those areas but may not contribute to large drainage stabilization or improvement.	Minor to moderate benefits from green stripping to protect important sage habitat and reduce spread of noxious weeds and grass. Native and non-native seed use benefits wildlife in land rehabilitation. Aspen and special habitats managed for diverse age structure; major long-term benefits for many species. Major benefits expects from projects designed for riparian enhancement. Permanent exclosures (500 acres) to protect riparian habitats would create minor to major beneficial impacts on water quality and riparian vegetation, and improve fisheries.

Wildlife—Energy & Minerals				
No Action Alternative	**Alternative 1**	**Alternative 2**	**Alternative 3**	**Preferred Alternative**
Most actions from the energy and minerals program would result in short-term adverse impacts, but the scale of the impact is dependant on where and how large the impact area will be (to be determined through site-specific NEPA analysis). The expected low occurrence of activity within these programs would most have negligible impacts on wildlife.	Similar to the No Action Alternative, the energy and minerals program would result in short-term adverse impacts but the scale of the impact is dependant on where and how large the impact area will be (to be determined through site-specific NEPA analysis). The expected low occurrence of activity within these programs would most have negligible impacts on wildlife.	Restriction on where energy and mineral use could occur provides long-term benefits to wildlife by keeping these areas off limits to development. Areas 'Open' for energy and mineral use would result in short-term adverse impacts but the scale of the impact is dependant on where and how large the impact area will be. The expected low occurrence of activity within these programs would most have negligible impacts on wildlife.	Most actions from the energy and minerals program would result in short-term adverse impacts but the scale of the impact is dependant on where and how large the impact area will be. Impacts could be substantial but difficult predict where or when these might occur (to be determined through site-specific NEPA analysis). The expected low occurrence of activity within these programs would most have negligible impacts on wildlife.	Similar to the No Action Alternative, the energy and minerals program would result in short-term adverse impacts but the scale of the impact is dependant on where and how large the impact area will be (to be determined through site-specific NEPA analysis). The expected low occurrence of activity within these programs would most have negligible impacts on wildlife. Restrictions on important identified habitats will provide long-term benefits to those species (i.e., sage-grouse leks).

Wildlife—Forestry				
No Action Alternative	**Alternative 1**	**Alternative 2**	**Alternative 3**	**Preferred Alternative**
The forestry program actions would have mostly short-term and minor impacts on wildlife and, in many cases, long-term benefits to wildlife habitat. Healthy forest helps to maintain healthy environments for good bio-diversity. Juniper reduction improves sage steppe habitat for those species dependant on them, but small-scale removal only adds minor benefits to wildlife habitats.	Minor to major short-term adverse impacts from mechanical emphasis in the forestry program. But, in turn, could have long-term moderate to major beneficial impacts to wildlife habitat. Improved forest conditions and decrease juniper would help create healthy and diverse areas for wildlife. Road construction for harvesting would cause short-term adverse impacts that in some areas may be a major impact. Mitigation measures would be put in place in sensitive areas.	Emphasis of hand treatments and "light hand on the land" approach to harvesting and improving forest conditions would provide the best benefits over other alternatives. Healthy forest emphasis would result in minor to major short-term adverse impacts for both aquatic and terrestrial wildlife, but in turn would have long term beneficial impacts to wildlife habitat. Improved forest conditions and decrease juniper would help create healthy and diverse areas for wildlife.	Mechanical emphasis in the forestry program would result in minor to major short-term adverse impacts, but in turn would have long-term beneficial impacts to wildlife habitat. Improved forest conditions and decreased juniper would help create healthy and diverse areas for wildlife. Thirty miles of road construction for harvesting would cause short-term adverse impacts that in some areas may be a major impact. Mitigation measures would be put in place in sensitive areas.	Minor to major short-term adverse impacts from mechanical emphasis in the forestry program. But in turn would have long-term moderate to major beneficial impacts to wildlife habitat. Improved forest conditions and decreased juniper would help create healthy and diverse areas for wildlife. Road construction for harvesting would cause short-term adverse impacts that in some areas may be a major impact. Mitigation measures would be put in place in sensitive areas.

Wildlife—Livestock Grazing & Wild Horse Management				
No Action Alternative	**Alternative 1**	**Alternative 2**	**Alternative 3**	**Preferred Alternative**
Grazing of public lands on the AFO would continue to have long-term minor to major adverse impacts, except where significant changes in grazing management are made to improve category one allotments. Moderate to major impacts could occur when grazing riparian areas, meadows, springs, and from grazing that contributes to low fire frequency and increased juniper invasion. Minor to major impacts on springs and riparian areas where horse numbers are too high and contribute to habitat degradation.	Similar to No Action Alternative, except that major adverse impacts could occur from increased AUM use above the current active use. Implementing guidelines from the sage-grouse conservation plans could improve sagebrush habitats over the long term. Minor to moderate benefits to springs and other important wildlife areas from reduction in horse numbers. Implementing management for long term reductions of horse number will have moderate long term benefits for wildlife habitat.	Reducing grazing by two thirds would have major benefits to all habitats for aquatic and terrestrial wildlife. Major benefits would result in important shrub habitats for big game, sagebrush habitats used by sage-grouse, and many ground-dwelling animals. There would be continued long-term moderate benefits to perennial plants from reduced grazing upon them and could increase beneficial fires. Moderate benefits to springs and other important wildlife areas from reduction in horse numbers. Implementing management for long-term reductions of horse number will have moderate long-term benefits for wildlife habitat.	Similar to No Action, grazing would continue to have long-term minor to major adverse impacts, except where significant changes in grazing management are made to improve category one allotments. Moderate to major impacts could occur when grazing riparian areas, meadows, springs, and from grazing that contributes to low fire frequency and increased juniper invasion. Minor to major adverse impacts on springs and riparian areas where horse numbers are too high and contribute to habitat degradation.	Except where significant changes in grazing management are made to improve category one allotments, grazing public lands on the AFO would continue to have short-term and long-term adverse impacts. Minor to major impacts would occur when grazing riparian areas, meadows, and springs, and from grazing that contributes to low fire frequency and increased juniper invasion. Implementing guidelines from the sage-grouse conservation plans could improve sagebrush habitats over the long term. Minor to moderate benefits to springs and other important wildlife areas from reductions in horse numbers to AML. Implementing management for long-term reductions of horse numbers to AML will have moderate long-term benefits for wildlife habitat.

Wildlife—Recreation & Travel Management				
No Action Alternative	**Alternative 1**	**Alternative 2**	**Alternative 3**	**Preferred Alternative**
Minor to major adverse impacts on wildlife habitat from continued 'Open' designations of OHV use within sage-grouse and important big game habitat. Relatively low occurrence of off- road use on the AFO expected to increase over the next 20 years and could cause major adverse impacts. Continued closures on big game winter ranges will have long-term moderate beneficial impacts.	Several OHV closures within sensitive wildlife habitats would have long-term minor to major benefits for big game. Continued 'Open' designations of OHV use could have minor to major adverse impacts on wildlife habitat; especially within important sage-grouse and big game habitat. Relatively low occurrence of off- road use on the AFO is expected increase over the next 20 years and could cause major adverse impacts. Continued closures on big game winter ranges will have moderate beneficial impacts.	Most restrictions on OHV use and therefore major benefits to wildlife. Seasonal and permanent closures would provide long-term benefit to important big game ranges and sensitive sage-grouse areas. In most cases reduced human disturbance is always a benefit to wildlife.	Continued 'Open' designations of OHV use could have minor to major impacts on wildlife habitat, especially within sage-grouse habitat. The current low occurrence of off- road use on the AFO is expected to increase over the next 20 years and cause these adverse impacts. Continued closures on big game winter ranges will have moderate beneficial impacts.	Change in OHV designated 'Open' to 'Limited to Existing and Designated Routes' provides major beneficial impacts for aquatic and terrestrial wildlife. Reduced impact allows undisturbed areas and concentrates human uses so that wildlife can adapt long-term to the human use patterns and find more seclusion on the landscape. Seasonal and permanent closures would provide long-term moderate benefits to important big game ranges and sensitive sage-grouse areas. Limitations on other recreation activities will benefit riparian habitat and species
Wildlife—Special Designations				
Minor to moderate beneficial impacts due to continued management of WSAs and ACECs. These areas contribute to low human occurrence resulting in low disturbance to wildlife.	Moderate beneficial impacts due to increased ACEC designation and other special areas that would benefit wildlife over long term. Low human occurrence in these areas and continued management of WSAs will result in low disturbance to wildlife.	Moderate to major beneficial impacts due to increased designation of ACECs and other special areas that would benefit wildlife over long term. Low human occurrence in these areas and continued management of WSAs will result in low disturbance to wildlife.	Minor beneficial impacts due increased designation of ACECs and other special areas would benefit wildlife over the long term. Low human occurrence in these areas and continued management of WSAs will result in low disturbance to wildlife.	Moderate beneficial impacts due to increased designation of ACECs and other special areas would benefit wildlife over the long term. Low human occurrence in these areas and continued management of WSAs will result in low disturbance to wildlife.

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