

Chapter 3 – Alternatives



This Draft Environmental Impact Statement (DEIS) addresses possible management direction that will be used to prepare the Cascade-Siskiyou National Monument (CSNM) Resource Management Plan. Four CSNM management alternatives, including a “No Action” alternative, are described in this chapter. The “No Action” Alternative, Alternative A, will essentially serve as a baseline for most resource and land use allocations. The “No Action” Alternative will allow the reader to compare various strategies for future management. It will not be a “no monument designation” alternative, and it does not provide or create opportunities for enhancement of the Monument values beyond the immediate protective measures of the proclamation. The “Action” Alternatives B, C and D describe various ways activities would be managed in the CSNM. Each alternative has a different emphasis, primarily defined in terms of the types of management necessary to meet the primary goal of protecting, maintaining, restoring or enhancing relevant and important ecological, biological, geological, and archaeological objects.

Designated Areas and Zones

Areas and zones were designated within the CSNM that will be used to identify and/or focus specific management activities. The Soda Mountain Wilderness Study Area (WSA), the Scotch Creek Research Natural Area (RNA) and the Oregon Gulch Research Natural Area were designated prior to the creation of the CSNM and would be managed under specific directions based on the ecological and biological values with their boundaries. Two “Emphasis Areas” are identified that focuses on the management of plant communities to achieve ecological goals. Plant communities outside of the WSA and the RNAs are grouped into the Diversity Emphasis Area or the Old-Growth Emphasis Area (map 41). The grass, shrub, woodland and wet meadow plant communities are placed into the Diversity Emphasis Area. Coniferous forest plant communities are placed in the Old-Growth Emphasis Area. These “Emphasis Areas” are further identified below. The designated areas within the CSNM are:

- 1) Soda Mountain Wilderness Study Area (WSA) 6,447 acres
 - 2) Scotch Creek Research Natural Area (RNAs). 1,800 acres
 - 3) Oregon Gulch Research Natural Area 1,056 acres
 - 4) Diversity Emphasis Area (DEA)..... 19,741 acres
 - 5) Old-Growth Emphasis Area (OGEA) 23,903 acres
- CSNM Total..... 52,947 acres

The CSNM has been divided into two management zones that are used when describing proposed management activities that are not necessarily related to vegetation management such as recreational activities, visitor facilities and visual resource management. An east-west oriented line separates the North Zone from the South Zone. This line divides the Upper Emigrant Creek, Keene Creek, Middle Jenny Creek subwatersheds (North Zone) from the Upper Cottonwood Creek, Scotch Creek Camp Creek and Lower Jenny Creek subwatersheds (South Zone). These zones will be referred to during the identification of proposed management activities. See map 42 for the location of these management zones on the landscape. In addition, primary recreation use zones were identified and will be referred to throughout the document designating areas of high visitor use (see map 42).

Wilderness Study Area

The Soda Mountain Wilderness Study Area (WSA) consists of the headwaters of the Dutch Oven Creek, Camp Creek and Salt Creek subwatersheds. The boundary of the WSA is the same as originally identified, however, technical advances in mapping have recalculated the area within the original boundary. Although the original wilderness

inventory identified 5,867 acres, technical advances in mapping now put the WSA area within the original wilderness inventory boundary at approximately 6,447 acres. The Soda Mountain WSA was recommended for wilderness designation by the Secretary of the Interior in 1991. The President, in turn, recommended it for wilderness designation to the Congress in 1991. To date no Congressional action has been taken on these recommendations, therefore, the area is managed under the BLM's *Interim Management Policy for Lands Under Wilderness Review*, H-8550-1(USDI 1995d) which outlines what must be done to insure that the Area's suitability for wilderness designation is not impaired by proposed activities. Until Congress acts on the President's recommendation for the Soda Mountain Wilderness Study Area, it is to be managed under the *Interim Management Policy For Lands Under Wilderness Review* and all management implications will be common to all alternatives. As the Soda Mountain Wilderness Study Area is managed according to the Interim Management Policy (IMP), management of this area will not be analyzed any further in this document.

Research Natural Areas

RNAs include the Scotch Creek RNA and the Oregon Gulch RNA. These RNAs were originally designated in the BLM Medford District's RMP (USDI 1995a) and will continue to be recognized within the CSNM as a result of the Memorandum of Understanding between the BLM and The Nature Conservancy (Appendix R). The Scotch Creek RNA consist of 1,800 acres adjacent to the west side of the WSA in the lower reaches of Scotch Creek in Oregon (map 2). The Oregon Gulch RNA encompasses approximately 1,056 acres and is located in the southeastern portion of the CSNM (map 2). Each RNA has its own unique values that address a vegetation cell in the Oregon Natural Heritage Program. The management of each RNA is common to all alternatives as a specific management plan based on the criteria of the Oregon Natural Heritage Program is in Appendix DD and EE.

Diversity Emphasis Area

The Diversity Emphasis Area (DEA) is the land in the CSNM that consists of hardwood, shrub and grass plant communities. There are an estimated 19,741 acres of federal land in the Diversity Emphasis Area with the majority located south of Soda Mountain (map 41).

Unlike conifer communities, grasslands, shrublands, and most woodland plant communities are characterized by large changes in species abundance over relatively short periods of time. This is because many plant species have short life spans, and are dependent on fire and insects for reproduction. Various herbaceous species thrive for only a few years before conditions change enough to prevent growth. Shrub species may become decadent after a few decades, and need to be renewed through activation of their seedbank by fire. Furthermore, many hardwood species are dependent on fire for creating conditions favoring their persistence on the landscape. This condition is best described in terms of fuel-loading. Presently, fire suppression has led to high fuel conditions conducive to intense fires with the potential to kill above-ground parts, as well as latent, below-ground buds.

Management within the DEA will strive to maintain and facilitate ecosystem processes (succession, fire) and ecosystem functioning (nutrient cycling, hydrological cycle) to maintain the patterns of vegetation that sustain the wide range of individual species, habitats, and communities that contribute to local and regional diversity. An emphasis will be placed on maintaining and restoring elements of biological interest mentioned within the Presidential Proclamation for the Cascade-Siskiyou National Monument.

In practical terms, this means recognizing how the landscape has been altered since the settlement of Euro-Americans approximately 150 years ago and using management tools to recreate or maintain the range of plant communities and conditions relating to historic processes. Management will most closely approximate historical processes and the manner in which they interacted with the physical landscape. This will require the use of landscape-level surveys and strategy to create a spatial temporal management plan meeting both stand and landscape-level objectives. Pilot studies will be employed to ensure management actions achieve desired outcomes before implementing treatments on a larger scale.

A generalized “desired future condition” incorporates a reduction of fuel-loading over the landscape, while also creating a range of conditions within the plant communities (relating to plant life-form composition and fuels) across the landscape of the DEA. This strategy is aimed at maintaining shorter-lived and fire-mediated plant species on the landscape as part of the process of managing to maintain plant species, plant communities, as well as, the range of plant and wildlife habitats within the Monument. Reducing and/or eliminating noxious weeds is an critical management component that is a high priority common to all alternatives.

Old-Growth Emphasis Area

The Old-Growth Emphasis Area (OGEA) consists of approximately 23,903 acres of land within the CSNM which is presently late-successional habitat and old-growth (LSOG) coniferous forest or capable of becoming late-successional and old-growth forest (map 41). Before the establishment of the CSNM, most of the Old-Growth Emphasis Area was identified as the Jenny Creek Late-Successional Reserve (LSR). The former Jenny Creek LSR provided a key link between other LSRs in the Cascade and Klamath Mountains (map 52). As a result of this link, and the Proclamation reference to protection and enhancement of old-growth, it is clear that CSNM lands capable of producing late-successional habitat and old-growth forest should be managed for that purpose.

The main goal of LSR management is to maintain, protect, and restore conditions of late-successional and old-growth forest ecosystems in the maximum amounts sustainable through time to promote habitat for late-successional and old-growth associated species. Inherent in meeting this goal is the contribution towards recovery of listed and sensitive species associated with late-successional habitat and old-growth forest. The overriding goal for the Old-Growth Emphasis Area would not change from those of the LSR. Management activities aimed at meeting this goal would not conflict with language set forth in the Proclamation of the Monument and CSNM objects would be protected.

The proposed alternatives for management of the Old-Growth Emphasis Area consider various objectives for accomplishing the goal of maintaining, protecting and restoring late-successional and old-growth forest ecosystems. Alternatives differ based on the intensity of managing specific habitat types and, therefore, the amount of time it will take to accomplish the goal.

Proposed Alternatives

Proposed alternatives and management direction in this plan pertains only to BLM-administered land within the CSNM boundary (map 1). Management of non-federal land within or adjacent to the CSNM boundary will not be addressed in this document. Private land identified for possible future acquisition into the Monument would occur with voluntary participants only, and be conducted in accordance with existing laws and regulation pertaining to federal land exchanges and acquisition of non-federal property. The criteria for the prioritization of land acquisition is listed in Appendix KK.

The alternatives vary in many aspects, but some procedures and actions would be the same in all of the alternatives. Rather than repeat the similar aspects in each alternative description, activities that are the same in all alternatives are summarized in the “Management Common to All Action Alternatives” section found at the end of this chapter. Management for the following issues would be the same regardless of the action alternative (Alternative B-D) selected:

- Management of Aquatic Habitat
- Management of Noxious Weeds
- Management of the Soda Mountain Wilderness Study Area
- Management of Research Natural Areas
- Management of Wildfire Suppression Activities
- Management of Air Quality
- Management of Archeological Sites
- Management of Special Use Activities
- Management of Hyatt Lake Recreation Complex
- Management of Snags and Coarse Woody Debris
- Management of Fish and Wildlife by the State of Oregon
- Management of the Pacific Crest Trail
- Management of Special Status Plants and Animals
- Management of Visual Resources
- Management of Off-Highway Vehicle
- Management of Livestock Grazing
- Management of Visitor Facilities

Rationale for the Preferred Alternative

The process of developing alternatives and selecting the preferred alternative required consideration of various approaches in order to implement Proclamation direction, Federal Land and Policy Management Act (FLPMA), and other applicable mandates, as well as the various objectives. In identifying the preferred alternative, the CSNM Planning Team determined that Alternative C most effectively accomplishes the overall objective of maintaining, protecting, restoring or enhancing the CSNM resources and objects, best addresses the diverse community and stakeholder concerns in a fair and equitable manner, and provides the most workable framework for future management of the CSNM. Although parts of the other alternatives would adequately meet the goal for CSNM, the team felt that Alternative C provides the best foundation on which to build the plan.

The planning team recognizes that the selection of the preferred alternative resulted from qualitative judgement, and that those who are interested in the future management of the CSNM will have different perspectives on the issues addressed in this document. A significant purpose of this process is to facilitate public dialogue on those issues. The information from the public dialogue will be considered in the formulation of the final CSNM Proposed Resource Management Plan/EIS.

ALTERNATIVE A – No Action Alternative

The No Action Alternative describes the current management situation which is essentially the BLM Medford District Resource Management Plan guidance combined with the additional non-discretionary specific direction of the Presidential Proclamation. The No Action Alternative does not provide or create opportunities for enhancement of the monument values beyond the immediate protective measures of the Proclamation. It allows the reader to compare the current interim management with various strategies for future management (Alternatives B, C and D). This alternative will serve as a baseline for most resource and land use allocations.

Vegetation Management

Although the RMP provides for activities to maintain and enhance vegetation, interim management direction deferred activities pending the completion of the CSNM management plan. The exception to the deferred management is the control of noxious weeds. Plant community data collection and monitoring of existing sites continues. Thirteen exclosures have been constructed as part of a study to determine the impacts of grazing on the objects of biological interest in the CSNM. The complete study plan, Draft Study of Livestock Impacts on the Objects of Biological Interest in the Cascade-Siskiyou National Monument (USDI 2001), was released in April of 2001.

Special Forest Products

During interim management, except for administrative purposes and traditional native American gathering, all collection and/or harvesting of Special Forest Products has been deferred pending the completion of the CSNM Resource Management Plan. Under the Medford District RMP, special forest products would be managed for production and sale when demand is present and where actions are consistent with primary objectives for the land use allocation. Permits for various commodities, such as mushrooms or firewood, would be issued for personal use. Principles of ecosystem management are to be used to guide the management and harvest of special forest products.

Management of the Transportation System

Under this No Action Alternative, the transportation system would be managed in accordance with the Medford District RMP while implementing specific direction of the CSNM proclamation. The Medford District RMP objectives are to develop and maintain a transportation system that serves the needs of the users in an environmentally sound manner. Problems associated with high road density would be corrected by emphasizing the reduction of roads where those problems occur (RMP pg 84). Management directions from the RMP that pertain to the CSNM under the No Action Alternative include:

- All motorized vehicles are restricted to designated roads
- The attainment of the Aquatic Conservation Strategy (pg.22, RMP).
- Avoid surface disturbance within special areas and special habitats.
- Minimize new road construction in areas with fragile soils (pyroclastic)...
- Stabilize existing roads where they contribute to significant adverse affects on soils water and fisheries.
- Construct roads in the LSR (now referred to as Old-Growth Emphasis Area) if potential benefits of silviculture, salvage, and other activities exceed the cost of habitat impairment.
- Reduce existing road mileage within key watersheds.
- Follow best management practices (in Appendix D of RMP)...to mitigate adverse

effects on soils, water, fish, and riparian habitat during road construction and maintenance.

- Determine necessity of road systems to meet initial wildfire suppression objectives prior to any prepared closure or modification.

These are the main directives in the RMP that pertain to the transportation system, for all of the management directives refer to the RMP (pages 86 through 88). Since the implementation of the RMP (1995), approximately 77 miles of roads have been temporarily closed.

The Best Management Practices for roads pertaining to this area include:

- Use seasonal restrictions on all unsurfaced roads.
- Surface inadequately surfaced roads that are to be left open to traffic during wet weather.

The following interim management practices were implemented after the establishment of the CSNM and are in accordance with the Proclamation or protective measures taken to maintain the integrity of the landscape while the resource management plan is being developed. The emergency closure of these roads were published in the *Federal Register* (Volume 65, Number 171) on September 1, 2000.

- Closed Schoheim road (41-2E-10.1), except between the southwest section line of T.40S., R.4E., Sec.4 and the Copco road where it provides access to private property.
- Closed Randcore Pass Road (40-4E-19.2) past the junction with road 40-4E-31.0
- Closed Skookum Creek road (40-2E-28 and 40-3E-27.2) past the junction with road 40-3E-27.1
- Closed road 41-2E-3.0 past the point where it crosses the Pacific Crest National Scenic Trail
- Closed road 41-3E-9.0 past the barricade in T.41S., R.2 E., Section 9, SW1/4NW1/4
- Closed Lone Pine Ridge Road (40-3E-31) past the block in T40S, R3E Section 31
- Closed an un-numbered road which crosses the Oregon-California border at the section line between sections 7 and 18, T.41S., R.4E.
- Closed an un-numbered road which crosses the Oregon-California border at the south section line of Section 13, T.41S., R.2E.

Mechanized Recreation

All motorized and mechanized vehicles are prohibited off designated roads (refer to transportation systems and map 30 for roads designated for use). Under interim management, snowmobiles are allowed on roads in the designated areas listed on map 53. Prior to the Proclamation cross country travel by snowmobiles was permitted when the snow depth was greater than 12 inches. The use of mountain bicycles are restricted to roads designated open to public access (Plate 1).

Non-Mechanized Recreation

Non-mechanized recreation including hiking, backpacking, camping, rock climbing, hang gliding, para-sailing, and picnicking is unrestricted across the CSNM. These activities in the RNAs must not interfere with the protection and maintenance of the key characteristics of these areas. The Pacific Crest National Scenic Trail is the only officially designated hiking trail within the CSNM.

Recreational Animal Stock Use

Recreational animal stock use is allowed throughout the Monument but must not interfere with protection and maintenance of key resource characteristics in the RNAs. No commercial recreational animal stock use would be authorized pending the completion of the CSNM management plan.

Visitor Facilities

Visitor facilities currently used for the CSNM are the BLM Medford District Office and the Hyatt Lake Recreational Complex. The BLM office in Medford supplies maps and brochures and visitors can talk to monument staff about specific points of interest. Maps and brochures are available at the Hyatt Lake Recreational Complex. The State of Oregon's Visitor Center, located in Ashland, also serves as a site where maps and brochures about the CSNM are disseminated. Current guidance on visitor use include:

- No parking off of roads except at designated sites
- New parking/trailhead facilities allowed only as needed for resource protection
- New toilet facilities would be furnished as needed for resource protection
- Continue use and maintenance of existing signs/interpretive sites for protection of Monument objects and to provide travel information
- New interpretive sites could be developed consistent with the protection of Monument objects
- New signs would be installed only for the protection of CSNM objects and public safety

Management of Linear Rights-of-Way and Communication Sites

The Proclamation establishing the Monument states: "The establishment of this monument is subject to valid existing rights (VER). Valid existing rights include a variety of BLM authorizations such as right-of-way grants, leases, permits and reciprocal agreements. Private land owners within the Monument are assured access to their property as existing law requires the Bureau of Land Management to provide reasonable access to non-federally owned land that is surrounded by public land.

Under the No Action Alternative, the BLM would continue to accept applications for BLM administered lands where they are consistent with local comprehensive plans, Oregon Statewide planning goals and rules, and the Medford District RMP policy identifying those areas to exclude or avoid. Land use allocation directions which would apply to the CSNM are:

Continued allocation of those lands which support existing rights-of-way corridors and communication sites.

- Subject to all VERs, exclude rights-of-way in the following areas:
 - Research natural areas
 - Wilderness study areas
 - Visual resource management Class I areas
 - Known special status plant species sites
- Subject to all VERs, avoid rights-of-way in the following areas:
 - Recreation sites
 - Sensitive species habitat
 - Visual resource management Class II areas
 - Known wetlands
 - Jenny Creek LSR (now called Old-Growth Emphasis Area)

Rights-of-way may be granted in avoidance areas, listed above, when no feasible alternate route or designated rights-of-way corridor is available.

Rights-of-way must avoid adverse effects that retard or prevent attainment of the Aquatic Conservation Strategy and riparian reserves objectives. Where legally possible adjust existing rights-of-way to eliminate adverse effects that retard or prevent the attainment of the Aquatic Conservation Strategy and riparian reserves objectives. If adjustments are not effective and where legally possible, eliminate the activity.

- The access road (no BLM number) to the Soda Mountain summit from the Soda Mountain Road (39-3E-32.3) would be maintained and repaired to reduce the erosion/sediment source problem.

The No Action alternative would continue current levels of maintenance, access, and other established uses consistent with the Medford District's RMP and VERs.

ALTERNATIVE B

Alternative B promotes natural ecosystem processes in the management of plant communities. One exception to this philosophy would be in the management of young conifer stands that exist as a result of past management practices. In the young conifer stands, active management would be implemented to ensure the establishment of conifer trees. Activities such as recreation and visitor use are not promoted and accommodations for these uses would be minimal. The transportation system would be maintained at minimal levels mainly for resource protection and many roads would be closed and/or naturally decommissioned.

Vegetation Management within the Diversity Emphasis Area

Under Alternative B, limited management intervention allowing natural processes would be used to attain plant community diversity. The only management activities that would occur across the landscape in the Diversity Emphasis Area (DEA) are survey/monitoring of plant communities (including listed and sensitive plant species) and noxious weed control. Noxious weed control would conform to standards set forth in the BLM Medford District's Integrated Weed Management Plan (see Appendix S). Although common to all alternatives, noxious weed control would be the primary vegetation management objective in Alternative B. The remainder of the management objectives to meet "desired future conditions" would be attained through natural processes. Refer to table 3-1 for the management objectives for the Diversity Management Area.

List of tools available to meet defined management objectives

In order to minimize soil surface disturbance, this alternative limits the number of tools available for noxious weed control including bio-control, hand-pulling, and herbicides within the context of the following management strategy.

Vegetation Management Strategy

- Maintain healthy herbaceous plant communities as a barrier to weed invasion by minimizing ground-disturbing activities. Eliminate isolated noxious weed patches placing an emphasis on management tools that minimize soil surface disturbance (bio-control, hand-pulling, and herbicides).
- Sow with native herbaceous seed (from local seed source) where natural ground-disturbance requires rehabilitation. Maintain a source of native herbaceous seed for emergency rehabilitation/restoration.

- Isolate and contain extensive noxious weed patches (greater than 1 acre)
 - ensure no motorized vehicle, cycling, hiking, livestock thoroughfare, particularly during the wet season.
- Create a long-term, site specific restoration/management strategy for each extensive noxious weed patch which includes:
 - Apply treatment method(s) most suited to species and location on the landscape
 - Monitor efficacy of treatments and alter management strategy as needed
 - Anticipate several years of treatment application necessary for the control of non-desired species/seedbank.
- Proposed management actions for noxious weed control would be applied to small study areas before application to the larger landscape.
- Establish a database of plant communities and ecological processes through surveys and monitoring.

Table 3-1. Grass/Shrub/Woodland Plant Community Management Objectives	
Management Objectives	Action/Tools
Control noxious weeds	Use of bio-control, hand pulling methods and/or herbicides
Establish database of conditions of plant communities	Survey and monitor plant communities and populations of listed and sensitive plant species

Vegetation Management of Old-Growth Emphasis Area

Alternative B focuses on promoting continued and accelerated development of late-successional and old-growth habitat by treating the early to mid-seral stage conifer stands that have potential of becoming late-successional and old-growth habitat (habitat type 3). The first priority would be the reforestation of land with the potential to produce late-successional and old-growth habitat. Reforestation techniques including site preparation, tree planting, cutting competing vegetation, and animal control would be implemented where stand replacement events such as past clear-cutting or wildfires have occurred.

The second priority would be to implement density management treatments of established conifer stands in habitat type 3, either plantations or natural stands, in order to accelerate their development towards late-successional and old-growth habitat. Young stands (those generally less than 30 years old in habitat type 3) are presently at high tree densities that will not allow them to develop into late-successional and old-growth given historic processes (Sensenig 2000). Many of the habitat type 3 lands are pine plantations between 10 and 30 years of age. More rapid pine growth and subsequent increases in canopy depth accelerates ingrowth of Douglas-fir and white fir in the understory of pine plantations in the CSNM. Thinning pine plantations to preferred levels accelerates growth and increases vigor over time (Oliver 1979). Thinning pine pole stands is to reduce the risk of beetle attack (Cochran and others 1993). These techniques apply to natural stands and plantations. Density management techniques involves the reduction of competing vegetation including thinning (cutting down) conifer trees of less than average stand size that are growing too close together. All thinning treatments proposed in Alternative B would be non-commercial (less than 7" dbh). Approximately 3,400 acres (90 percent) of habitat type 3 would be treated over the next 10 years.

Excessive slash created by brush removal and density management activities would be treated (in many cases by prescribed fire) in order to reduce the fuel loading and wildfire hazard. Monitoring would be essential to determine the effectiveness of treatment and recording the progression of the stands toward meeting the Old-Growth Emphasis Area goal.

The following prioritized criteria would be used when identifying treatment areas to meet Old-Growth Emphasis Area goals under Alternative B.

- 1) Where recent stand replacement events have occurred and it is determined that some treatment is needed to help re-establish trees.
- 2) Those ecoregions within the CSNM that currently lack late-successional and old-growth habitat and have relatively high amounts of potential habitat (habitat 3).
- 3) Young stands (habitat type 3) that need to be treated to increase tree growth in order to accelerate the development of late-successional and old-growth habitat characteristics or to reduce moderate to high levels of insect and disease related mortality.
- 4) Where treating early-successional forest is adjacent to (generally within 1/4 mile) existing late-successional and old-growth, such that treating it would lead to development of larger blocks of late-successional and old-growth habitat.
- 5) Stands within riparian reserves and subwatersheds lacking late-successional and old-growth habitat and/or desired structures.

Special Forest Products

There would be no collection of special forest products from the CSNM under this alternative except for traditional native American gathering or administrative purposes such as research and monitoring.

Transportation System

Under Alternative B, the transportation system would be managed as shown on map 31. The objectives are to maintain the minimal transportation system necessary to facilitate meeting the goal of protection and maintenance of Monument resources. Problems associated with high road density would be corrected by emphasizing the reduction of roads where those problems occur.

Management directions under Alternative B include (for all of the management directives refer to Appendix CC):

- All mechanized vehicles are restricted to designated roads.
- The attainment of Monument Aquatic Conservation Strategy Objectives (see Appendix BB).
- Avoid special areas and special habitats.
- Minimize new road construction. Construct roads in the Monument only if potential ecological benefits exceed the effects of habitat impairment unless required by Valid Existing Rights (VERs)
- Stabilize existing roads where they contribute to adverse affects on soils, water and fisheries.
- Where legally possible, reduce the amount of existing roads in the CSNM particularly where road densities are greater than 2 miles per section.

- Follow best management practices (in Appendix AA) to mitigate adverse effects on soils, water, fish, wildlife, and riparian habitat during road construction and maintenance.
- Determine necessity of road systems to meet initial wildfire suppression objectives prior to any planned closure or modification.

Best Management Practices for roads would include:

- Surface roads that are to be left open to traffic from October 15 through May 15.
- Roads that are not adequately surfaced would be closed from October 15 through May 15.

Transportation Management Objectives are shown on Map 31. Major roads of concern are listed below with recommended treatments:

- Schoheim road (41-2E-10.1); the western portion would be closed and left to decommission naturally, the eastern portion would be closed for use by unauthorized vehicles except between the southwest section line of T.40S., R.4E., Sec.4 and the Copco road where it provides access to private property.
- Pilot Rock Road (41-2E-3.0) past the point where it crosses the Pacific Crest National Scenic Trail would be closed and left to decommission naturally
- Close the Pilot Rock access road (BLM #40-2E-33) where it intersects old Highway 99 with a gate to prevent vehicle access.
- Randcore Pass Road (40-4E-19.2) past the junction with road 40-4E-31.0 would be closed for use by unauthorized vehicles.
- Skookum Creek road (40-2E-28 and 40-3E-27.2) past the junction with road 40-3E-27.1 would be closed for use by unauthorized vehicles.
- Road 41-3E-9.0 past the barricade in T.41S., R.2E., Section 9, SW1/4NW1/4 would be closed and left to decommission naturally.
- Lone Pine Ridge Road (40-3E-31) past the block in T.40S., R.3E., Section 31 would be closed and left to decommission naturally.
- The un-numbered road which crosses the Oregon-California border at the section line between sections 7 and 18, T.41S., R.4E. would be closed for use by unauthorized vehicles.
- The un-numbered road which crosses the Oregon-California border at the south section line of Section 13, T.41S., R.2E. would be closed and left to decommission naturally.
- Seasonally (Oct.15 - May 15) close the Pilot Rock jeep road with gates.

Mechanized Recreation

In the Proclamation creating the CSNM, the Secretary of the Interior was directed to “prohibit all motorized and mechanized vehicle use off-road...” As a result, all mechanized forms of recreation are restricted to designated roads which are open for public access. These roads are identified in the transportation plan. Included in this category are mechanized vehicles of all types including snowmobiles and mountain bikes. No off road travel by any of these vehicles is allowed in CSNM. In this alternative, Alternative B, no roads would be designated for snowmobile use thus the Monument would be closed to snowmobiles.

Non-Mechanized Recreation

Included in this category are such forms of recreation as hunting, fishing, camping, hiking, technical rock climbing, bungee jumping, hang gliding, and para-sailing. Recreational animal stock use will be covered separately below.

Under this alternative, camping would only be allowed at the existing campgrounds in the Hyatt Lake Recreation Complex and along the PCNST. Campfires are restricted to existing fire pits at the Hyatt Lake Recreation Complex and “leave no trace” campfires are allowed in association with PCNST camping.

The only existing designated hiking trail within the CSNM is the Pacific Crest National Scenic Trail (PCNST). There are two officially designated side trails associated with PCNST in the CSNM at Hobart Bluff and Wildcat Hills. Under this alternative, no new hiking trails would be constructed or designated. An existing trail created by repeated use but not built to BLM standards and maintained could be in existence but is not recognized or designated by BLM as a trail. Hiking is unrestricted in the Monument except within RNAs where it is restricted to existing roads/trails.

Hunting and fishing regulations are set by the State of Oregon and this plan does not address those regulations.

Technical rock climbing, hang gliding, para-sailing/gliding, bungee jumping are not compatible with the objectives of the CSNM under this alternative and therefore are not allowed.

Additional forms of recreation which are not addressed or new forms that may be created in the future would be prohibited until adequately evaluated in relationship to the CSNM management objectives.

Recreational Animal Stock Use

Under this alternative all animal stock use is prohibited. This includes horses, llamas, goats, mules, donkeys, dogs, camels, elephants, and bison. Concerns over grazing, noxious weeds, nutrient loading from droppings, and damage to soils, water and traditional root crops are associated with these animals. This would also apply to commercial sled dog and sleigh ride activities which were permitted in the past around Hyatt Lake.

Visitor Facilities

This alternative allows for the use of existing federal government facilities (within and outside of the Monument - without improvements or alterations) as part of the Monument visitor services and interpretation program. The BLM Medford District Office would remain the Monument headquarters and primary point of information for visitors. The Hyatt Lake Recreation Complex administration building would be used as a contact point for monument visitors in addition to its normal operations. The State of Oregon’s Welcome Center located in the Forest Service’s Ashland Ranger District office would continue to be used to disseminate information pertaining to the Monument such as maps and brochures.

Alternative B provides for the maintenance of existing designated trailhead and parking facilities on BLM land in the CSNM. Maintenance for resource protection and safety would be allowed, but alterations, expansion, or new construction at these or any other sites within the Monument would not be allowed under this alternative. No new permanent or temporary toilets would be located at any of these sites. No drinking water sources would be developed for any of the designated sites. Parking off-road would be permissible only at existing designated sites. Any existing, non-designated off-road parking would not be authorized for use and may be signed and rehabilitated accordingly. Existing parking and trailhead sites, within the CSNM, that will hereafter be considered as designated include:

- PCNST parking along the Soda Mountain Road (39-3E-32.3): [T40S, R3E, Section 16]

- PCNST parking at Porcupine Gap along the (40-2E-33-3.0) Road: [T40S, R2E, Section 35]
- Horse Corrals along old Highway 99: [T 41S, R2E, Section 9]
- Parking within designated areas in the Hyatt Lake Recreation Complex: [T39S,R3E,Sections 15, 21, 22]

This alternative provides for the continued use and maintenance of existing interpretive sites and signs for travel, safety, resource protection, and visitor information. No new interpretive sites would be developed within the CSNM under this alternative. New signs would be limited to those necessary for protection of the monument resources and public safety.

Management of Linear Rights-of-Way and Communication Sites

The Proclamation establishing the Monument states: “The establishment of this monument is subject to valid existing rights (VER). Valid existing rights include a variety of BLM authorizations such as right-of-way grants, leases, permits and reciprocal agreements. Private land owners within the Monument are assured access to their property as existing law requires the Bureau of Land Management to provide reasonable access to non-federally owned land that is surrounded by public land.

Under this alternative, BLM would issue no new authorizations for either linear rights-of-way or communication sites on public lands. There would be no expansion of existing facilities or construction of new facilities at either of the two communication sites i.e. Soda Mountain and Chestnut Mountain. The access road (no BLM number) to the Soda Mountain summit from the Soda Mountain Road (39-3E-32.3) would be maintained and repaired to reduce the erosion/sediment source problem.

Alternative B would continue current levels of maintenance, access and other established uses consistent with valid existing rights.

ALTERNATIVE C

Alternative C is the preferred alternative. It incorporates active management for protection and maintenance of the conifer communities while limiting some ground disturbing management tools that may be used in maintaining and restoring the other plant communities. Recreation and visitor use is accommodated at levels that don't interfere with protection, maintenance and/or restoration of Monument resources. The transportation system would be managed to accommodate visitor use and safety while closing and decommissioning roads (both mechanical and natural) in order to protect Monument resources.

Vegetation Management in the Diversity Emphasis Area

Alternative C seeks attainment of Monument objectives through direct management intervention. However, tools are restricted to those resulting in minimal soil surface disturbance so as to minimize weed invasion and facilitate the natural process of plant community succession. Alternative C strives to maintain individual plant species, plant communities, as well as the full range of plant and wildlife habitat characteristics of each plant community within the Monument. Natural processes such as fire will be mimicked as closely as feasible. Other processes such as weed invasion will be controlled to minimize impacts to natural ecosystem processes. In comparison to

Alternative B, active management would be implemented to maintain and restore a range of plant community conditions. A limited range of tools would be available to facilitate management intervention where monitoring has indicated undesirable plant community and wildlife habitat conditions. Management objectives for the plant communities are listed in Table 3-2.

List of management tools available to meet defined management objectives

Alternative C allows limited ground-disturbance, but excludes the use of heavy machinery except for maintaining, repairing or decommissioning roads, use in rock quarries or for pond/pump-chance maintenance, repairs or rehabilitation/restoration. Management tools for this alternative include: manual weeding, prescribed fire, fence construction, manual thinning, helicopters, herbicide application (for weed control only), native plant establishment, weed-eater, chainsaws, and handheld auger.

Vegetation Management Strategy

- Maintain healthy herbaceous plant communities as barrier to weed invasion by limiting ground-disturbing activities. Eliminate isolated mono-culture weed patches using identified management tools.
- Sow with native herbaceous seed (from local seed source) where natural ground-disturbance requires rehabilitation. Maintain a source of native herbaceous seed for emergency rehabilitation/restoration.
- Isolate and contain extensive weed patches (greater than 1 acre)
 - ensure no motorized vehicles, cycling, hiking, and livestock thoroughfare particularly during the wet season.
- Create a long-term, site specific restoration/management strategy for each extensive noxious weed patch which includes:
 - Apply treatment method(s) most suited to species and location on the landscape
 - Monitor efficacy of treatments and alter management strategy as needed
 - Anticipate several years of treatment application necessary for the control of non-desired species/seedbank.
- Proposed management actions for weed control would be applied to small study areas before application to the larger landscape.
- Establish a database of plant communities and ecological processes through surveys and monitoring.
- Improve condition of stands with mixture of weeds and remnant native herbaceous species using identified management tools.
- Survey wet meadows, seeps, and springs to quantify restoration needs. Initiate restoration of hydrological functioning where necessary.
- Survey riparian vegetation, particularly along the 303(d) listed streams.
- Survey, protect and/or restore endemic plant species including listed and Bureau special status plants.

- Restoration activities would be tailored to maintain or enhance populations of listed and Bureau special status plants.
- As new information is received, adapt long-term management plan for maintaining a range of conditions/habitats within plant communities of the Monument.

Table 3-2. Grass/Shrub/Woodland Plant Community Management Objectives

Management Objective and Conditions	Action/Tools
Grasslands	
<p>Foothill Mountain Grasslands, Steep Mountain Grasslands, and Biscuit Scablands represent some of the most fire-dependent plant communities of the CSNM landscape. Fire suppression, weed invasion and livestock grazing have contributed to the deterioration of all or part of these communities. Many lower elevation communities in the Agate Flat area are under annual grass monoculture, or have annual grasses as a dominant component. Where native grass and forb species still dominate the herbaceous layer of plant communities, prescribed fire treatments will be distributed across the landscape to facilitate the co-existence of short-term fire-dependent species (short-lived forbs and grasses utilizing ephemeral habitats created by fire) together with species able to persist in the longer-term without fire (long-lived perennial grasses, woody species). The following objectives are common to all grasslands, open shrublands, and open woodlands.</p>	
<p><u>Maintain and Protect existing native grasslands:</u> Most grasslands are maintained by disturbance. Fire plays a critical role in the individual species ecology of grassland dwelling species (vigor, seedset, tillering ability, successful seed germination). Careful survey/monitoring for signs of degradation (weed invasion, litter buildup, and increased woody canopy) and timely action may be necessary to maintain existing native grasslands.</p>	<p>Treat up to 20 percent of the native grasslands within each subwatershed (map 13) of the CSNM in the next 10 years. Prescribed fire would be the first tool used to remedy signs of degradation. Manual treatment (piling and burning) could be used where broadcast fire cannot be safely prescribed. Treatment application during the summer dormant season is most favorable, but not always feasible due to dry conditions. Treatments would most likely occur in the fall or spring. Pilot studies are a pre-requisite for treating areas greater than 20 acres.</p>
<p><u>Improve native grass/annual grass mix to native grass domination:</u> Annual grasses can invade decadent native grasslands following long-term fire suppression, or low vigor grasslands following long-term livestock impact. Defoliation treatments can be timed to reduce annual grass seedset, but maintain native perennial grass seedset and vegetative tillering. Local conditions may necessitate multiple treatment types (eg. it is unlikely that fuels would allow the application of fire for 2-3 consecutive years).</p>	<p>Within the next 10 years, treat up to 15 percent of the native grasslands within each subwatershed (map 13) that are being invaded by annuals. Apply spring/early summer defoliation treatments (fire) to prevent annual grass seedset. Two applications may be necessary. Treatments may need to continue for two or more years. Native grass seed application may be necessary in patches of annual grass domination.</p>
<p><u>Restore annual grass monoculture to native grass domination:</u> The low success rate of treatments attempting to meet this objective makes this a low management priority. Dense stands of early germinating/maturing annual grasses easily out-compete native grasses seedlings for water and nutrients. The presence of medusahead exacerbates the problem through establishment of a thick duff layer.</p>	<p>Treat up to 10 percent of the annual grass monoculture areas within each subwatershed of the CSNM in the next 10 years. At least three years of defoliation treatment and/or herbicide application are necessary to control the seedbank prior to successful native grass establishment. Native grass seed application is an essential part of any restoration effort. (see Weed Mgt. Plan, Appendix GG).</p>

Table 3-2. Grass/Shrub/Woodland Plant Community Management Objectives

Management Objective and Conditions	Action/Tools
<p>Wedgeleaf ceanothus stands are the most common shrubland of the CSNM landscape. Low statured hardwood stands (eg, rosaceous chaparral) are also considered to constitute shrublands. Fire suppression has created a preponderance of older aged shrub stands. The relative scarcity of rosaceous chaparral implies a restriction on management beyond small pilot studies aimed at a further understanding of their plant community dynamics. Since the life-cycle of shrublands includes a stage of grass domination following fire, all grassland management objectives also apply to shrublands.</p>	
<p><u>Recreate a range of wedgeleaf ceanothus stand ages across the landscape:</u> The long-term management plan will maintain a range of shrub stand ages between 0 and 50 years old with equal distribution across decadal classes. Short fire-return intervals may prevent sexual reproduction of established shrubs, thereby resulting in their local extirpation.</p>	<p>Treatment of up to 20 percent of the wedgeleaf ceanothus stands within each subwatershed of the CSNM would occur within the next 10 years. Use broadcast fire or manual cutting, piling and burning to reinitiate stands of shrubs. Fire return intervals of more than 5 years are preferred. A survey of all wedgeleaf ceanothus stands (stand age, stand cover) and their understory are a prerequisite for creating a long-term shrubland management plan.</p>
<p>Woodlands</p>	
<p>A large range of woodland types exist in the CSNM, including Oak-Bunchgrass, Oak-Juniper-Fescue, Oak-Pine-Fescue, Oak-Pine-Oatgrass, Pine-Oak-Terrace, Pine-Oak-Fescue, and Oak Mahogany Fescue. These communities integrate with grasslands and shrublands. Consequently, management objectives for grasslands and shrublands are also pertinent to woodlands.</p>	
<p><u>Conifer invasion:</u> Mesic (relatively moist) oak woodlands are subject to conifer invasion as a consequence of fire-suppression. A full inventory of conifer invaded oak woodlands is necessary before the application of prescribed fire.</p>	<p>Upon completion of an inventory, up to 25 percent of the oak woodlands within each subwatershed (map 13) being invaded within CSNM would be treated during the next 10 years. Prescribed broadcast fire is the best tool for reducing conifer canopy cover within oak woodlands. Manual treatments (cutting, piling and burning) can be used where broadcast fire cannot be safely reintroduced.</p>
<p><u>Shrub invasion:</u> Fire suppression has resulted in increased cover by shrubs within formerly open woodlands. Where fuel-loading threatens to result in a stand-replacement wildfire event, manual thinning could be used to reduce fire-hazard and induce vigorous shrub growth.</p>	<p>Treat up to 20 percent of shrub invaded areas within each subwatershed (map 13) of the CSNM would be treated in the next 10 years. Several woodland prescriptions have been successfully implemented within the Applegate Adaptive Management Area using broadcast burning and manual treatments (cut, pile and burn). Similar prescriptions could be used in the CSNM.</p>

Table 3-2. Grass/Shrub/Woodland Plant Community Management Objectives	
Management Objective and Conditions	Action/Tools
<p><u>Loss of 'open oak savanna' communities:</u> Where some oak woodlands were once characterized by open spaces, fire suppression has resulted in a proliferation of a younger age class (<130 years) of Oregon white oak, especially in more mesic oak woodlands. Increased stand density is believed to have reduced acorn production, an important food source for wildlife. Remaining stands of native herbaceous understory are frequently associated with Oregon white oak canopy. Thinning of dense Oregon white oak stands to historical tree density should only occur providing there is no loss of the native herbaceous component within newly created interspaces.</p>	<p>Treatments should be restricted to pilot studies and monitored for at least five years (acorn production, understory and overstory composition) prior to larger scale treatment application. If pilot studies are successful, treat 10 percent of the dense stands within each subwatershed (map 13) in the next 10 years. Prescribed broadcast fire is the best tool for reducing stand density within oak woodlands. Manual treatments (cutting, piling and burning) can be used where broadcast fire cannot be safely reintroduced.</p>
Wetlands, Riparian Vegetation, Floodplains, Springs and Seeps	
<p>This category represents a wide range of plant communities. All have been impacted by past livestock management, pond construction, and diversion through road construction. Apart from the former Box-O Ranch, most riparian overstory remains intact. Livestock exclusion, or finer control of timing and intensity of grazing will allow for a rapid recovery of these plant communities. There is a strong possibility that these communities house a range of endangered and survey and manage mollusks.</p>	
<p><u>Facilitate wetland and riparian plant recovery:</u> The effects of improper livestock grazing is the greatest encumbrance to the recovery of wetland plant communities.</p>	<p>Complete a survey on all wetland and riparian plant communities and restore hydrologic functions of impacted areas immediately. Use fencing to exclude livestock, and/or alter the livestock management to facilitate wetland plant community recovery including herding and salting.</p>
<p><u>Repair of hydrological functioning:</u> Most wetland and riparian plant communities suffering from altered drainage due to culvert and/or road construction will regain a suitable plant community composition following correction of drainage problems.</p>	<p>Complete a full inventory of wetland plant communities to assess the need for drainage reparations. Rehabilitate drainage problems associated with roads using mechanized equipment. Less ground disturbing methods such as horses or helicopters may be used in some instances for adding woody material or other structures.</p>
<p><u>Re-establishment of riparian woody vegetation:</u> This is primarily a serious problem on the former Box-O Ranch. Grazing deferment has resulted in improved conditions. Isolated seeps and springs may need planting of suitable woody species.</p>	<p>A full inventory of woody vegetation of all wetlands, riparian vegetation, springs and seeps is required before any management intervention (replanting, weed control).</p>
<p><u>Repair of ponds and pump chances:</u> Ponds and/or pump-chances would be improved, reconstructed or decommissioned to allow a recovery of the former plant communities.</p>	<p>Complete surveys to determine restoration needs. Immediately repair impacted areas as soon as possible. The use of mechanized equipment would be allowed to accomplish objectives.</p>

Table 3-2. Grass/Shrub/Woodland Plant Community Management Objectives

Management Objective and Conditions	Action/Tools
<p><u>Floodplain restoration</u>: Historical pasture creation has greatly reduced the extent of former hardwood floodplain communities. The former Box-O Ranch is a prime area for restoration. Current management is allowing the re-establishment of re-sprouting and seed reproducing hardwoods and shrubs (white alder, maple Oregon ash, willow, and mock-orange). A planting program is establishing a conifer component. A long-term goal envisions a mature riparian hardwood dominated forest intergrading with oak woodlands within the extended floodplain.</p>	<p>Continue riparian planting program and manage bottomland pastures to allow for woody tree establishment. Initiate an extended floodplain planting program. This includes management of understory as well as tree planting. Native perennial grasses should be established following recommendations for grassland management. Establish Oregon white oak by using a hand held power-driven auger to drill through the hard clay pan to allow easier growing conditions and tree establishment.</p>

Vegetation Management in the Old-Growth Emphasis Area

Under Alternative C, the main objective is protecting existing and potential late-successional and old-growth habitat from the threat of habitat loss due to catastrophic disturbance (i.e., intense wildfire). This would be accomplished by reducing the fuel loading in all stands (habitat types 3,4,5&6) with high fire hazard that are within 1/4 mile of existing late-successional and old-growth habitat (habitat types 1&2). In some cases, thinning (both non-commercial and commercial) of vegetation in these stands (habitat types 3,4,5&6) may occur before the fuel reduction techniques are implemented to reduce the fuel ladder and amount of live fuel. In addition, forest stands in habitat type 3 that have moderate fire hazard and that are within 1/4 mile of existing late-successional and old-growth habitat would be treated as described above to further reduce fuel loading and accelerate progression toward desired old-growth stand characteristics. Up to 2,000 acres of these habitat type 3 stands would be treated within the next 10 years.

In order to protect existing late-successional and old-growth habitat (habitat type 1&2), fuel treatment would occur within late-successional and old-growth habitat that has high fire hazard (see map 45). Non-commercial thinning of vegetation could occur in some of these stands prior to fuel treatment if necessary. Special attention would be given to reducing the non-fire dependent (mainly white-fir) component of existing late-successional and old-growth habitat which could be accomplished through manually cutting individual trees (non-commercial) or prescribed understory broadcast burning. Thinning from below would decrease the fuel ladder by increasing crown base height and changing species composition to lighter crowned and fire adapted species (Graham 1999). Up to approximately 1,770 acres of habitat type 1&2 would be treated within the next 10 years to accomplish this objective. The manipulated stands would be monitored for effectiveness of the treatment and to record their progression toward attaining and /

or maintaining late-successional and old-growth habitat characteristics. Refer to Table 3-3 for a summary of potential treatments for meeting late-successional and old-growth protection.

The following prioritized criteria would be used when identifying treatment areas to accomplish Old-Growth Emphasis Area goals under Alternative C.

- 1) The overriding priority would be the reduction of high fuel hazards along the ridge line that separates the north/south management zones.
- 2) Treatment of activity fuels (excess slash that results from stand treatments).
- 3) Where recent stand replacement events have occurred and it is determined that some treatment is needed to help re-establish trees.
- 4) Treatment of all stands with high fire hazard within 1/4 mile of late-successional and old-growth habitat (type 1&2).
- 5) Treatment of forest stands in habitat type 3 that have moderate fire hazard and that are within 1/4 mile of existing late-successional and old-growth habitat.
- 6) Treatment of existing late-successional and old-growth habitat (habitat types 1&2) to reduce high fuel hazard. Non-commercial thinning may occur in some of these stands before fuel treatments to reduce the white fir components within late-successional and old-growth habitat at risk due to density (decreased vigor), insect infestation, disease, or fuel ladders.
- 7) Effectiveness monitoring of all treated sites.

Habitat Type	Possible Treatments over next Decade	Potential Acres	Percent of Habitat Potentially Treated
1 & 2	<ul style="list-style-type: none"> • Reduction of Fuel Component • Non-Commercial thinning 	1,770	15
3	<ul style="list-style-type: none"> • Treat all habitat with moderate & high fuel hazard within ¼ mile of habitat 1 & 2 for fuel reduction • Commercial & Non-Commercial thinning could occur prior to fuel treatment 	2,346	62
4	<ul style="list-style-type: none"> • Treat all habitat with high fuel hazard within ¼ mile of habitat 1&2 for fuel reduction 	2,614	14
5	<ul style="list-style-type: none"> • Treat all habitat with high fuel hazard within ¼ mile of habitat 1&2 for fuel reduction • Possible Commercial & Non-Commercial thinning 	839	10
6	<ul style="list-style-type: none"> • Treat all habitat with high fuel hazard within ¼ mile of habitat 1&2 for fuel reduction 	157	14
Total of CSNM outside of WSA & RNAs		7,726	18

Special Forest Products

No commercial collection of any special forest products would be allowed within the CSNM. Fungi/mushroom collection for personal use would be allowed. Special use permits would be issued for the collection of plant materials including fungi/mushroom when used for traditional native American gathering or administrative purposes (including approved research projects). During thinning and fuel management activities, in areas where adequate levels of coarse woody debris exist, firewood would be moved to slash decks. Permits would be issued to cut firewood in these slash decks. Permits for the collection of rocks/gems and petrified wood would be issued in pre-designated areas for educational purposes as long as the collection does not interfere with protection of Monument resources.

Transportation System

Under the Alternative C, the transportation system would be managed as shown on map 32. The objectives are to maintain the minimal transportation system necessary to facilitate meeting the overall goal of protection, maintenance and restoration of Monument resources. Problems associated with high road density would be corrected by emphasizing the reduction of roads where those situations occur.

Primary management directions under Alternative C include (for all of the management directives refer Appendix CC):

- All mechanized vehicles are restricted to designated roads.
- The attainment of Monument Aquatic Conservation Strategy Objectives (see Appendix BB).
- Avoid special areas and special habitats.
- Minimize new road construction. Construct roads in the Monument only if potential ecological benefits exceed the effects of habitat impairment unless required by Valid Existing Rights (VERs)
- Stabilize existing roads where they contribute to adverse affects on soils, water and fisheries.
- Where legally possible, reduce the amount of existing roads in the CSNM particularly where road densities are greater than 2 miles per section.
- Follow best management practices (in Appendix AA) to mitigate adverse effects on soils, water, fish, wildlife, and riparian habitat during road construction and maintenance.
- Determine necessity of road systems to meet initial wildfire suppression objectives prior to any planned closure or modification.

Best Management Practices for roads would include:

- Surface roads that are to be left open to traffic from October 15 through May 15.
- Roads that are not adequately surfaced would be closed from October 15 through May 15.

Transportation Management Objectives are shown on Map 32. Major roads of concern are listed below with recommended treatments:

- Schoheim road (41-2E-10.1); the western portion would be closed and mechanically decommissioned, the middle portion would be closed and left to decommission naturally, the eastern portion would be closed for use by unauthorized vehicles except between the southwest section line of T.40S.,R.4E.,Sec.4 and the Copco road where it provides access to private property.

- Pilot Rock Road (41-2E-3.0) past the point where it crosses the Pacific Crest National Scenic Trail would be closed and mechanically decommissioned.
- Maintain Pilot Rock access road (BLM #40-2E-33) in current condition and acquire full public access.
- Randcore Pass Road (40-4E-19.2) past the junction with road 40-4E-31.0 would be closed for use by unauthorized vehicles.
- Skookum Creek road (40-2E-28 and 40-3E-27.2 Segment A) past the junction with road 40-3E-27.1 would be improved down to where Sections 36 (T.40S.,R.3E.)and 1(T.41S.,R.3E) meet and closed to unauthorized vehicles between November 15 and April 1 of each year. Skookum Creek road past the common line of Section 36 (T.40S.,R.3E.)and Section 1(T.41S.,R.3E) would be close to unauthorized traffic throughout the year.
- Improve the Soda Mountain lookout road for extended season use and install a gate where spur road takes off to the lookout.
- Road 41-2E-9.0 (segments A&B) past the barricade in T.41S., R.2 E., Section 9, SW1/4NW1/4 would be closed and mechanically decommissioned.
- Lone Pine Ridge Road (40-3E-31) past the block in T.40S., R.3E., Section 31 would be closed and left to decommission naturally.
- The un-numbered road which crosses the Oregon-California border at the section line between sections 7 and 18, T.41S., R.4E. would be closed for use by unauthorized vehicles.
- The un-numbered road which crosses the Oregon-California border at the south section line of Section 13, T.41S., R.2E. would be closed and mechanically decommissioned.

Mechanized Recreation

All mechanized forms of recreation are restricted to designated roads which are open for public access. These roads are identified in the transportation plan (map 32). Included in this category are mechanized vehicles of all types including snowmobiles and mountain bikes. No mechanized vehicles are allowed off of designated roads. Designating roads specifically for non-motorized mechanized recreation could be considered in the future. In this alternative, Alternative C, all BLM-administered roads in the north zone (map 42) of the Monument would be designated for snowmobile use. This designation does not include roads that have been closed or decommissioned under this alternative.

Non-Mechanized Recreation

Under this alternative dispersed “leave no trace” camping would be allowed across the entire CSNM except for the Hyatt Lake Recreation Complex, the RNAs, and in structures at the former Box-O Ranch area. Camping within the Hyatt Lake Recreation Complex is restricted to designated sites. Organized groups that have existing permits would be allowed to camp outside of the Hyatt Lake designated group areas. These permits would only be renewed if the activities are found to be consistent with the objectives of the CSNM. No new applications for dispersed group camping would be accepted under this alternative. Group camping for administrative purposes would be allowed as long as the activity does not interfere with the protection of monument objects or resources. Camp fires would be allowed within the CSNM except within the RNAs. All camp fires would be consistent with State of Oregon regulations and adhere to the “leave no trace” camping objectives. Within the Hyatt Lake Recreation Complex, camp fires are only allowed in designated fire pits

Hunting and fishing regulations are set by the State of Oregon and this plan does not address those regulations.

The only existing hiking trail within the CSNM is the PCNST (and associated side trails). Under this alternative new trail construction or designation could occur but only within the designated primary recreation use zones (see map 42). Hiking is unrestricted in the Monument except within RNAs where it is restricted to existing roads/trails.

In order to protect the natural geologic features, technical rock climbing would not be allowed within the CSNM. Hang gliding and para-sailing/gliding would only be allowed in designated areas and by permit only. The designated area would be determined by the Monument staff through an analysis process after an application is received and the decision is made to permit the activity. Other activities not mentioned would be analyzed on a case-by-case basis.

Recreational Animal Stock Use

Under this alternative, recreational stock use would not be allowed in RNAs. Recreational animal stock use off road would be allowed in the remainder of the CSNM with the following restrictions:

- The total number of stock on overnight trips would be 4 animals/group.
- The total number of stock on day trips is restricted to 6 animals/group.
- These animals would not be allowed to overnight within 200 feet of any waters edge.
- No recreational stock use of any kind is allowed in the South Zone from November 15 to May 1.

Recreational animal stock use for commercial purposes would not be allowed anywhere within the CSNM under this alternative.

Visitor Facilities

This alternative allows for the improvement and alteration of existing facilities for use as part of the Monument's visitor services and interpretation program. The Hyatt Lake administration site may be improved (including signs and new entry) to serve as a visitor contact station. The existing Welcome Center/Ashland Ranger District office would still be utilized as an Interagency Welcome Center under this alternative. The BLM Medford District would remain a point of contact for visitor information and the CSNM headquarters. This alternative would allow for the development of facilities within the surrounding communities for use as potential visitor contact stations. Exact location of these facilities would be based on availability of infrastructure, environmental site constraints, economic viability, and potential funding.

This alternative provides for the maintenance of existing designated trailhead, parking, and toilet facilities as described under Alternative B plus designated parking areas at the:

- Pacific Crest National Scenic Trail (PCNST) and Pilot Rock Trail parking at end of 3.0 Road off Pilot Rock Rd.(40-2E-33): [T41S, R2E, Section 3] Pilot Rock parking facility at rock quarry along the Pilot Rock Road (40-2E-33): [T41S, R2E, Section 3]

In addition, this alternative allows for the improvement and alteration of the existing designated sites that are also located within the primary recreation use zones (see map 42). Temporary toilets could be provided, as necessary, at existing designated trailhead and parking sites that are located within the primary recreation use zones. Construction of new permanent toilets would be considered only within the Hyatt Lake Recreation Complex. Parking off-road on BLM land would be permissible only at existing designated sites.

New interpretive sites and/or signs could be developed, as needed, in the primary recreation use zones within north management zone for resource protection, travel information, educational purposes and/or public safety. No new interpretive sites would be developed in the south management zone and new signs would be installed only for resource protection, travel information, and/or public safety.

Linear Rights-of-Way and Communication Sites

The Proclamation states: “The establishment of this monument is subject to valid existing rights.” Valid Existing Rights include a variety of BLM authorizations such as right-of-way grants, leases, permits and reciprocal agreements. Private land owners within the Monument are assured access to their property as existing law requires the Bureau of Land Management to provide reasonable access to non-federally owned land that is surrounded by public land.

One objective is to continue to make BLM administered lands available for needed rights-of-way where consistent with local comprehensive plans, Oregon statewide planning goals and rules, and protection of Monument resources. Another objective is to ensure that all rights-of-way for hydroelectric developments are consistent with Northwest Power Planning Council guidance, which recommends prohibiting future hydroelectric development on certain rivers and streams with significant fisheries and wildlife values. Land use allocation direction pertaining to the CSNM are:

- Allocation of lands to existing rights-of-way corridors and communication sites would continue.
- Subject to all VERs, with the exception of buried lines in rights-of-way of existing roads, avoid new rights-of-way in the CSNM. Rights-of-way may be granted when no feasible alternate route or designated rights-of-way corridor is available but every measure would be taken to minimize the negative affects on Monument resources.
- Rights-of-way must avoid adverse effects that retard or prevent attainment of the Monument Aquatic Conservation Strategy and riparian reserves objectives. Where legally possible adjust existing rights-of-way to eliminate adverse effects that retard or prevent the attainment of the Monument Aquatic Conservation Strategy and riparian reserves objectives. If adjustments are not effective and where legally possible, eliminate the activity.

Existing communication site authorizations on Soda Mountain and Chestnut Mountain would continue. No new communication sites would be developed in the CSNM. There would be no new facilities built at the existing communication sites and efforts to mitigate visual effects of the existing facilities would be undertaken. The Soda Mountain communication site access road would be improved to reduce erosion, maintained to BLM standards and gated.

Alternative C would continue current levels of maintenance, access and other established uses consistent with previously identified objectives and VERs.

ALTERNATIVE D

Alternative D promotes aggressive management for protection, maintenance and restoration of Monument resources through the use of all management tools available. Recreation and visitor use would be accommodated to the fullest extent possible while protecting Monument resources. The transportation system would be managed to

accommodate and promote visitor use, where feasible, and safety while aggressively closing and decommissioning roads (both mechanical and natural) in order to protect and restore Monument resources.

Vegetation Management in the Diversity Emphasis Area

In comparison to Alternatives B and C, Alternative D incorporates all tools available for an aggressive approach to attainment of protection, maintenance, restoration and enhancement of plant communities within the Diversity Emphasis Area. This alternative facilitates management intervention in areas where tools defined by Alternative C are ineffective or impossible to apply because of limitations in topography (e.g., steep slope) and location (e.g., adjacent to private land or midslope) or current condition (e.g., high fuel-loading). Use of tractor mounted mechanical contrivances would allow treatment over a larger area of the Monument. Management objectives for the plant communities are the same as Alternative C listed in table 3-2.

List of tools/management actions available to meet defined management objectives

All management tools are available in Alternative D. This includes herbicide application, manual weeding, plowing/discing, slashbuster, mowing, bio-control, prescribed fire, fence construction, mechanical chipping, manual thinning, mechanical thinning, native plant establishment, weed-eater, helicopters, chainsaws, handheld auger, and tractor driven auger.

Vegetation Management Strategy

The vegetation management strategy for Alternative D is the same as Alternative C.

Vegetation Management in the Old-Growth Emphasis Area

Alternative D would incorporate the objectives of Alternative C with some additional measures to protect and/or enhance existing late-successional and old-growth habitat (habitats 1&2). In addition to vegetation treatments proposed in Alternative C, measures would be taken to protect and/or enhance existing late-successional and old-growth habitat by including commercial thinning (along with non-commercial thinning) of habitat types 1 and 2 with high fuel hazards and treating the activity fuels. This could occur on the 1,770 acres of habitat type 1 and 2 previously identified in Alternative C. These treatments would open up the canopy, decrease vegetation competition, increase tree vigor and reduce fuel ladders. Commercial thinning of this habitat would be part of a science-based ecological restoration project aimed at meeting protection and old-growth enhancement objectives.

In addition to fuel reduction measures listed in Alternative C, all habitat type 5 stands within 1/4 mile of existing late-successional and old-growth habitat that have moderate fuel hazard would be treated to reduce fuel loading (see map 44). This treatment would occur on up to approximately 4,400 acres. Thinning of existing vegetation, both commercially and non-commercially, could occur before fuel reduction treatments occur if necessary. Commercial thinning would be part of a science-based ecological restoration project aimed at meeting late-successional and old-growth habitat protection and enhancement objectives. Table 3-4 summarizes potential treatments that would occur in the Monument over the next ten years to protect late-successional and old-growth habitat.

The prioritized criteria used to identify treatment areas under Alternative D to accomplish Old-Growth Emphasis Area goals would be the same as Alternative C (items 1-6) plus those listed below.

- 7) Treatment of existing late-successional and old-growth habitat that have high fuel hazard by commercial thinning habitat types 1 and 2 and treating the activity fuels.
- 8) Treatment of all forest stands in habitat type 5 within 1/4 mile of existing late-successional and old-growth habitat that have moderate fuel hazard to reduce fuel loading.
- 9) Effectiveness monitoring of treated stands

Habitat Type	Possible Treatment in the next decade	Potential Treated Acres	Percent of Habitat Potentially Treated
1 & 2	<ul style="list-style-type: none"> • Reduction of Fuel Component • Possible Commercial & Non-Commercial thinning 	1,770	15
3	<ul style="list-style-type: none"> • Treat all habitat with moderate & high fuel hazard within ¼ mile of habitat 1&2 for fuel reduction • Commercial & Non-Commercial thinning could occur prior to fuel treatment 	2,346	62
4	<ul style="list-style-type: none"> • Treat all habitat with high fuel hazard within ¼ mile of habitat 1&2 for fuel reduction 	2,614	14
5	<ul style="list-style-type: none"> • Treat all habitat with moderate and high fuel hazard within ¼ mile of habitat 1&2 for fuel reduction • Possible Commercial & Non-Commercial thinning 	7,239	84
6	<ul style="list-style-type: none"> • Treat all habitat with high fuel hazard within ¼ mile of habitat 1&2 for fuel reduction 	157	14
Total of CSNM outside of WSA & RNAs		14,126	32

Special Forest Products

No commercial collection of any Special Forest Products would be allowed within the CSNM. There would be no collection of plant material in the CSNM except fungi/mushrooms for personal use. Special use permits would be required for traditional native American gathering or approved administrative use such as research projects. During thinning and fuel management activities, in areas where adequate levels of coarse woody debris exist, firewood would be moved to slash decks. Firewood would be made available from these slash decks for personal use with a permit. Permits for the collection of rock/gems and petrified wood for personal use would be issued in pre-designated areas as long as the collection does not interfere with the protection of Monument resources.

Transportation System

Under the Alternative D, the transportation system would be managed as shown on map 33. The objectives are to maintain the minimal transportation system necessary to facilitate meeting the overall goal of protection, maintenance, restoration and

enhancement of Monument resources. Problems associated with high road density would be corrected by emphasizing the reduction of roads where those situations occur.

Management directions that pertain to Alternative D are the same as describe in Alternative C. In this alternative, vehicles would be authorized to leave the designated road surface for parking and/or camping but must stay within 150 feet of the road prism. Vehicles must not cause environmental damage, create new roads/trails, or leave the road to bypass road closure barriers. Vehicles may exceed the 150 feet limitation on hardened, traditional surfaces to access camping areas.

Transportation Management Objectives for alternative D are shown on map 33. Major roads of concern are listed below with recommended treatments:

- Schoheim road (41-2E-10.1); most of the road would be closed and mechanically decommissioned, the eastern portion would be closed for use by unauthorized vehicles except between the southwest section line of T.40S.,R.4E.,Sec.4 and the Copco road where it provides access to private property.
- Pilot Rock Road (41-2E-3.0) past the point where it crosses the Pacific Crest National Scenic Trail would be closed and mechanically decommissioned.
- Improve the Pilot Rock road (BLM #40-2E-33&41-2E-3.0 before the PCNST) to allow all season use. This may include surface rock or surface rock plus oil.
- Randcore Pass Road (40-4E-19.2) past the junction with road 40-4E-31.0 would be closed and mechanically decommissioned.
- Skookum Creek road (40-2E-28 and 40-3E-27.2) past the junction with road 40-3E-27.1 would be improved and left open to the public throughout the year down to where Section 36 (T.40S.,R.3E.) and Section 1(T.41S.,R.3E) meet. Skookum Creek road past where Section 36 (T.40S.,R.3E.) and Section 1(T.41S.,R.3E) meet would be closed to unauthorized use.
- Improve spur road in Section 21 (T.40S.,R.3E.) that ties back into the BLM 39-3E-32.3 road.
- Road 41-3E-9.0 past the barricade in T41S, R2 E, Section 9, SW1/4NW1/4 would be closed and mechanically decommissioned.
- Lone Pine Ridge Road (40-3E-31) past the block in T40S, R3E Section 31 would be closed and mechanically decommissioned.
- The un-numbered road which crosses the Oregon-California border at the section line between sections 7 and 18, T41S, R4E would be closed for use by unauthorized vehicles.
- The un-numbered road which crosses the Oregon-California border at the south section line of Section 13, T41S, R2E would be closed for use by unauthorized vehicles.
- Explore acquiring access to public use.

Mechanized Recreation

All mechanized forms of recreation are restricted to designated roads which are open for public access. These roads are identified in the transportation plan. Included in this category are motorized vehicles of all types including snowmobiles and mountain bikes. No cross country travel by any of these vehicles is allowed in CSNM. Designating existing roads or constructing new roads specifically for non-motorized mechanized recreation could be considered in the future. Under this alternative, Alternative D, all BLM-administered roads in the Monument would be designated for use by snowmobiles. This designation does not include roads that have been closed or decommissioned under this alternative such as the Schoheim road (41-2E-10.1).

Non-Mechanized Recreation

Under this alternative, dispersed “leave no trace” camping would be allowed across the entire Monument with the exception of the Hyatt Lake Recreational Complex, RNAs, and in the structures of the former Box-O Ranch area. Camping in the Hyatt Lake Recreation complex would be confined to designated camp sites. Organized groups with existing permits would be allowed to continue their event with no guarantee of renewal. Renewal would only be approved if the activity is consistent with the protection of CSNM objects. Groups of 12 or more persons planning to camp outside of the Hyatt Lake Recreation Complex would be required to obtain a permit. A limited number of new group camping applications would be accepted for analysis and possible approval. Group camping for administrative purposes would be allowed throughout the monument as long as it does not conflict with resource and monument object protection. Campfires would be allowed within the CSNM except in RNAs, where they are prohibited and in the Hyatt Lake Complex where they must be in designated fire pits.

Hunting and fishing regulations are set by the State of Oregon and this plan does not address those regulations.

The PCNST is the only hiking trail within the CSNM. Under this alternative, new trail construction or designation could be approved if analysis shows it is compatible with the objectives of the CSNM. No trail construction or designation would occur within the RNAs or WSA. Hiking is unrestricted in the Monument except within RNAs where it is restricted to existing roads/trails.

In order to protect the natural geologic features, technical rock climbing would only be allowed on Pilot Rock. The use of power augers for the placement of permanent protective devices would be prohibited. All protection on the rock used in technical climbing would be removed after completion of the climb.

Hang gliding or para-sailing/gliding would be allowed throughout the Monument with the exception of the WSA and the RNAs. Other forms of recreation would be analyzed by Monument staff prior to permitting the activity to occur.

Recreational Animal Stock Use

Recreational stock use would be allowed throughout the CSNM except for the RNAs. The maximum number of animals allowed on day trips would be 12/group and the maximum number of animals allowed on overnight trips would be 8/group. Animals that reside overnight must be at least 100 feet from any waters edge. Animal stock would consume only weed-free feed 24 hours prior to entering the Monument. Feed for stock must be brought in and only certified weed free feed may be used.

Commercial recreational stock use would be allowed throughout the CSNM except in the RNAs or WSA. Up to three Special Recreation Permits (SRPs), would be issued yearly. Special stipulations would be attached to ensure protection of Monument resources. Permittees would only be allowed to use designated routes and campsites. The total number of stock allowed for day trips would be 12, and the maximum number on overnight trips would be 8. Commercial stock must overnight at least 200 feet from any waters edge. Animal stock would consume only weed-free feed 24 hours prior to entering the Monument. All feed must be brought in for the animals and only certified weed free feed can be used. Commercial stock activities are not allowed in the South Management Zone from November 15 to May 1.

Recreational animal sledding would be allowed on designated roads/trails in the entire Monument except RNAs. Up to three Special Recreation Permits for animal sledding would be issued in the northern management zone.

Visitor Facilities

This alternative allows for the same facility parameters as Alternative B, with the additional allowance for the construction of a new facility within the Monument boundary.

This alternative would provide for the continued maintenance of existing designated trailhead, parking, and toilets as described in Alternative C. Improvements and alterations of existing designated trailhead and parking sites would be allowed throughout the Monument. Similarly, construction of new trailhead and parking facilities would be considered on federal land throughout the Monument. Temporary toilets could be located as necessary on BLM land throughout the Monument. Construction of new permanent toilets would be considered on BLM land within the primary recreation use zones. Drinking water sources and new permanent toilets could be developed at sites within this primary recreation use zone (see map 42).

This alternative allows for the continued use and maintenance of all existing interpretive sites and signs on BLM land within the monument. In addition, alterations and improvements of existing sites and signs could occur throughout the Monument as necessary. New sites and signs could be developed throughout the entire Monument.

Management of Linear Rights-of-Way and Communication Sites

The management of linear rights-of-way would be the same as described in Alternative C. Under this alternative, there would be no additional communication sites constructed in the Monument but new facilities would be considered at existing communication sites. Efforts to mitigate visual impacts of any authorized new facility would be implemented. In addition, if funding is available, an in-depth analysis of the existing situation would be undertaken in order to develop a site specific management plan which addresses site efficiency and visual resources. The plan would also address new technology and the possibility of managing the communication site(s) through a professional site manager in an effort to coordinate users in meeting management objectives.

Management Common To All Alternatives

Monument Aquatic Conservation Strategy

All management actions/treatments throughout the Monument would be consistent with the Monument Aquatic Conservation Strategy listed in Appendix BB. This strategy identifies protection required for all water bodies including permanently-flowing and intermittent streams, lakes, ponds (natural and constructed), springs, and wetlands. Riparian Reserves are the primary management tool for protection of water bodies and their associated riparian vegetation. In addition, Riparian Reserves are used to protect unstable and potentially unstable areas within the Monument.

Restoration and enhancement activities that benefit aquatic habitat and water quality may be conducted throughout the CSNM. These activities may include, but would not be limited to planting vegetation in riparian areas, stabilizing stream banks, placing instream habitat structures (e.g. logs, boulders, etc.), fencing springs and wetlands, and upgrading or decommissioning roads. In addition, partnerships with private landowners, watershed councils, state and other federal agencies would be pursued to remove or improve fish passage barriers such as diversion dams. Streams with the highest priority for aquatic habitat restoration and enhancement efforts are Jenny and Keene Creeks. The highest priority for spring and wetland restoration would be assigned to those that contain endemic mollusks. The highest priority for water quality

restoration and enhancement projects would be on the water quality limited streams listed in Table 2-9. Environment assessments will be prepared on a project specific basis to evaluate the potential impacts of any proposed ground-disturbing activities.

Management of Soda Mountain Wilderness Study Area (WSA)

In 1991, the Secretary of the Interior recommended to the President of the United States, who subsequently recommended to Congress, that certain areas currently designated as WSAs be officially designated as wilderness and that certain other areas designated as WSAs be deleted from wilderness consideration. The recommendation for the Soda Mountain WSA included 5,867 acres suitable for wilderness designation and 28 acres not recommended for wilderness designation. Since the original proposal, advanced mapping techniques (Geographical Information System) now show the Soda Mountain WSA at 6,447 acres. The WSA boundary has not changed from the original designation. Until Congress acts on the President's recommendation for the Soda Mountain Wilderness Study Area, it is to be managed under BLM's *Interim Management Policy For Lands Under Wilderness Review*, H-8550-1. The Interim Management Policy manual describes the policies under which the Bureau of Land Management will manage lands under wilderness review until Congress either designates these lands as wilderness or releases them for other purposes.

The Interim Management Policy applies only during the time a WSA is under wilderness review and until Congress acts on it, or where applicable, by a final decision by the BLM. After Congress acts on the President's recommendations for each WSA, a different policy will apply, depending on whether or not Congress designates the area as wilderness. Areas designated as wilderness will be managed under BLM manual 8560–Management of Designated Wilderness Areas and under the regulations at 43 CFR 6300. Areas released from wilderness study will no longer be subject to the Interim Management Policy, and will be managed consistent with surrounding contiguous landscape of the CSNM.

In the Soda Mountain Wilderness Study Area, necessary actions designed to protect the physical, biological, and cultural resources, as well as the quality of the wilderness experience will be accomplished using methods and equipment that have the least impact on the quality of an individual or group's wilderness experience, as well as the physical, biological, and cultural resources within the WSA. The minimum tool, equipment, or structure necessary to successfully, safely, and economically accomplish the objective will be used. The chosen tool, equipment, or structure will be the one that least degrades wilderness values temporarily or permanently.

Management of Research Natural Areas

The management of each Research Natural Area (RNA) is common to all alternatives as a specific management plan based on the criteria of the Oregon Natural Heritage Program was written. The Oregon Gulch RNA Management Plan is Appendix DD and the Scotch Creek RNA Management Plan is Appendix EE.

CSNM Property Boundary and Ownership

The Cascade-Siskiyou National Monument designation applies only to federally managed land. The external boundary depicted on the CSNM Analysis Area map (map 1) is for planning purposes only. Privately owned property within this outer boundary is not encumbered by, or in any way a part of the CSNM designation. In the event additional property is acquired within the CSNM boundary, it will become part of and managed in accordance with the Monument plan to further the values for which it was acquired.

Land Tenure Adjustments

CSNM Proclamation permits acquisition of private property to further protect the ecological values for which the Monument was designated. However, any acquisitions would occur with voluntary participants only, and be conducted in accordance with existing laws and regulation pertaining to federal land exchanges and acquisition of non-federal property. The Proclamation withdraws public lands from selection, sale, leasing or other disposition under the Public Land Laws except by exchange for the purposes of furthering the values for which the Monument was designated. Land acquisitions, through purchase or exchange, would be considered on a case by case basis where the resource values to be acquired would enhance or protect the objects for which the CSNM was designated. The exchange of public lands within the CSNM for private lands that would better protect and/or enhance the purposes for which the Monument was designated is permitted. Lands may come under BLM administration within the Monument boundary established in the Presidential Proclamation (map 1) after completion of the Cascade-Siskiyou National Monument Resource Management Plan/Record of Decision through exchange, donation, purchase, revocation of withdrawals of other Federal agencies, or relinquishment of Recreation and Public Purpose Act leases. Newly acquired or administered lands or interest in lands would be managed for their highest potential or for the purposes for which they are acquired. Lands acquired with no identified special values or management goals would be managed in the same manner as surrounding or compatible Monument land.

Noxious Weed Control and Management

The control and management of noxious weeds is a priority across the CSNM and will conform to the Medford District's Integrated Weed Management Plan and Environmental Assessment (EA) #OR-110-98-14 (Appendix S), tiered to the *Northwest Area Noxious Weed Control Program Environmental Impact Statement* prepared 12-85 and amended 3-87. The weed management plan for the CSNM is listed in Appendix GG.

Wildfire Suppression Policy

Due to ownership patterns and logistic constraints, the use of wildfire to meet resource objectives is not possible. The Bureau of Land Management has a master cooperative fire protection agreement with the Oregon Department of Forestry (ODF). This agreement delegates the responsibility of fire protection of all lands within the CSNM to the Oregon Department of Forestry. This contract directs ODF to take immediate action to control and suppress all wildfires. Their primary objective is to minimize total acres burned while providing for fire fighter safety. Although suppression tactics and practices may vary among alternatives, initial response and escape fire policy will be governed by the Bureau of Land Management's, *Master Cooperative Fire Protection Agreement* (#HA-A98-2A00, 10-14-98) with ODF. Special areas within the CSNM that require special suppression methods designed to minimize damage to unique habitat and resources have been designated and are listed in Appendix L.

Air Quality Management

The operational guidance for the Oregon Smoke Management Program is managed by the Oregon State Forester. The policy of the State Forester is to:

- Regulate prescribed burning operations on forest land.
- Achieve strict compliance with the smoke management plan.
- Minimize emissions from prescribed burning.

For the purpose of maintaining air quality, the State Forester and the Department of Environmental Quality shall approve a Oregon Smoke Management Plan for the purpose of managing smoke in areas they designate. The authority for the State administration is ORS 477.513(3)(a).

ORS468A.005 through 468A.085 provides the authority to DEQ to establish air quality standards including emission standards for the entire State or an area of the State. Under this authority the State Forester coordinates the administration and operation of the plan. The State Forester also issues additional restrictions on prescribed burning in situations where air quality of the entire State or part thereof is, or would likely become adversely affected by smoke.

In compliance with the Oregon Smoke Management Plan, prescribed burning activities on the Medford District require pre-burn registration of all prescribed burn locations with the Oregon State Forester. Registration includes specific location, size of burn, topographic and fuel characteristics. Advisories or restrictions are received from the State Forester on a daily basis concerning smoke management and air quality conditions.

The amount of smoke that constitutes a nuisance is not often defined but generally includes a property use or behavior that significantly impairs the use of other property due to some health, safety or economic consideration. The specific concentration or duration of smoke that constitutes a nuisance is subjective and site specific.

In order to avoid creating or continuing nuisance situations, the BLM has implemented smoke management guidelines. The guidelines used for each fire include:

- Identify critical smoke sensitive targets during the planning stage that may be affected by smoke.
- Prescribe weather and burning conditions that would direct smoke away from critical sensitive targets, such as wind direction and speed. Others include burning conditions that maximize the amount of smoke lifted and weather conditions that maximize dispersal (i.e. mixing height, transport wind speed and probability of air mass stagnation).
- On the afternoon prior to burning, obtain a weather forecast and smoke management forecast to make sure the prescribed weather and burning conditions will be met.
- On the morning of the burn, check to see if the weather and smoke management forecasts are favorable. If so, initiate any planned mitigation measures, light the fire and begin monitoring fire/smoke behavior for unanticipated situations. Be prepared to cease ignition and /or begin suppression if unanticipated situations cannot be controlled or mitigated. Also, be prepared to patrol smoke sensitive roadways through the night if the fire is still producing significant smoke at dusk.
- Whenever possible, burn when large fuel (3"+ in diameter) and duff moisture levels are high to minimize emissions. This may be best accomplished by burning under spring-like conditions. Utilize firewood sales to reduce fuel loads.
- Whenever possible, pile fuels prior to burning. Piled fuels result in fewer emissions per ton of fuel consumed and have greater seasonal flexibility.
- Whenever possible, burn only fuel concentrations rather than the entire area.
- Whenever possible burn during periods of atmospheric instability for better smoke dispersal.

Archaeological Site Protection

Archaeological sites within the CSNM would be protected in accordance with applicable laws and regulations. The *National Environmental Policy Act* and *Federal Land Policy and Management Act*, direct federal agencies to preserve important cultural and historical sites. In addition, the *National Historic Preservation Act* (NHPA) requires agencies to consider the effects of their actions on significant historic sites. Section 106 of the NHPA provides a process for identifying, evaluating, and assessing effects of federal actions on cultural resources. The Programmatic agreement between the BLM, the Advisory Council on Historic Preservation, and National Conference of State Historic Preservation Officers, and a Protocol for Managing Cultural Resources established by the Oregon State Historic Preservation Office and the BLM Oregon/Washington State Office implements this act.

Special Use Activities

Special Areas are areas officially designated by Presidential proclamation, statute or Secretarial order including: components of the National Trails System, the National Wild and Scenic Rivers System; National Conservation Areas, National Monuments and Recreation areas; the National Wilderness System; an area covered by joint agreement between the BLM and a State government as provided for in Title II of the Sikes Act; or any area where the authorized officer determines that the resources require special management and control measures for their protection and a permit system for individual use would achieve management objectives. Organized Group Activity and Event Use permits are for noncommercial and noncompetitive group activities and recreation events. Special Area use permits may be required for individual (private, noncommercial) recreation use in the CSNM. The Monument manager would determine when a permit is required based on resource concerns, user conflicts and/or the need for monitoring. Some restrictions may be applied to the number and type of permits issued based on restrictions identified in the proposed alternatives.

The issuance of a Special Recreation Permit (SRP) is a discretionary action. Applications for uses requiring an SRP may be denied based upon factors such as a moratorium issued as part of planning decisions; the results of an environmental analysis; other potential impacts to resource values; a use allocation system; public health and safety; the applicant's past performance; or the inability of the managing office to manage or monitor the proposed use. Before issuing a Special Recreation Permit for an activity or group event, a determination is made that the requested use is primarily recreational. If not, it may be more appropriate to authorize the use as a land use permit under FLPMA (see **General Land Use Authorization Policy** section).

General Land Use Authorization Policy

BLM'S authority for issuing land use authorizations on the Public Lands was established by Congressional action in 1976. That was the year Congress passed Public Law 94-579, known as *Federal Land Policy and Management Act* (FLPMA). With the passage of FLPMA, the BLM was given broad discretion to manage the public lands for proposed uses utilizing a variety of "tools" to achieve this end. Under Title III, Section 302 (b) of FLPMA it states:

"In managing the public lands, the Secretary shall, subject to this Act and other applicable law and under such terms and conditions as are consistent with such law, regulate, through easements, permits, leases, licenses, published rules, or other instruments as the Secretary deems appropriate, the use, occupancy, and development of the public lands..."

Paint Ball Gun Recreation

The discharging of paint ball guns will not be permitted within or into the CSNM.

Hyatt Lake Recreation Complex Management

The Hyatt Lake Recreation Complex is 474 acres located in the northwest corner of the Monument (map 2). This high-use recreation area has developed recreation facilities that require substantial investment and management. Management objectives within the Hyatt Lake Recreation Complex are to provide for safe and enjoyable recreational opportunities consistent with the protection of Monument objects. The vegetation in the Hyatt Lake Recreation Complex will be managed consistent with the appropriate vegetation emphasis area. The Hyatt Lake Recreation Complex (HLRC) facilities will be managed to accommodate existing visitor uses and activities in accordance with the Hyatt Lake Recreation Complex Management Plan (Appendix HH). Future expansion within the Hyatt Lake Recreation Complex will be evaluated and undertaken as needs are identified.

Northwest Forest Plan

Although the CSNM designation supercedes all prior designations, the Monument will continue to contribute toward the overall Northwest Forest Plan goal of maintaining, protecting and enhancing late-successional and old-growth habitats in accordance with the *Final Supplemental Environmental Impact Statement on the Management of Habitat for Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl* (USDA/USDI, 1994).

Snags and Coarse Woody Debris

All management activities within the Old-Growth Emphasis Area will adhere to the Snags and Coarse Woody Debris standards and guidelines listed in Appendix JJ.

Best Management Practices

Best Management Practices (BMPs) are required by the Federal Clean Water Act (as amended by the Water Quality Act of 1987) to reduce non-point source pollution to the maximum extent practicable. BMPs are considered the primary mechanisms to achieve Oregon water quality standards. All management activities and practices within the CSNM will be consistent with the Best Management Practices described in Appendix AA

Management of Fish and Wildlife by the State of Oregon

The Oregon Department of Fish and Wildlife (ODFW), the U.S. Fish and Wildlife Service and the National Marine Fisheries Service have responsibility for the management of all fish and wildlife populations (setting desired population levels, protecting special species, setting hunting/trapping laws and harvest limits, licenses and fees, etc.) throughout Oregon. Federal agencies work cooperatively with state agencies to ensure that federal habitat management is consistent with ODFW fish and wildlife population management goals. However, ODFW will be responsible for the management of fish and wildlife within the CSNM.

Pacific Crest National Scenic Trail

The Pacific Crest National Scenic Trail would be managed according to the existing comprehensive management plan (USDA 1982) with a 100 foot no-cut vegetation buffer on either side of the trail. Exceptions to the buffer restriction are for trail maintenance and safety.

Management of Survey & Manage/ Special Status Species

Special Status Species are plant and animal species which are proposed for listing, officially listed (T/E) or candidates for listing as threatened or endangered by the Secretary of the Interior under the provisions of the *Endangered Species Act* (ESA); those listed or proposed for listing by the State of Oregon, and those designated by the BLM State Director as sensitive. Special Status Species will be managed in accordance with the ESA, Bureau standards/policy and guidelines listed in Appendix Z.

In order to reduce adverse effects to rare plant, surveys and measures to maintain or enhance viable populations of rare plants will be accomplished on a project basis following Bureau policy, guidelines, and measures outlined in Appendix Z during the implementation. Surveys and consultation with the U.S. Fish and Wildlife Service on projects potentially affecting the endangered Gentner's fritillary (*Fritillaria gentneri*) is required.

Visual Resource Management

The existing Visual Resource Management (VRM) designations of class III and IV within the Monument do not coincide with the ecological goals established in the Presidential Proclamation nor do they reflect the national scope of public sensitivity which has occurred as a result of the establishment of the CSNM. Under all alternatives, CSNM land in the north management zone (see map 42) will be managed as VRM Class II and the south management zone will be managed as VRM Class I. The policy justification for managing to a VRM class higher than currently allocated within the BLM Medford Resource Management Plan, is found within the VRM Manual.

Class I is assigned to those areas where a management decision has been made previously to maintain a natural landscape. This includes areas such as national wilderness areas, the wild section of national wild and scenic rivers, and other congressionally and administratively designated areas where decisions have been made to preserve a natural landscape (VRM Manual 8410-1, Section V, pg. 5)

The objective of Class II is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.

The long-term management objectives in the CSNM focus on the preservation of the natural landscape. Past management activities, both federal and non-federal, in the northern management zone have pre-empted the existence of a natural landscape. Although the long-term goal is to restore a natural landscape, future management activities to meet objectives of the Old-Growth Emphasis Area (i.e., vegetation manipulation, prescribed burning) may be in conflict in the short-term. Therefore, the CSNM landscape within the north management zone will be managed to meet VRM Class II. Anticipated land management activities for vegetation manipulation, road/transportation and other authorized uses (i.e., linear power lines or communication facilities) will be localized and have short-term effects on visual resources from critical viewpoints and, with proper mitigation, are considered consistent with the long-term VRM direction. The objective is to promote a sustainable landscape character which reflects the dynamic, natural patterns of the regional ecosystems, while allowing for culturally valued modifications which blend with these patterns. The CSNM southern management zone exhibits a natural landscape which should be preserved and will be managed as a VRM Class I. The exception to the VRM Class I would be the existing right-of-way for the power transmission line in the southern management zone which would be managed VRM Class II.

Off-Highway Vehicular (OHV) Travel

For the purposes of protecting the objects and values for which the CSNM was designated, all mechanized modes of surface travel, including but not limited to, OHVs, motorcycles, all terrain vehicles, snowmobiles, bicycles and tractors shall be confined to the surface of designated open roads except for emergency, administrative and other authorized use.

Livestock Grazing

Livestock grazing will continue, in the short-term, consistent with management established prior to the establishment of the CSNM. The Presidential Proclamation has directed the Secretary of the Interior (through the BLM) to study the impacts of livestock grazing on the objects of biological interest with specific attention to sustaining the natural ecosystem dynamics. This shall be accomplished through:

- Ongoing and future research and monitoring.
- Reviews of existing published literature where inferences can be drawn from relevant, comparable ecological relationships.
- Evaluations of existing data on historic trends relative to the CSNM objects of biological interest.

Numerous research and monitoring efforts have been developed as the Draft Study of Livestock Impacts on the Objects of Biological Interest in the Cascade-Siskiyou National Monument (USDI 2001). Additional research and monitoring plans may be developed as identified. The draft study plan (USDI 2001) of research and monitoring pertaining to livestock grazing activities is available for public review and will be peer reviewed before being finalized. The impacts of livestock grazing will be assessed upon completion of the study. Subsequent evaluations will be conducted, as determined by the monitoring and research study plans.

Impacts to be studied include the consequences of grazing and trampling of vegetation by livestock, and the affects of facilities and operational activities required to sustain and manage livestock operations. Livestock grazing practices within the CSNM shall be deemed incompatible if :

- found to be substantially responsible for the introduction and/or spread of noxious weeds, undesirable non-native species and vegetation.
or
- determined to reduce or impede the recovery of rare, threatened, endangered, special status or native species populations.
or
- they do not maintain or restore conditions consistent with the attainment of the Monument Aquatic Conservation Strategy, Clean Water Act and Grazing EIS objectives, or do not comply with other applicable laws and regulations.
or
- determined to be a factor responsible for, or contributing to adverse impacts to important wildlife habitats including black-tailed deer winter range, native ground nesting birds, and rare or special status animal species.
or
- found to be deleteriously impacting springs, seeps and wetlands or damaging to aquatic organisms including sensitive aquatic mollusks and anadromous fish species.
or
- determined to be impacting archaeological resources or sites.
or
- determined to be responsible for undesirable changes in vegetation community composition and structure, or maintenance of the existing undesirable annual/perennial grass ratios.

The assessment of compatibility will be conducted by an interdisciplinary team of scientists comprised principally of fishery/aquatic biologists, wildlife biologists, rangeland ecologists, soil scientists and botanists. This interdisciplinary team will evaluate the impacts and/or usefulness of livestock grazing and provide

recommendations on its compatibility to the Monument manager. Where/when deleterious impacts are identified within the CSNM, livestock management will be modified, reduced or eliminated. Continued livestock grazing shall not be authorized where identified as incompatible with the values for which the CSNM was designated. If livestock grazing is modified, reduced, eliminated or voluntarily relinquished, the resultant available vegetation/forage (AUMs) shall be reapportioned to benefit natural ecological processes.

Ground disturbing activities and the construction of new livestock facilities, including watering developments, corrals and chutes will not be authorized unless the grazing assessments conclude that they are necessary to protect or enhance the CSNM's objects of value. The construction of new fences shall only be authorized where required to protect ecological resources, and must comply with visual resource management guidelines. Existing livestock facilities may be maintained. The use of horses in livestock operations to control, disperse or manage grazing operations is considered an administrative use and will be allowed. The use of roads for livestock operations shall be limited to designated open roads and be consistent with the CSNM transportation management plan, except where/when otherwise authorized for administrative purposes by the Monument Manager.

Authorized Uses

All prohibited uses within the CSNM may be authorized for emergency, research, or administrative purposes. Authorized uses must not conflict with the protection of CSNM objects or resources. Vending within the Monument would be occasional, infrequent, and allowed by permit on a case-by-case basis following criteria that would protect Monument resources.

Hazards to Facility, Visitor and Public Safety

Removal of trees from within the Monument may take place only if clearly needed for ecological restoration and maintenance or public safety. The felling of trees that have commercial value may occur where select trees endanger facilities, visitor or public safety. Such situations are anticipated along roads, utility right-of-ways, trails, property lines, parking areas, and/or campgrounds and high visitor use areas within the Hyatt Lake Recreation Complex. These "safety" trees may be sold commercially only after it has been determined that they are not needed for riparian enhancement, coarse woody debris, or other resource value within the Monument.

Management of Visitor Facilities

All facilities, existing, newly acquired, jointly operated, or newly constructed, will comply with current legislation regarding accessibility [The Americans with Disabilities Act of 1990 (ADA), The Rehabilitation Act of 1973, and The Architectural Barriers Act of 1968]. In addition, any new construction or alteration of existing facilities (including trails) would comply with state and local codes as well as impending federal legislation regarding the accessibility of the outdoor recreation environment. All existing and new facilities would be maintained, designed, and constructed according to Bureau standards. The above mentioned Acts do not pertain to roads and does not restrict or prevent the closing of roads for resource protection or other administrative purposes.

Public Outreach/Education

The overall goal for the public outreach and education in the CSNM is to enhance protection of the Monument's values and resources through increased awareness and appreciation. Public outreach and education for the CSNM would focus on adjacent landowners, local communities, and Monument visitors. The level of public outreach and education for the CSNM would correlate with the types of BLM management activities and the amount of visitor use in the Monument.

Adjacent Landowners and Local Communities

The checkerboard nature of land ownership within and adjacent to CSNM boundaries necessitates a commitment by BLM to establish communication and cooperation with adjacent landowners and local communities. The BLM would engage in public outreach activities designed to keep adjacent landowners and local communities informed of new developments or activities related to the CSNM.

Some on-the-ground management activities in the CSNM may be visible to the surrounding community and to Monument visitors. Public outreach would be designed to inform and educate the public about the goals, objectives and operation of different management activities as needed.

The BLM would strive to build relationships with the surrounding community through numerous approaches including partnerships and collaborative projects. When possible, the BLM would use existing community resources for the development of outreach or educational materials. The BLM could engage the surrounding communities in efforts to protect, enhance, and restore the resources of the CSNM through hands-on stewardship such as monitoring, restoration projects and scientific research.

In many cases, management activities designed to protect and restore Monument resources may be similar to the management objectives of adjacent landowners. The BLM would identify and use common land management goals as a basis for developing voluntary collaborative projects with adjacent landowners of the CSNM. These projects would be designed to promote the protection, restoration and enhancement of resources in the Monument and on adjacent non-federal land. For example, the long-term effectiveness of noxious weed control efforts in the Monument would increase if the BLM and adjacent landowners worked together on this problem. The reduction of fire hazard in the Monument and on adjacent non-federal lands is another example of a common goal. The BLM would keep the surrounding community informed of management activities in the Monument. When possible, the BLM may assist in providing technical or informational support to adjacent landowners wishing to engage in similar activities on non-federal land.

Visitor Education

Public outreach and education would be designed to promote protection and understanding of the CSNM. The amount of public outreach and education provided for visitors would be contingent on the level and types of activities taking place in the Monument. Visitor outreach and education would follow any restrictions on signing, interpretive exhibits, displays or facilities determined in this Plan.

Public outreach and education for all Monument visitors would emphasize resource protection and visitor safety by meeting the following objectives:

- Provide the public with accurate information on visitation, use and recreation in the CSNM.
- Identify areas of high visitor use, or areas with particularly fragile resources and take necessary steps to prevent resource damage.
- Educate visitors on how best to limit impacts to Monument resources using “Leave No Trace” principles.
- Target different types of recreation (i.e. equestrians, backpackers, snowmobilers etc.) with specific messages on how those user groups can prevent resource damage.

- Clarify visitor expectations and the Monument's mission with relation to visitor experiences on other public lands. Educate the public about the vision and mission of the National Landscape Conservation System (NLCS) and the CSNM.
- Provide information on how historical and current human uses within the Monument and on adjacent land have shaped the character of the Monument.
- Emphasize the need for visitors to be aware of and respect the private property adjacent to Monument lands.
- Increase appreciation of and respect for Monument resources through interpretation.

Issues and Actions Considered But Eliminated From Analysis

Expansion of the Soda Mountain Wilderness Study Area (WSA)

The official wilderness inventory was completed in 1980. Subsequently, a Statewide Wilderness EIS was completed with associated Record of Decision signed by the Secretary of Interior in 1991. Based on the Record of Decision, the President submitted proposed legislation to Congress in July, 1992. The Wilderness Study Areas (WSAs) that were inventoried and studied under Section 603 of FLPMA, and where recommendations are pending before Congress, are protected from actions that would impair their suitability for preservation as wilderness.

The recently issued BLM *Wilderness Inventory and Study Procedures* handbook (H-6310-1), provides for the possibility of new wilderness inventories and studies under the authority of Sections 201 and 202 of FLPMA. That guidance applies only to new inventory and land use planning efforts. Ongoing wilderness-related land use planning, such as this plan, should be completed using the State-specific guidance and procedures developed for these projects. The guidance developed for this ongoing planning effort was to use the results of the Section 603 wilderness inventory and study, which concluded with the Soda Mountain WSA and its recommendation as suitable for wilderness preservation. No other roadless areas in the present Monument were determined to meet the criteria for WSA.

Future management actions may facilitate an area meeting the requisite of wilderness characteristics, at which time the BLM will re-inventory the area for wilderness characteristics and evaluate the findings, using procedures described in H-6310-1. If the BLM determines that an area may have wilderness characteristics, and if actions are proposed that could degrade the wilderness values of the roadless character so as to disqualify the area from further consideration as a WSA, the BLM will consider in a NEPA document an alternative of mitigating or relocating the proposed action to avoid or minimize impacts on wilderness values; and will also consider the alternative of postponing a decision on the proposed action until the wilderness values can be addressed through a new land use plan or plan amendment.

Predominant Recreation Development

The CSNM management direction is to protect the objects identified in the Presidential Proclamation. Therefore, visitor use is secondary to the protection of the biological, hydrological, archaeological and geological resources for which the monument was established. An emphasis on recreation and associated development, outside of the Hyatt Lake Recreation Complex, is not consistent with the CSNM management goals and objectives.

Eliminating Prescribed Fire

Because of the importance of fire in natural ecosystem processes and the array of fire associated and/or dependent plant communities, the total elimination of prescribed fire as a management tool was not considered a viable or responsible option.

Monitoring

Monitoring is an essential component of natural resource management because it provides information on changes in resource use, condition, processes and trends. Monitoring also provides information on the effectiveness of management activities and strategies. The implementation of this Plan will be monitored to ensure that management actions follow prescribed management direction (implementation monitoring), meet desired objectives (effectiveness monitoring), and are based on accurate assumptions (validation monitoring). Some effectiveness monitoring and most validation monitoring will be accomplished by formal research. A comprehensive monitoring strategy for the Monument is listed as Appendix LL.

Monitoring will be an integral component of adaptive ecosystem management. Close coordination and interaction between monitoring and research are essential for this type of management. Data obtained through systematic and statistically valid monitoring can be used by scientist to develop research hypotheses related to priority issues. Conversely, the results obtained through research can be used to further refine protocols and evaluate the effectiveness of implementation of this Plan.

Monitoring results will provide managers with the information to determine whether an objective has been met, and whether to continue or modify the management direction. Findings obtained through monitoring, together with research and other new information, will provide a basis for changes to the Plan. The monitoring strategy itself will not remain static. The monitoring strategy will be periodically evaluated to insure that the monitoring questions and standards are still relevant. Adjustment to the monitoring strategy will be made as appropriate. Some monitoring items may be discontinued and others may be added as knowledge and issues change with implementation. Priorities will be given for monitoring mandated by executive order or legislation.

The monitoring process will collect information in the most cost effective manner possible, and may involve sampling or remote sensing. Monitoring could be cost prohibitive if not designed carefully. Therefore, it will not be necessary or desirable to monitor every management action or direction. Unnecessary detail and unacceptable costs will be avoided by focusing on key monitoring questions and proper sampling methods. The level and intensity of monitoring will vary, depending on the sensitivity of the resource, process or trend and the scope of the proposed management activity.

Limits of Acceptable Change

Monitoring will provide information that will allow managers to evaluate changes to Monument resource use, condition, processes and trends. Not all changes will be positive and management strategies must be adjusted to deal with unacceptable changes. Limits must be established that initiates adjustments in management activities. The limits of acceptable change for the CSNM would be any discernable unnatural negative change to key resource condition and processes. Once identified, immediate action would occur to eliminate or minimize the activities causing the negative change and a strategy would be implemented to restore the resource condition or process.

