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other fluid releases, which could degrade water quality. Examples of this are the releases associated with well-flow testing for geothermal power development. Spills can also occur from equipment that uses hazardous fluids such as gasoline and oil. The impact on fish populations depends upon the type of hazardous material released and the quantity of the release. If severe enough, mortalities can occur and habitat can become unsuitable for aquatic life.

- *Altered stream flow regimes.* Water yield increase resulting from vegetation removal and alteration of natural drainage could result in scouring of stream channel bottoms and decreasing fish habitat and food sources.
- *Changes in water temperatures.* Increases in water temperature can occur in areas where streamside vegetation is removed, increasing the amount of sunlight reaching the water. The default buffers and management constraints would minimize the amount of mining that would occur in these sensitive areas. If mining were to occur in riparian areas, increased water temperatures could reduce suitable habitat for cold-water fish species. As water temperature increases, the amount of available dissolved oxygen for fish and aquatic invertebrates decreases.

Designation of 131,044 acres as open to leasing subject to terms and conditions of the standard lease form would limit the BLM's ability to assign major or moderate stipulations (such as NSO) in those areas. Consequently, there could be an increased impact on aquatic habitats in these areas. The standard lease stipulations include compliance with established acts, laws, and regulations governing BLM land management, which would provide protection to special status fish species. Areas designated as open to leasing with NSO stipulations would provide some protection to aquatic habitats by limiting the amount of surface disturbance. Protection would be realized where NSO stipulations are applied to riparian areas and areas upslope of fish-bearing streams. Potential impacts on fish and aquatic habitats from locatable minerals activities could occur as a result of activities on the 121,961 acres designated as open to location.

Effects from Recreation Management

Increased recreation use and demand require an increased management response to mitigate the impacts from this increase, leading to SRMA designation. Potential impacts to fish species and aquatic habitats would result from impacts to riparian habitats and streambanks and increased erosion. Increased visitor use without increased management and SRMA designation would be expected to result in greater impacts. Continued acquisition of lands and conservation easements within the Salmon River and Lolo Creek SRMAs could provide additional protection of aquatic habitats from private land uses, such as timber harvest, road construction, and rural development.

Effects from Renewable Energy Management

Potential impacts from geothermal, wind, and solar energy development are predominantly associated with the construction, use, and maintenance of roads and facilities. Road-related activities could result in increased sedimentation in fish-bearing streams, rivers, and lakes. The potential effects of increased sedimentation would be similar to those described above for mining activities (under Effects from Minerals Management). Right-of-way avoidance and exclusion areas would protect against these potential impacts.

Potential impacts from biomass energy development would be similar to those described for timber harvest activities under the Vegetation—Forests Management section.

Effects from Transportation and Travel Management

Roads and trails could result in increased sedimentation to fish-bearing streams, rivers, and lakes. Increased sedimentation in streams could affect fish populations in a variety of ways, including direct mortality, reduction in suitable spawning gravels, reduction in summer and winter rearing habitat, suffocation and mortality of eggs, and displacement of individual fish.

Effects from ACEC/RNA Management

Designation of ACECs and RNAs in areas containing fish-bearing water bodies would indirectly protect aquatic habitats and fisheries. Under all alternatives there would be six areas managed as ACEC/RNAs, although the size of the Lucile Caves ACEC/RNA is larger under Alternative A than the other alternatives. The number and specific area designated and managed as ACECs varies by alternative.

Effects from Wild and Scenic Rivers Management

Aquatic habitats and fish populations located in the ~~five~~ six segments determined suitable for inclusion in the NWSRS, Salmon River (two segments), Lolo Creek, Hazard Creek, Hard Creek, and Lake Creek, would be protected from land uses that could result in degradation. The majority of these areas are already managed using similar protective measures as a result of BLM sensitive species management and ESA requirements. The wild and scenic suitability determination would add another, potentially legislative, layer of protection.

Impacts from Native American Tribal Uses Management

Consulting with tribes to identify culturally significant plants, animals, fish, and important habitats could improve habitat conditions for those species and habitats if these consultations result in changes in management that would improve habitats. ~~Tribes collecting or hunting special status species, as allowed under their treaty rights, could impact those species.~~

Effects from Public Safety—Abandoned Mines and Hazardous Materials Management

Hazardous and contaminated site cleanups could improve fish habitat where contamination has occurred near fish-bearing streams. Activities such as site restrictions and rock dump stabilizations would limit the potential for hazardous materials to reach fish-bearing water bodies. Cleanup efforts could result in water quality improvements, stream stabilizations, and watershed restoration. Potential impacts to fisheries would be the same for all alternatives.

Effects from Wild and Scenic Rivers Management

Land acquisition and conservation easement acquisition along the Lower Salmon River would increase the BLM's management capabilities for the protection of fisheries and aquatic habitats in the Lower Salmon River.

Alternative A

Effects from Soils Management

Implementing the MFP Road Guidelines (BLM 1981a), Riparian Management Guidelines (BLM 1985e), and PACFISH (BLM and Forest Service 1995) for soil-disturbing activities would minimize soil erosion and protect riparian habitats. This would indirectly protect aquatic habitats and fish by maintaining or increasing PFC of riparian habitats. The 1985 Riparian Management Guidelines and Fisheries and Water Quality Objectives (BLM 1985d) include some watershed-specific restrictions regarding sediment budgets and water quality that would directly protect aquatic habitats and fish.

Management to maintain fish habitat by pursuing water quality and watershed health objectives would maintain good-quality habitat for fish species, focusing on chinook salmon, steelhead, and resident salmonid species. Federal listing of salmon, steelhead, and bull trout, and subsequent ESA Section 7 consultation with USFWS, would reduce potential for BLM impacts to listed fish, aquatic habitats, and soil resources.

Sedimentation from landslides and mass wasting events in streams could degrade aquatic habitats. PACFISH (1995) has specific measures to protect landslide-prone areas and to minimize potential for mass wasting would indirectly protect riparian and aquatic habitats.

Effects from Water Resources Management

Implementing the MFP Road Guidelines (BLM 1981a) and Riparian Management Guidelines (BLM 1985e) for soil-disturbing activities would minimize nonpoint source pollution. Other potential impacts are described under Effects from Soils Management. The Riparian Management Guidelines (BLM 1985e) and Fisheries and Water Quality Objectives (BLM 1985d) include some watershed-specific restriction regarding sediment budgets and water quality that also would directly protect aquatic habitats and fish. This would indirectly protect aquatic habitats and fish.

Effects from Vegetation—Forests Management

The current estimated annual ASQ for timber harvesting, which is 6,600 MBF on 358 acres, would continue. Timber harvest and other forest practices such as road construction could impact aquatic habitats and fish populations, including special status fish species. Potential impacts on aquatic resources from forest management are described under the Effects Common to All Alternatives section, above. As described under the Vegetation—Riparian and Wetlands section and the Aquatic Resources, Fish, and Special Status Fish section, several protective measures would be implemented to reduce or prevent impacts from forest management practices on aquatic resources. However, the potential for impacts from forest practices still exists, and increases or decreases in impacts depend upon the amount of land disturbed, treatment activities, and watershed-specific aquatic resources. Under Alternative A, potential impacts would be most likely in streams within watersheds or adjacent to the 24,257 acres classified for intensive forest practices and to a lesser extent on the 11,500 acres classified for extensive management. Impacts to aquatic resources could also occur in streams adjacent to the 35,757 acres, but because these would not be managed for timber production, the potential for impacts would be much less.

Effects from Vegetation—Riparian and Wetlands Management

Management measures proposed under Alternative A would protect riparian habitat to maintain wildlife and fish habitat, water quality, and aquatic resources. In general, the level of protection provided would be similar to that provided under the other three alternatives, although the classification system and buffers from the Riparian Management Guidelines (BLM 1985e) and Fisheries and Water Quality Objectives (BLM 1985d) differ from those presented in Alternatives B, C, and D. The default buffer zones implemented under Alternative A would be larger for lakes and large rivers than under the other alternatives, providing additional protection. Many of the 39 prescription watersheds (totaling 66,077 acres) identified in Alternative A would be reclassified as restoration or conservation watersheds under the other alternatives.

Effects from Wildlife and Special Status Wildlife Management

The majority of management measures implemented would not affect aquatic resources. Some land treatments (e.g., prescribed burning, plantings) and other construction projects (e.g., water development, road closures) would have varying levels of impacts. Impacts depend upon the amount of area disturbed, treatment activities, and watershed-specific aquatic resources. However, wildlife management measures that would protect riparian habitats such as limiting use of forage in riparian areas to 50 percent of available forage would indirectly protect aquatic resources, fish, and special status fish species. Special status wildlife management activities for riparian habitat-dependent species such as the yellow-billed cuckoo would similarly protect aquatic habitats.

Effects from Aquatic Resources, Fish, and Special Status Fish Management

Management under Alternative A would include developing plans and identifying actions for the protection and enhancement of aquatic resources. Default buffers would be larger for lakes and large rivers under Alternative A than for the other alternatives. Buffers for other fish-bearing watersheds within RHCAs would be the same as for RCA stream buffers under Alternatives B, C, and D. Effects are discussed under Effects Common to All Alternatives.

Effects from Wildland Fire Management

General potential effects from wildland fire use as related to vegetation removal are described under Effects Common to Alternatives, Effects from Vegetation—Forests Management. Under Alternative A these potential effects could occur in the entire CFO as all unplanned ignitions can be evaluated for wildland fire use upon completion of the appropriate wildfire implementation plan (**Figure H-1**, Areas Available for Wildland Fire Use—Alternatives A and C [see **Appendix H** in Volume II~~I~~]). Similarly, the potential effects from high-intensity fires and the subsequent degradation of aquatic resources, such as increased sedimentation and scouring, would be reduced upon implementation of wildland fire use. RCAs would be used to protect aquatic resources where vegetation is removed.

Effects from Visual Resources Management

General impacts from visual resources management are described under Effects Common to All Alternatives. Indirect protection of aquatic habitats under Alternative A would occur on the 12,704 acres and 41,195 acres designated as VRM Classes I and II, respectively.

Effects from Forest Products Management

Potential impacts from forest products management are described under the Vegetation—Forests Management sections under Effects Common to all Alternatives and Alternative A. Riparian areas are critical for the proper functioning of aquatic systems, including aquatic habitat and fish population health. Effects are discussed under Effects Common to All Alternatives. RHCA established under PACFISH would provide protection to fish-bearing stream habitats and associated riparian areas. Potential impacts are described under Effects from Vegetation—Forests Management. Timber harvest activities would not occur where they could destroy or degrade wetland-riparian areas.

Effects from Livestock Grazing Management

Potential impacts from grazing described under Effects Common to All Alternatives could occur where grazing is permitted near fish-bearing streams, rivers, lakes, and riparian areas. There would be 122,732 acres available for grazing in 168 allotments under Alternative A. Alternative A, current

management, has generally proven compatible with aquatic resources and fisheries according to monitoring and the results of Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management (BLM 1997a) (**Appendix A** [see Volume II~~I~~]) assessments conducted to date. Therefore, impacts to aquatic resources could occur on these acres.

Proper season of use grazing would be implemented on the remaining 68,177 acres. This strategy is moderately compatible with fisheries because proper season of use, along with proper grazing levels, would support maintenance or improvement of riparian areas and streambanks. Riparian areas would still receive grazing use, which could result in varying levels of impacts to riparian and aquatic habitats.

Improved grazing practices and reduced impacts to aquatic resources have occurred with the listing of salmon, steelhead, and bull trout and completion of ESA Section 7 consultation with USFWS for all allotments. Because of the large number of allotments that consist of fragmented, intermingled BLM ownership, emphasis for grazing management and monitoring is primarily focused on allotments adjacent to fish-bearing streams that are most sensitive to grazing, such as low-gradient streams that occur in meadows.

Effects from Minerals Management

Some protection of aquatic habitats and fish populations in the Salmon River would be provided by withdrawing public lands within 0.25-mile of the rivers from mineral entry.

Effects from Transportation and Travel Management

The greatest potential for increased sedimentation occurs in Open travel areas where new roads and trails are being constructed and where cross-country riding can result in erosion and potential impacts to riparian and aquatic habitats. Limited travel areas would be less likely to cause increased sedimentation compared to Open areas because no cross-country travel would be authorized in Limited areas. Similar impacts from use of existing roads and trails would occur in Open and Limited areas. Road and trail restrictions for motorized vehicle use would reduce potential for increased erosion and sediment. Closed travel areas would protect fish-bearing streams from the effects of road and trail use.

Effects from Lands and Realty Management

Continued withdrawal of public lands within 0.25-mile of the Salmon River would provide protection of aquatic habitats and fisheries in the Salmon River from potential impacts associated with mining.

Effects from ACEC/RNA Management

Under Alternative A, four areas totaling 23,366 acres would be managed as ACECs. Aquatic habitats and fisheries would be indirectly protected through the designation and management in these areas. The predominant fisheries affected by ACEC designation include those in the Craig Mountain, Lower Lolo Creek, and the lower Salmon River ACECs.

Alternative B

Effects from Soils Management

Under Alternative B, BMPs (**Appendix B** [see Volume II~~I~~]) would update and improve upon the MFP Road Guidelines (BLM 1981a) and Riparian Management Guidelines (BLM 1985e).

Implementing BMPs for soil-disturbing activities would minimize soil erosion/sediment. This would indirectly protect aquatic habitats and fish by maintaining or increasing PFC of riparian habitats. However, the BMPs to be implemented under this alternative do not contain the specific restrictions pertaining to sediment budgets and water quality that are included in the Fisheries and Water Quality Objectives (BLM 1985d) and designated prescription watersheds (Alternative A). This would increase the flexibility of BLM when permitting activities that could affect aquatic habitats and fisheries, potentially increasing impacts within specific prescription watersheds. However, programmatic direction provided for conservation and restoration watersheds would be that land uses would not result in adverse increases in sediment, which would impact aquatic resources.

Reclamation and mitigation to soil and water resources would indirectly protect or enhance aquatic habitats.

Measures to protect landslide-prone areas and to minimize potential for mass wasting would indirectly protect riparian and aquatic habitats. Measures implemented under Alternative B would be similar to Alternative A in regards to management activities on and avoidance of landslide-prone areas.

Effects from Water Resources Management

Under Alternative B, BMPs (**Appendix B** [see Volume III~~I~~]) would update and improve upon the MFP Road Guidelines (BLM 1981a) and Riparian Management Guidelines (BLM 1985e). Implementing BMPs for soil-disturbing activities would limit nonpoint source pollution and protect water quality. This would indirectly protect aquatic habitats and fish. Alternative B does not contain specific sediment budget requirements compared to Alternative A; therefore, the means of protecting water quality are less defined and potentially less protective. However, programmatic direction provided for conservation and restoration watersheds would be that land uses would not result in adverse increases in sediment, which would impact aquatic resources.

Promoting activities to achieve DFCs in restoration watersheds would help increase the amount of PFC riparian habitat and indirectly benefit aquatic resources. The number of restoration watersheds varies by alternative, as presented in **Table 4-~~18~~ 19** (Comparison of Aquatic Resources, Fish, and Special Status Fish Indicators by Alternative).

Effects from Vegetation—Forests Management

Timber harvest and other forest practices such as road construction could impact aquatic habitats and fish populations, including special status fish species. As described under the Vegetation—Riparian and Wetlands section and the Aquatic Resources, Fish, and Special Status Fish section, several protective measures would be implemented to reduce or prevent impacts from forest management practices on aquatic resources. However, the potential for impacts from forest practices still exists, and increases or decreases in impacts depend upon the amount of land disturbed, treatment activities, and watershed-specific aquatic resources. Under Alternative B, potential impacts would be most likely to occur in the same watersheds identified as the commercial forest land base (40,598 acres). Alternative B would decrease the current estimated annual PSQ for timber harvesting by 53 percent (to 3,129 MBF) with an estimated usage area of 242 acres (an estimated 32-percent decrease from current management).

Implementing timber harvest activities to maximize the economic return of forest stands with existing or high risk for extensive mortality could increase timber harvest activities in fish-bearing

watersheds. This could increase the potential for timber harvest-related impacts on aquatic resources. The potential impacts to aquatic habitats would be increased compared to the natural mortality of stands due to the construction of roads and additional ground-disturbing activities barring the occurrence of fire. If fire occurred in forest stands with extensive mortality, fire intensity would be significantly increased due to fuel loading, and sediment impacts to streams could be significantly increased over mitigated impacts due to harvest.

Effects from Vegetation—Rangelands Management

Monitoring programs to assess rangeland health and adaptive management could prevent losses in soil stability, which would indirectly protect aquatic habitats. Management emphasis for maintenance and improvement of rangeland vegetation would occur for Craig Mountain WMA and Rattlesnake Ridge area. Improvement of upland and riparian habitat conditions in the long term would improve soil stability and reduce erosion and sediment.

Effects from Vegetation—Riparian and Wetlands Management

Management measures would indirectly protect fish habitat and water quality. The monitoring emphasis on streams that provide habitat for listed or sensitive fish would improve management for these species. The primary difference in riparian vegetation management between Alternatives A and B is in relation to the size of the buffer zone for large rivers and lakes. Alternative A would have default buffers of 500 feet, whereas Alternatives B would have default buffers of 300 feet for fish-bearing streams and 150 feet for lakes, ponds, and reservoirs. Alternative B would identify ~~32~~ 28 restoration and ~~1~~ three conservation watersheds totaling 64,481 acres, 2 percent less than the prescription watersheds in Alternative A. Management emphasis for maintenance of or improvements to aquatic and riparian habitats would occur in the drainages presented in **Table 4-~~18~~19**, Comparison of Aquatic Resources, Fish, and Special Status Fish Indicators by Alternative.

Effects from Wildlife and Special Status Wildlife Management

Wildlife management measures designed to protect or enhance riparian habitat would indirectly protect or enhance adjacent aquatic habitats. Specific measures that would improve fish resources include maintaining or improving habitat for bald eagle forage species and measures promoting conservation of yellow-billed cuckoo. Vegetation treatments (e.g., prescribed burning, forest stand treatments for DFC, plantings) and other construction projects (e.g., water development, road closures) would have varying levels of impacts. Such impact depends upon the amount of area disturbed, treatment activities, and watershed-specific aquatic resources.

Effects from Aquatic Resources, Fish, and Special Status Fish Management

Alternative B would promote conservation and restoration for special status fish species. Activities resulting in conservation easements and land tenure adjustments would increase the amount of habitat being managed for specials status fish.

Alternative B would manage 64,481 acres as conservation and restoration watersheds, 2 percent less watershed acres than the prescription watersheds under Alternative A. Good-quality aquatic habitats would be maintained and/or degraded aquatic habitats improved with management emphasis for aquatic and riparian restoration and protective measures occurring in conservation and restoration watersheds.

~~If realized through BLM support, f~~Fish passage improvements would help fish species, in particular anadromous species, by providing access to additional habitats for spawning and rearing and by

facilitating downstream distribution. Similarly, actions such as instream habitat improvements and road decommissioning would improve aquatic habitat conditions.

Effects from Wildland Fire Management

General potential effects from wildland fire management as related to vegetation removal are described under Effects Common to Alternatives, Effects from Vegetation—Forests Management. Effects would be similar to those described under Alternative A, except wildland fire use methods would be implemented in the southern portion of the Salmon ~~FMU~~FMA and the Craig Mountain ~~FMU~~FMA (**Figure H-2**, Areas Available for Wildland Fire Use—Alternative B [see **Appendix H** in Volume II~~I~~]). This would increase the amount of area treated compared to Alternative D.

Effects from Visual Resources Management

Effects would be the same as those described under Alternative A.

Effects from Forest Products Management

Designing harvest and reforestation projects to achieve full stocking on 90 percent of the area within 5 years would help protect aquatic habitats from long-term impacts. Full stocking within five years would reduce the amount of time that potential increased sedimentation and altered stream flows would occur.

Protection of riparian areas during road construction would be provided by the buffer zones associated with the Road Construction Guidelines and Aquatic and Riparian Management Strategy (**Appendix F** [see Volume II~~I~~]). The potential impacts based on buffer zone size are described under the Effects from Vegetation—Riparian and Wetlands Management section.

Effects from Livestock Grazing Management

Potential impacts from grazing as described under Effects Common to All Alternatives could occur where grazing is permitted near fish-bearing streams, rivers, lakes, and riparian areas. Livestock grazing would be permitted on 105,619 acres and 166 allotments under Alternative B. Potential impacts to aquatics from grazing would be less than Alternative A. Permanently retiring allotments at Craig Mountain, Wapshilla Ridge, and Corral Creek would reduce the potential for grazing-related impacts to fish in these areas, although these allotments have been vacant for over 10 years. The Idaho Department of Fish and Game acquired adjacent lands, and the area has a high-priority emphasis for wildlife management.

Effects from Minerals Management

Indirect protection of aquatic habitats from leasable minerals and mineral materials operations would occur on the 43,590 acres of public lands subject to NSO stipulations where these lands occur in riparian areas and areas upslope of fish-bearing streams. NSO stipulations would protect riparian habitats and indirectly protect aquatic habitats from surface-disturbing activities such as vegetation removal. This protection would be greater than under Alternative A.

Fish species and aquatic habitats in river segments identified as suitable for inclusion in the NWSRS would be protected from leasable and salable minerals activities within 0.25-mile of the river. This would include bull trout, westslope cutthroat trout, steelhead, and chinook salmon in Lake Creek, summer steelhead, spring Chinook, and coho salmon in Lolo Creek, and various fish species in Hazard and Hard Creeks.

Effects from Transportation and Travel Management

Effects would be similar to those described under Alternative A; however, eliminating Open areas would reduce the potential for impacts to aquatic habitats from cross-country motorized use in these areas. Restoring unnecessary roads and trails would reduce the amount of sediment reaching fish-bearing streams.

Effects from Lands and Realty Management

Retaining public lands along the Salmon River would provide continued protection of the aquatic habitats, fisheries, and special status fisheries in the Salmon River from private land uses such as development or timber harvest. Withdrawal of public lands on the Lower Salmon River would increase protection of aquatic habitats and fisheries in the Salmon River from potential impacts associated with mining.

Effects from ACEC/RNA Management

Under Alternative B, ~~five~~ six areas totaling ~~32,562~~34,187 acres would be managed as ACECs, ~~39~~ 46 percent more than ACEC areas under Alternative A. Aquatic habitats and fisheries would be indirectly protected through the designation and management in these areas. The predominant fisheries affected by ACEC designation include those in Lower Lolo Creek, Upper Lolo Creek, Lower Salmon River, Salmon River, East Fork American River, and American River ACECs.

Alternative C

Effects from Soils Management

Effects would be the same as those described under Alternative B.

Effects from Water Resources Management

Effects would be the same as those described under Alternative B.

Effects from Vegetation—Forests Management

Effects would be similar to those described under Alternative B, except that, under Alternative C, the commercial forest land base would be 34,611 acres. Alternative C would decrease the acreage available for timber harvesting by 3 percent from that available under Alternative A. Alternative C would decrease the current estimated annual PSQ for timber harvesting by 53 percent (to 3,101 MBF) from Alternative A, with an estimated usage area of 191 acres (an estimated 47-percent decrease from current management).

Effects from Vegetation—Rangelands Management

Effects would be similar to those described under Alternative B, with the exception that addition management emphasis would be given to Salmon River canyon grasslands for maintenance and/or improvement of habitats. Improvement of upland and riparian habitat conditions in the long term would improve soil stability and reduce erosion and sediment.

Effects from Vegetation—Riparian and Wetlands Management

Effects would be similar to those described under Alternative B, except Alternative C would identify ~~30~~ 37 restoration and 3 conservation watersheds totaling 68,359 acres, 3 percent more than the prescription watersheds in Alternative A.

Effects from Wildlife and Special Status Wildlife Management

Effects would be similar to those described under Alternative B, except Alternative C would provide additional protections against potential aquatic habitat degradations from OHV use and grazing activities. Alternative C identifies increased emphasis for achievement of DFC, particularly old forest characteristics. Vegetation treatments (e.g., prescribed burning, forest stand treatments for DFC, plantings) and other construction projects (e.g., water development, road closures) would have varying levels of impacts. Such impact depends upon the amount of area disturbed, treatment activities, and watershed-specific aquatic resources. The predominant impact from these activities would be related to increased sedimentation in fish-bearing streams.

Effects from Aquatic Resources, Fish, and Special Status Fish Management

Effects would be similar to those described under Alternative B, except Alternative C would manage 68,359 acres as conservation and restoration watersheds. This would be 6 percent more than under Alternative B and 3 percent more than the prescription watersheds under Alternative A. As a result, aquatic habitats in more watersheds would be improved under Alternative C than under any other alternative. Good-quality aquatic habitats would be maintained and/or degraded aquatic habitats improved with management emphasis for aquatic and riparian restoration and protective measures occurring in conservation and restoration watersheds.

Effects from Wildland Fire Management

General potential effects from wildland fire management as related to vegetation removal are described under Effects Common to Alternatives, Effects from Vegetation—Forests Management. Effects would be similar to those described under Alternative A. This would increase the area where wildland fire is used compared to Alternatives B and D.

Effects from Visual Resources Management

Indirect protection of aquatic habitats under Alternative C would occur on the 26,945 acres and 46,753 acres designated as VRM Classes I and II, respectively. This is 112 percent and 13 percent more than VRM Classes I and II, respectively, under Alternative A.

Effects from Forest Products Management

Effects would be similar to those described under Alternative B, except Alternative C would include less acres of forest harvest and treatment and larger RCA stream buffers for riparian areas within forested areas. This would also represent less acres of forest harvest and treatment and larger buffers than under Alternative A.

Effects from Livestock Grazing Management

Effects would be similar to those described under Alternative B, except Alternative C would permit livestock grazing on 101,350 acres and 145 allotments. The potential for impacts to aquatics from grazing would be the least in Alternative C.

Effects from Minerals Management

Effects would be similar to those described under Alternative B, except Alternative C would indirectly protect aquatic habitats on 68,854 acres of public lands subject to NSO stipulations where these lands occur in riparian areas and areas upslope of fish-bearing streams.

Effects from Transportation and Travel Management

Effects would be the same as those described under Alternative B.

Effects from Lands and Realty Management

Effects would be the same as those described under Alternative B.

Effects from ACEC/RNA Management

Under Alternative C, nine areas totaling 58,695 acres would be managed as ACECs, 150 percent more area than under Alternative A. Aquatic habitats and fisheries would be indirectly protected through the designation and management in these areas. The predominant fisheries affected by ACEC designation include those in Lower Lolo Creek, Upper Lolo Creek, Little Salmon River, Lower Salmon River, Salmon River, East Fork American River, and American River ACECs.

Alternative D

Effects from Soils Management

Effects would be the same as those described under Alternative B.

Effects from Water Resources Management

Effects would be the same as those described under Alternative B.

Effects from Vegetation—Forests Management

Effects would be similar to those described under Alternative B. Under Alternative D, the commercial forest land base would be 45,190 acres (26 percent more than Alternative A). Alternative D would increase the acreage available for timber harvesting (361 acres, a 1-percent increase from current management), while the estimated annual PSQ for timber harvesting would decrease by 27 percent from current management (to 4,823 MBF).

Effects from Vegetation—Rangelands Management

Effects would be similar to those described under Alternative B, except Alternative D would not include emphasis areas for improvement of rangeland vegetation.

Effects from Vegetation—Riparian and Wetlands Management

Effects would be similar to those described under Alternative B. Alternative D would identify ~~27~~ 24 restoration and ~~1~~ three conservation watersheds totaling 52,118 acres, 21 percent less than the prescription watersheds in Alternative A.

Effects from Wildlife and Special Status Wildlife Management

Overall effects would be similar to those described under Alternative B. Compared to Alternatives B and C, Alternative D identifies less emphasis for achievement of DFC, particularly old forest characteristics. Vegetation treatments (e.g., prescribed burning, forest stand treatments for DFC, plantings) and other construction projects (e.g., water development, road closures) would have varying levels of impacts. Such impact depends upon the amount of area disturbed, treatment activities, and watershed-specific aquatic resources.

Effects from Aquatic Resources, Fish, and Special Status Fish Management

Effects would be similar to those described under Alternative B. Alternative D would manage 52,118 acres as conservation and restoration watersheds. This would be 19 percent less than under Alternative B and 21 percent less than the prescription watersheds under Alternative A. As a result, aquatic habitats in fewer watersheds would be improved under Alternative D than under Alternatives A, B, or C. Good-quality aquatic habitats would be maintained and/or degraded aquatic

habitats improved with management emphasis for aquatic and riparian restoration and protective measures occurring in conservation and restoration watersheds.

Effects from Wildland Fire Management

General potential effects from wildland fire management as related to vegetation removal are described under Effects Common to Alternatives, Effects from Vegetation—Forests Management. Effects would be similar to those under Alternative C, except more lands would be treated under Alternative D.

Effects from Visual Resources Management

Indirect protection of aquatic habitats under Alternative D would occur on 7,205 acres and 36,180 acres designated as VRM Classes I and II, respectively. This is 43 percent and 12 percent less than VRM Classes I and II, respectively, under Alternative A, and the least of any alternative.

Effects from Forest Products Management

Effects would be similar to those described under Alternative B, except that Alternative D would include more acres of forest harvest and treatment and smaller RCA stream buffers for riparian areas within forested areas within forested areas.

Effects from Livestock Grazing Management

Effects would be similar to those described under Alternative B. Alternative D would permit livestock grazing on 135,850 acres and 170 allotments. The potential for impacts to aquatics from grazing would be the greatest in Alternative D, as additional areas would be made available for grazing. In addition, potential indirect impacts on aquatic habitats would increase as a result of increasing the amount of grazing lands available at Craig Mountain, Wapshilla Ridge, and Corral Creek (The Nature Conservancy lands excluded). Impacts could include streambank and riparian degradation, as described under the Effects Common to all Alternatives section. Increasing the area available for grazing along the American River and Lolo Creek would increase the potential for degradation of riparian habitats and streambank stability in these areas.

Effects from Minerals Management

Effects would be similar to those described under Alternative B, except Alternative D would indirectly protect aquatic habitats on 35,045 acres of public lands subject to NSO stipulations where these lands occur in riparian areas and areas upslope of fish-bearing streams.

Effects from Recreation Management

Issuance of commercial permits for Lolo Creek could increase the use of this area. Increasing the number of people who visit this relatively remote stretch of river would increase the potential increased recreation use and associated impacts to riparian and aquatic habitats. Expected river-based recreation use would primary occur during high-flow periods in spring or early summer. Increased recreation use is expected to have some potential impacts to spawning fish or redds.

Effects from Transportation and Travel Management

Effects would be similar to those described under Alternative A; however, decreasing Open travel areas by 73 percent would reduce the potential for impacts to aquatic habitats from cross-country motorized use in these areas.

Effects from Lands and Realty Management

Effects would be the same as those described under Alternative B.

Effects from ACEC/RNA Management

Under Alternative D, two areas totaling 21,958 acres would be managed as ACECs, six percent less area than under current management. Aquatic habitats and fisheries would be indirectly protected through the designation and management in these areas. The predominant fisheries affected by ACEC designation include those in the Lower Salmon River and Salmon River ACECs.

Cumulative Effects

Approximately 214 miles of streams and rivers and 6 lakes (28 acres) on BLM lands provide fish habitat. With the exception of Marshall Lake, none of the lakes support native salmonids, and fish presence is a result of fish transplants/stocking (e.g., rainbow trout, cutthroat trout, and brook trout). Water quality, riparian habitats, and fish habitat have experienced slight upward trends during the past decade within drainages that are mostly owned by the federal government or Idaho Department of Fish and Game. Connectivity between fish populations within the planning area remains intact, with exceptions such as road crossings (e.g., culverts/roads), where partial or complete barriers may prevent upstream migration. Effects of past actions include increased sedimentation from roads and landslides. These effects have been decreasing in frequency and severity on federal and state lands through improved management.

Fish populations are not restricted by land ownership. Many resident populations migrate upstream and downstream depending on their life cycle, using aquatic habitats independent of land ownership. Anadromous fish in particular migrate to the ocean as smolts (juveniles) and return as adults. Aquatic habitat management outside BLM-administered lands is often critical for the health of fish populations within BLM-managed lands. Additionally, water quality on BLM-administered land is often affected by up-drainage land uses and other natural or human-caused events (e.g., fires, floods, debris torrents, etc.), which do not occur on BLM lands. The BLM manages less than 2 percent of the lands within the planning area; consequently, the scale of potential effects from BLM management on aquatic habitats is relatively small compared to other land owners/managers. Land-management activities both outside of and within BLM-managed lands are important for fish populations, including special status fish. Cumulative effects on fish and special status fish would be those effects where activities outside of BLM-managed lands combined with actions on BLM-managed lands to affect fisheries.

Management measures to improve water quality, such as the TMDL program established by the IDEQ, tribes, and US EPA, is coordinated with other state, federal, and private restoration programs to improve watershed and aquatic conditions in mixed-ownership drainage. This cooperative effort facilitates BLM management within watersheds when public lands are intermixed with other ownerships.

Potential degradation of water quality, riparian habitats, and aquatic habitats could occur from timber, mining, road construction, OHV use, and grazing activities outside BLM-administered lands. These potential effects, combined with the potential effects from these activities on BLM-administered lands, could result in increased effects on fish populations. Although there are several conservation measures to be implemented along with these resource uses, effects similar to those described above could occur. The largest degradations to aquatic habitats would most likely occur

from activities on private lands that are not subject to the same environmental reviews as activities on federally and state-managed lands.

Unlike Alternative A, Alternative B has no areas designated as open, cross-country motorized travel areas, which would reduce the potential for associated effects compared to Alternative A. The Cottonwood RMP proposed riparian and watershed management actions (i.e., designation of restoration and conservation watersheds), combined with the National Forest Plan Revisions (i.e., emphasis on restoring or maintaining vegetation and watershed conditions), could result in a net increase in riparian habitat quality. An increase in riparian habitat quality would indirectly increase aquatic habitat quality and fish populations. These cumulative effects would potentially occur in areas where Forest Service land is located within the same watershed as BLM land. Overall, the potential cumulative degradation of aquatic habitats and fisheries resources would be less under Alternative C, followed by Alternatives A, B, and D. Watersheds where the BLM would have the highest opportunities for cooperative management and improvement of aquatic conditions are watersheds identified as prescription, conservation, or restoration watersheds.

Cumulative effects under Alternative C would be similar to under Alternative B, except more restoration and conservation watersheds have been identified by the BLM, and more riparian habitats would be improved under Alternative C. Cumulative effects under Alternative D would be similar to under Alternative B, except fewer restoration and conservation watersheds have been identified by the BLM and fewer riparian habitats would be improved. In addition, more timber would be harvested under Alternative D, increasing the potential to degrade water quality and aquatic habitats.

4.2.11 Special Status Plants

Goal: Maintain or restore special status species and their habitat to contribute to species recovery.

Summary

Management actions under most resource categories and under all alternatives could affect special status plants either directly or indirectly. Many proposed limitations would exclude management actions within known special status plant occurrence areas, so that many of the potential impacts would affect only undocumented special status plant occurrences or would reduce the potential for species colonization. Alternative C would best maintain or restore special status plants and their habitats followed by Alternatives B, D, and then A.

The threat to special status plants from weeds would not be eradicated, but under all alternatives the problem would be slowed across the CFO, with local areas being restored to native vegetation.

Actions would be in compliance with the ESA and BLM policy to recover and conserve special status plants and the ecosystems upon which they depend. All the actions considered together would at least maintain the current condition of special status plant habitats and population parameters under all alternatives. **Table 4-~~19~~ 20** identifies the indicators that were used to analyze effects on special status plants under each alternative.

Table 4-20
Comparison of Special Status Plants Indicators by Alternative

Indicator	Alternative A	Alternative B	Alternative C	Alternative D
Occurrences of special status plant populations	Least potential for increases in numbers of occurrences	Intermediate between Alternatives A and C; more than Alternative D	Greatest potential for increases in numbers of occurrences	Intermediate between Alternatives A and C; less than Alternative B
Special status plant populations' conditions and trends (e.g., plant numbers/size of populations [rarity], plant composition, ecological condition, seral condition)	Least potential for improvement in conditions and population health trends	Intermediate between Alternatives A and C; more than Alternative D	Greatest potential for increases in conditions and population health trends	Intermediate between Alternatives A and C; less than Alternative B
Noxious weeds and other aggressive nonnative plant species encroachment	Potential for occurrences would increase	Potential for occurrences would stay at current levels or would decrease	Greater potential than Alternative B for occurrences to decrease	Greater potential than Alternative A for occurrences to increase
Identified conservation and restoration measures to reduce threats to special status plants	With the exception of a few designated HMPs and ACEC/RNAs, no specific conservation and restoration measures; would use site-specific ESA consultation primarily to reduce threats from ongoing and new actions where applicable	Identifies specific conservation and restoration measures that could support recovery for listed plants and not cause potential listing for BLM sensitive plants; more specific in supporting recovery plans for listed plants	Similar to Alternative B; designated ACEC/RNAs would offer more protection for populations	Similar to Alternative B

Source: BLM 2004a
Notes: These indicators can be measured, but predictions of future conditions can only be expressed qualitatively.

Methods of Analysis

Indicators

Indicators are used to identify the level of impact. For special status plants, the indicators used for impact analysis are identified in **Table 4-~~19~~20**, Comparison of Special Status Plants Indicators by Alternative.

Methods and Assumptions

Special status plant species health within the CFO is directly related to the overall ecosystem health, and the presence of nonnative vegetation is the single most critical indicator of ecosystem health relative to special status plants. Analysis of impacts on special status plants included assessing whether a project or action would affect a special status plant occurrence size, health, and vigor. Project and activity threats and opportunities for improvement to occupied and other suitable habitats (for expansion) were assessed. The degree of impact attributed to any one project or ongoing activity is influenced by area characteristics, which include topography/soils, plant communities, ecological condition, and climate. As ecosystems respond ~~in response~~ to soil, vegetation, or hydrologic impacts, varying levels of impacts would occur to special status plants, dependent on site characteristics and the duration and magnitude of disturbance.

Impacts would occur if management actions resulted in substantial or irreplaceable loss of vital and high-value habitats. Subsequent loss of habitat function or disruption of life history requirements would preclude maintenance or improvement of special status plant populations.

This analysis is based on the following methods and assumptions:

- Implementation of project design and mitigation measures would take place as identified. Mitigation measures' ability to avoid impacts is generally determined by past evaluations of such actions that have been implemented under similar conditions;
- Implementation-level actions would be further assessed at an appropriate spatial and temporal scale and level of detail;
- Additional field inventories may be needed to support implementation-level decisions;
- Implementation-level decisions will be subject to further analysis under NEPA; and
- Implementation-level decisions that may affect species listed under ESA may be subject to ESA Section 7 consultation with USFWS.

Effects Common to All Alternatives

Effects from Soils Management

Under all alternatives, special status plants could be indirectly conserved via conservation measures to protect from erosion and other degradations to soil, which in turn diminishes impacts on vegetation. Any action that decreases disturbances to soil would also decrease the potential for weed encroachment because weeds have a competitive advantage in disturbed soils.

Effects from Water Resources Management

Effective watershed management, which minimizes erosion, would result in healthy and diverse plant communities, especially in riparian areas. BLM sensitive species that occur in riparian areas include Case's corydalis, chatterbox orchid, Douglas' clover, Idaho barren strawberry, western ladies'-tresses, and spacious monkey flower.

Effects from Vegetation—Forests Management

Vegetation treatments that alter tree species composition or stand structure for specific resource objectives or for commercial value would alter habitats immediately after treatments and for decades. Effects would be highly dependent on 1) species, 2) habitat conditions before and after treatments, 3) type of treatment, 4) details of how each treatment is carried out, 5) adjacent habitat

types, and 6) long-term management of each area after treatments. BLM sensitive species that occur in forested habitats are Case's corydalis within riparian areas in cedar, Engelmann spruce, and grand fir habitats; western ladies-tresses in seeps in Douglas-fir stands near grasslands; and Idaho barren strawberry in meadows and moist woods along streams, and in moist and cool sites associated with grand fir, western red cedar, and alpine fir zones. Other species that may be associated with forest vegetation include Jessica's aster (Douglas fir/ninebark) and broad-fruit mariposa lily (open ponderosa pine and/or Douglas fir communities in forested uplands).

Forest treatments and harvest would be designed to avoid or minimize impacts to habitats and sensitive plant populations. Overall, the potential for degradation to BLM sensitive plant habitats and occurrences from forest management practices are low.

Effects from Vegetation—Weeds Management

Spread of noxious and invasive weeds results in decreases in habitat quality and diversity. Nonnative plant species pose a serious threat to native plants, including many special status species, because they compete for space, light, water, pollinators, and nutrients, are spreading rapidly, and are difficult to control. Treatment actions would not be sufficient to control the spread of weeds on all BLM-managed lands in the CFO, but they would reduce these impacts in treated areas. Actions to prevent and control invasive and noxious weeds using integrated weed management techniques could reduce or at least slow down the rate of increase in the CFO and the severity of damage to native plants.

Effects from Vegetation—Riparian and Wetlands Management

Actions that would improve riparian PFC could in turn conserve or improve habitats for riparian-dependent special status plant species, including Case's corydalis, chatterbox orchid, Douglas' clover, Idaho barren strawberry, western ladies'-tresses, and spacious monkey flower. Improving riparian habitats could increase the chances of these special status species colonizing new riparian areas in the future.

Effects from Wildlife and Special Status Wildlife Management

General wildlife management actions that protect habitat features, such as riparian vegetation or ecological condition of grasslands, would generally offer limited protection for special status plants that use the same habitats as well.

Effects from Aquatic Resources, Fish, and Special Status Fish Management

Any fish-related stream improvement actions that improve the quantity and quality of riparian areas could indirectly improve habitat conditions or expand appropriate habitat for future colonization for riparian-dependent special status plant species, such as Case's corydalis, chatterbox orchid, Douglas' clover, Idaho barren strawberry, western ladies'-tresses, and spacious monkey flower.

Effects from Special Status Plants Management

Actions to comply with the ESA and conserve threatened and endangered species could eliminate take and could contribute to recovery of listed species. Actions to reduce impacts on sensitive species, such as inventorying suitable habitats, reviewing discretionary activities for impacts, and project-specific inventories, could improve or at least slow down losses of habitat extent and quality. These actions could also contribute to reducing the potential for future ESA listings of BLM sensitive species.

Effects from Wildland Fire Management

Weed treatments in grasslands for fuel reduction could benefit special status plants by reducing fire severity and competition. The level of impact from fires occurring in special status plant habitats would depend on whether that species is fire-dependent, severity of fire, type of habitat, composition, structure and fire regime of the area relative to the historical range of variability, and fire suppression. Special status plant populations could be damaged or destroyed in a severe fire, and fire could cause the additional proliferation of cheatgrass, a fire-promoted species in the canyon grasslands that serves as habitat for the two listed plant species in the CFO. Fires occurring in poor-fair ecological condition grasslands could contribute to increased infestations of weeds and nonnative vegetation, which could encroach on occupied or suitable habitats for special status plants. Forested fuel treatments would have effects similar to forested vegetation treatments. Forest fires and forested fuels treatment would have limited effects on special status plants, as most of the species in the CFO are grassland- and/or riparian-dependent although the broad-fruit mariposa lily occurs in forest openings. Other species that may be associated with forest vegetation include Jessica's aster (Douglas fir/ninebark) and Idaho barren strawberry (associated with grand fir, western red cedar, and subalpine fir). Because fuel treatments are generally focused on dense portions of forest, these species would not be affected by treatments. Effects of fire management actions on special status plants would be similar among alternatives.

Effects from Visual Resources Management

Impacts from visual resources management on special status plants are indirect and come from actions under other areas of resource management that are authorized within each VRM class. Vegetation treatments, road construction, recreational facilities construction, and mining are actions that would change visual appearance and that could also affect special status plant habitat and their associated species. Numerous safeguards, such as the ESA, would be in place to minimize the chances of affecting special status plant habitat, but the potential for indirect, unforeseen, and accidental impacts always exists. Generally, VRM Class IV, for example, would contain more alterations of habitats over time than VRM Class I.

Effects from Forest Products Management

Forest products management effects on special status plants would be similar to those under Effects from Vegetation—Forests Management.

Effects from Livestock Grazing Management

Management of BLM lands to meet Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management (BLM 1997a) (**Appendix A** [see Volume II~~I~~]), ESA, ACECs and RNAs, and inventories prior to issuing grazing permits would minimize impacts from livestock grazing across alternatives. The majority of ongoing grazing allotments have not had intensive inventories completed for special status plants. However, increased inventory efforts during the past decade have occurred within grazing allotments. Potential damage from livestock grazing on special status plants would primarily be incidental on unknown occurrences or from nonauthorized livestock. Fencing or other mitigation measures would be implemented if livestock grazing were found to be impacting any special status plant population.

Effects from Minerals Management

Minerals management impacts on special status plants potentially occur from surface disturbance and thus loss of habitat and potential destruction of individuals. Actions spell out where, how much,

and what type of mineral exploration and extraction can occur. Generally, the tighter the restriction, the fewer potential impacts on special status plants. The ESA, ACECs and RNAs, NSO, and inventories prior to issuing permits would prevent most impacts. Potential impacts could result if occurrences are not documented. Mineral actions that disturb soil could lead to an increase in weeds in the CFO that compete with special status plants.

Effects from Recreation Management

Impacts from recreation management actions are similar to those under Effects from Transportation and Travel Management.

Effects from Renewable Energy Management

Potential effects from renewable energy management are generally similar to those described under Effects from Minerals Management and Effects from Vegetation—Forests Management.

Effects from Transportation and Travel Management

Impacts from travel management on special status plants are generally limited to accidental destruction of individual plants or occurrences from vehicles and pedestrian and equestrian use. Travel management restrictions, special designations, and the ESA generally minimize but do not eliminate the potential for these impacts.

Effects from Lands and Realty Management

Private lands containing special status plant occurrences could be acquired or conservation easements obtained to protect and conserve habitats for specials status plants. Realty actions that result in disturbance of soils and vegetation, such as new road construction for a right-of-way, could have direct and indirect impacts to special status plants, depending on if occupied or suitable habitats for plants could be affected.

Effects from ACEC/RNA Management

Generally, special management areas such as ACECs and RNAs result in protection of special status plants from human activities and long-term improvement or at least maintenance of habitat quality because of numerous restrictions, such as OHV use, mineral exploration, and timber harvest. Special status plant species occur in most of the existing ACEC/RNAs or ACECs and new areas proposed under various alternatives. These designations provide additional protection for areas providing occupied and suitable habitats for special status plant species.

Effects from Wild and Scenic Rivers Management

Wild and scenic river management can restrict activities that would alter the tentative classification, which could indirectly conserve habitats, especially riparian areas and canyon grasslands, in areas where actions would have been authorized without the classification. These effects would vary according to the criteria for which each segment was found suitable. Several special status plant species occur in canyon grasslands and/or riparian areas and could receive additional protections under management to protect outstandingly remarkable values. Under all alternatives, 29 miles of river segments found suitable, as well as 112 miles of the Salmon River that has been a study river since 1968, would be managed to preserve their outstandingly remarkable values. This would indirectly affect special status plants, as described above.

Effects from Wilderness and Wilderness Study Areas Management

Continued management of wilderness and WSAs would generally preserve the possibility that special status plant occurrences could exist in these areas or could colonize them at some point in the future. These areas include BLM's 750-acre portion of the Frank Church/River of No Return Wilderness in compliance with the Wilderness Act, and the 5,571-acre Marshall Mountain WSA and the 6,463-acre Snowhole Rapids WSA, which are under Interim Management Policy for lands under wilderness review. If the WSAs should be released from wilderness consideration by Congress, management of these areas could offer slightly less protection for special status plants from other actions and human disturbance. These species would still receive required protections for special status plants afforded on other BLM-managed lands.

Effects from Watchable Wildlife Viewing Sites Management

~~Special status plants that occur in areas identified for watchable wildlife sites.~~ Any management actions that maintain or improve ecological conditions for watchable wildlife sites~~these areas~~ would directly and/or indirectly affect special status plants that could occur there.

Effects from Native American Tribal Uses Management

Consulting with tribes to identify culturally significant plants, animals, fish, and important habitats could improve habitat conditions for those species and habitats if these consultations result in changes in management that would improve habitats. ~~However, allowing tribal members to collect special status species, as allowed under their treaty rights, could impact those species.~~

Effects from Public Safety—Abandoned Mines and Hazardous Materials Management

Generally, actions to remediate contaminated sites to safeguard human health could also affect special status plant habitats and populations, especially if restoration activities occur in occupied or suitable habitats for special status plants. Reducing contaminants in the environment could result in healthier vegetation communities. Additional actions under Alternatives B, C, and D to more effectively manage hazardous sites and cleanups could indirectly improve habitat and the health of special status plant populations more than under Alternative A.

Alternative A

Effects from Soils Management

The MFP Road Guidelines (BLM 1981a), Riparian Management Guidelines (BLM 1985e), and PACFISH (BLM and Forest Service 1995) would avoid and mitigate many surface disturbances and erosion. This could reduce impacts on quantity and quality of vegetation and thus reduce impacts to potential special status plant habitats from other resource uses, especially those associated with roads and areas providing occupied or suitable habitats for special status plants. Alternative A could provide for slightly less indirect protection of special status plants and their habitats than the other alternatives that include a more thorough and protective list of BMPs, reclamation measures, and conservation/restoration actions, as described under Alternative B.

Effects from Water Resources Management

Special status plant habitat, especially riparian and wetland habitats, could be indirectly conserved from water management actions such as implementation of the MFP Road Guidelines (BLM 1981a), Riparian Management Guidelines (BLM 1985e), and PACFISH (BLM and Forest Service 1995). These actions directly and indirectly conserve riparian vegetation and other affected occupied or suitable habitats associated with water resources management.

Effects from Vegetation—Forests Management

Specific forest vegetation management under Alternative A would have direct and indirect effects on occupied and suitable habitats for special status plants within a project or treatment area. Project design and mitigation measures would avoid or minimize impacts. However, actions that conserve old growth habitats could also conserve species of plants warranting sensitive designations in the future if additional old growth habitats were lost.

Effects from Vegetation—Weeds Management

Under Alternative A, actions to prevent and control invasive and noxious weeds using integrated weed management techniques, consistent with BLM's *Partners Against Weeds: An Action Plan for the Bureau of Land Management* (BLM 1996), could reduce the rate of increase of the area and severity of damage to habitats as described under Effects Common to All Alternatives.

Effects from Vegetation—Riparian and Wetlands Management

Under Alternative A, riparian management actions would continue to reduce the potential for degradations of riparian habitat, as described under Effects Common to All Alternatives. Implementing BMPs for riparian management units, Riparian Management Guidelines (BLM 1985e), and PACFISH (BLM and Forest Service 1995) would avoid and mitigate many surface disturbances and erosion and would protect and enhance riparian vegetation. This could reduce potential impacts on riparian-dependent special status plant habitats from other resource uses, especially those associated with roads and those located in riparian areas. Alternative A includes RHCAs totaling 24,290 acres.

Effects from Wildlife and Special Status Wildlife Management

Alternative A has the goals of improving one-half of the 3,840 acres of poor condition range to fair condition and improving one-half of the 13,766 acres of fair condition range to good condition within 20 years. Meeting these goals could improve 8,803 acres of habitat that could more likely be colonized by special status grassland plants in the future than without improvements. Limiting the use of forage in riparian area to 50 percent of available forage would prevent extreme damage to riparian habitats. Development and implementation of HMPs that maintain or enhance ecological condition would be beneficial to special status plants if the project area included occupied and suitable habitats for special status plants. Vegetation treatments would have design features to avoid or minimize impact to special status plants.

Effects from Special Status Plants Management

Under Alternative A, the Long Gulch and Skookumchuck populations of MacFarlane's four-o'clock would be protected as ACEC/RNAs, as further described under Effects from ACEC/RNA Management.

Effects from Wildland Fire Management

Use of nonfire fuel-management strategies to help maintain or improve range conditions would necessitate weed removal, using herbicides, biocontrols, or other methods. Under Alternative A, 1,700 to 10,680 acres could be treated annually to reduce weeds and reduce hazardous fuel conditions. These weed treatments would be focused in the canyon grasslands where special status plants exist.

Effects from Livestock Grazing Management

Alternative A would permit livestock grazing on 122,732 acres and 168 allotments. Potential effects on special status plants are incidental to livestock grazing, particularly if unknown plant populations are degraded by such grazing.

Effects from Minerals Management

Impacts to special status plants from minerals management could occur anywhere they exist except within the 750 acres of wilderness currently withdrawn from operation of the mining laws (locatable minerals) and the mineral laws (leasable and salable minerals). This withdrawal would continue under Alternatives B, C, and D. Impacts in WSAs would be less because of the nondiscretionary closure to leasable minerals activity and the discretionary closure to salable minerals activity. The Salmon River withdrawal currently protects special status plants from locatable minerals activities (subject to prior existing rights) on BLM land within 0.25-mile of the river bank. Conditions of approval for plans of operations involving minerals activities (i.e., mitigation measures and/or stipulations) would protect special status plants on a case-by-case basis.

Effects from Recreation Management

The BLM would continue to manage public lands for a variety of recreational activities within all ROS settings (**Table 4-~~15~~16**, Recreation Opportunity Spectrum). These percentages are indicative of the management emphasis for recreation activities on BLM-administered lands. A much smaller portion of the planning area is reserved for primitive experiences, when compared to opportunities for activities that include motorized uses. Generally, special status plants within the Primitive class would have less potential to be impacted. Impacts, as described under Effects Common to All Alternatives, would increase as ROS class moves from Primitive to Urban. Specifically, more acres would remain in Primitive ROS class under Alternative A than under the other alternatives, so Alternative A could have the fewest potential impacts on special status plants from recreation (**Table 4-~~15~~16**, Recreation Opportunity Spectrum).

Effects from Transportation and Travel Management

There would be a much greater number of acres that are designated Open to OHV use than under the other alternatives (compared to zero acres under Alternatives B and C). Areas open to motorized cross-country travel have the greatest potential to harm special status plants and damage habitats, as described under Effects Common to All Alternatives. Cross-country travel has the potential to disturb soils and vegetation and accelerate spread for nonnative species, which could infest occupied or suitable habitats for special status plants.

Effects from Lands and Realty Management

Lands withdrawn from mineral entry could reduce the chances of damage to special status plant populations.

Effects from ACEC/RNA Management

Under Alternative A, effects would generally be consistent with those described under Effects Common to All Alternatives. Populations would be protected directly by actions that prohibit specific impacts to special status plants and their habitats and indirectly from conserving other natural resources. Although these management actions would conserve special status plants, Alternative A would generally be less effective than Alternatives B, C, or D, where additional actions

would be added to refine management of ACECs and RNAs and where new ACECs would be added.

Alternative B

Effects from Soils Management

Implementing BMPs (**Appendix B**, Best Management Practices [see Volume II~~I~~]) for soil-disturbing activities and applying reclamation measures to mitigate adverse impacts on soils and water could indirectly benefit special status plant species compared to Alternative A. By preventing soil-disturbing activities, the BMPs could potentially encourage healthy vegetation communities that increase the chances of colonization of an area by a special status species. Reclamation measures could further restore potential habitats that have previously been impacted.

Effects from Water Resources Management

Alternative B would offer more protection and opportunities for improvement than Alternative A because Alternative B includes a more-thorough and protective list of BMPs, reclamation measures, and conservation/restoration actions. Implementing BMPs (**Appendix B**, Best Management Practices [see Volume II~~I~~]), monitoring, and adaptive management add additional actions that could benefit special status plants and their habitats compared with Alternative A. The BMPs could prevent additional erosion and could lead to healthier vegetation communities. Associated monitoring and adaptive management could increase the effectiveness of the BMPs.

Effects from Vegetation—Forests Management

Under Alternative B, effects of forest vegetation management on special status plants are limited by protections preventing vegetation treatments within occurrences and the limited number of species that are forest dependent. Effects would be the same as those described under Alternative A.

Effects from Vegetation—Weeds Management

Types of effects from weed management actions on special status plants would be similar to those described under Effects Common to All Alternatives. Numerous additional specific actions under Alternative B would make weed management more effective than under Alternative A and thus would be more successful at slowing down the encroachment of weeds in native habitats. These additional actions include inventories, education, control methods, rehabilitation, and monitoring.

Effects from Vegetation—Rangelands Management

Under Alternative B, actions designed to promote the health of native vegetation communities, including Craig Mountain and Rattlesnake Ridge, and to rehabilitate areas in nonnative vegetation would generally: 1) reduce potential degradations of habitat quality; and 2) improve it where rehabilitated by increasing quantity and quality of native plant communities. Where there are no occurrences, improving overall health of native grasslands could increase the chances of special status plants colonizing areas that provide occupied or suitable habitats.

Effects from Vegetation—Riparian and Wetlands Management

Alternative B would have slightly smaller RCA stream buffers compared to Alternative A RHCAs. There would be 22,847 acres of RCAs, including riparian vegetation. Alternative B would prioritize management of conservation and restoration watersheds totaling 64,481 acres, 2 percent less than the prescription watersheds in Alternative A. Types of effects are described under Effects Common to All Alternatives.

Effects from Wildlife and Special Status Wildlife Management

Additional actions to conserve wildlife habitats, especially in canyon grasslands, include vehicle restrictions and rangeland and riparian improvements; these additional actions could indirectly protect existing occurrences of special status plants by increasing the land health surrounding the populations and by reducing weed encroachment. Land treatments that maintain or improve ecological conditions for wildlife could increase the chances of future colonization of special status plants if such habitats are suitable for special status plants.

Effects from Aquatic Resources, Fish, and Special Status Fish Management

Effects would be similar to those described under Alternative A, but additional actions to conserve, enhance, and restore aquatic habitats could provide additional riparian habitat improvement.

Effects from Special Status Plants Management

Actions designed to ensure that special status plant populations are stable or continue to improve under Alternative B would be more effective than under Alternative A. Monitoring populations of the two listed species, MacFarlane's four-o'clock and Spalding's silene, at least every three years would provide more accurate and precise information on the health and extent of these populations. More timely information would allow for faster adaptation of management actions to preserve these species. Implementing conservation and restoration measures identified within the recovery plans could improve the health and size of these populations and contribute towards recovery of the species and potential delisting. Developing new management plans for the listed species would assist in implementing the recovery actions on BLM-managed lands in the CFO. Implementing control measures for invasive plants that adversely impact listed plant populations would, if effective, prevent or reduce competition that could weaken these populations. Establishing and maintaining new populations of listed species that would support recovery efforts, if carried out, could increase the chances and rate of recovery for the species and could provide insurance for threats to existing populations. Land tenure adjustments could enhance the federal government's ability to conserve listed and BLM sensitive plant species with regulations and conservation efforts that do not apply on private lands. Inventorying suitable habitats for new populations of BLM sensitive species could further protect these species by identifying locations and thus facilitating protection of them from accidental degradations to unknown populations and identifying locations for restoration and enhancement opportunities.

Effects from Wildland Fire Management

Chemical and/or biological treatments would be used on up to 36 percent of CFO lands with the annual treatment range of 844 to 6,078 acres. This is 44 percent less than Alternative A and, as such, would result in fewer impacts to special status plants in the canyon grasslands.

Effects from Visual Resources Management

Effects would be the same as those described under Alternative A.

Effects from Livestock Grazing Management

Effects would be similar to those described under Alternative A. Alternative B would permit livestock grazing on 105,619 acres and 166 allotments, 14 percent fewer acres than Alternative A.

Effects from Minerals Management

Impacts to special status plants would be the same as Alternative A with possible added protection provided by the Mineral Leasing Stipulation in **Appendix J** (Mineral Leasing Surface Use

Stipulations–Alternatives A, B, C, and D [see Volume II~~I~~]). These stipulations include NSO-4, which restricts surface occupancy and/or disturbance activities related to leasable and salable minerals that could have negative impacts on listed and sensitive plant species.

Effects from Recreation Management

The BLM would continue to manage the Elk City, Little Salmon River, John Day Creek, and Marshall Mountain areas as Extensive Recreation Management Areas. Lolo Creek and Craig Mountain would be designated as SRMAs, identifying recreation as the principal use of these lands. The Lolo Creek SRMA would emphasize backcountry, dispersed, and nonmotorized recreation opportunities, with an emphasis on white–water boating and fishing. The Craig Mountain SRMA would provide opportunities in a natural setting for big game hunting, hiking, and biking while promoting backcountry recreation experiences. Managing lands as SRMAs rather Extensive Recreation Management Areas could encourage additional use of these lands and thus increase the amount of potential disturbances of special status plants as described under Effects Common to All Alternatives. However, because these two SRMAs emphasize nonmotorized activities, impacts would be less.

Similar to Alternative A, the BLM would continue to manage public lands for a variety of recreational activities within all ROS settings (**Table 4-~~15~~16**, Recreation Opportunity Spectrum). Under Alternative B less than half of the acres under Alternative A would be managed as Primitive, potentially opening over 8,000 acres of land to additional human disturbances that could affect special status plants; this is described under Effects Common to All Alternatives.

Effects from Transportation and Travel Management

Under Alternative B no areas would be Open to cross-country motorized vehicular traffic, reducing potential impacts on special status plants compared to Alternative A. Implementation actions to improve public education and compliance includes patrols, enforcement, education, visitor contacts, monitoring, and use restriction signage.

Effects from Lands and Realty Management

Improvements to special status plant habitats and populations via land acquisition could be more likely under Alternative B than current management because 113,728 acres in 12 management blocks have been identified with ranked resource values. Special status plants rank as "high value" for 48,166 acres in three blocks. Conservation easements would be used as another tool to protect resources, including special status plants.

Encouraging co-location of linear rights-of-way would reduce the area of surface disturbance that could threaten special status plants by direct damage to plants and spread of noxious weeds. Special status plant populations within withdrawals would generally be more protected than lands not withdrawn or protected by a special designation because there would be a reduced level of surface disturbances.

Effects from ACEC/RNA Management

Under Alternative B, two new ACECs would be created that contain sensitive plant species. This would include 5,759 acres on the Salmon River from White Bird Creek to French Creek and 570 acres on the East Fork American River. The Lower Salmon River ACEC, which contains sensitive plants, would be increased to 16,199 acres. These actions would increase from current management

the amount of protection for these species by bringing more acreage under the protections of ACEC designation.

Alternative C

Effects from Soils Management

Effects would be similar to those described under Alternative B, except that RCA stream buffers would be larger and additional emphasis for riparian/aquatic management would occur with additional conservation and restoration watersheds. These actions would have additional direct or indirect benefits for special status plants if occupied or suitable habitats occur in these areas.

Effects from Water Resources Management

Effects would be similar to those described under Alternative B, except for the differences described under Alternative C, Effects from Soils Management, above.

Effects from Vegetation—Forests Management

Effects would be the same as those described under Alternative B.

Effects from Vegetation—Weeds Management

Effects would be the same as those described under Alternative B.

Effects from Vegetation—Rangelands Management

Effects would be similar to those described under Alternative B, with the addition of promoting native plant communities in Salmon River canyon grasslands. Less acreage would be identified as being available for livestock grazing. Thus, Alternative C has the greatest potential to improve grassland habitats for special status plants.

Effects from Vegetation—Riparian and Wetlands Management

Alternative C would be slightly more effective at conserving and restoring riparian habitats for special status plants than Alternatives A and B because stream buffers would be larger. There would be 27,624 acres of RCAs, 14 percent more than Alternative A and 21 percent more than Alternative B. Alternative C would designate 6 percent more area of conservation and restoration watersheds (64,481 acres) than Alternative B and 3 percent more than the prescription watersheds in Alternative A. Types of effects would be as described under Effects Common to All Alternatives.

Effects from Wildlife and Special Status Wildlife Management

Effects from wildlife and special status wildlife management would be similar to Alternative B, with the following exceptions:

- Under Alternative C, adding the Lower Salmon River to the emphasis management areas for native grassland communities could increase the area of canyon grassland habitat that is improved;
- Riparian and wetland management actions would be more effective at improving riparian habitat that could support special status plant populations because RCA stream buffers would be larger (this is described under Riparian and Wetland Management, above) and because of additional conservation and restoration watersheds. Specifying use criteria for grazing allotments along fish-bearing streams could further conserve riparian areas; and

- In addition to no net increase in roads in 12 specified areas, 5 areas would be managed for a net decrease in roads. This could decrease motorized vehicle use in these areas and could reduce associated public recreation use, which could affect occupied or suitable habitats for special status plants. A reduction of motorized use of roads and trails would also reduce threats from spread of nonnative species, which could impact occupied or suitable habitats for special status plants.

Effects from Aquatic Resources, Fish, and Special Status Fish Management

Effects from aquatic resources management actions would be similar to those described under Alternative B, with larger RCA stream buffers and additional improvement to riparian habitats because of additional conservation and restoration watersheds. These effects also would be greater than under Alternative A.

Effects from Special Status Plants Management

Effects would be the same as those described under Alternative B.

Effects from Wildland Fire Management

Treated FRCC 2 and 3 areas, including those treated for weeds by biological or chemical methods, would decrease by 16 percent relative to Alternative B, reducing the chances of special status plants impacts.

Effects from Visual Resources Management

Indirect impacts on special status plants from visual resources management would be less than Alternatives A and B. Alternative C would have the greatest number of acres in VRM Class I and II and the fewest in Class III.

Effects from Livestock Grazing Management

Effects would be similar to those described under Alternative A. Alternative C would permit livestock grazing on 101,350 acres and 145 allotments, 17 percent fewer acres than Alternative A.

Effects from Minerals Management

Effects would be the same as those described under Alternative B.

Effects from Recreation Management

Effects would be the same as those described under Alternative B.

Effects from Transportation and Travel Management

Effects would be the same as those described under Alternative B.

Effects from Lands and Realty Management

Effects would be the same as those described under Alternative B.

Effects from ACEC/RNA Management

Under Alternative C the Craig Mountain ACEC would be expanded from 3,956 acres to 23,342 acres, an almost 5-fold increase from current management. Habitats would be further conserved by additional restrictions on roads and grazing, and a monitoring program would be implemented. Upper Lolo Creek would be designated an ACEC. This 1,625-acre parcel would directly and indirectly conserve sensitive plants, especially riparian-dependent plants, by restricting timber

harvest, withdrawing land from mineral exploration and development, decommissioning roads, managing exotic plants, and restoring riparian areas.

Alternative D

Effects from Soils Management

Effects would be similar to those described under Alternative B, except that RCA stream buffers would be smaller and less emphasis for riparian/aquatic management would occur with fewer watersheds designated as conservation and restoration watersheds.

Effects from Water Resources Management

Effects would be similar to those described under Alternative B, except for the differences described under Alternative D, Effects from Soils Management, above.

Effects from Vegetation—Forests Management

Effects would be the same as those described under Alternative B.

Effects from Vegetation—Weeds Management

Effects would be the same as those described under Alternative B.

Effects from Vegetation—Rangelands Management

Rangeland management actions would be similar to current management and less protective of special status plants and would provide less potential for improvement than under Alternatives B or C because there would be no emphasis management areas for improvement of ecological conditions of canyon grasslands.

Effects from Vegetation—Riparian and Wetlands Management

Alternative D would be slightly less effective at conserving and restoring riparian special status plants habitats than all other alternatives because RCA stream buffers would be smaller. There would be approximately 20,710 acres of RCAs, 15 percent less than Alternative A. Alternative D would designate the fewest conservation and restoration watersheds (52,118 acres) of any alternatives.

Effects from Wildlife and Special Status Wildlife Management

Under Alternative D, effects from wildlife and special status wildlife management would be similar to those described under Alternative B. Riparian and wetland management actions would be less effective at improving riparian habitat than all the other alternatives because stream buffers would be smaller; this is described under Effects from Vegetation—Riparian and Wetland Management, above.

Effects from Aquatic Resources, Fish, and Special Status Fish Management

Effects from aquatic resources management actions would be similar to those described under Alternative B; there would be less potential improvement to riparian special status plants habitats than all other alternatives because stream buffers would be smaller and there would be fewer conservation and restoration watersheds.

Effects from Special Status Plants Management

Effects would be the same as those described under Alternative B.

Effects from Wildland Fire Management

The types of effects of wildland fire management on special status plants would be similar to those described under Effects Common to All Alternatives, except unplanned fire for wildland fire use would not be evaluated in commercial forest lands or on grazing allotments (**Figure H-3**, Areas Available for Wildland Fire Use—Alternative D [see **Appendix H** in Volume II~~I~~]) unless it is determined to not adversely impact commercial timber lands or active grazing allotments. This could preclude potential special status plants habitat improvements in commercial timber lands. This alternative would allow for chemical or biological weed treatments on 80 percent more land area than under Alternative C and the same area as Alternative B, increasing potential impacts to special status plants from this type of action the most of any alternative.

Effects from Visual Resources Management

Alternative D would have the fewest number of acres in VRM Class I and II and the greatest in Class III. As such, indirect impacts on special status plants from visual resources management would be the greatest among the four alternatives.

Effects from Livestock Grazing Management

Effects would be similar to those described under Alternative A. However, Alternative D would permit livestock grazing on 135,850 acres and 170 allotments, 11 percent more acres than Alternative A.

Effects from Minerals Management

Effects would be the same as those described under Alternative B.

Effects from Recreation Management

Under Alternative D, impacts on special status plants from recreation management would be similar to those described under Alternative B throughout most BLM-managed lands. However, in the Craig Mountain WMA SRMA, access would be improved to promote rural, developed recreation instead of backcountry experience. This could result in more potential disturbances of special status plants and their habitats from the effects of increased human presence and vehicles (as described under Effects Common to All Alternatives).

Effects from Transportation and Travel Management

Effects from transportation and travel management on special status plants would be similar to those under Alternative B, except there would be a 23,189-acre Open area designation that would allow for more potential damage than under Alternatives B or C.

Effects from Lands and Realty Management

Effects would be the same as those described under Alternative B.

Effects from ACEC/RNA Management

Fewer areas (totaling 23,924 acres) would be proposed for designation, almost 7 percent less than Alternative A. This would result in somewhat less protection for occupied and suitable habitats for special status plants in these areas. Effects of ACEC/RNA management actions on special status plants would be similar to those described under Alternative B. The only proposed difference is to allow livestock grazing to support achievement of goals on Wapshilla Ridge ACEC/RNA. Quantity and composition of vegetation may be altered by grazing, but if grazing is being used as a tool to achieve goals, there would not be impairment of special status plant populations.

Cumulative Effects

Most of the cumulative projects listed in Section 4.1.3, Cumulative Impacts, have had or could have at least indirect effects on special status plants. Effects of past actions and natural events including fire suppression, livestock grazing, timber harvest, mineral development, road construction, and recreation, often leading to infestations from nonnative species, have affected special status plants in the CFO planning area.

In the foreseeable future, invasion of native habitats by noxious weeds and other exotic species poses one of the greatest threats to native plant species and communities and is an increasing concern within the CFO. Controlling the spread of invasive plants is essential for the conservation of special status plant species. Cooperative efforts are underway to control nonnative species that may encroach on occupied and suitable habitats for special status plants. Conservation and restoration efforts to protect occupied and suitable habitats for special status plants would support recovery for listed plants and reduce potential for federal listing of BLM sensitive plants.

The same types of cumulative effects would occur under all alternatives. Generally, Alternative C would contribute the greatest potential for improvement in special status plant populations, habitat, and potential habitat in northern Idaho because of numerous management actions, mitigation measures, and restrictions. Alternatives A and D would contribute less to any improvements in special status plant habitat conditions across northern Idaho because of more focus on commodities, especially under Alternative D. Alternative B is intermediate between Alternatives C and D in most regards.

4.2.12 Wildland Fire Management

Goal: Manage fuels and wildland fires to protect life and property and to protect or enhance resource values.

Summary

Alternative A would best manage fuels and wildland fire to protect life and property and to protect and enhance resource values, followed by Alternatives D, B, and then C. Proposed practices to protect aquatic resources, and visual quality could reduce the acres where effective treatment could occur. Under Alternative A, specific percentages of CFO FRCC 2 and 3 (moderate to high risk) WUI areas would not be identified for fire risk/fuels-reduction treatments. Alternative A does specify acres available for treatment, and treatments are prioritized in a manner that would lead to reduced FRCC and reduced risk in the WUI. A range of recent past acre treatments was also used to determine the effect of fire management actions. **Table 4-~~20~~ 21** identifies the indicators that were used to analyze effects on wildland fire management under each alternative.

Methods of Analysis

Indicators

Indicators are used to identify the level of impact. For wildland fire management, the indicators used for impact analysis are identified in **Table 4-~~20~~21**, Comparison of Wildland Fire Management Indicators by Alternative.

Table 4-21
Comparison of Wildland Fire Management Indicators by Alternative

Indicator	Alternative A[1]	Alternative B	Alternative C	Alternative D
Effects on WUI	Prioritizing areas for fuel treatment according to WUI and FRCC status would reduce risk in the WUI and potentially reduce FRCC where treatments occur. This prioritization would result in treating the most affected vegetation types and promote restoration in these areas.	Prioritizing areas for treatment according to hazard in WUI would result in reduced risk in priority areas. This alternative would likely result in substantially less WUI fuels reduction than Alternative A (see below).	Prioritizing areas for treatment according to hazard in WUI would result in reduced risk in priority areas. This alternative would likely result in substantially less WUI fuels reduction than Alternative A (see below).	Prioritizing areas for treatment according to hazard in WUI would result in reduced risk in priority areas. This alternative would likely result in slightly more WUI fuels reduction than Alternative A (see below).
Percent of CFO by FRCC	The potential WUI 5-year treatment of FRCC 2/3 lands is 54,763 acres and could result in the following changes to FRCC: Current Percent of CFO Lands: FRCC 1: 10% FRCC 2: 33% FRCC 3: 57% Plan Life FRCC Potential Change: FRCC 1: ~~11~~20% - ~~14~~40% FRCC 2: ~~32~~12% - ~~40~~33% FRCC 3: ~~51~~29% - ~~55~~50%	The potential WUI 5-year treatment of FRCC 2/3 lands would be 37,395 acres, 32% less than Alternative A, and could result in the following changes to: Plan Life FRCC Potential Change: FRCC 1: 17% - 38% FRCC 2: 12% - 33% FRCC 3: 29% - 50% ~~FRCC 1: 22%~~ ~~FRCC 2: 37%~~ ~~FRCC 3: 41%~~	The potential WUI 5-year treatment of FRCC 2/3 lands would be 18,697 acres, 66% less than Alternative A, and could result in the following changes to FRCC: Plan Life FRCC Potential Change: FRCC 1: 15% FRCC 2: 35% FRCC 3: 50%	The potential WUI 5-year treatment of FRCC 2/3 lands would be 56,092 acres, 2% more than Alternative A, and could result in the following changes to FRCC: Plan Life FRCC Potential Change: FRCC 1: 28% FRCC 2: 39% FRCC 3: 33%

Source: BLM 2004a

Methods and Assumptions

This analysis is based on the following methods and assumptions:

- Acres in FRCC 1 will remain in FRCC 1 during the 20-year analysis period;
- Acres treated to "move toward FRCC 2 or FRCC 1" were considered effectively moved into that FRCC for analysis purposes;

- FRCC 2 and 3 were used to represent moderate and high hazard/risk, respectively for analysis purposes;
- For calculating percent of areas treated, wildland fire management goals can be achieved while still meeting other management action requirements, and budget and staffing level would be sufficient to achieve treatment goals; and
- For qualitative discussions on impacts from management direction for everything except wildland fire management, actions and objectives for other resources will override fire management goals unless otherwise specified.

Effects Common to All Alternatives

Effects from Air Quality Management

All of the air quality actions could hinder or delay implementation of burning-related wildland fire management actions. This could mean that treatments such as prescribed burns would be delayed until later, even to the next year, which could delay treatments that would reduce FRCC or reduce wildfire risk in the WUI, but it would not completely eliminate them. It is expected that all treatments would eventually ~~get done~~be completed.

Effects from Wildland Fire Management

Allowing no more than 30 percent of the CFO acres to burn in a 5-year period could reduce prescribed burning to reduce FRCC or hazard. Based on past history (see Chapter 3, Section 3.2.12, Wildland Fire Ecology and Management), it is unlikely that 30 percent would burn in a 5-year period and therefore prohibit prescribed burning. Fuel reduction and reduced FRCC and hazard would improve firefighter safety, reduce fire behavior and over the long term, allow fires to burn more like their historic conditions.

Effects from Livestock Grazing Management

Grazing could lead to some conifer encroachment and invasion of nonnative species in the dry conifer and perennial grass types, and could increase tree density by limiting grass competition in the dry conifer type. All of these conditions contribute to increased FRCC. Grazing also could reduce fine fuels that could affect the rate of spread and intensity of fire.

Effects from Transportation and Travel Management

Areas open to motorized use or open to motorized travel off designated routes could improve suppression access, increase potential for human-caused fires from recreationists, and lead to the spread of invasive species that could increase FRCC in most of the vegetation types found in the CFO.

Roads closed to motorized travel year-round eventually could become overgrown with vegetation or could otherwise become impassible because of cut or fill failures, culvert removal, or fallen timber, If so, these roads may not be available for use during wildland fire suppression, thereby increasing suppression response times, making it more likely that fires would become larger and burn more acres.

Effects from Wild and Scenic Rivers Management

Management of the outstandingly remarkable values of river segments found suitable for inclusion in the NWSRS could increase visual quality protection via more protective VRM classifications, which could inhibit the BLM's ability to manage fuels to improve FRCC and reduce the hazard in

the WUI. These effects are discussed under Effects from Visual Resources Management for each alternative.

Effects from Native American Tribal Uses Management

Consulting with tribes to identify culturally significant plants, important habitats, and traditional use locations could place higher priority of protection in areas not previously identified or could limit actions in planned treatment areas. Prescription burning could satisfy tribes interested in prescription burning's potential to promote plant gathering potential.

Alternative A

Effects from Soils Management

Avoiding adverse impacts on sensitive land types could result in reduced acres of treatment in areas with higher (worse) FRCC or in WUI, which should have negligible effects. Decommissioning, obliterating, or partially recontouring roads on sensitive land types would remove them from service for fire suppression or for easy access to accomplish treatments to reduce FRCC or the risk or hazard in the WUI.

Effects from Water Resources Management

Meeting fish and water quality objectives could affect where and to what extent treatments to reduce FRCC could occur (24,290 acres included in the RHCA); the same would be true of treatments to reduce risk to the WUI.

Effects from Vegetation—Forests Management

There would be 24,257 acres designated for intensive management and 11,500 acres designated for extensive management (treatments) that would allow reduced FRCC and risk through timber management.

Where custodial acres occur in the WUI, -timber management could also be employed to reduce risk to the WUI.-.

Establishing priorities for treatment by FRCC and WUI would ensure that the acres most needing treatment would be treated first, and that appropriate fuel conditions would be maintained. This would reduce FRCC and risk to the WUI where treatments occur. Because the priority treatment areas are in the WUI, wildland fires could be easier to suppress if there were less intense fire behavior because of reduced fuel loads and reduced ladder fuels (small trees growing in the understory) (Graham et al. 2004).

Effects from Wildlife and Special Status Wildlife Management

Reviewing ongoing or new actions and modifying them for listed species conservation may or may not reduce or increase FRCC, or increase or decrease risk to WUI, depending on what the modification entails and where the modification occurs.

Improving range conditions for wildlife would improve FRCC. In the WUI, it could result in more fine fuels, which can increase rate of spread and flame length but reduce severity and resistance to control and potentially lowering risk to WUI.

Maintaining a 100-yard nondisturbance buffer around active raptor nests could delay some treatments, which could affect FRCC.

Effects from Special Status Plants Management

Some special status plants are located in the WUI or may be found in the WUI during future plant inventories. Protecting listed plants could prohibit treatments that could reduce FRCC or influence the design of treatments that would reduce the risk to WUI. This protection could also affect wildland fire suppression.

Effects from Wildland Fire Management

Using wildland fire could result in a reduced FRCC over the long term..

Treating FRCC 2 and 3 areas first would result in treating the most affected vegetation types and promoting a reduced FRCC in these areas. **Table 4-~~21~~ 22** summarizes the range of acres that could be treated in a five-year period and the effects that would have on FRCC. On areas which remain untreated, shrub and forested vegetation types that are currently FRCC 2 would move to a higher (worse) FRCC in 20 years because of a lack of disturbance. The perennial grass type is currently in FRCC 3. Consequently, for the calculations below, it was assumed that acres that were not treated would not move into a higher (worse) FRCC, although in reality, perennial grass that is treated and moves to a lower FRCC could move back into a higher FRCC over the 20-year analysis period. In the WUI, treatments would result in more fine fuels which would need to be removed through maintenance, and would also remove the heavier fuels (noxious weeds) reducing severity, intensity, and resistance to control.

Table 4-22
Results of Implementing FRCC Reduction and Maintenance Actions under Alternative A

Fire Regime Condition Class	Current Acres[1]	Current Percent of CFO Lands	Acres Treated in Five Years, Low to High Range[2]	Acres After Treatment, Low to High Range (acres)	% of CFO After Treatment, Low to High Range
FRCC 1	14,383	10%	0	24,383 – 57,258~~15,821 – 20,136~~	~~11~~20% – ~~14~~40%
FRCC 2	47,464	33%	10,000 – 42,875	46,026 – 57,532	32% – 40%
FRCC 3	81,983	57%	10,000 – 42,875	73,353 – 79,107	51% – 55%
Total	143,830		20,000 – 85,750		

[1] Acres are evaluated individually here. In Chapter 3, FRCC is reflected for vegetation types as a whole.
[2] Acres in five years based on **Appendix H**, Wildland Fire Management (see Volume II~~I~~).

The low range of the calculations performed for Alternative A is based on the BLM's 2004 budget and staffing level, which is likely a reasonably good indicator of the future budget and staffing level. The high range of the calculations is based on maximum treatment acres recommended to achieve the goals in the MFP (BLM 1981a).

In the WUI, the treatment priorities described in Chapter 2 would result in improvements in FRCC and maintenance of appropriate FRCC where it exists. When treatments are achieved to reduce or maintain FRCC 1, wildland fires would eventually burn at a severity and intensity that is historically appropriate for the vegetation type; however, in stand-replacing fire regimes (historic fire regimes III, IV, and V), FRCC I may still pose a risk to life and property. In stands with historic fire regimes I and II, this would include low-intensity fires that are much easier to control, when necessary. In

the long term, this would result in a reduced fuel load, less-dense understory vegetation, and healthier trees.

The goal of Community Wildland Fire Protection Plans is to identify WUI resources and risk and develop a strategy to reduce the risk of loss to life and property in the WUI and the infrastructure that allows the community to function. For BLM wildland fire management, this would require the reduction of fuels in WUI covered in the plans. Overall, implementing fuels reduction would reduce intensity and resistance to control of wildland fire, reducing risk to the WUI. In some instances, this could also result in a reduction in FRCC in the WUI.

Reducing the potential for stand-replacing fire would entail reducing crown closure, overall stand density, and ladder fuels. This action would reduce the risk of high-intensity fire behavior. Stand-replacing fire is a natural component of all fire regimes, but it is uncommon in historic fire regime I (frequent, low-severity fire). In the wet/cold conifer type (34,506 acres) and the cottonwood/riparian conifer type (2,474 acres) this action would require human-caused disturbance because stand-replacing fire is the historic fire regime, which is not acceptable within the WUI. In the dry conifer type, shrub, and grass types, this would improve FRCC; in the wet/cold conifer, aspen/conifer mix, and riparian types, this action would not affect FRCC.

Reducing hazardous fuels outside the WUI using fire and non-fire treatments would improve FRCC in vegetation types where hazardous fuels have increased due to wildland fire suppression, insects, disease, or noxious weeds or invasive species.

Effects from Visual Resources Management

In some cases, VRM Class I and II areas would restrict activities in forested areas that could improve FRCC or reduce the risk to WUI, particularly in the dry conifer type (**Table 4-~~22~~23**, Forested WUI Acres by VRM under Alternative A). Where WUI overlaps VRM I and II, fuel-reduction activities in forested types designed to change species composition and reduce stand densities would be inconsistent with the VRM designations.

Table 4-23
Forested WUI Acres by VRM under Alternatives A and B

WUI Areas in VRM Classes I and II	Urban WUI Acres	Rural WUI Acres
WUI in VRM Class I	0	5,803
WUI in VRM Class II	7,349	11,390
Total WUI Category in VRM Classes I and II	7,349	17,193
Total WUI Category Acres	33,584	94,093
Percentage of WUI Category in VRM Classes I and II	22%	18%

Source: BLM 2004a

Under Alternative A, some dry conifer (FRCC 3) and moist conifer (FRCC 2) outside of the WUI in VRM Class I or II areas could not be treated effectively to reduce FRCC, to reduce the risk of stand-replacing fire, or to reduce the level of hazardous fuels as required under wildland fire management.

Effects from Forest Products Management

Effective treatments to reduce insect and disease mortality would improve FRCC, although to a limited degree. In the WUI, this would reduce hazardous fuels, which would reduce risk to the WUI.

Timber management in intensive areas may or may not improve FRCC, depending on the treatment and its location. Intensive forest practices can improve species composition and stand density, which are largely the reasons for FRCC 3 in forested areas. Until activity fuels are treated, however, fuel loadings pose a hazard. Activity fuels are nearly always reduced within two years of the activity. After activity fuels are treated, hazardous fuels are significantly reduced and, in most cases, this would reduce FRCC. These treatments reduce hazardous fuels and generally reduce the risk of stand-replacing fire. Extensive management can have the same effects but often to a much lesser degree because few acres are treated.

Effects from ACEC/RNA Management

ACECs that would prohibit or restrict vegetation treatments or timber harvesting (Wapshilla Ridge, Lower and Middle Cottonwood Islands, Captain John Creek, Long Gulch, Lucile Caves, and Skookumchuck) would increase or maintain high FRCC in those areas (2,233 acres).

Alternative B

Effects from Soils Management

Effects would include those described in Alternative A. In addition, interdisciplinary review of all activities on slopes over 55 percent or with indicators of slope instability could result in fewer treatments to improve FRCC or reduce risk to the WUI. One-hundred-foot slope distance buffers around landslides and landslide-prone areas could also reduce treatment areas to improve FRCC or reduce risk to WUI.

Effects from Water Resources Management

Effects would be similar to those described under Alternative A, except 22,847 acres would be included in RCAs, compared to 24,290 included in RHCAs under Alternative A.

Effects from Vegetation—Forests Management

The DFC management areas (**Figure 6**, Desired Future Condition Blocks – Alternative B [see Volume IV of the Cottonwood Draft RMP/EIS]) were established and structural composition goals developed (**Appendix D**, Desired Future Conditions for Forest Vegetation/Wildlife Habitat – Alternatives B and C [see Volume II~~I~~]). Managing for these structural goals is consistent with managing for FRCC I. However, managing for these structural goals could prevent achievement of fuel reduction goals in the WUI. In these cases, the WUI fuel reduction goals would have priority over the structural goals to insure that risk-reduction actions were implemented.

In areas outside the DFC management areas, priorities for treatment by FRCC and WUI would ensure that the acres needing treatment the most would be treated first. This would serve to reduce the FRCC and the risk to the WUI where treatments occur. Fuel treatments can make wildland fires easier to suppress if there were less-intense fire behavior because of reduced fuel loads and reduced ladder fuels (small trees growing in the understory) (Graham et al. 2004).

Effects from Vegetation—Weeds Management

Controlling weeds and invasive species would reduce FRCC in the perennial grass type by reducing fire severity and returning the fire frequency and timing to HRV, which is the reason for the increased FRCC.

Effects from Vegetation—Rangelands Management

Maintaining existing native plants and converting nonnative plant communities to desired plant communities would reduce FRCC in the perennial grass type; reducing fire severity and returning the fire frequency and timing to HRV.

Effects from Vegetation—Riparian and Wetlands Management

Maintenance and enhancements of riparian management objectives could improve FRCC where the riparian management objectives are consistent with vegetation conditions, fuel loadings, and fire return intervals for each type. Where riparian management objectives are not consistent, treatments to reduce FRCC would not occur and FRCC would continue to increase. Riparian management objectives override all other considerations in riparian areas, except for safety considerations.

In some areas within WUI, treatments needed to reduce the risk to the WUI may not be the desired condition for RCA, or meet riparian management objectives. **Appendix F**, Aquatic and Riparian Management Strategy (see Volume II~~I~~), requires that all treatments maintain or enhance riparian management objectives even if they occur outside of RCA, and makes no allowance for treatments in the WUI that may not fit the desired condition as indicated by riparian management objectives. This restriction could prevent attainment of some fuel reduction goals within the WUI.

Effects from Wildlife and Special Status Wildlife Management

Reviewing ongoing and future activities would have the same effects as those described under Alternative A.

Managing forests and rangeland to contribute to healthy populations of rangeland- and forest-dependent species would reduce FRCC when treatments to meet wildlife needs result in restoration of species composition, structure, and fire return interval. In some instances, however, FRCC reduction and wildlife needs could conflict, resulting in increasing FRCC. Wildlife needs could also conflict with WUI treatments, resulting in continued increased risk to the WUI if wildlife needs take priority over reducing hazardous fuels.

Effects from Aquatic Resources, Fish, and Special Status Fish Management

For wildland fire management, effects would be the same as those described under the Effects from Vegetation—Riparian and Wetlands Management section, above.

Effects from Special Status Plants Management

Effects would be the same as those described under Alternative A.

Effects from Wildland Fire Management

Effects would be similar to those described under Alternative A, except wildland fire use would be restricted to Craig Mountain ~~FMU~~FMA and that portion of the Salmon ~~FMU~~FMA south and east of Riggins (**Figure H-3**, Areas Available for Wildland Fire Use—Alternative D [see **Appendix H** in Volume II~~I~~]). In these areas, wildland fire use could result in a reduced FRCC over the long term.

Table 4-~~23~~ 24 summarizes the potential effects on FRCC of management actions to reduce FRCC in Alternative B. Acres with reduced FRCC due to wildland fire use are not reflected in this table. Lower FRCC improves firefighter and public safety.

Table 4-24
Results of Implementing FRCC Reduction and Maintenance Actions under Alternative B

Fire Regime Condition Class	Current Acres[1]	Current Percentage of CFO	Acres Treated in Five years[2]	Acres After Treatment	Percentage of CFO after Treatment
FRCC 1	14,383	10%	~~17,250~~0	31,643	~~22~~17%-38%
FRCC 2 (30% treated)	47,464	33%	17,250	53,217	12%-33~~37~~%
FRCC 3 (40% treated)	81,983	57%	23,000	58,970	29%-50~~41~~%
Total	143,830		57,500	143,820~~143,830~~	

[1] Acres are evaluated individually here. In Chapter 3, FRCC is reflected for vegetation types as a whole.
[2] Acres in 5 years based on 40 percent of the CFO.

Under recent budget and staffing level levels available for fire management, the BLM has been able to treat an average of 4,000 acres per year, indicating that it is unlikely that the BLM could effectively treat over 57,500 acres in 5 years to maintain or reduce FRCC. Limitations and planning for the management of other resources would impose additional constraints on wildland fire management and could increase FRCC in some areas.

Acres by VRM class would be the same as those under Alternative A, but allowances would be made for fuel treatments to occur in WUI and for public and firefighter safety and infrastructure protection

Effects from Visual Resources Management

Effects would be the same as those described under Alternative A.

Effects from Forest Products Management

Forest products would come from forest vegetation management action, as described under the Effects from Vegetation—Forests Management section. Requirements to meet aquatic and riparian management are described under the Effects from Riparian and Wetland section, above.

Effects from Transportation and Travel Management

Decommissioning or obliterating roads could increase response time for fire suppression in restoration and conservation watersheds, possibly resulting in additional acres burned by unplanned wildland fire. This could increase the risk to WUI, and result in making it harder for BLM to achieve the stated goal of controlling wildland fires within one operating period.

Effects from ACEC/RNA Management

Effects would be similar to those described under Alternative A, except that the Lucile Caves ACEC/RNA would be reduced from 404 acres to 136 acres. ACECs that would prohibit or restrict vegetation treatments or timber harvesting (1,965 acres) would increase or maintain high FRCC in those areas.

Alternative C

Effects from Soils Management

Effects would be the same as those described under Alternative B.

Effects from Water Resources Management

Effects would similar to those described under Alternative A, except under Alternative C, RCA stream buffers would be slightly wider on perennial non-fish-bearing streams, affecting 27,624 acres compared to 24,290 acres in Alternative A. In addition, there would be more watersheds designated for restoration and conservation.

Effects from Vegetation—Forests Management

Effects would similar to those described under Alternative B, except 28,087 acres would be designated for treatments to meet DFC. FRCC would continue to increase across the CFO.

Effects from Vegetation—Weeds Management

Effects would be the same as those described under Alternative B.

Effects from Vegetation—Rangelands Management

Effects would be the same as those described under Alternative B.

Effects from Vegetation—Riparian and Wetlands Management

Effects would be similar to those described under Alternative B, except that, under Alternative C, more acres would be considered RCA unless a site-specific watershed analysis is completed.

Effects from Wildlife and Special Status Wildlife Management

Effects would be the same as those described under Alternative B.

Effects from Aquatic Resources, Fish, and Special Status Fish Management

For wildland fire management, effects would be similar to those described under the Effects from Vegetation—Riparian and Wetlands Management, above, except that more watersheds would be considered conservation or restoration watersheds, which would result in fewer treatments to improve FRCC and to reduce risk to WUI. See also Effects from Vegetation—Riparian and Wetlands Management.

Effects from Special Status Plants Management

Effects would be the same as those described under Alternative B.

Effects from Wildland Fire Management

Effects would be similar to those described under Alternative A, except wildland fire use in all ~~FMU~~FMAs could allow wildland fire use to help reduce FRCC (**Table 4-~~24~~25**) (**Figure H-1**, Areas Available for Wildland Fire Use—Alternatives A and C [see **Appendix H** in Volume II~~I~~]). Lower FRCC improves firefighter and public safety.

Under recent budget and staffing level levels available for fire management, BLM has been able to treat an average of 4,000 acres per year, indicating that it is likely that the BLM could effectively treat the 25,974 acres in 5 years to maintain or reduce FRCC under Alternative C.

Table 4-25
Results of Implementing FRCC Reduction and Maintenance Actions under Alternative C

Fire Regime Condition Class	Current Acres[1]	Current Percentage of CFO	Acres Treated in Five Years[2]	Acres after Treatment	Percentage of CFO after Treatment
FRCC 1	14,383	10%	~~7,792~~0	21,575	15%
FRCC 2 (30% treated)	47,464	33%	7,792	50,340	35%
FRCC 3 (40% treated)	81,983	57%	10,390	71,915	50%
Total	143,830		25,974	144,430 ~~143,830~~	

[1] Acres are evaluated individually here. In Chapter 3, FRCC is reflected for vegetation types as a whole.
[2] Acres in 5 years based on 20 percent of the CFO.

Effects from Visual Resources Management

Effects would be similar to those described under Alternative A, except that 20 percent of the acres in the rural WUI would need VRM considered for management (**Table 4-~~25~~26**, Forested WUI Acres by VRM under Alternative C).

Table 4-26
Forested WUI Acres by VRM under Alternative C

WUI Areas in VRM Classes I and II	Urban WUI Acres	Rural WUI Acres
VRM Class I	2,259	7,294
VRM Class II	5,090	11,481
Total WUI in VRM Classes I and II	7,349	18,775
Total WUI Acres	33,584	94,093
Percentage of WUI in VRM Classes I and II	22%	20%

Source: BLM 2004a

Outside the WUI, VRM Class I and VRM Class II would make some treatments to reduce FRCC in dry conifer and moist conifer difficult to accomplish. VRM Classes I and II on these acres and would result in no reduction in FRCC in these areas.

Effects from Forest Products Management

Effects would be the same as those described under Alternative B.

Effects from Transportation and Travel Management

Effects would be the same as those described under Alternative B.

Effects from ACEC/RNA Management

Effects would be the same as those described under Alternative B.

Alternative D

Effects from Soils Management

Effects would be the same as those described under Alternative B.

Effects from Water Resources Management

Effects would be similar to those described under Alternative A, except 20,710 acres would be included in RCAs, compared to 24,290 included in RHCAs under Alternative A.

Effects from Vegetation—Forests Management

Effects from forest management would be similar to those described under Alternative B, although there would be no DFCs or large tree goals. Treatments would still be designed to reduce FRCC and to reduce fuels in the WUI to meet goals established elsewhere under Alternative D.

Effects from Vegetation—Weeds Management

Effects would be the same as those described under Alternative B.

Effects from Vegetation—Riparian and Wetlands Management

Effects would be similar to those described under Alternative B except under Alternative D, RCA stream buffers on intermittent streams would be slightly narrow, affecting slightly fewer acres.

Effects from Wildlife and Special Status Wildlife Management

Effects would be the same as those described under Alternative B.

Effects from Aquatic Resources, Fish, and Special Status Fish Management

Effects would be similar to those described under Alternative B except under Alternative D, RCA stream buffers on intermittent streams would be slightly narrow, affecting slightly fewer acres.

Effects from Special Status Plants Management

Effects would be the same as those described under Alternative A.

Effects from Wildland Fire Management

Effects would be similar to those described under Alternative A, except wildland fire use would be severely restricted compared to Alternative A, and very few opportunities for FRCC improvement would be realized (**Figure H-3**, Areas Available for Wildland Fire Use—Alternative D [see **Appendix H** in Volume II~~I~~]). In Alternative D, 60 percent of the CFO treated in 5 years would exceed the Projected Range of Annual Fuels Treatment" in **Appendix H**, Wildland Fire Management (**Table 4-~~26~~27**).

Table 4-27
Results of Implementing FRCC Reduction and Maintenance Actions under Alternative D

Fire Regime Condition Class	Current Acres[1]	Current Percentage of CFO	Acres Treated in Five Years[2]	Acres after Treatment	Percentage of CFO after Treatment
FRCC 1	14,383	10%	~~25,875~~0	40,272	28%
FRCC 2 (30% treated)	47,464	33%	25,875	56,094	39%
FRCC 3 (40% treated)	81,983	57%	34,500	47,464	33%
Total	143,830		86,251	143,816~~14 3,830~~	

[1] Acres are evaluated individually here. In Chapter 3, FRCC is reflected for vegetation types as a whole.
[2] Acres in 5 years based on 60 percent of the CFO.

Under recent budget and staffing level levels available for fire management, BLM has been able to treat an average of 4,000 acres per year, indicating that it is unlikely that the BLM would be able to effectively treat over 86,000 acres in 5 years to maintain or reduce FRCC because of these limitations and due to planning and other resource management constraints.

Effects from Visual Resources Management

Allowances would be made for fuel treatments to occur in the WUI and for public and firefighter safety and infrastructure protection in VRM management areas. However, 814 acres of VRM Class I, where most fuel-reduction treatments would be severely limited, would be located within the rural WUI (**Table 4-~~27~~28**, Forested WUI Acres by VRM under Alternative D).

Outside the WUI, VRM Class I and VRM Class II would make treatments to reduce FRCC in dry conifer and moist conifer would be difficult to accomplish. VRM Class I and II areas and would result in no reduction in FRCC in these areas.

Table 4-28
Forested WUI acres by VRM in Alternative D

WUI Areas in VRM Classes I and II	Urban WUI Acres	Rural WUI Acres
VRM Class I	0	814
VRM Class II	4,105	10,056
Total in VRM Classes I and II	4,105	10,870
Total WUI Acres	33,584	94,093
Percentage of WUI in VRM Classes I and II	12%	12%

Source: BLM 2004a

Effects from Forest Products Management

Effects would be the same as those described under Alternative B.

Effects from Transportation and Travel Management

Effects would be the same as those described under Alternative B.

Effects from ACEC/RNA Management

Effects would be the same as those described under Alternative B.

~~**Table 4-27**~~
~~**Forested WUI acres by VRM in Alternative D**~~

~~WUI Areas in VRM Classes I and II~~	~~Urban WUI Acres~~	~~Rural WUI Acres~~
~~VRM Class I~~	~~0~~	~~814~~
~~VRM Class II~~	~~4,105~~	~~10,056~~
~~Total in VRM Classes I and II~~	~~4,105~~	~~10,870~~
~~Total WUI Acres~~	~~33,584~~	~~94,093~~
~~Percentage of WUI in VRM Classes I and II~~	~~12%~~	~~12%~~

~~Source: BLM 2004a~~

Cumulative Effects

Effects of past actions, natural events, and region-wide assessments (e.g., fire, fire suppression, logging, insect and disease, road construction, ICBEMP) that have affected fire management are documented in Chapter 3, Section 3.2.12, Wildland Fire Ecology and Management. To summarize, the fire regime and vegetation conditions have been altered from their historic fire regime and condition, and most of the CFO is in FRCC 2 or FRCC 3. Logging, fire suppression, and invasive plants (particularly in grasslands) have had the greatest effects, although insect and disease outbreaks have contributed significantly.

Effects on wildland fire management due to any of the Cottonwood RMP alternatives are overshadowed by reasonably foreseeable stand-replacing fire, continued fire suppression made necessary by WUI and intermingled landownership, and large-scale insect and disease outbreaks that would continue over the life of the RMP. Effects on wildland fire management, including FRCC and firefighter and public safety because of management accomplished by other landowners, could affect wildland fire management on public lands. When activity fuels on adjacent lands are not treated adequately, fuel hazard can increase and affect fire intensity and severity on BLM-administered lands. When adjacent owners treat fuels or implement wildfire mitigation plans in the WUI, fires are easier to suppress and firefighter safety is enhanced. All counties within CFO have adopted Community Wildland Fire Protection Plans and are beginning to implement home site evaluations and WUI treatments. Idaho Department of Lands, some private land owners and the Nez Perce Tribe are actively reducing fuels in WUI. Implementation of fire management direction in the Revised Payette National Forest Plan would result in additional acres treated inside and outside the WUI to reduce FRCC and wildland fire risk. Revising the Clearwater and Nez Perce National Forest Plan could result in more or less treatment of adjacent areas; because no decision has yet been made, the effects are unknown. Implementing the current plans results in additional treatments to reduce FRCC and risk of wildland fire in WUI. Wildland fire management on Forest Service lands will be determined in the Forest Plan decision, particularly areas where wildland fire use may occur. The BLM will need to coordinate with the Forest Service on all wildland fire use projects, as wildland fire use on Forest Service lands could affect FRCC on BLM-administered lands. Since Forest Service lands make up 63 percent of the land base in the cumulative effects analysis area, their activities have the most influence on FRCC overall. BLM lands make up less than 2 percent.

A decision to increase the level of wildland fire use or prescribed fire, along with agricultural field burning, on non-BLM lands could impact the BLM's ability to use wildland fire and prescribed fire because of air quality concerns and meeting the air quality requirements. This could postpone or eliminate fuel reductions or treatments to improve FRCC.

Wildland fuels could continue to increase as insects have and will continue to cause mortality in all conifers. Insect infestations can be exacerbated by inappropriate management, which could affect public lands. A lack of appropriate treatment could allow insect mortality to spread to BLM-administered lands from adjoining state, tribal, Forest Service, or private lands.

Population increases are likely to expand the WUI, which in turn could alter forest management, taking the emphasis off restoring historic composition and structure and focusing more on fuel reduction. There are no building codes which require fire resistant materials or defensible space, which could lead to a continual increase in the at-risk WUI as development of forested rural subdivisions continue.

Ground access is a critical component of wildland fire suppression. A trend toward reducing access to public lands due to adjacent land ownership could hamper wildland fire suppression efforts and pose a risk to public and firefighter safety.

Listings under the ESA could affect fuel-reduction treatments, and in some cases, wildland fire suppression actions. ESA listing would not override protection of life and property during wildland fire suppression, so firefighter and public safety should not be affected.

4.2.13 Cultural Resources

Goals: 1) Preserve and protect significant cultural resources and ensure that they are available for appropriate uses; and 2) Reduce imminent threats and resolve potential conflicts from natural or human-caused deterioration, or potential conflict with other resources uses, by ensuring that all authorizations for land use and resource use will comply with National Historic Preservation Act, Section 106.

Summary

Proposed management actions that could impact or increase the risk of impacts on known and unknown cultural resources include those that require ground disturbance, affect natural processes such as erosion, expose cultural resources to intense fire, open or close land to potentially incompatible uses, affect the visual setting of cultural resources, affect access to cultural resources, and remove or add land subject to federal protections for cultural resources. Most of the CFO has not been inventoried, and undiscovered cultural resources are believed to be present. The Section 106 process and tribal consultation would be completed to address anticipated impacts resulting from authorized and planned activities, but unauthorized activities, wildland fire, dispersed recreation, and natural processes could lead to impacts that may be more difficult to monitor and mitigate. Management actions include stipulations designed to avoid or reduce impacts.

The types of impacts resulting from many of the proposed resource management actions are the same or similar for each alternative. Because planned actions would be subject to review under the Section 106 process, there would be further site-specific consideration of cultural resource impacts. Overall, the emphasis in Alternative C on actions that emphasize resource conservation and protection and restrict incompatible actions would best protect significant cultural resources followed by Alternatives B, D, and then A. **Table 4-~~28~~ 29** identifies the indicators that were used to analyze effects on cultural resources under each alternative.

Table 4-29
Comparison of Cultural Resources Indicators by Alternative

Indicator	Alternative A	Alternative B	Alternative C	Alternative D
Acres and relative depth of ground-disturbing activities or removal of structural features permitted and their potential for affecting known or unknown intact cultural resources or areas of importance to Native American or other traditional communities.	No change	Decrease	Decrease	Decrease
Increased access to or activity in areas where resources are present or anticipated.	No change	Decrease	Decrease	Decrease
Extent that an action changes the potential for erosion or other natural process that could affect cultural resources.	No change	Decrease	Decrease	Decrease
Extent that the action alters the setting of cultural resources.	No change	Decrease	Decrease	Decrease

Source: BLM 2004a

Methods of Analysis

Indicators

Indicators are used to identify the level of impact. For cultural resources, the indicators used for impact analysis are identified in **Table 4-~~28~~29**, Comparison of Cultural Resources Indicators by Alternative. The primary indicator for assessing the condition and trend of cultural resources is the effect on National Register of Historic Places-eligible cultural resources or areas of importance to Native American or other traditional communities.

Methods and Assumptions

Impacts on cultural resources are assessed by applying the criteria of adverse effect as defined in 36 CFR 800.5a: "An adverse effect is found when an action may alter the characteristics of a historic property that qualify it for inclusion in the National Register of Historic Places in a manner that would diminish the integrity of the property's location, design, setting, workmanship, feeling, or association. Adverse effects may include reasonably foreseeable effects caused by the action that may occur later in time, be farther removed in distance, or be cumulative." The criteria of adverse effect provide a general framework for identifying and determining the context and intensity of potential impacts on other categories of cultural resources as well, if these are present. Assessment of effects involving Native American or other traditional community, cultural, or religious practices or resources also requires focused consultation with the affected group.

The following assumptions regarding the resource base and management practices were considered in the analysis:

- Most of the CFO has not been inventoried for cultural resources. There is potential for cultural resource occurrence in uninventoried areas, but the presence and significance of resources and impacts cannot be quantified;

- Traditional cultural properties are places associated with the cultural practices or beliefs of a living community. These cultural resource sites are rooted in the community's history and are important in maintaining cultural identity. Contemporary Native American groups such as the Nez Perce maintain social and cultural ties to the land and resources of the CFO. These cultural resources are generally not known or discussed outside of the affected community but may be present in the CFO. Maintaining access to these places is a responsibility of the BLM. Impacts on broader tribal interests in the natural resources of the CFO and the exercise of tribal treaty rights are discussed in Section 4.5.1, Native American Tribal Uses;
- Prior to authorizing a site-specific project, the federal and BLM requirements of consultation, site-specific inventory, and evaluation would be completed, and mitigation measures would be identified to minimize effects through the Section 106 process. Overall impacts could be minimized with mitigation measures, including avoidance;
- There is qualitative information that indicates areas where there is a higher probability that cultural resources would be present, relative to the whole CFO. For example, highly disturbed or recently developed areas would be less likely to include intact cultural resources;
- In the absence of inventory information, the number of acres affected and the intensity of the proposed activity is assumed to correlate to the potential number of cultural resource sites that may be affected and the potential severity of the impacts;
- With the completion of inventories for Section 106 purposes, more acres of public lands would be inventoried for cultural resources. Completion of these inventories would result in the identification and evaluation of additional cultural resource sites in the planning area requiring management actions such as protection and monitoring. Knowledge of these resources would: (1) aid in their protection from inadvertent impacts; (2) add to BLM's understanding of cultural resources both in surveyed and unsurveyed areas; and (3) potentially add to the BLM's workload in site protection, monitoring, and data recovery;
- Measures that withdraw land or restrict surface development for the purpose of resource protection can provide direct and indirect protection of cultural resources from disturbance, incompatible activities, and unauthorized activities;
- Natural processes, such as erosion or weathering, will degrade the integrity of many types of cultural resources over time. Human visitation, recreation, vehicle use, grazing, fire and nonfire vegetation treatments, and other activities can increase the rate of deterioration through natural processes. While the effect of a few incidents may be negligible, the effect of repeated uses or visits over time could increase the intensity of impacts due to natural processes;
- Vandalism or unauthorized collecting can destroy a cultural resource in a single incident. Exposure of cultural resources or access to areas where cultural resources are present can increase the risk of vandalism or unauthorized collection of materials; and
- Site monitoring, non-project-related inventories, site stabilization, and other proactive management activities would continue.

Effects Common to All Alternatives

Effects from Soils Management

Measures under all of the alternatives to limit soil erosion, manage ground-disturbing activities, and protect landslide-prone areas would enhance the preservation of cultural resources, particularly archaeological sites, in the long term.

Effects from Water Resources Management

Actions to restore watersheds and improve water quality, riparian habitat, and aquatic species could include risks of direct disturbance of cultural resources through ground-disturbing activities, such as vegetation treatments and erosion-control features, increased access, visibility and activity in the vicinity of cultural resources, or temporary loss of access if any traditional cultural properties are present. Impacts would be addressed in site-specific project review. Watershed improvements that reduce erosion and sedimentation could indirectly enhance ~~site~~ archaeological site preservation in the long term.

Effects from Vegetation—Forests Management

Forest vegetation treatment and management can impact cultural resources from ground disturbance, erosion, changes in setting, increased access, visibility and activity in the vicinity of cultural resources, and temporary loss of access to any traditional cultural properties present. There is a greater potential for impacts on cultural resources from intensive forest practices that use the full complement of commercial harvest systems and treatment methods. The potential for impacts is reduced for extensive and custodial forest practices. Effects on cultural resources from these actions would be considered in the Section 106 process. Although standard inventory and mitigation procedures would protect cultural resources, some unanticipated impacts could occur.

Effects from Vegetation—Weeds Management

There could be impacts on cultural resources from ground disturbance associated with treatments, effects of chemicals and fire, increased access, visibility and activity in the vicinity of cultural resources, and introduction of seeds and pollens, which could affect the accuracy of paleobotanical data on archaeological sites. Impacts would be addressed in site-specific project review. These actions in the long term could reduce erosion of archaeological sites and reduce the risk to cultural resources from wildland fire. There could be short-term impacts from changes in setting and loss of access during treatment to any traditional cultural properties present.

Effects from Vegetation—Rangelands Management

No specific actions are identified that could affect cultural resources, although unspecified management changes or projects to achieve objectives could include actions that reduce ground-disturbing activities and erosion and affect the cultural resources preservation.

Effects from Vegetation—Riparian and Wetlands Management

Cultural resources are often associated with riparian and wetland areas. Riparian restoration actions such as plantings, seeding, recontouring, topsoil placement, and vegetation treatments can disturb cultural resources and cause temporary loss of access to traditional cultural properties during treatments. Impacts could occur from ground disturbance associated with treatments, the effects of chemicals and fire, and introduction of seeds and pollens, which could affect the accuracy of paleobotanical data on archaeological sites. There could also be increased visibility of resources and activity in the vicinity of cultural resources. These actions could also have the indirect effect of

reducing erosion, which could enhance the archaeological site preservation. Restrictive buffers around streams and water bodies and closures to prevent actions that would degrade riparian conditions would indirectly protect cultural resources within these areas.

Effects from Wildlife and Special Status Wildlife Management

Actions to protect wildlife and wildlife habitat include restrictions or buffers that could restrict grazing, vehicle use, access, or other activities that are incompatible with maintaining wildlife and special status species. These actions could indirectly reduce the potential for direct disturbance of cultural resources and access leading to vandalism and unauthorized collecting. There could also be loss of access to traditional cultural properties. Some impacts from direct disturbance could be associated with vegetation treatments, including fire use to enhance habitat. Specific implementation actions would require further Section 106 review.

Effects from Special Status Plants Management

No specific actions are identified that could affect cultural resources, although unspecified management changes or projects to achieve objectives could include actions that impact cultural resources by reducing ground-disturbing activities and erosion. These actions would be subject to further review.

Effects from Wildland Fire Management

Fire can result in direct disturbance to cultural resources through the destruction or modification of structures, features, and artifacts. Organic materials and the information that can be obtained from their study are especially vulnerable to heat damage. Fire management and suppression activities can involve ground-disturbing activities that can also directly impact cultural resources, especially by altering the spatial relationships of archaeological sites. Fire can also result in impacts through erosion and the increased visibility of cultural resources. Fire can remove vegetation and expose previously undiscovered resources, allowing their study and protection; however, sites exposed by fire or flagged for fire avoidance in prescribed burns can be susceptible to unauthorized collection and vandalism. There could also be impacts on cultural resources from ground disturbance associated with fuel treatments and rehabilitation, the effects of chemicals and fire, and the introduction of seeds and pollens, which could affect the accuracy of paleobotanical data on archaeological sites.

The alternatives vary in the percentage of land that is targeted for particular fuel-reduction treatments and where wildland fire use would be considered. The risk of impacts on cultural resources is greatest from unplanned wildland fire, since the locations of cultural resources are less likely to be known and avoided during the fire and fire suppression. For planned fuel-reduction activities, where cultural resources would be considered prior to conducting the action, the risk of impacts would be greatest for mechanical methods and prescribed fire and less for chemical and biological treatments.

Effects from Cultural Resources Management

Management measures would preserve and protect cultural resources and help ensure that they are available for appropriate uses. Ongoing and planned management measures include proactive inventories in priority areas, consulting with federally recognized tribes, protecting and monitoring identified cultural resource areas, restricting OHV use to protect certain sites, standardizing cultural resource records, nominating resources to the National Register of Historic Places, preparing

planning and overview documents, continued implementation of the Lower Salmon River Cultural Resource Management Plan, and implementing other proactive management measures. Allocating cultural resources to use categories (scientific, conservation, traditional, interpretation, experimental, and discharged) and developing management actions in support of these designated uses would continue.

Impacts from proposed land use authorizations would be minimized or avoided by complying with laws and executive orders designed to preserve and protect cultural resources. Complying with management measures for authorized actions requires consulting with federally recognized tribes and other interested parties, identifying and evaluating cultural resources, and adhering to procedures for resolving any adverse effects and mitigating impacts. There is a greater risk of impacts resulting from unauthorized activities, natural processes, dispersed activities, and incremental or inadvertent human actions, especially where inventories are incomplete.

Effects from Visual Resources Management

VRM Class I and II designations provide indirect protection of cultural resources where visual setting is a contributor to the significance of the property or the traditional use. Requirements that new structures blend into the landscape could reduce the impact of visual intrusions. Visual intrusion on the setting of cultural resources must be considered in the Section 106 process and tribal consultation, regardless of VRM designation. Risk of impacts on cultural resources located in VRM Class I areas would also be indirectly reduced by limitations on surface-disturbing activities in these areas.

Effects from Forest Products Management

Forest product management can impact cultural resources from ground disturbance, erosion, changes in setting, and loss of access to any traditional cultural properties present. There is a greater potential for impacts on cultural resources from intensive forest practices that use the full complement of commercial harvest systems and treatment methods. The potential for impacts is reduced for extensive and custodial forest practices. Effects on cultural resources from these actions would be considered in the Section 106 process. Although standard inventory and mitigation procedures would protect cultural resources, some unanticipated impacts on resources would occur and would be proportional to the intensity of the action and affected acreage.

Effects from Livestock Grazing Management

Livestock grazing, watering locations, corrals, water haul roads, pipelines, and fences can affect cultural resources through direct disturbance and erosion. Actions that improve rangeland health could reduce the potential for impacts on cultural resources due to direct disturbance and erosion.

Effects from Minerals Management

Mineral exploration and development is associated with potential effects on cultural resources. Minerals management includes standard stipulations to reduce impacts on cultural resources. Impacts of specific actions would be considered in the Section 106 process in consultation with tribal governments. Potential impacts include direct ground-disturbing activities, erosion, intrusions to setting, and access leading to unauthorized collection or vandalism. Based on reasonably foreseeable development scenarios, very little activity is expected through the life of the RMP for fluid and solid leasable minerals. Locatable mineral development, primarily gold, and salable mineral

materials would continue, but based on minerals activities over the last 20 years, the affected acreage would likely be less than 500 footprint acres.

All of the alternatives include 12,786 acres that would be closed to fluid minerals and solid leasable mineral development. All alternatives also would continue the withdrawals on the Lower Salmon River. In total, 21,869 acres of public land and 8,062 acres of federal minerals (split estates) would be withdrawn from locatable minerals. Mineral material disposal would not be allowed on 750 acres (nondiscretionary), and 12,034 additional acres of discretionary closures are proposed. Closures of land to mineral exploration and development would have a long-term effect on cultural resources by restricting surface and other disturbances and potentially restricting incompatible uses. Withdrawals from mineral entry in the vicinity of the Salmon River would continue to protect significant cultural resources from an incompatible use.

Effects from Recreation Management

Current and proposed SRMAs would emphasize recreational use and access in these areas. Activity plans and consideration of the environmental impacts of this designation are required prior to formal designation. Significant cultural resources are present or are expected in many of these areas. Recreational use and access can impact cultural resources through direct disturbance, soil compaction, altered surface water drainage, erosion, intrusions to setting, and access leading to unauthorized collection or vandalism. The potential for impacts on cultural resources would increase as population and recreational use increases or is concentrated. All of the alternatives include provisions for recreational permitting, which can reduce the potential for impacts from overuse and dispersed recreation. The acquisition of access areas, recreational lands, and conservation easements in SRMAs could include cultural resources that would become subject to federal cultural resource protections or that could allow more options for avoiding impacts on cultural resources in river corridors while maintaining recreational opportunities. Additional effects specific to OHV use are addressed under Effects from Transportation and Travel Management.

Effects from Renewable Energy Management

Very little geothermal energy inventory and exploration is anticipated. The effects would be the same as those described under Effects from Minerals Management and include direct ground-disturbing activities, erosion, intrusions to setting, and access leading to unauthorized collection or vandalism.

Effects from Lands and Realty Management

Exchange or disposal of lands to nonfederal entities would permanently remove federal protections for any significant cultural resources present. The removal of federal protections is an adverse effect under the NHPA that would be addressed and resolved in the Section 106 process prior to disposal. The acquisition of new land would provide long-term federal protection to any cultural resources included in the transaction and could enhance currently managed resources by consolidating holdings. The criteria and priorities for acquisition include consideration of lands with unique and important resources. Land tenure adjustments that allow for better access to public lands could facilitate cultural use of traditional cultural properties but could also ~~could~~ lead to vandalism or unauthorized collection of cultural resources. Existing withdrawals of land such as the land adjacent to the Salmon River would continue to provide additional protection to cultural resources by restricting incompatible uses. Most BLM-administered land would remain open to rights-of-way and realty authorizations; however, some actions may be denied if they would result in unacceptable impacts to cultural resource values. They would be evaluated case by case.

Effects from ACEC/RNA Management

ACEC/RNA management could directly or indirectly provide long-term protection of cultural resources by restricting incompatible uses. Special management measures designed to protect resource values in ACECs would also decrease the risk of impacts on identified or unidentified cultural resources present. Under all alternatives, the risk of impacts on cultural resources from ground-disturbing activities, erosion, intrusions to setting, and access leading to unauthorized collection or vandalism would be reduced by restricting new rights-of-way and road construction in the Wapshilla Ridge and Lucile Caves ACEC/RNAs, prohibiting vegetation manipulation in the Lower and Middle Cottonwoods Islands ACEC/RNA, and restricting grazing in the Captain John Creek or the Skookumchuck ACEC/RNAs.

Effects from National Trails Management

The Nez Perce and Lewis and Clark National Trails are historic properties protected under the NHPA. Efforts to protect and enhance the values that qualify these cultural resources as National Trails are compatible and complementary with cultural resource protection.

Effects from Wild and Scenic Rivers Management

Management of the Salmon River and other suitable segments to protect identified outstandingly remarkable values would include direct and indirect protection of cultural resources in the river corridor.

Effects from Wilderness and Wilderness Study Areas Management

Surface-disturbing activities would be excluded from the Frank Church/River of No Return Wilderness, which would reduce the risk of impacts on cultural resources from ground-disturbing activities, erosion, intrusions to setting, and access leading to unauthorized collection or vandalism. Restrictions on surface-disturbing activities for lands under wilderness review would continue at the Marshall Mountain and Snowhole Rapids WSAs.

Effects from Native American Tribal Uses Management

All alternatives include provisions to consult with tribal groups, improve natural and cultural resource conditions, and identify, enhance, and facilitate cultural uses of significant plants, animals, fish, and important habitats. Recognition and inclusion of tribal knowledge and concerns with cultural resources and traditional uses would enhance the management of resources in the long term. Some use locations may be traditional cultural properties and need to be considered in the Section 106 process if affected by management actions.

Effects from Public Safety—Abandoned Mines and Hazardous Materials Management

Safety considerations and hazard reduction could require removal of historic structures and features and could involve ground and other disturbances. The impacts of hazard reduction and removal actions would be addressed in the Section 106 process, and adverse effects would be resolved. AML inventory and collection of history information would contribute to understanding the cultural resources present.

Alternative A

Effects from Soils Management

Fewer actions that could enhance the preservation of archaeological sites by limiting soil erosion, managing ground-disturbing activities, and protecting landslide-prone areas would be undertaken under Alternative A than under the other alternatives.

Effects from Water Resources Management

Fewer actions to restore watersheds would be undertaken under Alternative A than under the other alternatives, which would reduce the risks of impacts from direct disturbance or temporary loss of access to traditional cultural properties. Fewer watershed improvements would be planned that could indirectly enhance archaeological site preservation by reducing erosion.

Effects from Vegetation—Forests Management

Under Alternative A, forest management emphasizes various management strategies (such as intensive, extensive, and custodial management) to meet management objectives, such as maximum timber production, sustained yield timber production, or no timber production (although harvesting could occur for ecological reasons). The potential for impacts on cultural resources would vary by treatment type and would be addressed in site-specific Section 106 review.

Effects from Vegetation—Weeds Management

Under Alternative A, there would be fewer specified actions to prevent or treat for weeds than the other alternatives.

Effects from Vegetation—Riparian and Wetlands Management

Under Alternative A, RHCAs would total 24,290 acres. There would generally be fewer specified actions to maintain or improve wetlands and riparian areas than under the other alternatives. Cultural resources are often associated with riparian and wetland areas. Riparian restoration actions could disturb cultural resources and cause temporary loss of access to traditional cultural properties during treatments. In the long term these actions would also indirectly reduce erosion, which could enhance the preservation of archaeological sites. Restrictive buffers and closures to prevent actions that would degrade riparian conditions would indirectly protect cultural resources within these areas.

Effects from Wildlife and Special Status Wildlife Management

Under Alternative A, there would be fewer specific measures than under the other alternatives to protect wildlife and habitat through closures and restrictions on vehicle use, grazing, or access that could indirectly protect cultural resources in the areas where restrictions are designated.

Effects from Wildland Fire Management

Under Alternative A, wildland fire use would be considered for each unplanned fire, which would be the same as Alternative C (**Figure H-1**, Areas Available for Wildland Fire Use—Alternatives A and C [see **Appendix H** in Volume II~~I~~]). The risk of impacts on cultural resources is greatest from unplanned wildland fire, because the locations of cultural resources would be less likely to be known and avoided during the fire and fire suppression.. Under Alternative A, specific percentages of the CFO FRCC 2 and 3 (moderate to high risk) WUI areas would not be identified for fire risk/fuels-reduction treatments. An estimated 13 to 58 percent of CFO lands could receive fuel-reduction treatments in the next 5 years. Without fuel-reduction treatments there would be more risk in the long term to cultural resources from wildland fire.

Effects from Visual Resources Management

Proposed VRM Class I acres (12,704) and Class II acres (41,195) would be the same as Alternative B, greater than Alternative D, and less than Alternative C. VRM Class I and II designations provide indirect protection for cultural resources where visual setting is a contributor to the significance of the property or the traditional use. Class I designations could indirectly reduce risk to cultural resources from surface-disturbing activities in these areas.

Effects from Forest Products Management

Under Alternative A, the level of permitted forest practices are designated by acreage for the CFO. The estimated annual treatment acres through removal of forest products are 358 acres. It is anticipated that the treatment through the removal of forest products would be more than the other alternatives over the next 15 years, with the exception of Alternative D (361 acres). The estimated annual timber harvest of 6,600 MBF on 35,757 acres would continue.

Effects from Livestock Grazing Management

Effects would be the same as those identified for all alternatives. Under Alternative A, AUMs, allotments, and lands currently leased for livestock grazing would continue to be leased.

Effects from Minerals Management

Under Alternative A, only standard stipulations would apply to lands open to fluid and solid mineral leasing and mineral material permits, and there are no specific actions proposed regarding surface occupancy.

Effects from Recreation Management

Under Alternative A, there would be 33,197 acres of nonmotorized ROS designations, which is less than all of the other alternatives. Motorized recreation could impact cultural resources through direct disturbance, soil compaction, altered surface water drainage, erosion, intrusions to setting, and access leading to unauthorized collection or vandalism.

Cultural resource impacts would be formally considered in the development and implementation of SRMA activity plans. In the absence of activity plans, cultural resources would be protected in a manner similar to the way they are protected throughout the CFO. As recreational use increases and is concentrated in these recreational areas, the risk of impacts on cultural resources in these areas would increase. Alternative A would not specify a schedule for development of activity plans for Craig Mountain or Lolo Creek SRMAs.

Effects from Renewable Energy Management

Inventory and exploration of geothermal resources could include direct ground-disturbing activities, erosion, intrusions to setting, and access leading to unauthorized collection or vandalism. Very little geothermal energy inventory and exploration is anticipated. Impacts on cultural resources resulting from renewable energy development would be considered in the Section 106 process.

Effects from Transportation and Travel Management

Open motorized vehicle use can impact cultural resources through direct disturbance, soil compaction, altered surface water drainage, erosion, and intrusions to setting. Transportation access could facilitate access to any traditional cultural properties present for cultural uses, but it could also increase the risk of impacts on resources from unauthorized collection or vandalism.

Restricting vehicle use to existing routes would reduce the risk of disturbing cultural resources located off of travel routes. Enforcing travel routes is difficult, and unauthorized, user-created trails would continue to occur, potentially impacting cultural resources.

Under this alternative, 85,308 acres would be Open, 40,437 acres would be Limited to existing routes, and 18,054 acres would be Closed. Alternative A would result in more risk of impacts on

cultural resources than the other alternatives because of the amount of open, cross-country motorized vehicle use permitted, coupled with the expected increase in recreational use.

Effects from Lands and Realty Management

Under Alternative A, the BLM would retain all land within management blocks and would consider exchanging public lands in other areas to acquire private lands within management areas. Some unanticipated impacts could occur on CFO lands not excluded from rights-of-way, although actions may be denied if they would result in unacceptable impacts to cultural resource values.

Effects from ACEC/RNA Management

In addition to the effects common to all alternatives, under Alternative A the risk of cultural resource impacts from ground-disturbing activities, erosion, intrusions to setting, and access leading to unauthorized collection or vandalism would be reduced by restricting timber harvest or vegetation treatments in the Wapshilla Ridge ACEC/RNA, restricting timber harvest in the Captain John Creek ACEC/RNA, except for disease and insect control, restricting ground-disturbing activities in the Long Gulch ACEC/RNA, restricting vegetative treatments in the Lucile Caves or the Skookumchuck ACEC/RNAs, restricting road and right-of-way development and including measures to reduce erosion for timber harvest in the Lolo Creek ACEC, and designating Craig Mountain as an ACEC, with some restrictions on timber harvest and new rights-of-way or road construction.

Designating the Elk City Dump and American Hill Lake ACECs to protect the public from hazards could reduce impacts from some ground-disturbing activities, but remediation activities could affect the integrity of cultural resources.

Effects from Wilderness and Wilderness Study Areas Management

If released from consideration as wilderness areas, no management measures are specified for the Marshall Mountain WSA and the Snowhole Rapids WSA, which could result in surface-disturbing actions that increase the risk of impacts on cultural resources.

Alternative B

Effects from Soils Management

Additional BMPs for soil-disturbing activities and reclamation and erosion-control measures could reduce the risk to cultural resources, especially archaeological sites, from erosion and ground disturbance impacts.

Effects from Water Resources Management

Effects would be similar to those common to all the alternatives, with additional measures to improve water quality and stream characteristics that could involve some risk of cultural resource impacts from ground disturbance and removal of structures that may be historic. Additional actions to reduce erosion could also indirectly enhance archaeological site preservation.

Effects from Vegetation—Forests Management

Under Alternative B, all harvest systems and treatment methods and techniques could be used unless specifically prohibited or limited by site-specific prescription direction. The potential for impacts on cultural resources would vary by treatment type and would be addressed in site-specific Section 106 review.

Effects from Vegetation—Weeds Management

Under Alternative B there would be additional specified actions to prevent and treat lands for weeds, including physical, mechanical, biological, and chemical controls, which could impact cultural resources.

Effects from Vegetation—Riparian and Wetlands Management

Alternative B RCA stream buffers would total about 6 percent fewer acres than the RHCAs under Alternative A. This would result in decreased management emphasis on riparian restoration actions, which could result in fewer cultural resources impacts through direct disturbance, loss of access to traditional cultural properties, and reducing erosion of archaeological sites. Alternative B would provide more indirect protection to cultural resources than Alternative A through restrictions related to roads, grazing, recreation, minerals, and fire use.

Effects from Wildlife and Special Status Wildlife Management

Further restrictions under Alternative B on activities that are incompatible with wildlife management, such as grazing restrictions and closures, could indirectly enhance protection of cultural resources to a greater degree than under Alternative A. ~~Thirty-two~~Twenty-eight restoration watersheds and ~~one~~ three conservation watersheds would be designated and could lead to cultural resource impacts, as described in Effects from Vegetation—Riparian and Wetlands Management.

Under Alternative B, there would be no net increase in vehicle use of roads or trails in specific areas, and unneeded roads would be decommissioned. Cultural resources in the vicinity of these roads and trails would be afforded additional protection from direct disturbance and access leading to vandalism and unauthorized collecting, while there could be some loss of access to traditional cultural properties.

Effects from Wildland Fire Management

Under Alternative B, wildland fire use would be more restrictive than under Alternatives A and C but more restrictive than under Alternative D (**Figure H-2**, Areas Available for Wildland Fire Use—Alternative B [see **Appendix H** in Volume II~~I~~]). The risk of cultural resource impacts would be greatest from unplanned wildland fire, because the locations of cultural resources would be less likely to be known and avoided during the fire and fire suppression.

Treatment of up to 40 percent of the CFO lands classified as FRCC 2 or 3 (moderate to high risk) WUI areas would be targeted over any 5-year period, which is 50 percent more than under Alternative C and 50 percent less than under Alternative D. A direct comparison to Alternative A cannot be made because, under Alternative A, specific percentages of the CFO FRCC 2 and 3 (moderate to high risk) WUI areas are not identified. Prescribed fire would be used on up to 15 percent, mechanical treatments on up to 6 percent, and chemical and biological controls on up to 36 percent. Planned fuel-reduction treatments could impact cultural resources, with the greatest risk of impacts resulting from prescribed fire and mechanical treatments. Since treatments reduce the potential for unplanned fire spread, some indirect risk to cultural resources would be reduced.

Effects from Cultural Resources Management

Additional actions under Alternative B would enhance the current management of cultural resources by attempting to improve the consultation process, identifying priority areas for cultural resource inventories, scheduling and setting goals for resource monitoring, updating records, allocating sites to use categories, and preparing cultural resource management plans for the Elk City and Marshall

Mountains areas. These actions would have a long-term effect by increasing understanding of the cultural resources of the CFO, monitoring impacts, improving resource protection, and reducing incompatible uses.

Effects from Visual Resources Management

Effects would be the same as those identified for Alternative A.

Effects from Forest Products Management

Under Alternative B, all harvest systems and treatment methods and techniques could be used unless specifically prohibited or limited by site-specific prescription direction. The potential for impacts on cultural resources would vary by treatment type and would be addressed in site-specific Section 106 review. Estimated annual treatment acreage through removal of forest products would total 242 acres for the next 15 years, an estimated reduction of 32 percent in comparison to Alternative A.

Effects from Livestock Grazing Management

Effects would be similar to those identified for Alternative A, except that, under Alternative B, AUMs would be reduced to ~~6,254~~6,263 from 7,204, allotments would be reduced to 166 from 168, and grazed acres would be reduced to 105,619 from 122,732. Reducing grazing and implementing additional rangeland health standards under Alternatives B, C, and D would reduce the risk of impacts on cultural resources.

Effects from Minerals Management

Alternative B would include additional surface use stipulations on leasable and possibly salable minerals, which could reduce the risk on cultural resources present if mineral development occurs. The NSO-6 stipulation for cultural resources would prohibit surface occupancy within areas of cultural or spiritual value to Native American Tribes. These areas would be determined at the project level for site-specific areas. Additionally, 43,590 acres would be open to leasing of fluid minerals and solid leasable minerals, subject to NSO constraints, and 42,403 acres would be subject to CSU constraints, expanding protection of cultural resources. This alternative includes more acres with restrictions than Alternatives A and D and fewer acres with restrictions than Alternative C. As a result, there would be less risk of cultural resource impacts from fluid minerals and solid leasable minerals under this alternative than under Alternatives A and D.

Effects from Recreation Management

Under Alternative B, there would be 42,695 acres of nonmotorized ROS designations, which would be more than Alternative A. Motorized recreation could impact cultural resources through direct disturbance, soil compaction, altered surface water drainage, erosion, intrusions to setting, and access leading to unauthorized collection or vandalism. The risk of impacts on cultural resources from increased recreational use and concentration of use in particular areas would continue. Alternatives B and C would specify that activity plans be prepared for the Lolo Creek and Craig Mountain SRMAs by 2012. Activity plans would include consideration of impacts on cultural resources.

Effects from Renewable Energy Management

Very little geothermal energy inventory and exploration is anticipated. Under Alternative B, the use of biomass from vegetation treatment projects for electrical development would be considered. In addition to the risk of impacts described for vegetation treatments themselves, there would be additional acreage subject to ground-disturbing activities associated with the transport of the

material and construction of generating facilities and distribution systems. Impacts on cultural resources resulting from renewable energy development would be considered in the Section 106 process.

Effects from Transportation and Travel Management

Effects would be similar to those described for Alternative A. In addition, Alternative B would eliminate areas open to cross-country motorized vehicle use. OHV use would be Limited to designated routes on 125,729 acres. Areas Closed to motorized vehicle use would increase slightly to 18,069 acres. These alternatives would also include more outreach, enforcement, physical barriers, and monitoring measures in conjunction with route designations.

Potential impacts on cultural resources located off of travel routes would be reduced by restricting vehicle use to designated routes. Any potential effects from direct disturbance, soil compaction, altered surface water drainage, erosion, intrusions to setting, and access leading to vandalism and unauthorized collecting would be concentrated along the designated routes. The enforcement of travel routes is difficult, and unauthorized, user-created trails would continue to occur and potentially impact cultural resources.

Effects from Lands and Realty Management

Alternative B would retain approximately 113,728 acres of designated management blocks that contain high-value resources. New withdrawals and conservation easements that provide additional protection for cultural resources could be proposed.

Effects from ACEC/RNA Management

In addition to the effects common to all alternatives, under Alternative B, the risk of impacts on cultural resources from ground-disturbing activities, erosion, intrusions to setting, and access leading to unauthorized collection or vandalism would be reduced by restricting livestock grazing in the Wapshilla Ridge ACEC/RNA; restricting vegetation disturbance in the Lower and Middle Cottonwoods Islands ACEC/RNA; restricting ground-disturbing activities in the Long Gulch ACEC/RNA; restricting the construction of hydroelectric facilities, mineral entries, and new road and right-of-way development and including measures to reduce erosion for timber harvesting in the Upper and Lower Lolo Creek ACECs; expanding the Lower Salmon River ACEC from 15,702 acres to 16,199 acres; creating a Salmon River ACEC (from White Bird Creek to French Creek) to protect scenic and cultural values; creating an ACEC in the East Fork American River; protecting cultural resources through the designation of the American River Historic Sites District ACEC; and requiring that timber harvest roads be decommissioned within three years.

Alternative B would allow vegetation treatments and/or timber harvest in the Lower Salmon River ACEC and in the Wapshilla Ridge, Captain John Creek, Lucile Caves, and Skookumchuck ACEC/RNAs, which could increase the risk of impacts on cultural resources. The size of the Lucile Caves and Skookumchuck ACECs would be reduced. An ACEC would not be created at the Elk City Dump and American Hill Lake.

Overall, fewer risks of cultural resource impacts would be expected under Alternative B than under Alternatives A and D.

Effects from National Trails Management

Under Alternative B, there are additional provisions to identify and record trail segments and to develop informational and interpretive material. Additional efforts to inventory the location, condition, and setting of trails would provide better baseline information for planning and assessing impacts to these cultural resources. Public appreciation for the historic values and protection of these cultural resources could be enhanced by providing information and interpretive materials. Interpretation is an appropriate use for certain cultural resources.

Effects from Wilderness and Wilderness Study Areas Management

Under Alternative B, if Marshall Mountain WSA and Snowhole Rapids WSA were released from consideration as wilderness areas by Congress, management measures would continue to include restrictions on surface-disturbing actions that risk impacts to cultural resources.

Alternative C

Effects from Soils Management

Effects would be the same as those identified for Alternative B.

Effects from Water Resources Management

Effects would be the same as those identified for Alternative B.

Effects from Vegetation—Forests Management

Effects would be the same as those identified for Alternative B.

Effects from Vegetation—Weeds Management

Effects would be the same as those identified for Alternative B.

Effects from Vegetation—Riparian and Wetlands Management

Effects would be similar to those identified for Alternative B, except that Alternative C would increase the RCA buffers by 21 percent over Alternative B (and 14 percent over Alternative A). This is greater than all of the alternatives and could indirectly protect cultural resources.

Effects from Wildlife and Special Status Wildlife Management

Effects would be similar to those identified for Alternative B. There would be ~~40~~ 37 restoration and three conservation watersheds, which is more than the other alternatives (3 percent more than prescription watersheds under Alternative A); there also would be more restrictions on use of riparian areas. Restoration actions are associated with potential impacts on cultural resources as described in Effects from Vegetation—Riparian and Wetlands Management, while reduction of other activities in riparian zones could protect cultural resources from direct disturbance and the effects of erosion.

Effects from Wildland Fire Management

Under Alternative C, wildland fire use would be considered for each unplanned fire, which would be the same as Alternative A (**Figure H-1**, Areas Available for Wildland Fire Use—Alternatives A and C [see **Appendix H** in Volume II~~I~~]). The risk of impacts on cultural resources is greatest from unplanned wildland fire, because the locations of cultural resources would be less likely to be known and avoided during the fire and fire suppression.

Treatment of up to 20 percent of the CFO lands classified as FRCC 2 or 3 (moderate to high risk) WUI areas would be targeted over any 5-year period, which is 50 percent less than under Alternative B, and 300 percent less than under Alternative D. A direct comparison to Alternative A cannot be made because, under Alternative A, specific percentages of the CFO FRCC 2 and 3 (moderate to high risk) WUI areas are not identified. Prescribed fire would be used on up to 20 percent, mechanical treatments on up to 6 percent, and chemical and biological controls on up to 20 percent. Planned fuel-reduction treatments could impact cultural resources, with the greatest risk of impacts resulting from prescribed fire and mechanical treatments. Since treatments reduce the potential for unplanned fire spread, some indirect risk to cultural resources would be reduced.

Effects from Cultural Resources Management

Effects would be the same as those identified for Alternative B.

Effects from Visual Resources Management

Proposed VRM Class I acres (26,945) and Class II acres (46,753) are greater than the other alternatives and would provide the least risk of cultural resources impacts. Under this alternative, VRM Class I would increase 14,241 acres and VRM Class II would increase 5,558 acres in comparison to Alternative A. VRM Class I and II designations provide indirect protection for cultural resources where visual setting is a contributor to the significance of the property or the traditional use. Class I designations could indirectly reduce risk to cultural resources from surface-disturbing activities in these areas.

Effects from Forest Products Management

Effects would be similar to those identified for Alternative B, except that, under Alternative C, estimated annual treatment acreage through removal of forest products would total 191 acres, which would be the least of all the alternatives. This is 21 percent less than Alternative B and 47 percent less than Alternatives A and D.

Effects from Livestock Grazing Management

Effects would be similar to those identified for Alternative B, except that, under Alternative C, AUMs would be reduced to 6,020, allotments would be reduced to 145, and grazed acres would be reduced to 101,350, the least of all the alternatives. Reducing grazing and implementing additional rangeland health standards under Alternatives B, C, and D would reduce the risk of impacts on cultural resources.

Effects from Minerals Management

Effects would be similar to those identified for Alternative B, except that, under Alternative C, 68,854 acres would be open to leasing of fluid minerals and solid leasable minerals, subject to NSO constraints, and 59,122 acres would be subject to CSU constraints. This alternative includes more acres with restrictions than all of the other alternatives. There would be less risk of impacts on cultural resources anticipated from fluid minerals and solid leasable minerals under this alternative.

Effects from Recreation Management

Effects would be the same as those identified for Alternative B.

Effects from Renewable Energy Management

Effects would be the same as those identified for Alternative B.

Effects from Transportation and Travel Management

Effects would be similar to those identified for Alternative B. Alternative C would also include decreasing vehicle use on roads and trails in some areas, which would provide additional protection to cultural resources from direct disturbance and access leading to vandalism and unauthorized collecting.

Effects from Lands and Realty Management

Effects would be the same as those identified for Alternative B.

Effects from ACEC/RNA Management

Effects would be similar to those identified for Alternative B. In addition, under Alternative C, the risk of cultural resources impacts from ground-disturbing activities, erosion, intrusions to setting, and access leading to unauthorized collection or vandalism would be reduced by creating an ACEC at Craig Mountain with no grazing, no new rights-of-way or road construction, and limited timber removal; ~~restricting the construction of hydroelectric facilities and new road and right-of-way development, and including measures to reduce erosion for timber harvest in the Upper Lolo Creek ACEC;~~ and creating the Partridge/Elkhorn and Little Salmon ACECs, with provisions for minimal new road construction.

Overall, fewer risks of cultural resources impacts would be expected under Alternative C than under the other alternatives. More land would be placed in ACECs and RNAs than the other alternatives, and there would be more restrictions on ground-disturbing and other activities that could impact cultural resources.

Effects from National Trails Management

Effects would be the same as those identified for Alternative B.

Effects from Wilderness and Wilderness Study Areas Management

Effects would be the same as those identified for Alternative B.

Alternative D

Effects from Soils Management

Effects would be the same as those identified for Alternative B.

Effects from Water Resources Management

Effects would be the same as those identified for Alternative B.

Effects from Vegetation—Forests Management

Effects would be the same as those identified for Alternative B.

Effects from Vegetation—Weeds Management

Effects would be the same as those identified for Alternative B.

Effects from Vegetation—Riparian and Wetlands Management

Effects would be similar to those identified for Alternative B. Alternative D would decrease RCA buffers to total about 9 percent less area than Alternative B, 15 percent less than Alternative A, and 25 percent less than Alternative C. Smaller buffers could result in less indirect protection of cultural resources.

Effects from Wildlife and Special Status Wildlife Management

Effects would be similar to those identified for Alternative B, except that Alternative D would designate fewer restoration (27) and conservation (1) watersheds (19 percent less watershed acres than under Alternative B and 21 percent less than prescription watersheds under Alternative A) and would include fewer treatments to enhance habitat. There would be fewer watersheds and treatment actions, and the potential for impacts on cultural resources would be less than under Alternatives B and C.

Effects from Wildland Fire Management

Under Alternative D, wildland fire use would be considered in all areas except where it would impact commercial forest land management areas or livestock grazing (**Figure H-3**, Areas Available for Wildland Fire Use—Alternative D [see **Appendix H** in Volume II~~I~~]). This is the most restrictive alternative. The risk of impacts on cultural resources would be greatest from unplanned wildland fire, since the locations of cultural resources would be less likely to be known and avoided during the fire and fire suppression.

Treatment of up to 60 percent of the CFO lands classified as FRCC 2 or 3 (moderate to high risk) WUI areas would be targeted over any 5-year period. This would be the most fuel treatment targeted among all of the alternatives. Treatment under this alternative is 50 percent more than under Alternative B, and three times those under Alternative C. A direct comparison to Alternative A cannot be made because, under Alternative A, specific percentages of the CFO FRCC 2 and 3 (moderate to high risk) WUI areas are not identified. Prescribed fire could be used on up to 15 percent, mechanical treatments on up to 15 percent, and chemical and biological controls on up to 36 percent. Planned fuel-reduction treatments could impact cultural resources, with the greatest risk of impacts resulting from prescribed fire and mechanical treatments. Since treatments reduce the potential for unplanned fire spread, some indirect risk to cultural resources would be reduced.

Effects from Cultural Resources Management

Effects would be the same as those identified for Alternative B.

Effects from Visual Resources Management

Proposed VRM Class I acres (7,205) and Class II acres (36,180) would be less than all the alternatives and would have the highest risk of impact to the visual setting of cultural resources. VRM Class I and II designations provide indirect protection for cultural resources where visual setting is a contributor to the significance of the property or the traditional use. Class I designations could indirectly reduce cultural resources risk from surface-disturbing activities in these areas.

Effects from Forest Products Management

Effects would be similar to those identified for Alternative B, except that, under Alternative D, estimated annual treatment acreage through removal of forest products would total 361 acres, which would be the most specified among the alternatives. It is anticipated that the treatment through the removal of forest products over the next 15 years would be less than 1 percent more than Alternative A, 33 percent more than Alternative B, and 47 percent more than Alternative C.

Effects from Livestock Grazing Management

Like Alternatives B and C, Alternative D would include the implementation of additional rangeland health standards that would reduce the potential for erosion and would thereby reduce some direct impacts on cultural resources. However, under Alternative D AUMs would be increased to 8,54~~0~~9,

allotments would be increased to 170, and grazed acres would be increased to 135,850. This is the most of all of the alternatives and would increase the risk of impacts on cultural resources from grazing activities.

Effects from Minerals Management

Effects would be similar to those identified for Alternative B, except that, under Alternative D, 35,045 acres would be open to leasing of fluid minerals and solid leasable minerals, subject to NSO constraints, and 32,013 acres would be subject to CSU constraints. This alternative includes more acres with restrictions than Alternative A but fewer than Alternatives B and C.

Effects from Recreation Management

Effects would be the same as those identified for Alternative B.

Effects from Renewable Energy Management

Effects would be the same as those identified for Alternative B.

Effects from Transportation and Travel Management

Effects would be similar to those described for Alternative A. Under this alternative, 23,189 acres would be Open to cross-country motorized use, 102,542 acres would be Limited to designated routes, and 18,069 acres would be Closed. The risk of impacts from open OHV use would be reduced from Alternative A but would be much greater than Alternatives B and C, where this activity would not occur. Alternative D would result in more risk of impacts on cultural resources than the other alternatives except Alternative A because of the Open motorized vehicle use and the expected increase in recreational use.

Effects from Lands and Realty Management

Effects would be the same as those identified for Alternative B.

Effects from ACEC/RNA Management

Effects would be similar to those identified for Alternative B, except that Alternative D would create fewer ACECs to protect resources and would allow more activities in ACECs, which would impact cultural resources through ground-disturbing activities, erosion, intrusions to setting, and access leading to unauthorized collection or vandalism.

ACECs would not be created at Upper Lolo Creek, Lower Lolo Creek, East Fork American River, or the American River Historic Sites District. Cultural resources in these areas would not be subject to the ACEC management and restrictions on incompatible activities.

Unlike Alternative B, livestock grazing would be permitted in the Wapshilla Ridge ACEC/RNA. Under Alternative D, construction of hydroelectric facilities, road construction, mineral entries, or other activities would be allowed in the Lower Lolo Creek ACEC.

Overall, Alternative D would protect the fewest RNAs and ACECs and would involve the most potential ground-disturbing activities, such as roads and vegetative treatments, in areas that would be restricted under the other alternatives. The risk of impacts on cultural resources would be greatest under this alternative.

Effects from National Trails Management

Effects would be the same as those identified for Alternative B.

Effects from Wilderness and Wilderness Study Areas Management

Effects would be the same as those identified for Alternative B.

Cumulative Effects

The types of effects on cultural resources that have occurred in the past include destruction of cultural resources, loss of integrity due to physical or other disturbances, loss of setting, the effects of natural processes such as erosion and weathering, incremental disturbance from use or access, loss of access to traditional cultural properties, and effects from vandalism and unauthorized collection.

Cultural resource values have and would continue to be considered and inventoried in the acquisition and disposal of lands. In cases where resources are identified, mitigations to resolve adverse effects can preclude other desirable management options. Easier access through consolidation could facilitate better management and access to traditional cultural properties, but it also could lead to more impacts on cultural resources. Increased frequency of wildland fire in the cumulative effects area, wildland fire use, and suppression are associated with surface and other disturbances to cultural resources. Fuel and vegetation treatments including prescriptive fire treatment, timber harvest, and watershed restoration actions planned regionally are associated with impacts to cultural resources due to ground disturbance, the effects of chemicals and fire, introduction of seeds and pollens that can affect archaeological data, and potential loss of access to traditional cultural properties.

Population growth, construction associated with urban development, access changes, and growth in recreation would continue to impact cultural resources through loss or disturbance of resources that are not protected, changes in setting, pressure from incremental use, loss of access to traditional cultural properties, and access leading to vandalism of cultural resources. Historic properties and trails adjacent to areas of growth and development would be most susceptible to future impacts. Areas where open, cross-country OHV use is allowed would continue to expose cultural resources to impacts. Designating routes can protect cultural resources located off the routes, but restrictions are difficult to enforce, especially as population and recreational use grows and other areas are closed. Actions related to grazing, timber harvest, and mineral development have had past effects on cultural resources. Utilization of natural resources within the CFO planning area is expected to remain at current or slightly increased levels

For actions that could affect cultural resources on federal land or actions that are funded, licensed, or permitted by the federal government, compliance is required with the NHPA and other laws, statutes, and regulations. Consideration of the effects of undertakings on protected cultural resources would be required, and any adverse effects would be resolved. For many types of cultural resources, information on the regional cultural resource base is not available and needs to be developed to properly assess the significance of the resource base. State agency actions using federal funds or needing a federal permit require cultural resource review. Impacts on cultural resources would be avoided or mitigated in many of the regional actions. Some effects would be unavoidable. Measures are in place to identify threats to resources and to prioritize management actions, but some effects on known or unknown cultural resources resulting from activities such as natural processes, wildland fire, grazing, dispersed recreation, OHV use, and vandalism can go unnoticed and may not be mitigated. Mitigation could preclude other desirable management options and future uses. Development or actions on lands that are not protected by federal or other cultural resource statutes

and regulatory protections could lead to loss of these resources and the regional heritage and knowledge that they contain.

Cumulative effects would be similar among the alternatives. Alternative A would contribute to more regional cumulative effects resulting from land tenure adjustments, open OHV use, and wildland fire suppression. In general, Alternatives B, C, and D provide more management measures than Alternative A that would directly or indirectly reduce the potential for cumulative effects. However, each of these alternatives would also greatly accelerate fuel-reduction treatments using all available methods within five years and would have fewer restrictions on wildland fire use. Alternative B would treat up to 40 percent of the CFO lands classified as FRCC 2 or 3, Alternative C would treat 20 percent, and Alternative D would treat 60 percent. While these measures may contribute to cumulative effects on cultural resources, planned fuel reduction could reduce the potential for unplanned fires, reducing effects on cultural resources. Overall, the emphasis in Alternative C on actions that value resource conservation, protection, and minimal human intervention would have the least impact or risk of impacts to cultural resources and would contribute the least to cumulative effects, but unplanned fire risk would be the greatest.

There are ongoing actions by Native American groups to assert tribal rights and traditional uses throughout the region. The RMP recognizes that tribal knowledge contributes to the management of cultural resources and that traditional use areas or sacred sites can be traditional cultural properties that need to be treated as protected cultural resources.

4.2.14 Paleontological Resources

Goal: Preserve and protect significant paleontological resources and ensure that they are available for appropriate uses.

Summary

Impacts to paleontological resources are not anticipated. There are no known vertebrate or invertebrate fossils on public land in the CFO, but there is some potential for these resources to be present. Under all alternatives, further project planning would be conducted to review paleontological sensitivity and to address any impacts that could result from authorized activities. If resources are present, impacts would most likely result from vandalism, land tenure adjustments that remove resources from federal protection, salable mineral development, fire suppression, or other actions that require large-scale disturbance of bedrock, weathered bedrock, or unconsolidated alluvial deposits. There are additional measures specified in Alternatives B, C, and D to identify priority geographic areas for field inventory, protect any resources found, and consider scientific, educational, and recreational uses for any paleontological discoveries. **Table 4-~~29~~ 30** identifies the indicators that were used to analyze effects on paleontological resources under each alternative.

Methods of Analysis

Indicators

If scientifically important paleontological resources were located or anticipated, then the indicators identified in **Table 4-~~29~~30**, Comparison of Paleontological Resources Indicators by Alternative, are used to identify the level of impact.

Table 4-30
Comparison of Paleontological Resources Indicators by Alternative

Indicator	Alternative A	Alternative B	Alternative C	Alternative D
Acres and relative depth of ground-disturbing activities permitted	No Change	Overall decrease in ground-disturbing activities. Some increases in disturbance possible due to wildland fire and minerals	Overall decrease in ground-disturbing activities. Some increases in disturbance possible due to wildland fire and minerals	Overall increase in ground-disturbing activities. Some increases in disturbance possible due to wildland fire and minerals
Changes in access to or activities permitted in these areas	No Change	Net decrease in access	Net decrease in access	Net decrease in access
The extent that the management action changes the potential for erosion or other natural processes	No Change	Actions to reduce erosion are proposed	Actions to reduce erosion are proposed	Actions to reduce erosion are proposed

Source: BLM 2004a

Methods and Assumptions

There is no separate review process for effects on paleontological resources, but impacts are addressed under FLPMA, NEPA, other federal regulations, and BLM orders. Pursuant to FLPMA, the BLM has issued regulations that provide additional protection. Section 8365.1-5 of Title 43 CFR prohibits removing any scientific resource or natural object without authorization. There are exceptions to this prohibition for small quantities of common invertebrate fossils and petrified wood. Specific guidance is found in BLM Manual Section 8270, Paleontological Resource Management. The BLM manages paleontological resources for their scientific, educational, and recreational values and to ensure that any impacts are mitigated.

When areas containing fossils are identified during review of projects involving surface disturbance, land use authorizations, or title transfer, a formal analysis of existing data must be conducted to assess potential impacts on paleontological resources, and the need for a paleontological field inventory would be based on findings resulting from the above analysis. Consideration of impacts on paleontological resources includes an assessment of whether the project or action would result in the destruction or risk of destruction or unauthorized collection of fossils. Mitigations may be warranted where risks to vertebrate fossils, or noteworthy occurrences of invertebrate or plant fossils, are expected. Mitigation may be accomplished, for example, by 1) collecting data and fossil material, 2) by obtaining representative samples of the fossils, 3) by avoiding areas where fossils are found, or 4) in some cases by no action. In some cases, surface disturbance may expose fossils that could be excavated or interpreted for scientific study or public education.

The following assumptions regarding the resource base and management practices were considered in the analysis:

- There has not been a formal paleontological resource inventory in the CFO. Major geologic units present in the CFO generally have little fossil potential, but fossils could occur in

Martin Bridge Limestone and the Latah Formation. There are no known vertebrate or invertebrate fossils on public land in the CFO, but there are known localities on private and National Park Service lands. Mammoth remains have been found in Tolo Lake. As such, there is some potential for paleontological resources in parts of the CFO;

- The greatest potential for impacts would result from actions that include direct large-scale disturbance of bedrock, weathered bedrock, or unconsolidated alluvial deposits that may include fossils of more recent geologic age;
- Exposed fossils or scientifically important paleontological resources can be damaged by wind and water erosion, animal and human intrusion, natural deterioration, and development and maintenance activities. Vandalism and unauthorized collecting can destroy a feature or remove it from its context and availability for scientific study; and
- Excavation can reveal previously undiscovered resources and potentially allow research and interpretive uses.

Effects Common to All Alternatives

Effects from Geology Management

No paleontological resources or impacts are anticipated. If paleontological locations were found, actions to identify and allow appropriate uses of significant geological features could protect these resources from inappropriate uses. Alternatives B, C, and D also include further measures for developing scientific, educational, and recreational uses. These are appropriate uses for paleontological resources, but there could be a greater risk of impacts from vandalism and unauthorized collecting as access is improved and locations become known.

Effects from Wildland Fire Management

No paleontological resources or impacts are anticipated. Wildland fire use and suppression can involve ground-disturbing activities at depths that can directly affect paleontological resources, if present. These actions include constructing fire lines, bulldozing access roads, and using heavy equipment. High-intensity fire can also cause damage to surface fossils, including cracking, spalling, and oxidizing. Fire can result in impacts through erosion and the increased visibility of paleontological resources. Fire can also remove vegetation and expose previously undiscovered resources, allowing their study and protection; however, locations exposed by fire can be susceptible to vandalism and unauthorized collecting. More flexibility in considering the use of wildland fire is proposed under Alternatives B, C, and D.

Effects from Paleontological Resources Management

No paleontological resources or impacts are anticipated. Measures under all of the alternatives call for an inventory of areas that may contain paleontological resources prior to land use authorizations. Alternatives B, C, and D also include additional protective management measures to identify priority geographic areas for field inventory and to protect any identified resources on a case-by-case basis.

Effects from Minerals Management

Impacts to paleontological resources are not anticipated. If present, paleontological resources could be impacted by the extent and depths of ground disturbance associated with salable and locatable mineral development. However, the potential for paleontological resources would be assessed prior to authorizing these activities.

Effects from Lands and Realty Management

Impacts to paleontological resources are not anticipated. The acquisition of new land would provide long-term federal protection to any paleontological resources contained therein. Exchange or disposal of lands to non-federal entities would permanently remove federal protections for paleontological resources present. The potential for paleontological resources would be assessed prior to authorizing these activities.

Cumulative Effects

Paleontological resources are not anticipated in the CFO. Cottonwood RMP actions are not anticipated to impact paleontological resources or contribute to cumulative effects.

4.2.15 Visual Resources

Goal: Manage activities to maintain scenic quality.

Summary

Alternative C would best manage activities to maintain scenic quality followed by Alternatives A and B, with Alternative D providing the least focus on ~~promoting~~ protecting scenic quality. Fuel-reduction projects emphasized in Alternatives B and D may have short term impacts on visual quality with potential long term benefits of reducing fire risk and the associated viewshed impacts from fire. **Table 4-~~30~~ 31** identifies the indicators that were used to analyze effects on visual resources and how each alternative would affect them.

Table 4-31
Comparison of Visual Resources Indicators by Alternative

Indicator	Alternative A	Alternative B	Alternative C	Alternative D
Summary of Effects	Manages scenic quality somewhat less than Alternative C.	Manages scenic quality slightly less or similarly to Alternative A.	Scenic quality is most intensely managed.	Least-intensive management of scenic quality.
Changes to scenic quality from air quality management	No net change	No net change	No net change	No net change
Changes to scenic quality from water resources management	No net change	No net change	No net change	No net change
Changes to scenic quality from wildland fire management	No net change	Net decrease	Net increase	Net decrease
Acres by VRM class	Class I: 12,704 Class II: 41,195 Class III: 62,289 Class IV: 27,639	Class I: 12,704 Class II: 41,195 Class III: 62,289 Class IV: 27,639	Class I: 26,945 Class II: 46,753 Class III: 42,489 Class IV: 27,636	Class I: 7,205 Class II: 36,180 Class III: 72,803 Class IV: 27,635
Changes to scenic quality from PSQ	6,600 MBF (ASQ) Greatest potential change	3,129 MBF Less than A and D, more than C	3,101 MBF Least potential change	4,823 MBF Less than A, more than B and C
Changes to scenic quality from minerals management	No net change	Net increase in quality	Net increase in quality	Net increase in quality
Changes to scenic quality from transportation and travel management	No net change	Net increase in quality	Net increase in quality	Net increase in quality

Table 4-~~30~~31
Comparison of Visual Resources Indicators by Alternative *(continued)*

Indicator	Alternative A	Alternative B	Alternative C	Alternative D
Changes to scenic quality from ACEC/RNA management	No net change	Net increase in quality	Net increase in quality	Net decrease in quality
Changes to scenic quality from wild and scenic rivers management	Net increase	Net increase	Net increase	Net increase
Changes to scenic quality from wilderness and WSA management	No net change	No net change	No net change	No net change

Source: BLM 2004a

Methods of Analysis

Indicators

For visual resources, indicators used to assess impacts are outlined in **Table 4-~~30~~31**, Comparison of Visual Resources Indicators by Alternative.

Methods and Assumptions

Potential impacts on visual resources from each alternative are based on interdisciplinary team knowledge of the resources and the CFO planning area, and information gathered from the public during the planning process. Impacts were identified using best professional judgment and were assessed according to the following assumptions:

- Scenic resources would remain in demand within the CFO over the life of the RMP; and
- Conflicts regarding fuel treatments and retention of scenic beauty will increase as rural subdivision development increases; and
- The demand for recreational use would continue to increase over the life of the RMP, increasing the value of open spaces and undeveloped landscapes.

Effects Common to All Alternatives

Effects from Air Quality Management

The BLM would minimize degradation of the airshed by managing wildland fire, including prescribed fire, while meeting federal and IDEQ air quality and opacity standards. This would continue to promote visually clear skies over BLM-managed lands.

Effects from Water Resources Management

The BLM would continue to protect and maintain watersheds so that they appropriately capture, retain, and release water of quality that meets or exceeds state and federal standards. This would promote clean water in, for example, streams, resulting in visually clear aquatic landscapes.

Effects from Wildland Fire Management

The BLM would allow no more than 30 percent of CFO acres to burn in combination of wildland fire and/or prescribed fire (including wildland fire use) in any 5-year period. This would continue to

allow the landscape to be visually altered by fire over time. The BLM would design, develop, and implement hazardous fuels-reduction projects.

The BLM would base suppression methods on resource values (e.g., streams, cultural sites, WSAs, ACECs, VRM Class I and II areas, slopes and soils, and access) consistent with the Values at Risk identified in **Appendix H**, Wildland Fire Management (see Volume II~~I~~). Suppression methods would be designed to meet VRM class objectives as much as possible but could be superseded by priorities such as firefighter and public safety.

Effects from Wild and Scenic Rivers Management

Management of the outstandingly remarkable values of river segments found suitable for inclusion in the NWSRS would protect scenic values along the segments. Wild river segments are afforded a VRM Class I designation, directly increasing visual resource protection along the suitable segment.

Alternative A

Effects from Wildland Fire Management

The BLM would design, develop, and implement hazardous fuels-reduction projects. These projects should be developed and implemented consistent with the fuels treatment priorities and protocols displayed in **Appendix H**, Wildland Fire Management (see Volume II~~I~~). Fuels treatment protocols common to all ~~FMU~~FMAs (**Appendix H**, Wildland Fire Management) states treatments occurring in areas classified or inventoried as VRM Class I and II areas would consider visual qualities. Under current management, the BLM would implement fuel treatment projects only if the project fully meets existing VRM class designations. Changes to visual landscapes could occur, but the level of modification would be consistent with established VRM class objectives.

Effects from Visual Resources Management

The BLM would manage the following acreage of BLM land according to existing VRM class designations in **Table 4-~~31~~32**. VRM Class III contains the largest amount (43 percent) of acreage in the CFO planning area, allowing moderate changes to the visual landscape. Class I areas, covering smallest portion of the planning area (9 percent), strive to preserve the existing character of the landscape.

Table 4-32
VRM Classes on BLM-administered Lands

VRM Class	Alternative A (acres)	Alternative B (acres)	Alternative C (acres)	Alternative D (acres)
Class I	12,704	12,704	26,945	7,205
Class II	41,195	41,195	46,753	36,180
Class III	62,289	62,289	42,489	72,803
Class IV	27,639	27,639	27,636	27,635

Source: BLM 2004a

Effects from Forest Products Management

Under Alternative A, the level of permitted forest practices are designated by acreage for the CFO. Forest treatments located in Class I and II VRM areas would need to be designed to meet those areas objectives. Class III and IV areas would be subject to greater effects. Under Alternative A, the

estimated annual treatment acres through removal of forest products are 358 acres. It is anticipated that the treatment through the removal of forest products would be more than the other alternatives over the next 15 years, with the exception of Alternative D (361 acres). The estimated annual timber harvest of 6,600 MBF on 35,757 acres, would continue. Since the most timber would be extracted under this alternative, potential effects on visual resources from forest practices would be greatest under Alternative A.

Effects from Livestock Grazing Management

The BLM would manage the following number of grazing allotment acres on BLM-administered land with VRM designations in **Table 4-~~32~~33**. Most grazing (35 percent) would continue to occur in VRM Class III areas, and the least amount of grazing (5 percent) would occur in VRM Class I. Existing livestock facilities would continue to affect the visual resources over the long-term but lands in the CFO are agricultural and intermixed with private lands where livestock and livestock handling facilities are common components of the viewshed. New range improvements would be developed so to blend with the viewshed.

Table 4-33
VRM Class on Livestock Grazing Allotments

VRM Class	Alternative A (acres)	Alternative B (acres)	Alternative C (acres)	Alternative D (acres)
Class I	6,572	6,572	15,691	6,044
Class II	35,133	32,533	22,145	28,552
Class III	50,715	40,463	39,009	69,938
Class IV	25,961	23,517	21,890	26,937

Source: BLM 2004a

Effects from Minerals Management

The BLM would manage areas designated as open and closed to minerals according to **Table 4-~~33~~34**.

Table 4-34
Minerals Designations by VRM Class for Alternatives A and B

Minerals Designations	VRM Class I (acres)	VRM Class II (acres)	VRM Class III (acres)	VRM Class IV (acres)	Total (acres)
Leasables Open	0	39,734	62,276	27,608	129,619
Leasables Closed	12,704	1,450	0	0	14,154
Locatables Open	5,826	24,946	62,165	27,594	120,530
Locatables Closed	6,878	16,238	112	15	23,242
Salables Open	0	41,033	62,273	27,608	130,914
Salables Closed (discretionary and nondiscretionary)	12,704	151	3	0	12,858

Source: BLM 2004a

Leasable, locatable, and salable minerals activities would be allowed on 90 percent, 84 percent, and 91 percent, respectively, of BLM-administered land. The BLM would not designate NSO and CSU areas and there would be no mineral leasing stipulations; rather, stipulations would be established on

a case-by-case basis. Not requiring stipulations could result in surface disturbances (such as road construction and site development) associated with minerals activities that could damage visual resources.

Effects from Transportation and Travel Management

The BLM would manage areas designated as open, limited, and closed to motorized vehicles according to **Table 4-~~34~~35**.

There would be no change in the designation of Open, Limited, and Closed areas for motorized vehicles under this alternative. The majority of OHV areas designated as Open are within VRM Class II and III areas. Most areas designated as Closed to motorized use are within VRM Class I areas. These designations provide protection to sensitive visual landscapes while allowing cross-country OHV use to continue in areas with lower VRM objectives.

Table 4-35
Motorized Vehicle Use Area by VRM Class for Alternative A

Motorized Vehicle Use Area	VRM Class I (acres)	VRM Class II (acres)	VRM Class III (acres)	VRM Class IV (acres)	Total (acres)
Open	3	25,207	37,205	22,896	85,311
Limited	0	12,914	22,816	4,707	40,437
Closed	12,701	3,074	2,268	11	18,054

Source: BLM 2004a

Effects from Lands and Realty Management

The BLM would manage land designated for retention and disposal according to **Table 4-~~35~~36**.

Table 4-36
Retention and Disposal Areas by VRM Class for Alternative A

Land Tenure Adjustment	VRM Class I (acres)	VRM Class II (acres)	VRM Class III (acres)	VRM Class IV (acres)	Total (acres)
Retention	12,624	37,038	36,034	10,773	96,468
Disposal	80	4,157	26,256	16,866	47,358

Source: BLM 2004a

There would be no change to land tenure adjustment and most of the land being retained would be VRM Class II and III.

Effects from ACEC/RNA Management

The BLM would manage areas designated as ACECs and ACEC/RNAs according to VRM designations in **Table 4-~~36~~37**. There would be no change in the designation of ACECs and ACEC/RNAs, so there would be no new effects.

Effects from Wilderness and Wilderness Study Areas Management

There would be no new WSAs or Wilderness, and WSAs and Wilderness would continue to be managed under VRM Class I management objectives, resulting in no new impacts. Should the WSAs be released by Congress from wilderness consideration, there are no actions under Alternative A related to how the WSAs would be managed, resulting in undetermined effects on visual resources.

Table 4-37
VRM Classes in ACECs and ACEC/RNAs

VRM Class	Alternative A (acres)	Alternative B (acres)	Alternative C (acres)	Alternative D (acres)
Class I	6,172	6,172	20,192	6,172
Class II	13,634	20,545	30,130	15,473
Class III	5,215	7,438	6,185	2,077
Class IV	439	220	3,740	84

Source: BLM 2004a

Alternative B

Effects from Wildland Fire Management

Effects would be similar to those described for Alternative A, except under Alternative B, the BLM would strive to meet VRM objectives as much as possible while implementing fuel treatment projects. Changes to visual landscapes could occur and the level of modification could be inconsistent with established VRM class objectives. Fuel treatments allowed in the WUI could affect VRM Class I and II areas, however, treatments would be severely limited and designed to meet VRM class objectives as much as possible.

Effects from Visual Resources Management

The effects would be similar to Alternative A. Additionally, Alternative B places more emphasis than Alternative A on managing activities that affect visual resources instead of just managing visual resources. This would provide more comprehensive protection to visual resources in general.

Effects from Forest Products Management

Effects would be similar to those described for Alternative A, except under Alternative B, the estimated annual treatment acres through removal of forest products would be 242 acres. It is anticipated that the treatment through the removal of forest products over the next 15 years would be 21 percent more than Alternative C, but 32 percent less than Alternatives A and D.

Effects from Livestock Grazing Management

The BLM would manage grazing allotments with VRM designations in **Table 4-~~32~~33**, VRM Classes on Livestock Grazing Allotments. There would be no change in the number of acres for livestock grazing in VRM Class I areas in comparison to Alternative A. Under this alternative, 79 percent of the VRM Class II land would be used for grazing, thereby providing greater protection (a 6-percent decrease from Alternative A) to visual resources in VRM Class II areas from livestock grazing impacts, such as trampled vegetation. This would provide greater protection to areas with high scenic qualities (i.e., VRM Class I and II areas).

Effects from Minerals Management

The areas open for leasables, locatables, and salables would be the same as those described under Alternative A (**Table 4-~~33~~34**, Minerals Designations by VRM Class for Alternatives A and B). Under this alternative, leasable mineral activities would be constrained by NSO and CSU stipulations (**Table 4-~~37~~38**).

Table 4-38
Mineral Leasing Stipulations by VRM Class for Alternative B

Minerals Designations	VRM Class I (acres)	VRM Class II (acres)	VRM Class III (acres)	VRM Class IV (acres)	Total (acres)
Leasables NSO	<1	25,141	14,002	4,395	43,538
Leasables CSU	<1	41,110	1,115	174	42,400

Source: BLM 2004a

NSO and CSU stipulations (43,538 acres and 42,400 acres, respectively) would afford visual resources protection from surface disturbances (such as road construction and site development) associated with minerals activities. It is important to note, however, that the acres for NSO and the acres for CSU overlap.

Effects from Transportation and Travel Management

The BLM would manage areas designated as open, limited, and closed to motorized vehicles according to **Table 4-~~38~~39**.

Table 4-39
Motorized Vehicle Use Area by VRM Class for Alternative B

Motorized Vehicle Use Area	VRM Class I (acres)	VRM Class II (acres)	VRM Class III (acres)	VRM Class IV (acres)	Total (acres)
Open	0	0	0	0	0
Limited	3	38,121	60,018	27,603	125,744
Closed	12,701	3,074	2,268	11	18,054

Source: BLM 2004a

Alternative B would provide more protection to visual resources than Alternative A because there would be no Open areas for cross-country motorized vehicles. Closed areas would remain unchanged. Most motorized vehicle use would occur in areas designated as both Limited and VRM Class II, III, or IV, with the greatest use occurring in areas designated as both Limited and VRM Class III. In Limited areas, motorized vehicle use would be allowed on designated routes. Although existing cross-country motorized vehicle use is low within Open areas (which comprise 59 percent of the planning area), eliminating all Open OHV areas would generally improve scenic quality by reducing the amount of terrain scarring and vegetation damage from motorized vehicles.

Effects from Lands and Realty Management

The BLM would manage land designated for retention and disposal according to **Table 4-~~39~~40**.

Table 4-40
Retention and Disposal Areas by VRM Class for Alternative B

Land Tenure Adjustment	VRM Class I (acres)	VRM Class II (acres)	VRM Class III (acres)	VRM Class IV (acres)	Total (acres)
Retention	12,703	39,317	47,750	13,961	113,730
Disposal	1	1,878	14,540	13,678	30,096

Source: BLM 2004a

Compared to Alternative A, the BLM would retain more land in each individual VRM class, with the most additional land being retained having a VRM Class III designation. This would result in continued protection of visual resources.

Effects from ACEC/RNA Management

The BLM would manage areas designated as ACEC/RNAs according to VRM designations in **Table 4-~~36~~37**, VRM Classes in ACECs and ACEC/RNAs. Compared to Alternative A, the number of acres of ACEC/RNAs designated as VRM Class I would remain the same, and the number of acres of ACEC/RNAs designated as VRM Class II and III would both increase by approximately 50 percent. This could provide more protection to visual resources because management actions within ACEC/RNA designations typically limit certain activities to provide more protection to sensitive or valuable resources. For example, if the reason for designation is to protect vegetation or habitat, then the visual landscape associated with those resources would also be protected from disturbance and degradation.

Effects from Wilderness and Wilderness Study Areas Management

Should WSAs be released from wilderness consideration by Congress, the Snowhole Rapids WSA would be managed as VRM Class I, and the Marshall Mountain WSA would be managed as VRM Class II. Compared to Alternative A, this could result in less protection of the special visual resources in the Marshall Mountain WSA that were, in part, originally responsible for making the area suitable for designation as a WSA.

Alternative C

Effects from Wildland Fire Management

The effects would be the same as those described under Alternative B.

Effects from Visual Resources Management

Alternative C would provide more protection to visual resources than Alternative A. Most notably, Alternative C would more than double the amount of land designated as Class I. It would also increase by 5,558 acres the amount of land designated as Class II. Additionally, Alternative C places more emphasis than Alternative A on managing activities that affect visual resources instead of only managing visual resources. This would provide more comprehensive protection to visual resources in general.

Effects from Forest Products Management

Effects would be similar to those described for Alternative A, except under Alternative C, the estimated annual treatment acres through removal of forest products would be 191 acres, the least of all alternatives. It is anticipated that the treatment through the removal of forest products over the next 15 years would be 21 percent less than Alternative B and 47 percent less than Alternatives A and D.

Effects from Livestock Grazing Management

The BLM would manage grazing allotments with VRM designations in **Table 4-~~32~~33**, VRM Classes on Livestock Grazing Allotments. Under Alternative C, 58 percent of the VRM Class I land would be used for grazing, a 6-percent increase from Alternative A, which would diminish the unaltered quality of VRM Class I lands. Approximately 47 percent of VRM Class II land would be used for grazing, a decrease of 38 percent in comparison to Alternative A. Although more VRM Class I

lands would be grazed, overall this alternative would provide greater protection to visual resources in comparison to Alternative A because less land would be used for grazing.

Effects from Minerals Management

The BLM would manage areas designated as open and closed to minerals according to **Table 4-~~40~~41**.

Table 4-41
Minerals Designations by VRM Class for Alternative C

Minerals Designations	VRM Class I (acres)	VRM Class II (acres)	VRM Class III (acres)	VRM Class IV (acres)	Total (acres)
Leasables Open	14,241	45,293	42,477	27,605	129,615
Leasables Closed	12,704	1,450	0	0	14,154
Locatables Open	26,197	31,283	10,743	7,049	75,272
Leasables NSO	14,241	33,655	12,432	8,471	68,800
Leasables CSU	11,368	46,699	907	174	59,119
Locatables Closed	14,423	8,774	31	15	23,242
Salables Open	14,241	46,592	42,473	27,605	130,911
Salables Closed (discretionary and nondiscretionary)	12,704	150	3	0	12,857

Source: BLM 2004a

The percent of areas open for leasables, locatables, and salables would be the same as under Alternative A. Leasable mineral activities, however, would be constrained by the NSO and CSU stipulations (68,800 and 59,119 acres, respectively), which would afford visual resources protection from surface disturbances (such as road construction and site development) associated with minerals activities. It is important to note, however, that the acres for NSO and the acres for CSU overlap. In addition, Alternative C opens more VRM Class I and II land to locatables and salables compared to Alternative A, thereby provide less protection to visual resources areas of high value.

Effects from Transportation and Travel Management

The BLM would manage areas designated as open, limited, and closed to motorized vehicles according to **Table 4-~~41~~42**.

Table 4-42
Motorized Vehicle Use Area by VRM Class for Alternative C

Motorized Vehicle Use Area	VRM Class I (acres)	VRM Class II (acres)	VRM Class III (acres)	VRM Class IV (acres)	Total (acres)
Open	0	0	0	0	0
Limited	11,687	44,606	41,852	27,600	125,745
Closed	15,258	2,148	637	11	18,054

Source: BLM 2004a

Similar to Alternative B, this alternative would provide more protection to visual resources than Alternative A, because there would be no areas designated as Open for OHV use. Although the

total area closed to motorized vehicles would remain unchanged, more emphasis would be placed on protecting visual resources in areas designated as both closed and VRM Class I. Alternative C provides the most opportunities for motorized vehicle use in VRM Class I areas (which would be in areas designated as limited). Most motorized vehicle use would occur in areas designated as both Limited and VRM Class II, III, or IV, with the greatest use occurring in areas designated as both limited and VRM Class II. In areas designated as limited, motorized vehicle use would be allowed on certain routes to protect visual resources by reducing the amount of terrain scarring from motorized vehicles and disturbances to vegetation.

Effects from Lands and Realty Management

The BLM would manage land designated for retention and disposal according to **Table 4-~~42~~43**.

Table 4-43
Retention and Disposal Areas by VRM Class for Alternative C

Land Tenure Adjustment	VRM Class I (acres)	VRM Class II (acres)	VRM Class III (acres)	VRM Class IV (acres)	Total (acres)
Retention	26,698	44,776	28,296	13,959	113,728
Disposal	247	1,977	14,194	13,677	30,095

Source: BLM 2004a

Compared to Alternative A, the BLM would retain more land in VRM Class I and II areas, with the most additional land being retained having a VRM Class I designation. This would result in continued protection of visual resources characterized as having high value.

Effects from ACEC/RNA Management

The BLM would manage areas designated as ACEC/RNAs according to VRM designations in **Table 4-~~36~~37**, VRM Classes in ACECs and ACEC/RNAs. Compared to Alternative A, the number of acres of ACEC/RNAs designated as VRM Class I would more than triple, and the number of acres of ACEC/RNAs designated as VRM Class II would double. The number of acres of ACEC/RNAs designated as VRM Class IV would increase eightfold. This alternative would provide more protection to visual resources because management actions within ACEC/RNA designations typically limit certain activities to provide more protection to sensitive or valuable resources. For example, if the reason for designation is to protect vegetation or habitat, then the visual landscape associated with those resources would also be protected from disturbance and degradation.

Effects from Wilderness and Wilderness Study Areas Management

The effects would be the same as those described under Alternative B.

Alternative D

Effects from Wildland Fire Management

The effects would be the same as those described under Alternative B.

Effects from Visual Resources Management

Alternative D would provide less protection to areas with high scenic qualities (i.e., VRM Class I and II areas) than Alternative A. Most notably, Alternative D would reduce the amount of land designated as Class I by approximately 43 percent. It would also decrease by approximately 12 percent the amount of land designated as Class II.

Similar to Alternatives B and C, Alternative D places more emphasis than Alternative A on managing activities that affect visual resources instead of just managing visual resources. This would provide more comprehensive protection to visual resources in general.

Effects from Forest Products Management

Effects would be similar to those described for Alternative A, except under Alternative D, the estimated annual treatment acres through removal of forest products would be 361 acres, the most of all alternatives. It is anticipated that the treatment through the removal of forest products over the next 15 years would be less than 1 percent more than Alternative A, 33 percent more than Alternative B, and 47 percent more than Alternative C.

Effects from Livestock Grazing Management

The BLM would manage grazing allotments with VRM designations in **Table 4-~~32~~33**, VRM Classes on Livestock Grazing Allotments. Under Alternative D, 84 percent of the VRM Class I land would be used for grazing, a 32-percent increase from Alternative A, which would diminish the unaltered quality of VRM Class I lands. Approximately 79 percent of the VRM Class II land would be used for grazing, a decrease of 6 percent in comparison to Alternative A. Overall, this alternative provides the least visual resource protection through grazing management in comparison to all alternatives.

Effects from Minerals Management

The BLM would manage areas designated as open and closed to minerals according to **Table 4-~~43~~44**.

Table 4-44
Minerals Designations by VRM Class for Alternative D

Minerals Designations	VRM Class I (acres)	VRM Class II (acres)	VRM Class III (acres)	VRM Class IV (acres)	Total (acres)
Leasables Open	0	30,595	71,415	27,605	129,615
Leasables Closed	7,205	5,574	1,375	0	14,154
Locatables Open	6,456	28,284	14,175	5,315	54,980
Leasables NSO	<1	21,143	9,977	3,870	34,991
Leasables CSU	<1	30,607	1,232	174	32,013
Locatables Closed	6,879	14,862	1,487	14	23,242
Salables Open	0	30,595	72,711	27,605	130,911
Salables Closed (discretionary and nondiscretionary)	7,205	5,574	80	0	12,859

Source: BLM 2004a

The percentage of areas open for leasables, locatables, and salables would be the same as Alternative A. Leasable mineral activities, however, would be constrained by the NSO and CSU stipulations in **Table 4-~~43~~44**, Mineral Leasing Stipulations by VRM Class for Alternative D. NSO and CSU stipulations (34,991 acres and 32,013 acres, respectively) would afford visual resources protection from surface disturbances (such as road construction and site development) associated with minerals activities. It is important to note, however, that the acres for NSO and the acres for CSU overlap. In addition, Alternative D would opens more VRM Class III land to locatables and salables compared

to Alternative A, thereby providing more protection to visual resource areas of high value (VRM Class I and II).

Effects from Transportation and Travel Management

The BLM would manage areas designated as open, limited, and closed to motorized vehicles according to **Table 4-~~44~~45**.

Table 4-45
Motorized Vehicle Use Area by VRM Class for Alternative D

Motorized Vehicle Use Area	VRM Class I (acres)	VRM Class II (acres)	VRM Class III (acres)	VRM Class IV (acres)	Total (acres)
Open	2	724	11,774	10,688	23,188
Limited	0	26,885	58,762	16,911	102,558
Closed	7,205	8,571	2,268	10	18,054

Source: BLM 2004a

In general, Alternative D would provide more protection to visual resources than Alternative A, because there would be fewer areas designated as Open for OHV use. Although the total area closed to motorized vehicles would remain unchanged, less emphasis would be placed on protecting visual resources in areas designated as both closed and VRM Class I, and more emphasis would be placed on protecting visual resources in areas designated as both closed and VRM Class II. Most motorized vehicle use would occur in areas designated as both Limited and VRM Class II, III, or IV, with the greatest use occurring in areas designated as both limited and VRM Class III. In areas designated as Limited, motorized vehicle use would be allowed on designated routes to protect visual resources by reducing the amount of terrain scarring from motorized vehicles and disturbances to vegetation.

Effects from Lands and Realty Management

The BLM would manage land designated for retention and disposal according to **Table 4-~~45~~46**.

Table 4-46
Retention and Disposal Areas by VRM Class for Alternative D

Land Tenure Adjustment	VRM Class I (acres)	VRM Class II (acres)	VRM Class III (acres)	VRM Class IV (acres)	Total (acres)
Retention	7,204	35,035	57,530	13,959	113,728
Disposal	1	1,144	15,273	13,677	30,095

Source: BLM 2004a

Compared to Alternative A, the BLM would retain more land in VRM Class III and IV areas and less in VRM Class I and II areas. This would result in continued protection of visual resources characterized as having moderate to low value and the loss of protection of visual resources characterized as having high value.

Effects from ACEC/RNA Management

The BLM would manage areas designated as ACEC/RNAs according to VRM designations in **Table 4-~~36~~37**, VRM Classes in ACECs and ACEC/RNAs. Compared to Alternative A, the number of acres of ACEC/RNAs designated as VRM Class I would remain the same, and the number of acres of ACEC/RNAs designated as VRM Class II would increase by 1,839 acres. However, the number of acres of ACEC/RNAs designated as VRM Class III and IV would decrease by 3,493 acres. As a result, 1,675 acres would no longer be designated as ACEC/RNAs. Management activities associated with these acres would still be required to comply with VRM class management objectives; however, the visual resources associated with these lands would no longer be afforded the added protection associated with ACEC/RNA designation, which limits the types of allowable activities.

Effects from Wilderness and Wilderness Study Areas Management

The effects would be the same as those described under Alternative B.

Cumulative Effects

Effects of past actions and natural events including wildland fires, wildland fire suppression, mining, vegetation treatments, sale of forest products, motorized vehicle use, noxious weed invasion, subdivision of rural lands, and road construction have affected visual resources in the CFO planning area.

Foreseeable future actions affecting visual resources within the CFO planning area mirror many of the actions that have occurred in the past. The BLM cannot prevent certain events, such as landscape level projects conducted by other agencies like the Forest Service, nor can the BLM entirely prevent events such as wildland fires. The BLM does have greater control over activities, such as mining, the sale of forest products, and motorized vehicle use. The public living closer to public lands creates challenges to managing visual resources on public lands immediately adjacent to urban areas. It is assumed that the BLM would update its VRM class designations, if necessary.

All alternatives would continue to contribute to the protection of visual resources. Alternative A could contribute to scenic quality effects through timber management activities. Alternatives B and D, and to a lesser extent Alternative C, could contribute to adverse scenic quality effects through fuel-reduction projects because VRM guidelines could generally not be met. Overall, Alternatives B, C, and D would improve VRM class retention, increase actions to protect scenic quality from mineral activities and travel and transportation management, and increase viewsheds along wild and scenic rivers, in comparison to Alternative A.

4.3 RESOURCE USES

4.3.1 Forest Products

Goal: Provide forest products to help meet local and national demands.

Summary

Alternative A best meets the goal of providing forest products to help meet local and national demands, followed by Alternative D, B, and then C. In all alternatives, RCA stream buffers and protection measures for wildlife, special status species, and visual quality would limit where, how,

and when treatments could occur. **Table 4-~~46~~ 47** identifies the indicators that were used to analyze effects on forest products under each alternative.

Table 4-47
Comparison of Forest Products Indicators by Alternative

Indicator	Alternative A	Alternative B	Alternative C	Alternative D
Predicted annual PSQ in MBF	6,600 (ASQ)	3,129	3,101	4,823
Acres of forest management per year	358	242	191	361
Acres of forest management in a 15-year period[1]	Estimated 5,370	3,630	2,865	5,415
Annual PSQ foregone for custodial forest	unknown	2,488	2,731	2,235
Commercial Forest Base Acres	35,757	40,598	34,611	45,190

Source: BLM 2004a

[1] Based on the annual acres of forest management multiplied by 15 years.

Methods of Analysis

Indicators

Indicators are used to identify the level of impact. For forest products management, the indicators used for impact analysis are identified in **Table 4-~~46~~47**, Comparison of Forest Products Indicators by Alternative.

Methods and Assumptions

This analysis is based on the following methods and assumptions:

- Alternative A depicts ASQ (the average timber volume allowed), while the PSQ (the timber volume estimated to be reasonable considering environmental, economic, and budgetary condition) is predicted in Alternatives B, C, and D. ASQ and PSQ can not be directly compared;
- Social and economic opportunities will be accomplished following vegetation management objectives, and actions and effects are included in the vegetation management discussion;
- Forest product goals can be achieved while still meeting other resource management requirements;
- Burned timber may be salvaged in all areas unless it is specifically prohibited, including timber burned as a result of prescribed fire or wildland fire use; and
- Management actions related to protection of water quality, riparian areas, soils, fisheries, wildlife, special status plants, and ACECs, among others, affect the acres and output of forest products and are considered in the estimated PSQ.

Effects Common to All Alternatives

Effects from Soils Management

Protecting landslide-prone and sensitive areas could restrict timber harvesting in these areas. Decommissioning, obliterating, or partially recontouring roads would make them unavailable for use for producing forest products. This could result in constructing additional roads elsewhere or using other potentially more-expensive logging systems.

Effects from Water Resources Management

Road management actions specified in **Appendix F**, Aquatic and Riparian Management Strategy (see Volume III), could result in areas where timber harvesting is limited because it could require using other potentially more-expensive helicopter or skyline systems.

Water quality protection measures would affect transportation and logging systems. This could reduce timber volume availability in some watersheds.

Effects from Vegetation—Riparian and Wetlands Management

Riparian and wetlands actions would have the same effect on forest products as those described under the Effects from Vegetation—Riparian and Wetlands Management in the Vegetation—Forests section (Section 4.2.5) for each alternative.

Effects from Wildlife and Special Status Wildlife Management

Providing suitable habitat for and reducing impacts on federally listed species could result in areas where forest product removal would be prohibited or restricted. The effects depend on the listed species and the requirements for each species of concern.

Effects from Special Status Plants Management

Modifying projects to avoid or minimize adverse impacts on listed plants would result in areas where forest product removal would not be allowed or would be restricted.

Effects from Wildland Fire Management

Wildland fire use could reduce merchantable forest products in some areas if they are completely consumed by fire or could create merchantable forest products if the burned timber is salvaged.

Suppressing fires would prevent forest products from being burned.

Treating areas to reduce FRCC or hazardous fuels would produce some forest products.

Effects from Visual Resources Management

Effects would be the same as those described under the Effects from Visual Resources Management in the Vegetation—Forests section (Section 4.2.5).

Effects from Wild and Scenic Rivers Management

Effects would be the same as those described under the Effects from Wild and Scenic Rivers Management in the Vegetation—Forests section (Section 4.2.5).

Effects from Cultural Resources Management

Minimizing effects by redesigning or canceling projects could reduce the availability of forest products.

Effects from ACEC/RNA Management

Effects would be the same as those described under the Effects from ACEC/RNA Management in the Vegetation—Forests section (Section 4.2.5) for each alternative.

Effects from Livestock Grazing Management

Effects would be the same as those described under the Effects from Livestock Grazing Management in the Vegetation—Forests section (Section 4.2.5).

Effects from Native American Tribal Uses Management

Consulting with tribes to identify culturally significant plants, important habitats, and traditional use locations could limit production of forest products in areas not previously identified or could limit actions in planned treatment areas.

Alternative A

Effects from Vegetation—Forests Management

See Effects from Forest Products Management, below.

Effects from Forest Products Management

Based on timber harvest output since 1992, which averaged 2,000 to 11,000 MBF annually, the annual ASQ is estimated at about 6,600 MBF on approximately 358 acres. This estimate serves as a baseline for comparing alternatives. Under Alternative A, 24,257 acres would be intensive management, 11,500 acres would be extensive management, resulting in 35,757 acres of forest land would be included in the commercial timber base. The remaining 37,549 acres of forest land would be considered custodial and would not be managed for timber, although harvesting could occur for other ecological reasons.

Requirements to maintain snags and hiding cover in cutting units could affect both the efficiency of timber harvesting (making it more expensive or difficult) and reduces the amount harvested in each unit.

Reforestation requirements would ensure that adequate restocking occurs for future timber production.

Alternative B

Effects from Vegetation—Forests Management

Under Alternative B, 40,598 acres of forest land would be included in the commercial timber base. The remaining forest land would be considered custodial and would not be included in the commercial base for PSQ calculations, although harvesting could occur for ecological reasons.

Approximately 21,403 acres of commercial forest (62 percent of the commercial forest; **Table 4-~~47~~48**) would be in the 1,000-acre or larger blocks subject to DFC (24,789 acres) (**Appendix D**, Desired Future Conditions for Forest Vegetation/Wildlife Habitat [see Volume II~~I~~]). Maintaining more of the large tree components in the dry conifer types would reduce the timber volume removed per acre in those types. Dry conifer is the most common type in the CFO and where most forest products production occurs; therefore, by reducing the volume per acre removed, more acres would need to be harvested for each MBF. Additionally, longer rotations (years between initiation and cutting) would be needed to reach and maintain the large tree component, resulting in few acres available for longer periods of time, as compared to Alternative A, which does not have this DFC.

Designating custodial forest would result in the loss of 2,483 MBF of sale quantity timber per year on 224 acres (**Table 4-~~46~~47**, Comparison of Forest Products Indicators by Alternative).

Table 4-48
Commercial Forest in Desired Future Condition Blocks under Alternative B

Total Commercial Forest Land	Total in DFC blocks	Commercial Forest Land in DFC Blocks	Percent of DFC Blocks that are Commercial Forest Land	Percent of Commercial Forest Land in DFC Blocks
40,598 acres	24,789 acres	21,403 acres	86%	53%

Source: BLM 2004a

Effects from Wildlife and Special Status Wildlife Management

Volume would be reduced due to large tree retention, so forest vegetation management would become more expensive, resulting in situations where the BLM must pay to have trees removed, instead of the timber purchaser paying the BLM for the timber.

Effects from Forest Products Management

The PSQ is calculated based on acres that can be managed. Acres that are reserved for other purposes such as ACECs, special designations, or custodial forest reduce the potential PSQ. In Alternative B, approximately 242 acres (**Table 4-~~46~~47**, Comparison of Forest Products Indicators by Alternative) could be harvested annually for an output of 3,129 MBF. The potential output (based on vegetation type, current tree size, and stocking level) is 5,375 MBF on 458 acres annually, indicating that custodial acres would cause the PSQ to be reduced by 42 percent of its potential output. Reforestation requirements would ensure that adequate restocking occurs for future timber production.

Effects from Transportation and Travel Management

Decommissioning or obliterating roads would make them unavailable for most forest vegetation management actions, requiring more-expensive helicopter or skyline systems.

Alternative C

Effects from Vegetation—Forests Management

Under Alternative C, 34,611 acres of forest land would be included in the commercial timber base. The remaining forest land would be considered custodial and would not be managed for timber, although harvesting could occur for other ecological reasons.

Approximately 21,607 acres (62 percent of the commercial forest; **Table 4-~~48~~49**) would be in the 500-acre or larger blocks subject to DFC (28,087 acres) (**Appendix D**, Desired Future Conditions for Forest Vegetation/Wildlife Habitat [see Volume II~~I~~]). Effects would be similar to those described under Alternative B.

Effects of designating custodial forest would be the 2,759 MBF of sale quantity per year on 273 acres (**Table 4-~~46~~47**, Comparison of Forest Products Indicators by Alternative).

Table 4-49
Commercial Forest in Desired Future Condition Blocks under Alternative C

Total Commercial Forest Land	Total in DFC blocks	Commercial Forest Land in DFC Blocks	Percent of DFC Blocks that are Commercial Forest Land	Percent of Commercial Forest Land in DFC Blocks
34,611 acres	28,087 acres	21,607 acres	77%	62%

Source: BLM 2004a

Effects from Wildlife and Special Status Wildlife Management

Effects would be similar to those described for Alternative B, except changes in timber sale value would decline even more with the requirements to retain more large trees.

Effects from Forest Products Management

In Alternative C, approximately 191 acres could be harvested annually for an output of 3,101 MBF. The potential output is 5,861 MBF on 464 acres annually, indicating that custodial acres would cause the PSQ to be reduced by 47 percent of its potential output (**Table 4-~~46~~47**, Comparison of Forest Products Indicators by Alternative). Reforestation requirements would ensure that adequate restocking occurs for future timber production.

Effects from Transportation and Travel Management

Effects would be the same as those described for Alternative B.

Alternative D

Effects from Vegetation—Forests Management

Under Alternative D, 45,190 acres of forest land would be included in the commercial timber base. The remaining forest land would be considered custodial and would not be managed for timber, although harvesting could occur for other ecological reasons.

Effects of designating custodial forest would be the loss of 2,210 MBF of sale quantity per year on 187 acres.

Effects from Forest Products Management

In Alternative D, approximately 361 acres could be harvested annually for an output of 4,823 MBF. The potential output is 7,033 MBF on 548 acres annually, indicating that custodial acres would cause the PSQ to be reduced by 32 percent of its potential output (**Table 4-~~46~~47**, Comparison of Forest Products Indicators by Alternative). Reforestation requirements would ensure that adequate restocking occurs for future timber production.

Cumulative Effects

Effects of past actions, natural events, and region-wide assessments (e.g., fire, logging, insect and disease, road construction, ICBEMP) that have affected forest products are documented in Chapter 3 (Section 3.3.1, Forest Products). In summary, PSQ has declined over the last 20 years, and the small log market has developed.

Timber harvesting levels have declined on all federal lands in northern Idaho, have held relatively constant on state lands, and have increased on private lands. Using 2003 figures for the 10 northern counties, the BLM produced 0.4-percent of the timber sold in northern Idaho between 1994 and 2003.

Wildland fires and insect and disease would continue to cause tree mortality. Currently, some dead trees are salvage logged, although logging response to fire or insect and disease has also declined across all federal lands and has held relatively constant on state and private lands. It is uncertain whether future mortality would result in an increase in output (from salvage logging) or a decrease in output (due to loss of trees without salvage logging).

Implementing the National Fire Plan and fuel-reduction treatments on adjacent lands could produce more commercial forest products. The effect on the overall market would be minimal because of the percentage contributed to the market by BLM-administered lands. These types of treatments frequently produce very small-sized products or biomass. The market trend for these products is expected to increase as more mills become able to handle them, and as more uses for the product are developed.

4.3.2 Livestock Grazing

Goal: Provide opportunities for grazing, while meeting rangeland health standards.

Summary

Alternative D would best provide opportunities for grazing while meeting Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management (BLM 1997a) (**Appendix A** [see Volume II~~I~~]), followed by Alternative A then Alternative B, with Alternative C providing the least opportunities for grazing. Actions under most resource categories have the potential to affect livestock grazing. Grazing would be impacted when part of an allotment is restricted during vegetation treatments, prescribed burning, reforestation, or watershed or riparian restoration. Grazing exclusion areas designed to protect wildlife, sensitive species, or cultural or paleontological resources would impact livestock grazing. Mineral and energy development also would minimally impact livestock grazing in the short and long term by decreasing the amount of grazing acreage available during construction and operation of these facilities. **Table 4-~~49~~ 50** identifies the indicators that were used to analyze effects on livestock grazing under each alternative.

Table 4-50
Comparison of Livestock Grazing Indicators by Alternative

Indicator	Alternative A	Alternative B	Alternative C	Alternative D
Change in Acres under Lease for Grazing				
Lands available for livestock grazing	No net change: 122,732 acres	Net decrease: 105,619 acres	Net decrease: 101,350 acres	Net increase: 135,850 acres
Grazing lands available for disposal	41,880 acres	30,098 acres	30,098	30,098
Change in AUMs Permitted on Allotments				
Available AUMs (Note: Other resource activities that change grazing acres would have same impact on AUMs)	No net change: 7,~~204~~ 200 AUMs	Net decrease: ~~6,254~~6,263 AUMs	Net decrease: 6,020 AUMs	Net increase: 8,54~~0~~9 AUMs

Table 4-50
Comparison of Livestock Grazing Indicators by Alternative *(continued)*

Indicator	Alternative A	Alternative B	Alternative C	Alternative D
Types of Livestock Authorized on Allotments[1]				
Number of allotments that have cattle grazing	157	155	135	159
Number of cattle AUMs	6,211	5,270	5,030	7,556
Number of allotments that have sheep grazing	4	4	4	4
Number of sheep AUMs	894	894	894	894
Number of allotments that have horse grazing	13	13	12	13
Number of horse AUMs	99	99	96	99

Source: BLM 2004a

[1] This table does not reflect the total number of allotments by alternative because some allotments are authorized for both cattle and horses, and cattle and sheep.

Methods of Analysis

Indicators

Management actions could result in impacts on livestock grazing management if they directly or indirectly changed the quantity and availability of the forage base. Changes in the forage base could result from vegetation treatments and management of fish and wildlife and special status species habitat, wildland fire, forestry, minerals, lands and realty, recreation, and special designations. Indicators that are used to quantitatively and qualitatively assess management changes that could affect livestock grazing are summarized in **Table 4-~~49~~50**, Comparison of Livestock Grazing Indicators by Alternative.

Methods and Assumptions

Impacts on livestock grazing are generally the result of activities that affect management of forage levels for individual grazing allotments and/ or reduction of allotment acreage. Impact analysis is based on interdisciplinary team knowledge of resources and the planning area, review of existing literature, and information provided by BLM specialists. Certain assumptions are made, including:

- Data regarding grazing allotments are compiled from BLM sources;
- BLM will continue to complete Rangeland health assessments in accordance with the Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management (1997)~~Rangeland health assessments are and would continue to be conducted on all allotments and under all alternatives on a yearly basis, based on a 10-year cycle~~;
- Monitoring of allotments is occurring yearly based on allotment priority and potential for impacts due to grazing use; and
- Scattered parcels surrounded by private land are difficult to control season of use and number of AUMs utilized.

Effects Common to All Alternatives

Effects from Air Quality Management

Actions associated with air quality management would have long-term effects on the livestock grazing program. Air quality issues that affect vegetation include particulate matter and fugitive dust from wildland fire use and prescribed fire. Dust could reduce the quality and regenerative capacity of shrubs, forbs, and grasses and would decrease the availability and palatability of forage for livestock. Implementing prescribed fire under the guidelines put forth by the Montana/Idaho Airshed Group and adhering to IDEQ BMPs to reduce air emissions would indirectly affect livestock forage in the long term.

Effects from Soils Management

Soils management considerations would generally result in enhanced vegetative conditions through actions designed to reduce erosion, which would indirectly increase forage levels for livestock. Where the potential for accelerated erosion exists or where soil cover (vegetation and litter) could be improved, changes in the livestock season and duration of use would be required to improve vegetative cover and to reduce impacts on soils. Long-term effects on livestock operations would result from implementing grazing adjustments designed to protect vegetation and soil resources. Measures identified to limit soil erosion and ground-disturbing activities would affect livestock grazing activities by permanently or temporarily closing affected areas within allotments to grazing.

Effects from Water Resources Management

Any project designed to enhance watershed health would also enhance vegetation resources by reducing erosion, which would have the indirect effect of increasing forage levels for livestock. However, livestock grazing would be affected by the need to adjust or modify current livestock management to achieve the Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management (BLM 1997a) (**Appendix A** [see Volume II~~I~~]). In addition, grazing restrictions on season and duration of use would result from actions designed to protect and enhance water resources. Protecting water quality and watershed health would in some cases require changes in livestock management, such as deferred or shortened grazing periods, riparian pastures, increased cattle herding, and upland water development.

Management actions that result in increased water availability and forage base would indirectly affect livestock through improved livestock distribution and increased weight gain and conception rates. Protecting water quality standards would also affect livestock grazing by successfully managing habitat and water supplies for livestock grazing.

Effects from Vegetation—Weeds Management

Livestock do not always graze on weeds and invasive species. Encroachment of weeds into grazing areas reduces the preferred forage for livestock until treated. Actions to prevent and control invasive and noxious weeds using integrated weed management techniques could affect livestock grazing in the short term if livestock are excluded in the treatment areas until revegetation has taken place. Livestock grazing would improve over the long term by increasing forage, as the ecological condition of vegetation in grazing allotments improves following restoration.

Effects from Vegetation—Rangelands Management

Vegetation treatments designed to enhance vegetative conditions would directly affect livestock grazing activities by enhancing and increasing the forage base and vegetation age and structural

diversity, thereby improving livestock distribution and forage utilization. Vegetation treatment areas would receive short-term deferment to allow vegetation to recover. However, enhanced forage availability and forage base would be realized over the long term with herbaceous vegetation replacing woody shrub species.

Effects from Vegetation—Riparian and Wetlands Management

Livestock adjustments in riparian areas could also be needed to meet a PFC rating and the Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management (BLM 1997a) (**Appendix A** [see Volume II~~I~~]). Vegetation/fuel treatment could improve vegetation composition in riparian areas. Managing vegetation to meet DFCs would affect livestock grazing by providing shade in riparian areas within woody communities; however, there would be a reduction in forage availability and forage base.

Effects from Wildlife and Special Status Wildlife Management

Grazing conflicts could arise where there is direct competition with wildlife for forage. Big game species, such as elk and deer, compete for similar forage as cattle, sheep, and horses. During certain times of the year, the competition can be more pronounced. In the fall, sheep and cattle prefer the same browse species as deer and elk. Indirect impacts also could occur. For example, if elk calving occurred within grazing allotments, the calving areas could be closed to livestock during the calving season (spring).

Livestock management adjustments would be considered when wildlife and livestock conflicts arise as a result of competition for water, forage, or cover. In wildlife crucial habitat areas, livestock management adjustments would be implemented to reduce short- and long-term livestock impacts on wildlife. In addition, uneven distribution of big game causes some grazing allotments to receive a disproportionate amount of the total wildlife grazing within the planning area, which could necessitate adjustments in livestock management. Water developments designed to provide new water sources for wildlife in some situations would result in increased water availability for livestock, which would promote long-term improved distribution of both livestock and wildlife.

Actions to protect federally listed and BLM sensitive species and their habitats could affect livestock grazing by limiting grazing areas and seasons of use. For example, if a species were discovered within an allotment, the habitat could be protected by an exclosure during season of use. Sensitive wildlife habitats (e.g., crucial winter range) would also influence the location, timing of construction, and cost of range improvements.

Effects from Aquatic Resources, Fish, and Special Status Fish Management

Protection of springs, seeps, and adjacent riparian areas from grazing animals would provide cleaner and more dependable water sources for livestock. Fisheries actions, such as stream restoration and fish reintroduction, could reduce available forage through the construction of exclosures and riparian pastures. In addition, adjustments in livestock management, such as timing and duration of grazing, could be needed to ensure adequate fish habitat.

Effects from Special Status Plants Management

Actions to protect federally listed and BLM sensitive plant species could affect livestock grazing by limiting grazing areas and seasons of use. For example, if a listed plant species were discovered within an allotment and the species were being adversely affected by livestock grazing, it could require construction of an exclosure to protect it.

Effects from Wildland Fire Management

Grazing could be affected by wildfires and planned vegetative treatments, such as prescribed fire, chemical treatment, seeding, and brush and tree removal. BLM policy recommends that areas burned by wildland fire and prescribed burns for fuels-reduction project sites receive a minimum of two growing seasons of rest from livestock grazing or until vegetation objectives are met. Livestock closures for less than two growing seasons may be justified on a case-by-case basis, based on sound resource data and experience.~~BLM policy requires that areas burned by wildland fires and prescribed burns for fuel-reduction project sites receive a minimum of two growing seasons of rest from livestock grazing to ensure species regrowth and that existing vegetation or seeded vegetation become established.~~ In addition, vegetation resource objectives must be reached before grazing is reauthorized. Wildland fire could be used in all cover types and would have the same effect as prescribed burning.

Prescribed fires would have some impacts that would initially displace livestock and temporarily reduce forage and AUMs. Over the long term, prescribed fire normally improves forage base and availability in all vegetation cover types, which could improve livestock distribution. Chemical and mechanical treatments would also be used in all cover types to provide long-term benefits for vegetation and livestock. Only treatments approved for use on BLM-administered lands would be used. Generally, these treatment types would have a short-term impact on livestock grazing. Chemical treatments would focus largely on spot treatments to control noxious weeds and invasive species. Mechanical treatments would be used to remove conifers encroaching on aspen.

Deferring livestock use for two or more years after a wildland fire or some vegetation treatment allows new vegetation to establish and would have a short-term effect on livestock by temporarily reducing available AUMs and modifying grazing systems. Livestock would use unburned areas during the recovery period, or there would be temporary reductions in grazing use if other comparable forage or unused allotments were not available. Actions could also require that livestock be completely removed from allotments. Allotment restrictions would be managed on a site-specific, case-by-case basis for each vegetation treatment. Lessees could be required to lease additional private land, purchase additional forage, or reduce livestock numbers during interim periods when grazing is temporarily suspended. Wildland fires would have direct short-term impacts where wildland fire use damages livestock improvements such as fences and corrals, resulting in increased maintenance needs for the livestock operator and the need to herd livestock. Wildland fires could also reduce the pastures available for use.

Effects from Cultural Resources Management

In general, management actions associated with cultural resources affect relatively small localized areas and would have negligible effects on livestock forage. Even under the most intensive management, such as excavation, the acreage disturbed would be small. Fencing some cultural sites could exclude grazing and cause a loss of available forage. Restrictions on surface-disturbing and other disruptive activities near cultural sites could require that some range improvements be modified or relocated, and in rare cases improvements could be precluded. This too would have short-term negative effects on grazing.

Effects from Paleontological Resources Management

Effects would be the same as those described under Effects from Cultural Resources Management, above.

Effects from Visual Resources Management

Livestock and livestock handling facilities are a common and expected component within private and public lands in the Planning Area. Restrictions in VRM Class I and II areas could change the type, design, and location of new range improvements, but the restrictions would not necessarily preclude development that would result in long-term effects.

Effects from Livestock Grazing Management

~~The objectives and actions identified in Chapter 2, alternatives, affects the livestock grazing program by changing allotment boundaries, zeroing out vacant allotments, and implementing the Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management (BLM 1997a) (Appendix A [see Volume III]).~~

~~Changing allotment boundaries and zeroing out allotments could impact grazing by reducing or increasing the amount of forage available to livestock. Implementing the Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management (BLM 1997a) (Appendix A [see Volume III]) ensure healthy functional rangelands and productive livestock grazing practices~~The objectives and actions identified in Chapter 2, Alternatives, affects the livestock grazing program by determining allotment boundaries, class of livestock, season-of-use, and AUMs.

Effects from Minerals Management

Approximately 92 to 94 percent of grazing allotments would be open to mineral leasing, 81 to 84 percent would be open to locatable mineral development, and 93 to 95 percent would be open to salable mineral production under all alternatives. Impacts would be generally the same under all alternatives. Mineral development would impact livestock grazing in the short and long term by decreasing the amount of grazing acreage available during construction and operation of such facilities.

Effects from Recreation Management

Recreation would result in both direct and indirect short- and long-term effects on livestock grazing. Recreation activities would impact livestock grazing on public lands that allow for multiple uses by reducing forage through disturbance, and providing opportunity for harassment of grazing animals. Actions to protect recreation values could also impact livestock grazing by closing some areas to livestock grazing that overlap with specific recreation sites. Recreation would have some effect on livestock grazing through direct human disturbance, which displaces animals and injures or kills animals in vehicle-animal collisions on roads or highways. Grazing closures in recreational areas would result in a small loss of forage. Effects on livestock grazing would result from the temporary removal of vegetation by campers in concentrated areas. Vandalized range projects and gates left open would also affect grazing operations. These impacts would increase over the life of the RMP because the popularity of outdoor recreation is increasing. Educating members of the public who use these areas and emphasizing the benefits of multiple-use management would reduce some of these conflicts and could create advocates for traditional uses of BLM lands.

Effects from Renewable Energy Management

Developing solar, biomass, or wind energy could impact livestock grazing in the short and long term by decreasing the amount of grazing acreage available during construction and operation of such facilities in multiple-use areas.

Effects from ACEC/RNA Management

Managing ACEC/RNAs would result in direct and indirect effects on livestock grazing. In general, the protections afforded to these areas, such as restrictions on surface-disturbing and other disruptive activities, would help maintain and improve vegetation conditions, thereby maintaining or improving the forage base for livestock. However, some ACEC/RNA proposals could restrict grazing within specially designated areas, change seasons of use or implement additional management requirements.

Effects from Wilderness and Wilderness Study Areas Management

Managing WSAs would result in direct and indirect effects on livestock grazing. In general, the protections afforded to these areas, such as restrictions on surface-disturbing and other disruptive activities, would help maintain and improve vegetation conditions, thereby maintaining or improving the forage base for livestock.

Effects from Native American Tribal Uses Management

No specific effects have been identified from management actions regarding Native American tribal uses. The BLM would continue to consult with tribes regarding treaty rights, cultural access, and use of plants, animals, fish and habitats. Consultation could result in identifying areas where current or proposed livestock grazing could need to be modified to accommodate tribal uses or to avoid resources important to tribes. However, it is unlikely that accommodating tribal uses would be inconsistent with providing opportunities for grazing within the CFO in the long-term.

Effects from Public Safety—Abandoned Mines and Hazardous Materials Management

Actions to clean up newly discovered waste sites could temporarily impact livestock grazing practices by fencing off part of an allotment during cleanup and restoration of that site. Actions to correct and cleanup hazards and to protect closed sites would also help protect livestock from possible injury or contamination and well as improve the vegetative conditions around the sites.

Alternative A

Effects from Geology Management

Identifying and allowing for appropriate uses of significant geologic features would not impact livestock grazing practices.

Effects from Vegetation—Forests Management

The estimated treatment acreage of 760 acres of forested vegetation could impact livestock grazing in any two-year period. The short-term livestock grazing effects from reforestation would include the exclusion of livestock from reforested areas for two years. This would result in a short-term reduction in available grazing acreage and associated AUMs where reforestation coincides with grazing allotments. The long-term effects of excluding livestock from reforested areas would include the improvement in health, biomass, and diversity of forage in the areas once they are reopened to grazing.

Effects from Vegetation—Riparian and Wetlands Management

Approximately 2,128 acres of riparian habitat (2 percent) of the 122,732 acres available for livestock grazing could impact livestock grazing practices under Alternative A. The objective to improve degraded riparian and wetland habitat across the CFO would affect livestock grazing if current grazing practices were the reason riparian habitat objectives were not being met. Monitoring of

current use does not indicate improving degraded riparian habitat is contrary to livestock grazing in Alternative A. Localized impacts to grazing may occur where monitoring indicates current use is not compatible with riparian objectives. These impacts may include implementing restoration measures that require the exclusion of grazing use, permanently or temporarily closing affected areas, and additional management requirements such as herding or vegetation use criteria.

Effects from Wildland Fire Management

Wildland fire use could occur on all CFO acres. The short-term livestock grazing effects from implementing prescribed burning would include the exclusion of livestock from prescribed burn areas for potentially a minimum of two years. This would result in a short-term reduction in available grazing acreage and associated AUMs where prescribed burn areas coincide with grazing allotments. The long-term effect of excluding livestock from prescribed burn areas would include the improvement in health, biomass, and diversity of forage in the areas once they are reopened to grazing following the successful stabilization of soils and vegetation. Rehabilitation activities, particularly seeding would occur as soon as possible but not more than three years following a wildfire or prescribed burn event. Projects that would not be implemented immediately following fire could extend the time livestock would be restricted from areas, resulting in an additional temporary, short-term loss of the forage base.

Effects from Visual Resources Management

VRM I and II areas where livestock grazing occurs under Alternative A, (mainly along the Lower Salmon River) are in a pastoral area and adjacent to upslope private lands, where livestock and livestock handling facilities are a common and expected component. Livestock are visible in the viewshed on both private and public lands. Class I and II management areas could impact livestock grazing in allotments when new range improvements (e.g., fencing) are needed. The design and placement of new range improvements in those areas would have to be constructed in such a way as to repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape (as identified in BLM Handbook H-8410-1). Class III objectives state that the level of change to character of the landscape should be moderate; however, management activities could dominate the view and be the major focus of viewer attention (as identified in BLM Handbook H-8410-1). **Table 4-~~32~~33**, VRM Class by Livestock Grazing Allotment (located in section 4.2.15, Visual Resources), shows the VRM classes that overlay grazing allotments under each alternative.

Effects from Forest Products Management

Short-term and long-term effects due to exclusion of livestock following reforestation are described under Effects from Vegetation—Forests, above.

Effects from Livestock Grazing Management

Intensive management would be implemented in 13 allotments that incorporate rest grazing on 22,615 acres and deferred grazing on 27,700 acres. Intensive management would impact livestock grazing in the short-term by excluding livestock grazing from treatment areas until such time as management objectives are met. The long-term effect of excluding livestock from treatment areas would include the improvement in health, biomass, and diversity of forage in the areas once they are reopened to grazing.

Effects from Minerals Management

Mineral development would impact livestock grazing in the short and long term by decreasing the amount of grazing acreage available during construction and operation of such facilities. Under Alternative A, mineral leases would be evaluated on a case by case basis in order to determine constraints and stipulations mandated by the lease (i.e., NSO or CSU) (**Table 4-~~50~~51**).

Table 4-51
Mineral Stipulations within Grazing Allotments

Mineral Stipulation	Alternative A	Alternative B (acres)	Alternative C (acres)	Alternative D (acres)
NSO	Case-by-case basis	32,950	35,397	32,427
CSU	Case-by-case basis	33,820	30,967	29,428

Source: BLM 2004a

Effects from Recreation Management

General effects of recreation on livestock grazing are described under Effects Common to All Alternatives, above. Approximately 20 percent (24,278 acres) of available grazing areas would continue to be located in SRMAs.

Effects from Renewable Energy Management

Developing solar, biomass, or wind energy could impact livestock grazing in the short and long term by decreasing the amount of grazing acreage available during construction and operation of such facilities in multiple-use areas. Alternative A does not actively pursue renewable energy development and therefore would not likely impact livestock grazing.

Effects from Transportation and Travel Management

Under Alternative A, 66 percent (80,869 acres) of available grazing areas would continue to be designated as Open travel areas, which would allow cross-country motorized vehicle use (**Table 4-~~51~~52**, Travel Designations within Grazing Allotments). Increased demand for OHV use, could impact livestock grazing by increasing human-caused noise, dust, and vegetation disturbance, and by allowing greater opportunity for the harassment of grazing animals.

Table 4-52
Travel Designations within Grazing Allotments

Travel Designation	Alternative A (acres)	Alternative B (acres)	Alternative C (acres)	Alternative D (acres)
Open	80,869	0	0	23,814
Limited	30,839	95,657	91,649	100,436
Closed	10,959	9,897	9,633	11,538

Source: BLM 2004a

Effects from Lands and Realty Management

Table 4-~~52~~ 53 displays land tenure actions proposed under all alternatives within available grazing allotments. Approximately 34 percent (41,880 acres) of available grazing allotments would be available for disposal or exchange under Alternative A. These allotments could be impacted if and when exchanges occur, if they result in a reduction in AUMs.

Table 4-53
Land Tenure within Grazing Allotments

Realty Action	Alternative A (acres)	Alternative B (acres)	Alternative C (acres)	Alternative D (acres)
Retention Areas	80,855	75,055	72,840	105,286
Disposal Areas	41,880	30,564	28,574	30,564

Source: BLM 2004a

Effects from ACEC/RNA Management

Five ACEC/RNAs (21,484 acres) are located within grazing allotments under Alternative A. ACEC/RNAs could impact livestock grazing by limiting grazing within each ACEC/RNA, depending on the type of management identified. For example, under Alternative A, the Captain John Creek, Long Gulch, and the Skookumchuck ACEC/RNAs exclude livestock grazing. The Lucile Caves ACEC/RNA excludes livestock grazing within 136 acres of a fenced area.

Effects from Wilderness and Wilderness Study Areas Management

Protecting WSAs would impact livestock grazing by limiting additional range improvements and significant changes in grazing within each WSA until released by Congress (if that were to occur) for multiple uses. Approximately 6,045 acres of 13 allotments lie within the Snowhole Rapids WSA, and 528 acres of the Marshall Mountain Allotment lies within the Marshall Mountain WSA under Alternative A.

Alternative B

Effects from Geology Management

Limited public or commercial access to protected geologic sites could affect livestock grazing by preventing grazing in areas identified to be protected and could reduce AUMs that would otherwise be available under Alternative B. This impact would be slightly greater than under Alternative A.

Effects from Vegetation—Forests Management

Estimated treatment acreage of 466 acres of forested vegetation could impact livestock grazing in any two-year period under Alternative B. The short-term livestock grazing effects from reforestation would include the exclusion of livestock from reforested areas until such time as management objectives are met. This would result in a short-term reduction in available grazing acreage and associated AUMs where reforestation coincides with grazing allotments. The long-term effect of excluding livestock from reforested areas would include the improvement in health, biomass, and diversity of forage in the areas once they are reopened to grazing. Less acreage would be impacted under Alternative B, however, these impacts could be greater or less than impacts under Alternative A depending on the time it takes to meet management objectives (greater or less than two years as identified in Alternative A).

Effects from Vegetation—Riparian and Wetlands Management

The 1,880 acres of riparian habitat (2 percent) of the 105,619 acres available for livestock grazing could impact livestock grazing practices under Alternative B. Impacts would be the same as those described under Alternative A.

Effects from Wildlife and Special Status Wildlife Management

No new domestic sheep or goat grazing would be authorized where such would result in risk of disease transmission to bighorn sheep. This would limit potential for additional sheep and goat grazing in some areas. On existing sheep grazing allotments, coordination with grazing lessee's and appropriate state/federal agencies, and tribes would be taken to reduce or eliminate risks for domestic sheep transmission of disease. Primary focus would occur on allotments with high risk for disease transmission to bighorn sheep (**Table 4-15**, BLM Sheep Allotments and Risk Analysis for Disease Transmission to Bighorn Sheep). This would result in potential restrictions or modifications on existing sheep allotments.

Effects from Wildland Fire Management

Effects of Alternative B would be similar to those described in Alternative A, except effects of wildland fire use could occur in the Craig Mountain ~~FMU~~FMA and in portions of the Salmon ~~FMU~~FMA (**Figure H-1**, Areas Available for Wildland Fire Use—Alternatives A and C [see **Appendix H** in Volume II~~I~~]).

Effects from Visual Resources Management

VRM classes within available grazing areas under Alternative B would be similar to Alternative A (**Table 4-~~32~~33**, VRM Class by Livestock Grazing Allotment), as would impacts on new livestock grazing range improvements.

Effects from Forest Products Management

Short-term and long-term effects due to exclusion of livestock following reforestation are described under Effects from Vegetation—Forests, above.

Effects from Livestock Grazing Management

~~The Wapshilla Ridge, Craig Mountain WMA, and Corral Creek allotments that are currently vacant would be permanently closed under Alternative B, making the total number of available grazing allotments 166. AUMs would decrease by 950, a 13 percent reduction from Alternative A~~The Wapshilla Ridge Allotment (36279), Craig Mountain Allotment (36289), and Corral Creek Allotment (36290) have remained vacant for over ten years. These three allotments have remained vacant because the base property owner has no interest in grazing livestock. In addition, these three allotments are intermingled with the base property; consequently, the allotments could not be leased without affecting the private ground. The Wapshilla Ridge Allotment (36279), Craig Mountain Allotment (36289), and Corral Creek Allotment (36290) would be eliminated under Alternative B. In addition, the Lower Otto Creek Allotment would be created as a new allotment. The Lower Otto Creek allotment, when created, would consist of approximately 101 acres and support 15 AUMs and is accounted for in the totals described in this paragraph. The total number of available grazing allotments would be reduced from 168 to 166, the total number of acres would be reduced from 122,732 to 105,619, and the total number of AUMs would be reduced from 7,200 to 6,263, compared to Alternative A.

Effects from Mineral Resource Management

General effects of mineral resource management on livestock grazing are described under Effects Common to All Alternatives, above. Approximately 31 percent (32,950 acres) of the 105,619 acres of available grazing areas would be located in NSO mineral lease areas and 32 percent (33,820 acres) would be located in CSU areas.

Effects from Recreation Management

General effects of recreation on livestock grazing are described under Effects Common to All Alternatives, above. Approximately 25 percent (26,023 acres) of the 105,619 acres of available grazing areas would be located in SRMAs, a 5-percent increase from Alternative A.

Effects from Renewable Energy

Alternative B would actively pursue renewable energy development. Impacts would be greater on livestock grazing than under Alternative A due to the increased demand for supplying renewable energy.

Effects from Transportation and Travel Management

Under Alternative B, no available grazing areas would be designated as Open travel areas (**Table 4-~~51~~52**, Travel Designations within Grazing Allotments). Under Alternative B, 77 percent (80,869 acres) of available grazing areas would be changed from Open to Limited or Closed. Changing motorized vehicle use areas from an Open to a Limited or Closed designation would affect livestock grazing by reducing multiple uses on grazing allotments and thus reducing conflicts from such multiple uses (such as reduced grazing vegetation and harassment of livestock). Impacts to livestock grazing would be less than under Alternative A.

Effects from Lands and Realty Management

Approximately 29 percent (30,564 acres) of available grazing allotments (105,619 acres) would be available for disposal or exchange (**Table 4-~~52~~53**, Land Tenure within Grazing Allotments), which is 5 percent less than under Alternative A.

Effects from ACEC/RNA Management

~~Five~~ Six ACEC/RNAs (~~26,635~~27,720 acres) would overlap grazing allotments under Alternative B, ~~24~~ 29 percent more area than under Alternative A. Under Alternative B, livestock grazing would be excluded from the Wapshilla Ridge, Captain John Creek, Long Gulch, Skookumchuck, and Craig Mountain ACEC/RNAs. In addition, livestock grazing would be excluded from 136 acres of the Lucile Caves ACEC/RNA.

Effects from Wilderness and Wilderness Study Areas Management

Impacts on livestock grazing from WSAs would be similar to Alternative A.

Alternative C

Effects from Geology Management

Impacts would be greater than those identified under Alternative A and the same as those described under Alternative B.

Effects from Vegetation—Forests Management

Estimated treatment acreage of 394 acres of forested vegetation could impact livestock grazing during forest treatments in any two year period under Alternative C. The short-term livestock

grazing effects from reforestation would include the exclusion of livestock from reforested areas until such time as management objectives are met. This would result in a short-term reduction in available grazing acreage and associated AUMs where reforestation coincides with grazing allotments. The long-term effects of excluding livestock from reforested areas would include the improvement in health, biomass, and diversity of forage in the areas once they are reopened to grazing. Less acreage would be impacted under alternative C than under Alternatives A or B, however, these impacts could be greater or less depending on the time it takes to meet management objectives (greater or less than two years as identified in Alternative A).

Effects from Vegetation—Riparian and Wetlands Management

The 1,765 acres of riparian habitat (2 percent) of the 101,350 acres available for livestock grazing could impact livestock grazing practices under Alternative C. Impacts would be the same as those described under Alternatives A and B.

Effects from Wildlife and Special Status Wildlife Management

Potential exists for modification of authorized grazing or elimination of sheep or goat grazing where risks for transmission of disease from domestic sheep and goats to bighorn sheep occur. Effects to Livestock Grazing Management are similar to those described for Alternative B.

Effects from Wildland Fire Management

Effects of Alternative C would be similar to those described in Alternative A, as all areas would be considered for wildland fire use, provided resource goals could be met (**Figure H-1**, Areas Available for Wildland Fire Use—Alternatives A and C [see **Appendix H** in Volume II~~I~~]).

Effects from Visual Resources Management

Table 4-~~32~~33, VRM Class by Livestock Grazing Allotment, displays VRM class designations within available grazing allotments under Alternative C. Fifteen percent of the available grazing acreage would fall within VRM Class I areas, and 22 percent would fall within Class II areas. The impacts to new range improvements would be greater than all of the other alternatives because of the increase in Class I designated acreage.

Effects from Forest Products Management

Short-term and long-term effects due to exclusion of livestock following reforestation are described under Effects from Vegetation—Forests, above.

Effects from Livestock Grazing Management

Twenty-three allotments, which have been vacant for more than ten years would be eliminated as allotments. The total number of available grazing allotments would be reduced from 168 to 145, the total number of acres would be reduced from 122,732 to 101,350, and the total number of AUMs would be reduced from 7,200 to 6,020, compared to Alternative A.~~Twenty-three vacant allotments would be closed to livestock grazing under Alternative C, making the total number of available grazing allotments 145. Alternative C would reduce the acreage available for grazing by 21,321 acres (a 17-percent reduction from Alternative A) and 4,269 acres (a 4-percent reduction from Alternative B. AUMs would be reduced by 1,184 (a 16-percent reduction from Alternative A) and 234 acres (a 4-percent reduction from Alternative B). This would result in short-term and long-term impacts on livestock grazing uses, in greater intensity than the effects under Alternatives A or B.~~

Effects from Mineral Resource Management

General effects of mineral resource management on livestock grazing are described under Effects Common to All Alternatives, above. Approximately 35 percent (35,397 acres) of the 101,350 acres of available grazing areas would be located in NSO mineral lease areas (a 4-percent increase from Alternative B) and 31 percent (30,967 acres) would be located in CSU areas (a 1-percent decrease from Alternative B) under Alternative C.

Effects from Recreation Management

General effects of recreation on livestock grazing are described under Effects Common to All Alternatives, above. Approximately 24 percent (24,039 acres) of the 101,350 acres of available grazing areas would be located in SRMAs, a 4-percent increase from Alternative A and a 1-percent decrease from Alternative B.

Effects from Renewable Energy Management

Impacts would be greater on livestock grazing than under Alternative A and the same as those described under Alternative B.

Effects from Transportation and Travel Management

Impacts would be less than those identified under Alternative A and the same as those described for Alternative B.

Effects from Lands and Realty Management

Approximately 28 percent (28,574 acres) of available grazing allotments (101,350 acres) would be available for disposal or exchange (**Table 4-~~52~~53**, Land Tenure within Grazing Allotments), which is 6 percent less than under Alternative A and similar to Alternative B.

Effects from ACEC/RNA Management

Nine ACECs (28,259 acres) would be located in grazing allotments under Alternative C and would total 32 percent more area than under Alternative A and ~~6~~ 2 percent more than under Alternative B. Under Alternative C, livestock grazing would be excluded from the Wapshilla Ridge, Captain John Creek, Long Gulch, Skookumchuck, and Craig Mountain ACEC/RNAs. In addition, livestock grazing would be excluded from 136 acres of the Lucile Caves ACEC/RNA (same as under Alternative B).

Effects from Wilderness and Wilderness Study Areas Management

Approximately 6,025 acres of 12 allotments lie within the Snowhole Rapids WSA, and 528 acres of the Marshall Mountain Allotment lie within the Marshall Mountain WSA under Alternative C. The impact to livestock grazing would be similar to Alternatives A and B.

Alternative D

Effects from Geology Management

Impacts would be greater than those identified under Alternative A and the same as those described under Alternatives B and C.

Effects from Vegetation—Forests Management

Estimated treatment acreage of 680 acres of forested vegetation could impact livestock grazing during forest treatments in any two-year period under Alternative D. The short-term livestock grazing effects from reforestation would include the exclusion of livestock from reforested areas

until such time as management objectives are met. This would result in a short-term reduction in available grazing acreage and associated AUMs where reforestation coincides with grazing allotments. The long-term effect of excluding livestock from reforested areas would include the improvement in health, biomass, and diversity of forage in the areas once they are reopened to grazing. Less acreage would be impacted under Alternative D than under Alternative A. More acreage would be impacted under Alternative D than under Alternatives B or C. These impacts could be greater or less depending on the time it takes to meet management objectives (greater or less than two years as identified in Alternative A).

Effects from Vegetation—Riparian and Wetlands Management

The 2,324 acres of riparian habitat (2 percent) of the 135,850 acres available for livestock grazing could impact livestock grazing practices under Alternative D. Impacts on livestock grazing from riparian and wetlands vegetation management would be the same as Alternatives A, B, and C.

Effects from Wildlife and Special Status Wildlife Management

Potential exists for modification of authorized grazing or elimination of sheep or goat grazing where risks for transmission of disease from domestic sheep and goats to bighorn sheep occur. Effects to Livestock Grazing Management are similar to those described for Alternative B.

Effects from Wildland Fire Management

There would be no effects from wildland fire use from Alternative D, as wildland fire use would not occur in areas where livestock grazing is authorized (**Figure H-3**, Areas Available for Wildland Fire Use—Alternative D [see **Appendix H** in Volume II~~I~~]).

Effects from Visual Resources Management

Table 4-~~32~~33, VRM Class by Livestock Grazing Allotment, displays VRM class designations within available grazing allotments under Alternative D. Under Alternative D, 4 percent of available grazing acreage would fall under VRM Class I areas, and 21 percent of available grazing acreage would fall under VRM Class II areas. The impact to new livestock grazing range improvements would be similar to Alternatives A and B and less than under Alternative C.

Effects from Forest Products Management

Short-term and long-term effects due to exclusion of livestock following reforestation are described under Effects from Vegetation—Forests, above.

Effects from Livestock Grazing Management

Five grazing allotments would be expanded, and two allotments would be created. The total number of available grazing allotments would be increased from 168 to 170, the total number of acres would be increased from 122,732 to 135,850, and the total number of AUMs would be increased from 7,200 to 8,549, compared to Alternative A~~Two allotments would be opened under Alternative D, making the total number of available grazing allotments 170. Alternative D would increase the acreage available for grazing by 13,115 acres (11 percent) from Alternative A, 30,231 acres (29 percent) from Alternative B, and 34,500 acres (35 percent) from Alternative C. These changes would increase AUMs by 1,336, a 19-percent increase from Alternative A, a 37-percent increase from Alternative B, and a 42-percent increase from Alternative C~~.

Effects from Mineral Resource Management

General effects of mineral resource management on livestock grazing are described under Effects Common to All Alternatives, above. Approximately 24 percent (32,427 acres) of the 135,850 acres of available grazing areas would be located in NSO mineral lease areas (a 7-percent decrease from Alternative B and an 11-percent decrease from Alternative C), and 22 percent (29,428 acres) would be located in CSU areas (a 10-percent decrease from Alternative B and a 9-percent decrease from Alternative C) under Alternative D.

Effects from Recreation Management

General effects of recreation on livestock grazing are described under Effects Common to All Alternatives, above. Approximately 39 percent (52,450 acres) of the 135,850 acres of available grazing areas would be located in SRMAs, a 19-percent increase from Alternative A and an approximate 25-percent increase from Alternatives B and C.

Effects from Renewable Energy Management

Impacts would be greater on livestock grazing than under Alternative A and the same as those described under Alternatives B and C.

Effects from Transportation and Travel Management

Under Alternative D, 18 percent (23,814 acres) of available grazing areas (135,850 acres) would be designated as Open travel areas (**Table 4-~~51~~52**, Travel Designations within Grazing Allotments). Three times as many available grazing areas would be Limited to designated routes. Impacts on livestock grazing would be less than Alternative A, but slightly greater than Alternatives B or C.

Effects from Lands and Realty Management

Approximately 22 percent (30,564 acres) of available grazing allotments would be available for disposal or exchange (**Table 4-~~52~~53**, Land Tenure within Grazing Allotments), which is less than under Alternatives A, B, and C.

Effects from ACEC/RNA Management

Three ACECs (20,866 acres) would overlap grazing allotments under Alternative D. Under Alternative D, livestock grazing would be excluded from the Captain John Creek, Long Gulch, and Skookumchuck ACEC/RNAs. In addition, livestock grazing would be excluded from 136 acres of the Lucile Caves ACEC/RNA. Impacts would be similar to but slightly less than those under Alternative A, and less than both Alternatives B and C.

Effects from Wilderness and Wilderness Study Areas Management

Impacts on livestock grazing from WSAs would be the same as those described under Alternatives A, B, and C.

Cumulative Effects

The region of influence used to analyze cumulative impacts on livestock grazing includes actions that occur on or adjacent to all allotments located entirely or partially within the planning area. Past actions that have affected livestock grazing include human-caused surface disturbances (mineral development, recreation, and prescribed burning), wildland fires, and historic grazing practices that have contributed to current ecological conditions. Present actions affecting livestock grazing are mainly those that reduce available grazing acreage or the level of forage production in those areas.

Key examples include wildland fires, drought conditions, land disposals, OHV use, habitat restoration, and special designations that restrict grazing. Future actions affecting livestock grazing would be similar to present actions including any restriction associated with future species listings under the ESA.

The cumulative impacts under each of the alternatives on livestock grazing would be very similar and would parallel the impacts of the alternatives in the general impact analysis. In general, every alternative would reduce forage for livestock in the short-term during treatment activities, other surface disturbing and disruptive activities, human disturbance, and the presence of grazing wildlife. Forage would increase over the long-term, however, as treated vegetation communities reach potential productivity. Cumulative projects that increase human disturbance in grazing areas could also increase weeds and invasive species. As stated above, weed invasion can reduce preferred livestock forage and increase the chance of weeds being dispersed by roaming cattle. Cumulatively the impact would be greater than all of the alternatives proposed. Cumulative projects that increase human disturbance in grazing areas could also displace, injure, or kill animals. Changes to VRM would cumulatively impact livestock grazing by dictating what type of range improvements are allowed in varying visual resource class areas.

Cumulatively impacts from each resource would be greater on livestock grazing if the cumulative projects were to occur simultaneously, however, standard mitigation identified in the BLM Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management (BLM 1997a) (**Appendix A** [see Volume II~~I~~]) would be implemented across all alternatives and any other cumulative projects, thereby reducing or minimizing cumulative impacts on BLM lands.

4.3.3 Minerals

Goal: Make federal mineral resources available for exploration, acquisition, and production consistent with other resource goals. The federal mineral resource consists of 143,830 acres of public lands (federal surface and mineral) and approximately 84,000 acres of reserved minerals (non-federal surface, federal mineral).

Summary

Development of the various alternatives involved the identification of BLM administered land that is withdrawn from the operation of the mining laws (closed to locatable mineral activities), and open/closed to the mineral laws (includes both leasable and salable mineral activities). On BLM land open to the mineral laws, certain areas would be subject to surface use stipulations in addition to those on the standard lease/permit form. These additional restrictions include NSO, CSU, and TL. In many instances, more than one stipulation may apply on the same parcel of land. **Table 4-~~53~~ 54** indicates the only difference between alternatives is the level of surface use restrictions. Overall, more areas would be open to unrestricted mineral exploration and development under Alternative A than under the other alternatives followed by Alternatives D then B, and Alternative C would be the most restrictive.

Table 4-54
Comparison of Minerals Indicators by Alternative

Indicator	Alternative A	Alternative B	Alternative C	Alternative D
Acres withdrawn from mining laws	21,869	21,869	21,869	21,869
Acres closed to mineral leasing	12,786	12,786	12,786	12,786
Acres closed to mineral material sale	750	750	750	750
Acres discretionarily closed to mineral material sale	12,034	12,034	12,034	12,034
Acres of NSO	0	43,590	68,854	35,045
Acres of CSU	0	42,403	59,122	32,013
Acres with TLs	None	Deer and elk winter range and fawning and calving areas; Bald eagle winter feeding areas	Deer and elk winter range and fawning and calving areas; Bald eagle winter feeding areas	Deer and elk winter range and fawning and calving areas; Bald eagle winter feeding areas

Source: BLM 2004a

Further restrictions on mineral activities under each alternative include the withdrawal from the mining laws of about 8,062 acres of split estate lands within the Lower Salmon River withdrawal. These are parcels that have left federal ownership but the mineral rights were retained by the federal government (i.e., private surface/federal mineral).

Methods of Analysis

Indicators

Indicators are used to identify the level of impact. For minerals, the indicators used for impact analysis are identified in **Table 4-~~53~~54**, Comparison of Minerals Indicators by Alternative.

Methods and Assumptions

Impact analyses and conclusions are based on interdisciplinary team knowledge of resources in the CFO planning area, review of existing literature, and information provided by experts in the BLM or other agencies. Impacts are based on the preliminary design of the alternatives under consideration. Effects are quantified where possible. In the absence of quantitative data, best professional judgment prevailed. All alternatives must comply with the Clean Water Act, the Idaho Forest Practices Act, the ESA, and other laws. The following assumptions were applied to the analysis:

- The possibility of any activity within the planning area related to leasable commodities (oil and gas, solid minerals, and geothermal resources) is considered unlikely;
- Demand for salable and locatable minerals over the next 20 years would follow the current rate of resource development in a given area;
- Proposed activities on existing mineral leases or permits requested post implementation of the Cottonwood RMP may be subject to surface use stipulations (NSO, CSU, and TL); and

- Surface-disturbing and other disruptive activities could still occur at existing authorized facilities, which could result in wildlife disturbance, degradation of visual quality, recreation values and wilderness values, soil erosion, loss of livestock and wildlife forage, and loss of wildlife cover.

Effects Common to All Alternatives

Effects from Geology Management

Allowing appropriate uses of significant geological features under Alternative A and promoting scientific, educational, and recreational uses to unique features under the other alternatives could potentially restrict access for mineral activities in these areas.

Effects from Water Resources Management

Mineral activities could be limited under all alternatives near waters listed on the Clean Water Act 303(d) list for water quality impairment. Individuals and organizations involved in mineral activities could become involved in TMDL processes, which could also restrict mineral activities in affected watersheds, particularly near water bodies.

Effects from Vegetation—Weeds Management

Under all alternatives, individuals or organizations involved in mineral activities may be responsible for implementing weed-control measures. These measures could result in increased costs, which could affect whether individuals or organizations continue mineral activities.

Effects from Wildlife and Special Status Wildlife Management

Under all alternatives, activities (including mineral activities) could be modified or restricted if it were determined that they affect federally listed species or habitat. All alternatives would include a 100-yard nondisturbance buffer around raptor nests, which could exclude some mineral activities.

Effects from Wildland Fire Management

The use of wildland fire management under any of the alternatives could result in short-term lack of access to mineral activities. However, if these treatments prevented larger future wildland fires, then future access to mineral activities would be protected.

Effects from Cultural Resources Management

All of the alternatives could redesign, cancel, or mitigate mineral activities to protect cultural resources.

Effects from Visual Resources Management

All of the alternatives would manage the VRM Classes I and II to minimize disturbance of visual resources. Surface use stipulations under these two classes could redesign, cancel, or mitigate mineral activities.

Effects from Forest Products Management

Mining claimants are entitled to use timber from their claim for mineral activities on that claim. There could be less timber available for use by the claimant in areas identified for timber sales or treatment. Reforestation efforts could add to reclamation costs at any mineral activity site which could affect whether individuals or organizations continue mineral activities.

Effects from Minerals Management

All alternatives would continue the withdrawals on the Lower Salmon River. In total, 21,869 acres of public land and 8,062 acres of federal minerals (split estates) would be withdrawn from locatable mineral entry. Locatable mineral activities in WSAs could continue, however, they would be subject to the more stringent regulations found at CFR 3802: Exploration and Mining, Wilderness Review Program.

Each alternative would include nondiscretionary closures of 12,786 acres to fluid and solid leasable minerals. In addition, each alternative would include 12,~~786~~034 acres of discretionary closures and 750 acres of nondiscretionary closures for mineral material disposals.

Under all alternatives, BLM could require site-specific mitigation measures and/or stipulations during the review of the operations plan. These measures and/or stipulations could limit mineral activities.

Effects from Transportation and Travel Management

Approximately 100 miles of routes would be closed yearlong under each alternative, which would restrict motorized access to mineral activities.

Effects from Lands and Realty Management

All alternatives would continue the withdrawals on the Lower Salmon River. In total, 21,869 acres of public land and 8,062 acres of federal minerals (split estates) would be withdrawn from locatable mineral entry.

Effects from ACEC/RNA Management

No new rights-of-way or road construction would be allowed in the Wapshilla Ridge or Lucile Caves ACEC/RNAs, which could reduce access for mineral activities.

Effects from Wilderness and Wilderness Study Areas Management

Under all alternatives, the Frank Church Wilderness (750 acres) would remain closed to leasable, locatable, and mineral material development, prohibiting all types of mineral activities. The Snowhole Rapids WSA (6,463 acres) and Marshall Mountain WSA (5,571 acres) would remain closed to leasing, and in most cases would remain closed to sale or free use of mineral materials. The WSAs would not be withdrawn from locatable mineral development, but would be subject to more protective regulations. Overall, most mineral activity would be prohibited in these areas.

Effects from Public Safety—Abandoned Mines and Hazardous Materials Management

All alternatives would continue to benefit public safety through the prevention of illegal hazardous materials actions on public lands; ensuring proper use, authorization, permitting, and regulation of hazardous materials on public lands; conducting timely, efficient, and safe responses to hazardous materials incidences on public lands; and correcting physical hazards and cleanup of hazardous sites on public lands. Reclaiming AMLs could limit future mineral activities at these sites.

Alternative A

Effects from Soils Management

Alternative A would provide the least restricted access to mineral development because BMPs would be implemented from the Riparian Management Guidelines (BLM 1985e). These guidelines establish general management objectives for riparian areas and specific management requirements and

mitigation measures for riparian areas. While these guidelines could restrict activities, they do not specifically address mineral activities.

Effects from Water Resources Management

As described above under Effects from Soils Management, Alternative A would provide the least restricted access to mineral development because BMPs would be implemented from the Riparian Management Guidelines (BLM 1985e).

Effects from Vegetation—Riparian and Wetlands Management

As described above under Effects from Soils Management, Alternative A would provide the least restricted access to mineral development because BMPs would be implemented from the Riparian Management Guidelines (BLM 1985e).

Management of RHCA buffers totaling 24,290 acres would affect mineral activities. Activities would be planned and monitored in these areas to prevent damage to riparian areas and wetlands. This alternative provides more total area of stream buffers, and therefore, limitations on mineral activities along streams, in comparison to Alternatives B and D, but less than Alternative C. This alternative would not include any surface use stipulations for riparian and wetland vegetation.

Effects from Wildlife and Special Status Wildlife Management

Alternative A would include no NSO or TL restrictions for wildlife, special status species, and habitats, including raptors, deer and elk, or bald eagles.

Effects from Aquatic Resources, Fish, and Special Status Fish Management

Effects would be the same as those described above under Effects from Vegetation—Riparian and Wetlands Management.

Effects from Special Status Plants Management

Alternative A would include no NSO restrictions for special status plant species and rare plant communities. Mineral activities could still be affected by enforcement of the ESA.

Effects from Cultural Resources Management

OHV limitations to protect cultural resources could restrict access to mineral activities. Alternative A would include no NSO restrictions for cultural resources.

Effects from Visual Resources Management

Alternative A would include no NSO restrictions for VRM Classes I or II.

Effects from Minerals Management

Alternative A would maintain standard stipulations on the existing 131,044 acres open to mineral leasing and mineral material disposals.

Effects from Recreation Management

Alternative A would include 26,682 acres of SRMAs. To the extent that these areas limit road construction or use or limit ground-disturbing mineral activities to provide nonmotorized and other types of recreation opportunities, access to mineral resources could be reduced, and mineral activities could be restricted.

Alternative A also would include 33,197 acres of nonmotorized ROS designations (including 14,381 acres Primitive and 26,206 acres Semiprimitive Nonmotorized). Mineral activities could be restricted in Primitive and Semiprimitive areas because mechanized and motorized vehicles would not be allowed. Because Alternative A would include a slightly smaller area where these uses were restricted, more areas could be available for mineral activities. Alternative A would include no NSO restrictions for developed recreation sites or administrative sites and no CSU restrictions for SRMAs or rivers suitable for the NWSRS.

Effects from Transportation and Travel Management

Alternative A would include the largest area (85,308 acres) Open to yearlong, cross-country motorized travel, which could allow access for mineral activities. An additional 40,437 acres would be Limited to existing routes.

Effects from ACEC/RNA Management

Alternative A would not allow ground-disturbing activities in the Long Gulch ACEC/RNA, which could impact mineral activities. No new rights-of-way or road construction would be allowed, which could reduce access to mineral activities. Alternative A would create an ACEC of the Elk City Dump/American Hill Lake area. OHV use would be excluded and ground-disturbing activities would not be allowed, which could impact mineral activities. Alternative A would include no NSO restrictions for ACECs, although management may be restricted in these areas.

Effects from Wild and Scenic Rivers Management

As indicated above under Effects from Minerals Management (Effects Common to All Alternatives section), in total, 21,869 acres of public land and 8,062 acres of federal minerals (split estates) would be withdrawn from locatable minerals. These proposed mineral withdrawals would require approval by the Secretary of the Interior. Areas withdrawn from the mining laws would be closed to locatable minerals. Alternative A would include no NSO or CSU restrictions for rivers suitable for the NWSRS.

Effects from Wilderness and Wilderness Study Areas Management

~~Although~~ Alternative A would include no NSO restrictions ~~for~~ in~~Wilderness or~~ WSAs. ~~,~~ Current policies and guidelines would continue. ~~mineral activities would be restricted in these areas.~~

Effects from Public Safety—Abandoned Mines and Hazardous Materials Management

Alternative A would include no NSO restrictions for public safety.

Alternative B

Effects from Soils Management

Alternative B would follow the BMPs described in **Appendix B**, Best Management Practices (see Volume II~~I~~). These include six specific standards and guidelines related to mineral management, restrictions of mineral activities in RCA stream buffers, reclamation requirements, and monitoring procedures. These restrictions would limit mineral activities under this alternative.

Effects from Water Resources Management

As described above under Effects from Soils Management, Alternative B would provide the most restricted access to mineral development because BMPs in **Appendix B**, Best Management Practices (see Volume II~~I~~), would be implemented.

Effects from Vegetation—Riparian and Wetlands Management

As described above under Effects from Soils Management, Alternative B would provide the most restricted access to mineral development because BMPs in **Appendix B**, Best Management Practices (see Volume II~~I~~), would be implemented.

Management of RCA buffers totaling 22,847 acres (6 percent less than Alternative A) would affect mineral activities. Activities would be planned and monitored in these areas to prevent damage to riparian areas and wetlands. These restrictions and monitoring efforts would affect roads and mineral activities. In general, larger areas that are protected in buffers or RCA stream buffers result in greater restrictions for mineral activities.

Alternative B would include 22,847 acres of NSO restrictions for mineral leasing and potential NSO restrictions for mineral material disposals under NSO-2. Buffers for wetlands and landslide-prone areas are not included in the acreage calculations.

Alternative B would manage ~~1~~ three watersheds as ~~a~~ conservation watershed and ~~32~~ 28 watersheds as restoration watersheds, 2 percent less than prescription watersheds under Alternative A.

Effects from Wildlife and Special Status Wildlife Management

Alternative B would prohibit surface occupancy (NSO-3) when it would result in a "may affect" or "may impact" determination or within one mile of critical habitat niches for listed species. In addition, surface occupancy would be prohibited (NSO-5) within 0.25-mile of identified raptor nests. Alternative B would impose TLs allowing no construction or development activities within important deer or elk winter range between December 15 and March 31 (TL-1), allowing no construction or development activities within key deer or elk fawning or calving areas between May 15 and June 15 (TL-2), and allowing no ground-disturbing activities within bald eagle winter feeding areas between November 1 and March 1.

Alternative B would allow no net increase in motorized vehicle use of roads or trails in some areas. Access to mineral activities in these areas could be restricted.

Effects from Aquatic Resources, Fish, and Special Status Fish Management

Effects would be the same as those described above under Effects from Vegetation—Riparian and Wetlands Management.

Effects from Special Status Plants Management

Alternative B would prohibit surface occupancy (NSO-4) when it would result in a "may affect" or "may impact" determination or when it would be within the population perimeter of listed and BLM sensitive plant populations.

Effects from Cultural Resources Management

Alternative B would prohibit surface occupancy (NSO-6) within areas of cultural or spiritual value to Native American Tribes.

Effects from Visual Resources Management

Alternative B would include 12,704 acres of NSO restrictions for mineral leasing and potential NSO restrictions for mineral material disposals under NSO-9. This NSO restriction would apply to areas

designated as VRM Class I. Alternative B also would include 41,188 acres of CSU restrictions under CSU-1. In areas designated as VRM Class II, facilities could require special visual design.

Effects from Minerals Management

Proposed restrictions would apply to fluid leasable minerals and solid leasable minerals and could apply to mineral materials. Alternative B would impose 43,590 acres of NSO constraints, 42,403 acres of CSU restrictions, and TLs for wildlife habitat. Fluid minerals exploration drilling and field development would comply with the seasonal TLs, while activities associated with production would not. All of these surface use stipulations could be excepted, modified, or waived only as outlined in **Appendix J**, Mineral Leasing Surface Use Stipulations (see Volume II~~I~~).

Effects from Recreation Management

Effects from SRMAs would be similar to those described above under Alternative A, except that Alternative B would include 55,201 acres of SRMAs. Alternative B also would include 42,695 acres of nonmotorized ROS designations (including 6,200 acres Primitive and 36,495 acres Semiprimitive Nonmotorized), more than under Alternative A. Because Alternative B would include a slightly larger area where these uses were restricted, it could limit access to mineral activities more than the other alternatives.

Alternative B would include 631 acres of NSO restrictions for mineral leasing and potential NSO restrictions for mineral material disposals under NSO-8. This NSO restriction would apply to areas of developed recreation sites or sites used for agency administrative purposes. In addition, Alternative B would include at least 31,770 acres of CSU restrictions under CSU-3. No surface-disturbing facilities would be authorized that could adversely impact the use of SRMAs or rivers suitable for the NWSRS for recreation purposes.

Effects from Transportation and Travel Management

Alternative B would also consider habitat in locating routes, which could reduce access to mineral activities. Alternative B could also create a larger nondisturbance buffer around occupied raptor nests.

Effects from Lands and Realty Management

Alternative B would prioritize retaining public lands with high-value resources, including minerals.

Effects from ACEC/RNA Management

Alternative B would limit soil disturbance in the Lower and Middle Cottonwoods Islands ACEC/RNA, which could restrict mineral activities. Alternative B would not allow ground-disturbing activities with long-term adverse impacts to MacFarlane's' four-o'clock and suitable habitat. These limitations could restrict mineral activities. Roads also would be decommissioned and new roads would not be allowed within 300 feet of Lower Lolo Creek or on slopes greater than 50 percent, which could reduce access to mineral activities. Similarly, Alternative B would create the Upper Lolo Creek ACEC which would decommission roads not needed for long-term management which could reduce access for mineral activities. Alternative B would recommend expanding the Lower Salmon River ACEC by 3 percent (from 15,702 acres to 16,199 acres). No new road construction would be allowed in this ACEC under any alternative. The area would be excluded from mineral entry under the Lower Salmon River withdrawal. Alternative B would create an ACEC in the East Fork American River. Ground disturbance would be minimized on slopes greater than

40 percent. Road construction would not be allowed in RCA stream buffers. These restrictions could impact mineral activities.

Alternative B would implement NSO restrictions for mineral leasing and in most cases mineral materials disposal on all lands identified in ACECs which is 36,153 acres~~Alternative B would include 43,270 acres of NSO restrictions for mineral leasing and potential NSO restrictions for mineral material disposals under NSO-1. This NSO restriction would apply to ACECs, WSAs, and river corridors suitable for wild designation in the NWSRS~~.

Effects from Wild and Scenic Rivers Management

Alternative B would support renewing the existing withdrawals along the Lower Salmon River. In total, 21,869 acres of public land and 8,062 acres of federal minerals (split estates) would be withdrawn from locatable mineral entry. These proposed withdrawals would require approval by the Secretary of the Interior. Areas withdrawn from the mining laws would be closed to locatable minerals. Under Alternative B, ~~three~~no suitable segments would be recommended for inclusion in the NWSRS.

In addition to continuing the withdrawals from locatable minerals, Alternative B would implement NSO and CSU restrictions for leasable minerals and in most cases mineral materials disposal within 0.25-mile of river segments identified as suitable for inclusion in the NWSRS. These would apply to the existing river segments (112 miles) and an additional 29 miles identified during the RMP process.~~As stated under the Effects from ACEC/RNA Management, Alternative B would include 43,270 acres of NSO restrictions under NSO-1. This NSO restriction would apply to ACECs, WSAs, and river corridors suitable for wild designation in the NWSRS.~~

~~Alternative B would include 31,770 acres of CSU restrictions under CSU-3. CSU restrictions would apply to river corridors suitable for scenic and recreational designation in the NWSRS. These river corridors are ineligible for disposal. No surface-disturbing facilities would be authorized that could adversely impact the use of SRMAs or rivers suitable for the NWSRS for recreation purposes.~~

Effects from Wilderness and Wilderness Study Areas Management

Alternative B would implement an additional restriction (NSO-1) for leasable minerals activities in WSAs. This restriction may also be applied to mineral material activities in WSAs~~As stated under the Effects from ACEC/RNA Management, Alternative B would include 43,270 acres of NSO restrictions for mineral leasing and potential NSO restrictions for mineral material disposals under NSO-1. This NSO restriction would apply to ACECs, WSAs, and river corridors suitable for wild designation in the NWSRS~~.

Effects from Public Safety—Abandoned Mines and Hazardous Materials Management

Alternative B would include 24 acres of NSO restrictions for mineral leasing and potential NSO restrictions for mineral material disposals under NSO-7. This NSO restriction would apply to areas with known hazardous materials. Sites with hazardous substances remaining at the site would be restricted with no surface occupancy and sites would be closed to motorized vehicles which would require Plan of operations for mineral actions, increasing mineral restrictions in comparison to Alternative A.

Alternative C

Effects from Soils Management
Effects would be the same as those described under Alternative B.

Effects from Water Resources Management
Effects would be the same as those described under Alternative B.

Effects from Vegetation—Riparian and Wetlands Management
Effects would be similar to those described under Alternative B, except that RCA stream buffers under Alternative C would be largest totaling 27,624 acres, which would provide the most restriction for mineral activities. The entire acreage would include NSO restrictions for mineral leasing and potential NSO restrictions for mineral material disposals under NSO-2. Buffers for wetlands and landslide-prone areas are not included in the acreage calculations. Alternative C would manage 3 watersheds as conservation watersheds and ~~40~~ 37 watersheds as restoration watersheds, the most of all alternatives.

Effects from Wildlife and Special Status Wildlife Management
Effects would be the same as those described under Alternative B.

Effects from Aquatic Resources, Fish, and Special Status Fish Management
Effects would be the same as those described above under Effects from Vegetation—Riparian and Wetlands Management.

Effects from Special Status Plants Management
Effects would be the same as those described under Alternative B.

Effects from Cultural Resources Management
Effects would be the same as those described under Alternative B.

Effects from Visual Resources Management
Effects would be similar to those described under Alternative B, except that Alternative C would include 26,945 acres of NSO restrictions for mineral leasing and potential NSO restrictions for mineral material disposals under NSO-9, double that of Alternative B. Alternative C also would include 46,746 acres of CSU restrictions under CSU-1, over 12 percent more than Alternative B.

Effects from Minerals Management
Effects would be similar to those described under Alternative B, except that Alternative C would impose 68,854 acres of NSO constraints and 59,122 acres of CSU restrictions. Overall, Alternative C would impose NSO and CSU constraints on 17 percent more open areas than Alternative B.

Effects from Recreation Management
Effects would be the same as those described under Alternative B.

Effects from Transportation and Travel Management
Effects would be similar to those described under Alternative B, except that Alternative C would restrict vehicle use in more areas, which would further restrict access to mineral activities.

Effects from Lands and Realty Management
Effects would be the same as those described under Alternative B.

Effects from ACEC/RNA Management

This alternative would have similar effects on minerals as Alternative B, except that Alternative C also would protect Craig Mountain as an ACEC. No new rights-of-way or road construction would be allowed, which could reduce access to mineral activities. ~~Roads not needed for long-term management in the Upper Lolo Creek ACEC would be decommissioned, which could reduce access for mineral activities.~~ Alternative C would create the Partridge/Elkhorn and Little Salmon ACECs, which would minimize new road construction and reduce access for mineral activities.

Alternative C would also implement NSO restrictions for mineral leasing and in most cases mineral materials disposal on all lands identified in ACECs (60,661 acres). This is 68 percent more than under Alternative B.

Effects from Wild and Scenic Rivers Management

Effects would be ~~the same as~~similar to those described under Alternative B except, in addition to the existing river segments suitable for inclusion in the NWSRS (112 miles), 29 miles of river segments identified as suitable would be recommended for inclusion in the NWSRS.

Effects from Wilderness and Wilderness Study Areas Management

Effects would be the same as those described under Alternative B.

~~Effects would be similar to those described under Alternative B, except Alternative C would include 63,698 acres of NSO restrictions under NSO-1.~~

Effects from Public Safety—Abandoned Mines and Hazardous Materials Management

Effects would be similar to those described under Alternative B, except under Alternative C, sites with hazardous substances remaining at the site would be closed to mineral laws or restricted with no surface occupancy, increasing mineral restrictions in comparison to all alternatives.

Alternative D

Effects from Soils Management

Effects would be the same as those described under Alternative B.

Effects from Water Resources Management

Effects would be the same as those described under Alternative B.

Effects from Vegetation—Riparian and Wetlands Management

Effects would be similar to those described under Alternative B, except that RCA stream buffers under Alternative D would total 20,710 acres, the least of all alternatives. Larger RCAs would restrict mineral activities in larger areas. The entire acreage would include NSO restrictions for mineral leasing and potential NSO restrictions for mineral material disposals under NSO-2. Buffers for wetlands and landslide-prone areas are not included in the acreage calculations. Alternative D would manage ~~1~~ three watersheds as ~~a~~ conservation watersheds and ~~27~~ 24 watersheds as restoration watersheds, the least of all alternatives.

Effects from Wildlife and Special Status Wildlife Management

Effects would be the same as those described under Alternative B.

Effects from Aquatic Resources, Fish, and Special Status Fish Management

Effects would be the same as those described above under Effects from Vegetation—Riparian and Wetlands Management.

Effects from Special Status Plants Management

Effects would be the same as those described under Alternative B.

Effects from Cultural Resources Management

Effects would be the same as those described under Alternative B.

Effects from Visual Resources Management

Effects would be similar to those described under Alternative B, except that Alternative D would include 7,205 acres of NSO restrictions for mineral leasing and potential NSO restrictions for mineral material disposals under NSO-9, about half that of Alternative B. Alternative D also would include 36,180 acres of CSU restrictions under CSU-1, which is about 12 percent less than Alternative B.

Effects from Minerals Management

Effects would be similar to those described under Alternative B, except that Alternative D would impose 35,045 acres of NSO constraints and 32,013 acres of CSU restrictions. Overall, Alternative D would impose NSO and CSU constraints on 11 percent less open area acreage than Alternative B.

Effects from Recreation Management

Effects would be similar to those described under Alternative B, except that under Alternative D access routes would be improved in the Craig Mountain WMA, which could provide more access to mineral activities.

Effects from Transportation and Travel Management

Effects would be the same as those described under Alternative B.

Effects from Lands and Realty Management

Effects would be the same as those described under Alternative B.

Effects from ACEC/RNA Management

This alternative would have similar effects on minerals as Alternative B, except that the amount of land covered by ACECs would be less (23,924 acres). This is a 34 percent decrease~~This alternative would have similar effects on minerals as Alternative B, except that Alternative D would include 34,714 acres of NSO restrictions for mineral leasing and potential NSO restrictions for mineral material disposals under NSO-1, the least of all alternatives, with the exception of Alternative A. This NSO restriction would apply to ACECs, WSAs, and river corridors suitable for wild designation in the NWSRS~~.

Effects from Wild and Scenic Rivers Management

Effects would be the same as those described under Alternative B. ~~only recommend an additional 24 miles of river segments suitable for designation in the NWSRSEffects would be similar to those described under Alternative B, except Alternative D would include 34,714 acres of NSO restrictions under NSO-1.~~

Effects from Wilderness and Wilderness Study Areas Management

Effects would be the same as those described under Alternative B.~~Effects would be similar to those described under Alternative B, except Alternative D would include 34,714 acres of NSO restrictions under NSO-1.~~

Effects from Public Safety—Abandoned Mines and Hazardous Materials Management

Effects would be similar to those described under Alternative B, except under Alternative D sites with hazardous materials would only be restricted with no surface occupancy, reducing mineral restrictions in comparison to Alternatives B and C, but increasing restrictions in comparison to Alternative A.

Cumulative Effects

Northern Idaho has experienced extensive mineral activities over the past 140 years. Mining will continue on public, tribal, state, and private lands, depending on the price of commodities and the expense of complying with environmental regulations. If the price of gold increased, placer mining and underground lode deposit development would be expected to increase as well. This assumption is supported by the recent renewed interest in developing a gold property on BLM land northwest of Elk City which was prompted by the surge in gold prices. Based on the current knowledge of the geologic environment and past activity levels in the CFO, little to no development of leasable minerals is anticipated over the next twenty years. Development of sand, gravel, aggregate, and dimension stone is expected to grow due to increased demands from a growing population. The population of the CFO is projected to continue to grow at a rate of 11 percent between 2000 and 2020, resulting in a need for more mineral materials to support infrastructure and building construction.

The amount of BLM administered land in the CFO has increased by approximately 7 percent since 1981. Depending on whether mineral rights were acquired, the area open to mineral activities may also have increased. Regardless, the BLM controls the surface management of these areas, potentially allowing more flexibility for mining activities.

Although access from private lands to BLM-administered lands is expected to decrease in the future, overall road construction will likely increase in the future, including on BLM-administered lands in northern Idaho. The future rate of road development is unknown on private and State of Idaho lands. Continued development of recreation opportunities may result in increased access, which would also increase access to minerals.

Wildland fires will continue to be suppressed to reduce the risk to resource values, including minerals. This policy could prevent large wildfires from spreading to areas of mineral activity.

Increased conservation of fish and wildlife may result in more restrictions of mineral activities. As species are delisted under the ESA, increased mineral activities could be allowed in formerly restricted habitat areas. Water quality concerns could result in restrictions of surface disturbances related to mineral activities. Implementing the ICBEMP management strategy could also increase restrictions to mineral activities on public lands. Similarly, increasing restrictions to mineral activities may be imposed to reduce the spread of noxious weeds. Increased enforcement of mineral restrictions related to cultural and archaeological sites could reduce access for mineral activities in the future.

Implementing Forest Plans in National Forests near the CFO could restrict surface disturbances and road access related to mineral activities. These plans emphasize resource protection over commodity production.

All alternatives would withdraw the same acres from the mining laws, which would exclude locatable mineral activities. Alternative A would involve the greatest area open to mineral leasing and mineral material disposals without restrictions. Combined with past, present, and foreseeable future mineral activities on other public lands, state lands, tribal lands, and private lands, the cumulative result of Alternative A would be to allow more mineral activities than the other alternatives. Alternative C would include the most restrictions on mineral activities. Combined with other cumulative projects, the cumulative result of Alternative C would be to allow the least unrestricted mineral activities. Alternative B would include fewer restrictions on mineral activities than Alternative C. Combined with other cumulative projects, the cumulative result of Alternative B would be to allow more unrestricted mineral activities than under Alternative C. Alternative D would include fewer restrictions on mineral activities than Alternatives B or C. Combined with other cumulative projects, the cumulative result of Alternative D would be to allow more unrestricted mineral activities than Alternatives B or C.

4.3.4 Recreation

Goal: Manage public lands and waters to provide a broad spectrum of recreation experiences and benefits. Emphasize resource-based river recreation. Ensure that developed facilities and sites are appropriate for the resource setting, well maintained, safe, secure, and accessible. Provide high value recreation opportunities and receive a fair return for commercial and specialized recreation use.

Summary

Effects on recreation management from the proposed alternatives would result in a wide range of possible outcomes. Surface-disturbing activities such as wildland fire management and mineral development would have short-term and long-term effects on recreational users if areas and activities are restricted or excluded until surface-disturbing activities conclude, or if such activities change the landscape character or recreation opportunities available.

Special designations, including Wilderness Areas, WSAs, ACECs, ACEC/RNAs, and river segments recommended as suitable for designation in the NWSRS affect recreation management. Typically, these designations protect important historical, cultural, and scenic values, which encourage nonmotorized and more-primitive backcountry experiences. Opportunities for this type of recreational user would increase as the percentage of the designated acreage increases. Recreational users who prefer motorized travel as an activity or who require motorized travel to access an area could be affected if previously accessible areas become inaccessible to motorized travel; travel is discussed more in Section 4.3.6, Transportation and Travel Management.

Maintaining and possibly increasing SRMA designations would protect recreational resources and encourage appropriate recreation activities in these areas. Both land- and water-based activities would remain the focus in these designations, including the most popular activities within the CFO such as boating, camping, hiking, fishing, and sightseeing.

Alternative B best meets the goal of providing a broad spectrum of recreation settings and opportunities. Alternative C emphasizes less motorized recreation in more primitive settings, while

Alternative A has more emphasis on motorized recreation opportunities and includes the most acreage for OHV cross-country travel followed by Alternative D. Recreation indicators were identified to assess environmental effects. **Table 4-~~54~~ 55** identifies the indicators that were used to analyze effects on recreation management under each alternative.

Table 4-55
Comparison of Recreation Indicators by Alternative

Indicator	Alternative A	Alternative B	Alternative C	Alternative D
SRMA Areas				
Number of SRMAs	3	5	5	5
Acres of SRMAs	26,682	55,201	55,201	55,201
Acres by ROS Class				
Primitive (P)	14,381	6,200	6,200	6,200
Semiprimitive Nonmotorized (SPNM)	18,816	36,495	36,495	36,495
Semiprimitive Motorized (SPM)	26,206	23,593	23,593	23,593
Roaded-Natural (RN)	55,988	54,867	54,867	54,867
Semi-Urban (SU)	27,349	22,478	22,478	22,478
Urban (U)	40	40	40	40
Unclassified	1,046	0	0	0

Source: BLM 2004a

Methods of Analysis

Indicators

Indicators are used to identify the level of impact. For recreation management, the indicators used for impact analysis are identified in **Table 4-~~54~~55**, Comparison of Recreation Indicators by Alternative.

Methods and Assumptions

To evaluate the potential impact on recreation management from each alternative, information was gathered from recreation specialists and the public during the planning process, and information was assembled during interdisciplinary team meetings. Impacts were identified using best professional judgment and were assessed according to the following assumptions:

- The demand for recreational use would continue to increase over the life of the plan;
- Recreational visits would continue to increase;
- The incidence of resource damage and conflicts among recreationists involved in mechanized, motorized, and nonmotorized activities would increase with increasing use of public lands;
- Anticipated increases would focus on nonmotorized or float boating and OHV use, as well as fishing, hiking, mountain biking, camping, photographing, wildlife/bird observing, picnicking, and hunting; and

- User-created trails could continue to be developed throughout the CFO, although such actions are illegal, and creators and users of nondesignated trails will be subject to enforcement actions.~~User-created trails would continue to be developed throughout the CFO~~.

Effects Common to All Alternatives

Effects from Geology Management

Under all alternatives, management actions that establish additional protection for geological features could affect recreation management by improving recreational experiences, such as viewing, hiking, and photography that are associated with these features.

Effects from Soils Management

Under all alternatives, soils management could result in altering the existing roads network if roads are determined to be potentially harmful to the existing soil composition. This could affect recreation management by limiting motorized access and related activities in some areas.

Effects from Water Resources Management

Under all alternatives, implementing plans to improve water quality management could directly affect recreation management if restrictions are implemented on water bodies that are used for recreation activities such as boating and fishing. Some recreation activities, such as fishing, hiking, and wildlife viewing, would be indirectly affected as water quality and stream and river health is improved.

Effects from Vegetation—Forests Management

Direct control measures, as recommended by the Forest Service Insect and Disease Center, would be applied to forest management areas with high recreation value. These actions would directly impact recreational opportunities by preserving and protecting areas with recreation values.

Effects from Vegetation—Weeds Management

Implementing prevention and rehabilitation actions to combat the spread of invasive plant populations could directly affect recreation activities when treated areas overlap areas of desired recreational use. In the short-term, recreation activities would be limited in treatment areas; however, long-term effects on recreation include improved natural communities that enhance primitive recreation experiences.

Effects from Special Status Plants Management

Measures to protect special status plants would affect recreation management under all alternatives. Recreation activities that are found to impact listed plants would be restricted or excluded to avoid further damage.

Effects from Cultural Resources Management

Implementing site-specific measures for cultural resources would protect these resources of interest to the recreating public. However, these measures could also lead to restricting the development of recreational facilities and related opportunities. Employing OHV limitations would preclude recreation users who depend on motorized transportation to access public lands.

Effects from Forest Products Management

Under all alternatives, approximately 25 to 30 percent of the CFO planning area would be apportioned into commercial forest management areas. Recreation activities could be restricted or excluded from areas during forest management activities. Direct control measures to address forest health would occur in areas of high recreation value, directly affecting recreation management by improving forest health in known areas of high recreational use. Effects on recreation activities include enhanced opportunities for camping, hiking, and sightseeing.

Effects from Recreation Management

Under all alternatives, management actions would continue to support an array of recreational opportunities, including boating, camping, hiking, and fishing. The CFO would continue to manage the Lower Salmon River—Scenic, the Lower Salmon River—Recreational, and the Clearwater River SRMAs (totaling approximately 26,682 acres). The CFO would also continue to manage 183 miles of water trails, over 200 undeveloped or semi-developed recreation sites along the Clearwater and Salmon Rivers, and 12 recreation sites scattered across the planning area. Overall, these actions would directly affect recreation management by ensuring that water- and land-based recreational opportunities continue to exist in both designated and undesignated areas.

Special Recreation Permits would continue to be administered for commercial, competitive, organized group recreation activities, and individual use of special areas, affecting recreation management by monitoring the number of recreational users on public lands. This would reduce user conflicts and ensure that the recreation activity level on public lands would not inhibit other resource management objectives. Within SRMAs, issuing Special Recreation Permits would continue to support water-based commercial use on the Salmon River. Any Special Recreation Permits obtained in Extensive Recreation Management Areas would continue to support opportunities for commercial recreation such as big game hunting and trail rides.

Developed and dispersed opportunities remain constant throughout all alternatives. Twelve sites would continue to be managed under all alternatives, providing recreational users in these areas amenities such as toilets, picnic tables, boat ramps, and parking areas. The entire CFO would remain open to dispersed camping, except in areas where specific restrictions or exclusions are in place to meet other resource objectives.

Under all alternatives, 100,861 acres (approximately 70 percent of the CFO planning area) would remain open to over-snow motorized travel, providing opportunities such as snowmobiling to recreational users during winter months. Most of Craig Mountain WMA would remain closed to over-snow motorized travel, except 105 acres, reducing motorized winter activities in this area.

Effects from Lands and Realty Management

Land acquisitions, land exchanges, or conservation easements, regardless of the purpose, could directly affect recreation management. Changes in public land status could provide the public with more (or less) acreage on which to recreate. Land acquisitions could provide additional areas, subject to management actions established to protect sensitive resources.

Effects from ACEC/RNA Management

Measures to protect valuable and sensitive resources within ACECs and ACEC/RNAs designations would create an effect on recreational users throughout the CFO. Visitors to the ACECs and ACEC/RNAs could take part in wildlife viewing, sightseeing, hiking, and camping, all while

protecting important values within the designation. Conflicts between motorized and nonmotorized recreation users would be minimized in these areas, improving the quality of recreation experience for all users.

Effects from Wild and Scenic Rivers Management

Under all alternatives, 29 miles of river segments found suitable, as well as 112 miles of the Salmon River that has been a study river since 1968, would be managed to preserve their outstandingly remarkable values. This would preserve land- and water-based recreational activities in these areas.

Effects from Wilderness and Wilderness Study Areas Management

Under all alternatives, 750 acres would continue to be managed as a Wilderness Area and 12,034 acres would continue to be managed as WSAs, thereby affecting recreational users seeking backcountry and primitive experiences by ensuring the continued protection of the valuable resources contained within these designations.

Effects from Native American Tribal Uses Management

Under all alternatives, management actions would continue to maintain and improve, when possible, natural and cultural resource conditions to enhance opportunities to exercise Native American traditional uses. Recreation activities could be restricted or excluded if activities are interfering with the maintenance and protection of these resources.

Alternative A

Effects from Vegetation—Forests Management

Under Alternative A, current forestry practices would continue to affect recreation management. Forestry practices could initially cause short-term impacts on recreational users if certain areas are closed or restricted during timber production activities. Over the long term, recreation activities would resume. Recreational opportunities such as sightseeing and pleasure driving would be indirectly affected due to altered landscapes.

Effects from Vegetation—Riparian and Wetlands Management

Management actions developed to protect, rehabilitate, and restore riparian areas and wetlands under Alternative A would create impacts on recreational users if activities are occurring within restricted buffer strips, which are designated within riparian management units. Recreation sites (and activities) would be restricted to non-critical aquatic and terrestrial habitats. However, by minimizing disturbances to wildlife and stream habitat, over the long term primitive recreation experiences would be improved, including activities such as fishing, wildlife viewing, and hiking.

Effects from Wildlife and Special Status Wildlife Management

Wildlife and special status wildlife management could affect recreation by increasing restrictions on certain activities. If recreation activities, current or proposed, are determined to create direct or indirect impacts to a species, the activity would be modified. Although several management actions could increase restrictions on recreation activities, recreational opportunities that appreciate wildlife could be expanded as well.

Effects from Wildland Fire Management

Under Alternative A, wildland fire suppression on at least 70 percent of the CFO could affect recreation opportunities by minimizing fire-related interference with activities and protecting scenic

beauty. Areas where wildland fire use would be allowed (**Figure H-1**, Areas Available for Wildland Fire Use—Alternatives A and C [see **Appendix H** in Volume II~~I~~]) would directly affect recreational users in the short-term by restricting activities in burned areas until areas are reopened. Once burned areas are reopened, recreational opportunities could resume.

Effects from Minerals Management

Under Alternative A, minerals management could affect recreation everywhere except the Frank Church Wilderness Area, which is closed to the mineral laws and withdrawn from the mining laws. Lands within 0.25-mile of the Lower Salmon River would continue to be withdrawn from the mining laws, closing the area to locatable mineral exploration and development. Because the BLM would not designate NSO or CSU stipulations under this alternative, the Lower Salmon River area and all other BLM-administered lands currently open to mineral laws within the CFO would be subject to leasable and saleable mineral activity, subject to the BLM's discretion. This minerals management could create an effect on recreational opportunities and experiences.

Minerals management activities involving heavy equipment, new roads, well pads, and other facilities, would directly affect recreational users in the short-term by placing restrictions on areas where these activities are occurring. Over the long-term, surface-disturbances that create effects on the scenic quality and the natural landscape would indirectly affect recreational experiences.

Effects from Livestock Grazing Management

Livestock grazing management actions would include implementing the Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management (BLM 1997a) (**Appendix A** [see Volume II~~I~~]), which set standards for vegetation health, wildlife habitat, and riparian habitat. As a result, recreation opportunities, such as hunting, fishing, and wildlife viewing, would be affected.

Livestock grazing management would result in the continued presence of cattle and sheep and rangeland facilities on public lands. Approximately 24,278 acres of grazing allotments overlap SRMA designations. Recreational experiences in these areas, as well as other high use recreational areas in the planning area, could experience short-term impacts when recreation activities and grazing practices occur on the same public lands. Range improvements, such as adjusting fence locations, could create long-term effects on recreation by interfering with recreational use patterns or by temporarily displacing recreation activities.

Effects from Recreation Management

In addition to effects noted under the Effects Common to All Alternatives section above, under Alternative A the BLM would continue to manage the Elk City, Lolo Creek, Little Salmon River, John Day Creek, Marshall Mountain, and Craig Mountain areas as Extensive Recreation Management Areas.

The BLM would continue to manage public lands for a variety of recreational activities within all ROS settings. This alternative would continue to recognize 14,381 acres as Primitive, 18,816 acres as Semiprimitive Nonmotorized, 26,206 acres as Semiprimitive Motorized, 55,988 acres as Roaded-Natural, 27,349 acres as Semi-Urban, 40 acres as Urban, and 1,046 acres as Undesignated. Roaded-Natural (39 percent) accounts for the largest setting, and Urban (less than 1 percent) followed by Primitive (10 percent) represent the smallest setting in the CFO planning area. These percentages are indicative of the management emphasis for recreation activities on BLM-administered lands. A

much smaller portion of the CFO planning area is reserved for primitive experiences, when compared to opportunities for activities that include motorized uses.

Opportunities for water-based recreation under this alternative would continue. The BLM would allow 44 commercial water-based outfitter permits issued with the Idaho Outfitters Guides Licensing Board on the Salmon and Clearwater Rivers. No permits would be issued for Lolo Creek, and permits for Craig Mountain WMA would require concurrence of the Idaho Department of Fish and Game.

Effects from Transportation and Travel Management

This alternative provides the most motorized public access of any of the alternatives. OHV use on public lands would continue to be managed in accordance with existing OHV designations. Under Alternative A, approximately 85,308 acres would be designated as Open to OHV travel, or 59 percent of the CFO planning area. Approximately 40,437 acres would be managed as Limited, and 18,054 acres would be managed as Closed. The route network within the three designated SRMAs would recognize 9,889 acres as Open, 7,350 acres as Limited, and 9,444 acres as Closed.

Allowing this level of continued OHV use would not address resource and user conflict issues and could result in emergency closures to protect resources from extensive damage. This alternative would have the most opportunities for recreational activities that include the use of motorized travel, such as cross-country and pleasure driving and motorcycling riding; fewer opportunities for recreational users that prefer nonmotorized or backcountry experiences would occur.

Effects from Lands and Realty Management

In addition to the effects noted under the Effects Common to All Alternatives section above, lands and realty management under this alternative identifies approximately 47,361 acres for exchange. Nearly all of the public lands proposed for exchange, however, are scattered, isolated parcels that do not have public access and therefore, would not decrease the area of public lands available for recreation activities.

Under this alternative, public lands that have public access, high-value resources, and areas along the Salmon River would be retained, thereby preserving recreation opportunities in areas that meet those criteria. Realty actions would also be avoided in ACECs, RNAs, SRMAs, and wild and scenic rivers, which would have a positive effect on recreational users seeking primitive experiences.

Withdrawals that emphasize the protection of high-value resources would directly affect recreation management; specifically, the withdrawal on the Lower Salmon River would affect recreation opportunities by preserving the quality of recreational experiences and activities along the river, including boating, fishing, camping, and hiking.

Effects from ACEC/RNA Management

In addition to effects on recreation management noted under the Effects Common to All Alternatives section above, under Alternative A four ACECs would continue to be managed to protect important historical, cultural, scenic, and wildlife values contained within their boundaries. The four ACECs include Craig Mountain (3,956 acres), Elk City Dump/American Hill Lake (30 acres), Lower Lolo Creek (3,678 acres), and Lower Salmon River (15,702 acres).

Under Alternative A, six ACEC/RNAs would continue to be managed to protect important resources contained within their boundaries. The six ACEC/RNAs include Wapshilla Ridge (401 acres), Lower and Middle Cottonwoods Islands (43 acres), Captain John Creek (1,321 acres), Long Gulch (47 acres), Lucile Caves (404 acres), and Skookumchuck (18 acres).

This alternative would designate 23,366 acres as ACECs and 2,233 acres as ACEC/RNAs, a combined total of almost 18 percent of the CFO planning area. Opportunities for certain types of land- and water-based recreation activities such as backpacking, camping, and fishing would continue in these areas.

Alternative B

Effects from Soils Management

Under Alternative B, implementing BMPs and expanding minimum requirements for protecting soil from ground-disturbing activities could affect recreation management. Soil stabilization activities could preclude some recreation activities, such as recreating in streams, during reclamation projects. Temporary or permanent route closures that are implemented to protect soils could limit recreation activities in these areas.

Effects from Water Resources Management

Under Alternative B, implementing BMPs to promote water quality protection and limit nonpoint source pollution could affect recreation management. Alternative B emphasizes actively changing management direction to avoid additional effects on water quality. Changes could include actions to limit boating activities in water sources or to limit OHV activities on roads that cross streams and around water sources, which would minimize the likelihood of nonpoint source pollution. By limiting some recreation activities in these areas, other recreational activities such as wildlife viewing, fishing, and photography could also be affected.

Effects from Vegetation—Forests Management

Impacts on recreation management from forest management are similar to those described under Alternative A. Under Alternative B, forestry treatment projects that are specifically designed to enhance forest health ~~vigor~~ and composition could further affect recreational opportunities due to altered landscapes. Improvements to ranges for snags and coarse woody debris could improve wildlife habitat and contribute indirectly to recreation experiences such as wildlife viewing.

Effects from Vegetation—Riparian and Wetlands Management

Impacts on recreation from riparian and wetlands management are similar to those described under Alternative A. Under Alternative B, additional measures are identified to improve these areas, including restricting land and vehicle uses, both of which could affect recreation. Restrictions on land uses could prohibit recreation activities such as camping, hiking, and mountain biking, and vehicle restrictions could restrict recreation travel patterns, which would limit or prevent access to some sites.

Existing recreation sites and activities that occur within RCA stream buffers that are failing to meet riparian management objectives or that are adversely affecting special status fish will either be relocated or eliminated, directly affecting recreation management. New recreation sites, facilities, and activities would also be required to meet these standards or use would be precluded from designated RCAs.

Effects from Wildlife and Special Status Wildlife Management

Impacts on recreation management from wildlife and special status wildlife management under this alternative are similar to those identified under Alternative A. Additional conservation and restoration measures to protect suitable habitat or habitat niches and to maintain or improve forage species, nesting, or roosting habitat would further restrict recreation activities in certain areas. Depending on site-specific situations, conservation actions such as land tenure adjustments and conservation easements could further preclude recreation activities. Over the long-term, as wildlife habitat is improved, effects on recreational opportunities that relate to appreciating wildlife would develop.

Under this alternative, priority management areas to protect watersheds are identified for no net increase in motorized vehicle use of roads or trails. These areas include Craig Mountain, Lower Salmon River, John Day/Wet Gulch, Slate Creek, East of Riggins, Sheep–Hat Creek–Denny Creek, Elk Creek/Little Elk Creek, Hazard–Hard–Little Salmon River Face, Trail Creek–Boulder Creek, Marshall Mountain, Lolo Creek, and Clearwater River Face/Pardee. Identified areas total 101,526 acres; this would directly affect recreation management. Remote experiences for recreational users would be expanded, but others who are dependant on vehicle use for recreational activities could be restricted if popularity for motorized use in these areas expanded.

Effects from Aquatic Resources, Fish, and Special Status Fish Management

Measures to protect and improve aquatic resources, fish, and special status fish would continue to provide opportunities for recreational uses such as fishing and wildlife viewing. However, restrictions to protect these resources could restrict or exclude recreational activities from these areas, including motorized access by roads or trails, or access by boats.

Effects from Wildland Fire Management

Impacts on recreation management from wildland fire management are similar to those described under Alternative A. Under Alternative B, prescribed fire would be used to treat 5 to 15 percent, mechanical would be used to treat 2 to 6 percent, and chemical would be used to treat 5 to 36 percent of CFO FRCC 2 or 3 (moderate to high risk) WUI lands. Impacts on recreation activities would be direct and short-term, as recreational activities would be restricted while fire management activities are in progress.

Effects from Paleontological Resources Management

Developing measures to protect paleontological resources would protect these resources of interest to the recreating public. However, these measures could restrict or exclude recreation activities to protect sensitive resources.

Effects from Minerals Management

Impacts on recreation management from minerals management are similar to those described under Alternative A. Under this alternative, the BLM would designate NSO and CSU stipulations on lands open to leasable and saleable mineral activities. A total of 24,218 acres of SRMAs would be subject to NSO stipulations, and 25,897 acres would be subject to CSU stipulations. Implementing stipulations would reduce surface-disturbing activities, therefore reducing effects on recreational users.

Effects from Livestock Grazing Management

Impacts on recreation management from livestock grazing management are similar to those described under Alternative A. Under Alternative B, 26,023 acres of grazing allotments overlap SRMA designations. This is a 1,745-acre increase in comparison to Alternative A due to an increase in SRMA designations. Therefore, effects on recreational users would be slightly greater under this alternative.

Effects from Recreation Management

In addition to effects noted under the Effects Common to All Alternatives section above, under this alternative the BLM would continue to manage the Elk City, Little Salmon River, John Day Creek, and Marshall Mountain areas as Extensive Recreation Management Areas. Lolo Creek and Craig Mountain would be designated as SRMAs, in addition to the three SRMAs identified under Effects Common to All Alternatives, identifying recreation as the principal use of these lands. The Lolo Creek SRMA (3,635 acres) would emphasize backcountry, dispersed, and nonmotorized recreation opportunities, with an emphasis on whitewater boating and fishing. The Craig Mountain SRMA (24,884 acre) would provide opportunities in a natural setting for big game hunting, hiking, and biking, while promoting backcountry recreation experiences. SRMA designations under this alternative would total 55,201 acres, a 19-percent increase in comparison to Alternative A.

Similar to Alternative A, the BLM would continue to manage public lands for a variety of recreational activities within all ROS settings. This alternative would recognize 6,200 acres as Primitive, 36,495 acres as Semiprimitive Nonmotorized, 23,593 acres as Semiprimitive Motorized, 54,867 acres as Roaded-Natural, 22,478 acres as Semi-Urban, and 40 acres as Urban. Like Alternative A, Roaded-Natural (38 percent) accounts for the largest setting, and Urban (less than 1 percent) and Primitive (4 percent) represent the smallest (10 percent) setting; therefore, effects on recreation from these designations are similar to those described under Alternative A.

Commercial permits issued with the Idaho Outfitters Guides Licensing Board and effects on water-based recreation activities would be identical to those described under Alternative A. Under this alternative, additional zones would be established for both commercial and competitive uses, providing additional opportunities for activities such as boating and fishing. Commercial outfitting and guiding uses in these zones would require BLM Special Recreation Permits and would also be subject to Idaho Outfitters Guides Licensing Board regulations. Other commercial recreation uses in these zones would require permits but would not be regulated by the Idaho Outfitters and Guides Licensing Board (e.g., some Boy Scouts of America groups or University Outdoor Programs). The Lower Salmon River - Scenic SRMA would allow up to 10 permits for commercial recreation use not subject to Idaho Outfitter and Guides Licensing Board regulations; no commercial permits would be issued for Lolo Creek SRMA, and commercial permits for extensive SRMAs would be considered as needed.

Designating additional zones for competitive use or no competitive use would affect recreational users by increasing restrictions on some activities. Restricting competitive uses in the Lower Salmon River - Scenic SRMA, Lolo Creek SRMA, and all designated wilderness would create long-term direct effects on recreation users who prefer to use these areas for activities such as OHV or mountain bike races; however, opportunities for these activities would remain in the Lower Salmon River - Recreation, Clearwater River, and Craig Mountain SRMAs and in all Extensive Recreation Management Areas.

Effects from Transportation and Travel Management

This alternative provides less motorized public access in comparison to Alternative A. Areas designated as Closed would remain the same, however, no Open areas would be designated. Areas designated as Limited would increase to 125,729 acres (a 59-percent increase from Alternative A). The route network within the 5 designated SRMAs would recognize zero acres as Open, 44,117 acres as Limited, and 11,085 acres as Closed.

This alternative would limit areas available for recreational activities that include the use of motorized travel, such as cross-country and pleasure driving and motorcycling riding. Hunting would also be affected because hunters who depend on motorized travel for access, scouting, and retrieval would be limited to designated routes. More opportunities for recreational users that prefer nonmotorized or backcountry experiences would occur.

Alternative B identifies ~~1~~ three conservation and ~~32~~ 28 restoration watersheds, 2 percent more acreage than prescription watersheds under Alternative A. Decommissioning or obliteration of some roads in these areas could limit motorized access.

Effects from Lands and Realty Management

In addition to effects on recreation management noted under the Effects Common to All Alternatives section above, lands and realty management under this alternative identifies approximately 30,098 acres for disposal. Public lands that have public access, high value resources, and areas along the Salmon River would be retained and potential acquisitions of land and conservation easements on the Lower Salmon River, Craig Mountain WMA, Clearwater River, and Lolo Creek would preserve and expand recreation opportunities in areas that meet those criteria. In ACECs, RNAs, SRMAs, and wild and scenic rivers, realty disposal actions would be avoided while acquisition opportunities would be emphasized, which would create an effect on recreational users seeking primitive experiences.

Withdrawals that emphasize the protection of high-value resources would directly affect recreation management; specifically, the withdrawal on the Lower Salmon River would affect recreation opportunities by preserving the quality of recreational experiences and activities along the river, including boating, fishing, camping, and hiking.

Effects from ACEC/RNA Management

In addition to effects on recreation management noted under the Effects Common to All Alternatives section above, under Alternative B ~~five~~ six ACECs would be managed to protect important historical, cultural, scenic, and wildlife values contained within their boundary. The ~~five~~ six ACECs include Upper Lolo Creek (1,625 acres), Lower Lolo Creek (3,678 acres), Lower Salmon River (16,199 acres), Salmon River (5,759 acres), East Fork American River (570 acres), and American River Historic Sites District (6,356 acres). Along with resource protection, public use and access of the Lower Salmon River and Salmon River ACECs would be emphasized.

Similar to Alternative A, this alternative identifies the same six ACEC/RNAs to be managed to protect important resources contained within their boundaries. Under this alternative, the Lucile Caves ACEC/RNA acreage would decrease to 136 acres.

Overall, Alternative B would designate ~~32,562~~34,187 acres as ACECs and 1,966 acres as ACEC/RNAs, a combined total of ~~24~~ 25 percent of the CFO planning area. This represents an

overall increase of ~~6~~ 7 percent in ACEC and ACEC/RNA designations in comparison to Alternative A. Similar to Alternative A, opportunities for certain types of land- and water-based recreation activities, such as backpacking, camping, and fishing, would continue in these areas.

Effects from Watchable Wildlife Viewing Sites Management

Effects on recreation activities such as wildlife viewing and sightseeing would occur if additional watchable wildlife viewing sites were designated.

Alternative C

Effects from Soils Management

Under Alternative C, impacts to recreation management from soils management would be identical to those impacts described under Alternative B.

Effects from Water Resources Management

Under Alternative C, impacts to recreation management from water resource management would be identical to those impacts described under Alternative B.

Effects from Vegetation—Forests Management

Effects would be the same as those described under Alternative B.

Effects from Vegetation—Riparian and Wetlands Management

Under Alternative C, impacts to recreation management from riparian and wetlands management would be similar to those impacts described under Alternative B; however, RCA stream buffers would total 27,624 acres, 21 percent more area than under Alternative B and 14 percent more than Alternative A. Compared to Alternative A, this could increase the impact on recreation management by implementing restrictive measures on additional BLM-administered lands, further reducing recreational activities not meeting riparian management objectives or adversely affecting listed fish species.

Effects from Wildlife and Special Status Wildlife Management

Under Alternative C, impacts to recreation management from wildlife and special status wildlife management would be similar to those impacts described under Alternative B. Additionally, this alternative would strive for a net decrease in motorized vehicle use on roads and trails in priority management areas on 38,733 acres: Sheep–Hat Creek–Denny Creek; Hazard–Hard–Little Salmon River Face, Marshall Mountain, Lolo Creek, and Elk City Township. These limitations would directly affect recreation management by limiting any recreational activities that require motorized vehicle use either during the activity or to access the area where the activity would take place. Remote experiences for recreational users would be further expanded under this alternative when compared to Alternative B, but those who prefer motorized vehicle use for recreational activities would be further restricted.

Effects from Aquatic Resources, Fish, and Special Status Fish Management

Under Alternative C, impacts to recreation management from aquatic resources, fish, and special status fish management would be identical to those impacts described under Alternative B.

Effects from Wildland Fire Management

Under Alternative C, impacts to recreation management from wildland fire management would be similar to those impacts described under Alternative B. Under this alternative, prescribed fire would

be used to treat 5 to 20 percent of the CFO FRCC 2 or 3 (moderate to high risk) WUI lands, slightly increasing the effects on recreational activities from prescribed fire when compared to Alternatives B and D.

Effects from Paleontological Resources Management

Under Alternative C, impacts to recreation management from paleontological resources management would be identical to those impacts described under Alternative B.

Effects from Visual Resources Management

Under Alternative C, managing an additional 14,241 acres under Class I and 5,559 acres under Class II provides for better retention of the existing viewshed, which would preserve an important component for recreational users seeking primitive experiences.

Effects from Minerals Management

Impacts on recreation management from minerals management are similar to those described under Alternative A. Under this alternative, the BLM would designate NSO and CSU stipulations on lands open to leasable and saleable mineral activities. A total of 45,552 acres of SRMAs would be subject to NSO stipulations, and 43,795 acres would be subject to CSU stipulations. This is 47 and 41 percent more acres of NSO and CSU stipulations on SRMAs, respectively, compared to Alternative B. This could ~~increase~~ reduce the effects on recreation management by allowing ~~more~~ less surface disturbances in areas where recreation activities occur.

Effects from Livestock Grazing Management

Impacts on recreation management from livestock grazing management are similar to those described under Alternative A. Under Alternative C, 24,039 acres of grazing allotments overlap SRMA designations. This is a 239-acre reduction in comparison to Alternative A. Therefore, effects on recreational users would be slightly reduced under this alternative.

Effects from Recreation Management

In addition to effects noted under the Effects Common to All Alternatives section above, effects on recreation from recreation management would be identical to those described under Alternative B.

Effects from Transportation and Travel Management

Effects on recreation from transportation and travel management would be similar to those described under Alternative B. Under this alternative, priority management areas to protect watersheds include Craig Mountain, Lower Salmon River, John Day/Wet Gulch, Slate Creek, East of Riggins, Elk Creek/Little Elk Creek, Trail Creek–Boulder Creek, and Clearwater River Face/Pardee. Identified areas total 75,772 acres, a decrease of 25,804 acres in comparison to Alternative B.

This alternative identifies ~~40~~ 37 restoration and ~~3~~ three conservation watersheds, 3 percent more than prescription watersheds under Alternative A. Therefore, effects on recreational users from reducing roads and trails would be slightly greater under this alternative.

Effects from Lands and Realty Management

Effects on recreation management from lands and realty management are identical to those described under Alternative B.

Effects from ACEC/RNA Management

In addition to the effects on recreation management noted under the Effects Common to All Alternatives section above, under Alternative C nine ACECs would be managed to protect important historical, cultural, scenic, and wildlife values contained within their boundaries. This represents the most ACEC designations of all alternatives. The nine ACECs include Craig Mountain (23,342 acres), Lower Lolo Creek (3,678 acres), Upper Lolo Creek (1,625 acres), Lower Salmon River (16,199 acres), Partridge/Elkhorn (576 acres), Little Salmon River (590 acres), Salmon River (5,759 acres), East Fork American River (570 acres), and American River Historic Sites District (6,356 acres). Analogous to Alternative B, under this alternative public access and use would be emphasized in the Lower Salmon River and the Salmon River ACECs.

This alternative identifies the same six ACEC/RNAs as Alternative B to be managed to protect important resources contained within their boundaries, with the same amount of acreage for each designation.

Alternative C would designate 58,695 acres as ACECs and 1,966 acres as ACEC/RNAs, a combined total of 42 percent of the CFO planning area. This represents an overall increase of 24 percent in ACEC and ACEC/RNA designations in comparison to Alternative A. Similar to Alternative A, opportunities for certain types of land- and water-based recreation activities such as backpacking, camping, and fishing would continue in these areas.

Effects from Watchable Wildlife Viewing Sites Management

Effects on recreation management from watchable wildlife viewing sites management are identical to those described under Alternative B.

Alternative D

Effects from Soils Management

Under Alternative D, impacts to recreation management from soils management would be identical to those impacts described under Alternative B.

Effects from Water Resources Management

Under Alternative D, impacts to recreation management from water resource management would be identical to those impacts described under Alternative A.

Effects from Vegetation—Forests Management

Effects would be the same as those described under Alternative B.

Effects from Vegetation—Riparian and Wetlands Management

Under Alternative D, impacts to recreation management from riparian and wetlands management would be similar to those impacts described under Alternative B; however, RCA stream buffers would be slightly smaller (20,710 acres). This could decrease the impact on recreation management by implementing fewer restrictive measures on BLM-administered lands.

Effects from Wildlife and Special Status Wildlife Management

Under Alternative D, impacts to recreation management from wildlife and special status wildlife management would be similar to those impacts described under Alternative B.

Effects from Aquatic Resources, Fish, and Special Status Fish Management

Under Alternative D, impacts to recreation management from aquatic resources, fish, and special status fish management would be identical to those impacts described under Alternative B.

Effects from Wildland Fire Management

Under Alternative D, impacts to recreation management from wildland fire management would be similar to those impacts described under Alternative B. Under this alternative, mechanical and fire could be used to treat 2 to 15 percent of the CFO FRCC 2 or 3 (moderate to high risk) WUI areas, slightly increasing the effects on recreational activities from mechanical treatments when compared to Alternatives B and C.

Effects from Paleontological Resources Management

Under Alternative D, impacts to recreation management from paleontological resources management would be identical to those impacts described under Alternative B.

Effects from Visual Resources Management

Under Alternative D, managing a decrease of 5,499 acres under Class I and 5,015 acres under Class II, in comparison to Alternative A, provides for less retention of the existing viewshed. Most acres would be moved into Class III, which allows for changes to some of the more undisturbed lands, affecting the amount of acreage available to recreational users and especially those seeking primitive or backcountry experiences.

Effects from Minerals Management

Impacts on recreation management from minerals management are similar to those described under Alternative A. Under this alternative, the BLM would designate NSO and CSU stipulations on lands open to leasable and saleable mineral activities. A total of 23,733 acres of SRMAs would be subject to NSO stipulations and 25,897 acres would be subject to CSU stipulations, which is almost identical to Alternative B and is about 48 and 41 percent lower than NSO and CSU stipulations on SRMAs, respectively, in Alternative C. Effects on recreation management from minerals management would increase compared to other alternatives, but only slightly compared to Alternative B.

Effects from Livestock Grazing Management

Impacts on recreation management from livestock grazing management are similar to those described under Alternative A. Under Alternative D, 52,450 acres of grazing allotments overlap SRMA designations. This is a 28,172-acre increase in comparison to Alternative A. Effects on recreational users would be greater under this alternative due to the amount of allotments that overlay SRMA designations.

Effects from Recreation Management

In addition to effects noted under the Effects Common to All Alternatives section above, effects on recreation from recreation management regarding SRMA designations and ROS settings would be identical to those described under Alternative B.

Commercial permits issued with the Idaho Outfitters Guides Licensing Board and effects on water-based recreation activities would be similar to those identified under Alternative A, except commercial water-based outfitter permits would be based on the number of outfitters authorized by the State of Idaho in 2004, and permits would be issued for Lolo Creek SRMA. Opening the Lolo Creek SRMA for commercial outfitters would expand recreation opportunities for users who

depend on outfitters to access and recreate in areas. Establishing commercial permits would directly affect recreational users, depending on if BLM increases or decreases the amount of permitted use in these areas.

Similar to Alternative B, this alternative would establish additional zones for both commercial and competitive uses. Commercial uses other than outfitting and guiding in these zones would require permits but would not be regulated by the Idaho Outfitters Guides Licensing Board. The Lower Salmon River Scenic SRMA would allow 15 permits, and other recreation permits would be issued for SRMA and Extensive Recreation Management Area zones, including the Lolo Creek SRMA. This alternative slightly expands opportunities for commercial uses when compared to Alternatives B and C. Effects on recreation from designating additional zones for competitive use or no competitive use would be identical to those described under Alternative B.

Effects from Transportation and Travel Management

Under Alternative D, approximately 23,189 acres would be designated as Open to OHV travel, or 16 percent of the CFO planning area. The majority of acreage designated as Open has no legal public access to these lands. Approximately 102,542 acres would be managed as Limited, and 18,054 acres would be managed as Closed. The route network within the 5 designated SRMAs would recognize 349 acres as Open, 7,350 acres as Limited, and 9,444 acres as Closed.

This alternative would have more opportunities for recreational activities that include the use of motorized travel in comparison to Alternatives B and C. However, user conflicts within areas such as SRMAs, where recreation is dominant use, could also increase due to high levels of activity. Similar to Alternative B, hunting would also be affected but under this alternative, more opportunities for motorized access for scouting and retrieval would occur.

Priority management areas to protect watersheds, and effects on recreational users as a result of protecting these areas, are identical to those discussed under Alternative B. This alternative identifies ~~27~~ 24 restoration and ~~1~~ three conservation watershed, 21 percent fewer watershed acres than prescription watersheds under Alternative A. Therefore, fewer impacts on recreational users would occur, providing users more opportunities to access and recreate in watershed areas.

Effects from Lands and Realty Management

Effects on recreation management from lands and realty management are identical to those described under Alternative B.

Effects from ACEC/RNA Management

In addition to effects on recreation management noted under the Effects Common to All Alternatives section above, under Alternative D two ACECs would be managed to protect important historical, cultural, scenic, and wildlife values contained within their boundary. This represents the fewest ACEC designations of all alternatives. The two ACECs include the Lower Salmon River (16,199 acres) and the Salmon River (5,759 acres), both of which emphasize public access and use.

Similar to Alternatives B and C, this alternative identifies the same six ACEC/RNAs to be managed to protect important resources contained within their boundaries, with the same amount of acreage for each designation.

Overall, Alternative D would designate 21,958 acres as ACECs and 1,966 acres as ACEC/RNAs, a combined total of 17 percent of the planning area. This represents an overall slight decrease of less than 1 percent of ACEC and ACEC/RNA designations in comparison to Alternative A. Similar to Alternative A, opportunities for certain types of land- and water-based recreation activities such as backpacking, camping, and fishing would continue in these areas.

Effects from Watchable Wildlife Viewing Sites Management

Effects on recreation management from watchable wildlife viewing sites management are identical to those described under Alternative B.

Cumulative Effects

Effects of past actions including reductions in land mass due to development, changes to the landscape as a result of surface-disturbing activities, and area closures or restrictions for resource protection have affected recreational use in the CFO planning area.

All recreation, including OHV use, is expected to increase as population increases. Idaho's population increased approximately 29 percent between 1990 and 2000, and the population of the CFO planning area has grown on average 13 percent (Idaho Department of Commerce and Labor 2004). Furthermore, the population of the CFO planning area is expected to grow at a rate of approximately 11 percent, and the state is expected to grow approximately 35 percent over the next twenty years (EPA 2004). These numbers indicate continuing growth and popularity for recreational activities throughout the CFO planning area and in surrounding areas.

Surface-disturbances resulting from forestry, minerals, and grazing activities could cumulatively affect recreational users if activities were concentrated in heavily recreated areas and if activities overlapped in duration. Long-term effects to recreational use would also continue to occur as land acquisitions and disposals continue. Land exchanges directly affect management on those parcels and indirectly affect activities and patterns on surrounding lands. Land acquisitions along the river corridors would enhance recreation opportunities and experiences. Fuels treatments and wildfire management across ownerships should protect scenic beauty. Increased population in the CFO planning area will result in increased demand for river based recreation activities.

Implementing any of the alternatives would not contribute to a significant change to recreational opportunities on public lands.

4.3.5 Renewable Energy

Goal: Provide opportunities for the development of renewable energy resources, while minimizing adverse impacts to other resource values.

Summary

All four alternatives contain a mix of actions that would result in varied levels of production of forest byproducts available for use as biomass fuel. Most of these effects are difficult to quantify; however, wildland fire management specifies targets for how much land would be recommended for fuel treatment under Alternatives B, C, and D within any five-year period; Alternative A does not specify any targets for fuels treatments. Alternative D recommends the greatest treatment area, followed by Alternative B and then Alternative C. **Table 4-~~55~~ 56** identifies the indicators that were used to analyze effects on renewable energy under each alternative.

Table 4-56
Comparison of Renewable Energy Indicators by Alternative

Indicator	Alternative A	Alternative B	Alternative C	Alternative D
Availability of biomass fuel from fuel treatments and timber harvesting activities	No net change	Net increase	Net decrease	Greater increase than Alternative B

Methods of Analysis

Indicators

Management actions could result in impacts to renewable energy resources if any management actions were to directly or indirectly change the quantity and availability of biomass fuel materials. Changes in the fuel supply could result from changes in timber harvesting and fuel treatment activities. The indicator used to quantitatively and qualitatively assess management changes that could affect timber harvests and fuel treatments are summarized in **Table 4-~~55~~56**, Comparison of Renewable Energy Indicators by Alternative.

Methods and Assumptions

The planning area lacks any geothermal resource, any commercial concentrated solar power and photovoltaic energy potential, and any areas feasible for commercial wind power generation. Also, it is likely that biomass facilities would be sited on private land, and biomass fuel would be obtained from actions on CFO-administered land. Therefore, effects would be limited to conditions that change the availability of biomass fuel. Effect determinations are based on the extent to which each alternative would affect timber harvesting and fuel treatments and the wood products (biomass fuel) that would result.

It is assumed that logging activity and vegetation treatments are directly related to the availability of forest byproducts (wood) that can be used as biomass fuel.

Effects Common to All Alternatives

Effects from Vegetation—Forests Management

Stand conversion treatments and reduction of stands would generate logging byproducts that could be used as biomass fuel.

Effects from Wildland Fire Management

Hazardous fuels-reduction projects would generate forest byproducts that could be used as biomass fuel.

Effects from Minerals Management

Under all alternatives, the Wilderness Area would remain closed to the mineral laws and withdrawn from the mining laws, preventing all renewable energy management activities. Effects on biomass fuel development from minerals management would result from implementing right-of-way exclusion areas. Rights-of-way are necessary for nonrenewable and renewable energy development; therefore, exclusion areas would directly affect all energy development in these areas.

Approximately 11,622 acres, plus buffers along streams and rivers and the Elk City Dump, are identified as right-of-way exclusion areas.

Effects from Wilderness and Wilderness Study Areas

To maintain wilderness characteristics within wilderness areas and WSAs, under all alternatives, fuel treatments and timber harvesting activities would continue to be restricted, limiting the availability of biomass fuel on 11,622 acres, 8 percent of BLM-administered lands.

Alternative A

Effects from Vegetation—Forests Management

Under Alternative A, 24,257 acres are classified for intensive forest practices, 11,500 acres for extensive management, and 37,549 acres for custodial management. Intensive forest practices would maximize timber production on a sustained yield basis, extensive management would manage for timber production on a sustained yield basis but with few intensive practices, and custodial management areas would not be managed for timber production (although harvesting could occur for ecological reasons). These three classifications, in the order presented, would decreasingly contribute sidecast to biomass operations.

Effects from Wildlife and Special Status Wildlife Management

Under Alternative A, a 100-yard nondisturbance buffer would be established around all active raptor nests. This could limit timber harvest and fuel treatment activities around these nests and decrease the amount of sidecast available for biomass fuel.

Effects from Wildland Fire Management

Alternative A would produce the greatest potential biomass of all the alternatives.

Effects from Visual Resource Management

Management of visual resource under Alternative A would provide moderate flexibility in developing renewable energy. VRM Class I and Class II designations (53,899 acres) account for approximately 38 percent of BLM-administered lands. To meet VRM class objectives in these areas, timber harvest and fuel treatment activities would be limited, directly affecting biomass fuel development.

Effects from Forest Products Management

Under Alternative A, timber management activities would not occur in areas where they could destroy or degrade wetland-riparian areas. This could decrease the sidecast available to biomass operations. Alternative A also calls for precommercial thinning under certain conditions, which would increase wood potentially available for biomass fuel prior to timber harvest, contributing to an ongoing, multiple-source supply of biomass fuel.

Effects from ACEC/RNA Management

Under Alternative A, timber harvesting would not be allowed in ACECs or RNAs, except for disease or insect control. This would limit the availability of forest byproducts for use as biomass fuel on 23,366 acres designated as ACECs and 2,233 acres designated as ACEC/RNAs. Combined, special area designations would restrict the availability of biomass fuel from fuel treatments and timber harvesting activities on approximately 18 percent of BLM-administered lands.

Alternative B

Effects from Vegetation—Forests Management

Alternative B includes actions to enhance forest health ~~vigor~~ and/or habitat diversity, to actively manage species composition of the large tree size, and to implement timber harvest activities on forest stands with existing or high risk for extensive stand mortality. This would increase the availability of forest byproducts for use as biomass fuel.

Effects from Wildlife and Special Status Wildlife Management

Alternative B would require minimizing or avoiding disturbance within one mile of known occupied gray wolf denning sites and rendezvous areas, and maintaining or enhancing suitable gray wolf habitat (primarily large stands of cottonwoods). These actions could limit timber harvest and fuel treatment activities and decrease the amount of sidecast available for biomass fuel.

Effects from Wildland Fire Management

Under Alternative B, up to 40 percent of CFO lands classified as FRCC 2 or 3 (moderate to high risk) WUI areas would be treated over any 5-year period. Additional areas could be treated outside the WUI. Alternative B calls for treating 2 to 6 percent of these treatments using mechanical methods. These actions would ensure an ongoing removal of wood products from the forests and a supply of biomass fuel. Alternative B emphasizes biomass use as the preferred solution to meet natural resource management objectives, which would improve the potential for forestry products to be used for biomass energy production.

Under Alternative B, fuel treatment projects within WUI areas would be allowed to take precedence over VRM II designations where public or firefighter safety and/or protect infrastructure at risk due to hazardous fuels. This action would take place in specific areas under specific circumstances and would not have much effect on the supply of forestry products available for biomass energy production.

Effects from Visual Resources Management

Effects would be the same as those described under Alternative A.

Effects from Forest Products Management

Alternative B would expedite salvage activities in forest stands susceptible to or having outbreaks of forest insect or disease or that have mortality related to wildland fire. This could increase the availability of forest products for biomass use.

Effects from Renewable Energy Management

Alternative B would make vegetative treatment byproducts available for use in biomass energy facilities where removing the material from the site would not impede site productivity or prevent attainment of project objectives. Alternative B also calls for actively pursuing partnering opportunities between CFO and entities developing biomass-generating capabilities. Alternative B would improve the transfer of biomass fuels from forests to biomass facilities and encourage development of biomass energy facilities in the region.

Effects from ACEC/RNA Management

Under Alternative B, timber harvesting would not be allowed in ACECs or RNAs, except for disease or insect control and for achieving DFC with emphasis on old forest/old growth

components. Alternative B would also not allow vegetation or ground-disturbing actions that would result in long-term adverse impacts to MacFarlane's four-o'clock and suitable habitats. These actions would decrease the availability of forest byproducts for use as biomass fuel on ~~35,562~~34,187 acres designated as ACECs and 1,966 acres designated as ACEC/RNAs. Combined, special area designations would restrict the availability of biomass fuel from fuel treatments and timber harvesting activities on approximately ~~24~~ 25 percent of BLM-administered lands, an increase of about ~~6~~ 7 percent in comparison to Alternative A.

Alternative C

Effects from Vegetation—Forests Management

Effects would be the same as those described under Alternative B.

Effects from Wildlife and Special Status Wildlife Management

Effects would be the same as those described under Alternative B.

Effects from Wildland Fire Management

Under Alternative C, up to 20 percent of CFO lands classified as FRCC 2 or 3 (moderate to high risk) WUI areas could be treated over any 5-year period. Additional areas could be treated outside the WUI. This action would ensure an ongoing removal of wood products from the forests and a supply of biomass fuel, although at a much lower level than the other alternatives. Alternative C emphasizes biomass use as the preferred solution to meet natural resource management objectives, which would improve the potential for forestry products to be used for biomass energy production.

Effects from Visual Resource Management

Effects would be similar to those described under Alternative A, except Alternative C would provide less flexibility in developing renewable energy in comparison to Alternative A and B. VRM Class I and Class II designations (73,699 acres) account for approximately 51 percent of BLM-administered lands, a 14-percent increase from Alternative A and B.

Effects from Forest Products Management

Similar to Alternative A, timber management activities under Alternative C would not occur in areas where they could destroy or degrade wetland-riparian areas, which could decrease the sidecast available to biomass operations. Similar to Alternative B, Alternative C would also expedite salvage activities in forest stands susceptible to or having outbreaks of forest insect or disease or that have mortality related to wildland fire, which could increase the availability of forest products for biomass use.

Effects from Renewable Energy Management

Effects would be the same as those described under Alternative B.

Effects from ACEC/RNA Management

Effects would be similar to those described under Alternative B, except that the described actions would decrease the availability of forest byproducts for use as biomass fuel on 58,695 acres designated as ACECs and 1,966 acres designated as ACEC/RNAs. Combined, special area designations would restrict the availability of biomass fuel from fuel treatments and timber harvesting activities on approximately 42 percent of BLM-administered lands, which represents the most restrictions of all the alternatives.

Alternative D

Effects from Vegetation—Forests Management

Effects would be the same as those described under Alternative B.

Effects from Wildlife and Special Status Wildlife Management

Effects would be the same as those described under Alternative B.

Effects from Wildland Fire Management

Under Alternative D, up to 60 percent of CFO lands classified as FRCC 2 or 3 (moderate to high risk) WUI areas could be treated over any 5-year period. Additional areas could be treated outside the WUI. Alternative D proposes 2 to 15 percent of these treatment use mechanical methods. These actions would ensure an ongoing removal of wood products from the forests and a supply of biomass fuel. Alternative D emphasizes biomass use as the preferred solution to meet natural resource management objectives, which would improve the potential for forestry products to be used for biomass energy production.

Effects from Visual Resource Management

Effects from the management of visual resource under Alternative D would be similar to those described under Alternative A. This alternative would provide the most flexibility in developing renewable energy in comparison to Alternatives A, B and C. VRM Class I and Class II designations (43,385 acres) account for approximately 30 percent of BLM-administered lands, a 7-percent decrease in comparison to Alternatives A and B.

Effects from Forest Products Management

Effects would be the same as those described under Alternative C.

Effects from Renewable Energy Management

Effects would be the same as those described under Alternative B.

Effects from ACEC/RNA Management

Effects would be similar to those described under Alternative B, except that the described actions would decrease the availability of forest byproducts for use as biomass fuel on 23,183 acres designated as ACECs and 1,964 acres designated as ACEC/RNAs. Combined, special area designations would restrict the availability of biomass fuel from fuel treatments and timber harvesting activities on approximately 18 percent of BLM-administered lands, which would be similar to Alternative A.

Cumulative Effects

Past actions and events that have affected renewable energy resources in the panning area include the Idaho Statewide Implementation Strategy for the National Fire Plan, wildland fires, fuel treatments, cyclic insect and disease activity, and timber harvests.

The CFO FMP, completed in 2004, and other FMPs across Idaho will contribute to the awareness of biomass energy technology and to the availability of biomass fuels as forests across the state are treated to remove excess fuel. Wildland fires in the vicinity of the CFO planning area, whether past, present, or future, decrease the availability of biomass fuels. The mechanical treatment aspect of fuel treatments gives rise to an increase in forest byproducts available for biomass fuel. Increases in these

practices in the CFO vicinity will contribute to increases in the amount of biomass fuels available. Cyclic insect and disease activity affecting forest stands often results in tree kills and large amounts of wood available for removal and potential use as biomass fuel. The decline in timber harvesting on public lands over recent years has resulted in a decrease in castoffs available for use as biomass fuel; however, timber harvesting has increased on private lands, resulting in an increase in biomass fuel availability. The overall impact of changes in timber harvests over recent years is unknown and is treated in this analysis as a no net change in biomass availability.

Alternative A would not change the availability of biomass fuels and would not have a cumulative effect on renewable energy in the CFO. Alternatives B, C, and D would increase the availability of biomass fuels and cumulatively affect renewable energy in the CFO.

4.3.6 Transportation and Travel Management

Goal: Manage travel, roads, and trails to provide access and recreational opportunities, while minimizing resource impacts and user conflicts.

Summary

Transportation and travel management affects the number of users able to reach and travel on public lands. The primary cause of effects on or changes to the transportation network is resource protection. Measures that are implemented to protect natural resources, such as wildlife, water, and soil, and cultural resources could result in seasonal or permanent route restrictions or closures. Permitted activities on BLM-administered lands, such as those related to forestry and minerals, could expand the route network.

Approximately 70 percent of designated routes shown in the Proposed RMP (Alternative B from the Draft RMP) were analyzed in past NEPA documents done by the CFO. Therefore, the Proposed RMP assesses the remaining approximately 30 percent of designated routes not previously analyzed.

Alternative B would best manage travel, roads, and trails to provide access and recreational opportunities, while minimizing resource impacts and user conflicts. It would be followed by Alternatives C then D, with Alternative A having the most potential for resource impacts and user conflicts. **Table 4-~~56~~ 57** identifies the indicators that were used to analyze effects on transportation and travel management under each alternative.

Table 4-57
Comparison of Transportation and Travel Management Indicators by Alternative

Indicator	Alternative A	Alternative B	Alternative C	Alternative D
Area Designations				
Open (acres)	85,308	0	0	23,189
Limited to existing routes (acres)	40,437	0	0	0
Limited to designated routes (acres)	0	125,729	125,729	102,542
Closed (acres)	18,054	18,069	18,069	18,069

Table 4-57
Comparison of Transportation and Travel Management Indicators by Alternative *(continued)*

Indicator	Alternative A	Alternative B	Alternative C	Alternative D
Route Designations within Limited Areas				
Open Routes within Limited Areas:				
Open Routes with Public Access that are Open Yearlong (miles)[1]	40.69	103.26	103.26	100.83
Open Routes with No Public Access that are Open Yearlong (miles)	11.91	104.42	104.42	81.29
Total open routes in Limited areas (miles)	52.60	207.68	207.68	182.12
Approximate density of open routes within Limited areas (miles/square mile)	0.83	1.05	1.05	1.14
Restricted Routes within Limited Areas:				
Full Vehicle Closure Yearlong (miles)	30.82	100.67	100.67	100.65
Open Yearlong for Vehicles under 50 inches (miles)	0	5.92	5.92	5.92
Open 6/15-9/15 for Vehicles under 50 inches (closed 9/16-6/14) (miles)	0	1.24	1.24	1.24
Seasonal Vehicle Closure 10/1-6/15 (open 6/16-9/30) (miles)	0	0.39	0.39	0.39
Two-wheel Motorized Only (miles)	0	0.54	0.54	0.54
Route Restrictions Total (miles)	30.82	108.76	108.76	108.74
Total open and restricted routes in Limited areas (miles)	83.42	316.44	316.44	290.86

Source: BLM 2004a
[1] Note that Alternatives A and D have additional open routes within Open areas.

Methods of Analysis

Indicators

Indicators are used to identify the level of impact. For transportation and travel management, the indicators used for impact analysis are identified in **Table 4-~~56~~57**, Comparison of Transportation and Travel Management Indicators by Alternative.

Methods and Assumptions

Potential impacts on transportation and travel from each alternative are based on interdisciplinary team knowledge of the resources and the planning area and information gathered from the public during the planning process. Impacts were identified using best professional judgment and were assessed according to the following assumptions:

- The demand for recreational use would continue to increase over the life of the plan;
- Recreational visits would continue to increase;
- The incidence of resource damage and conflicts among recreationists involved in mechanized, motorized, and nonmotorized activities would increase with increasing use of public lands;
- Anticipated increases would focus on OHV use, as well as fishing, hiking, mountain biking, camping, motor boating, photographing, wildlife/bird observing, picnicking, and hunting;

- CFO expects some route proliferation, but will make every effort to prevent it~~User-created trails would continue to be developed throughout the CFO; and~~
- Implementation of the travel management plan will include increased public education, signing, enforcement, and resource monitoring in regards to travel management; and
- Technology will continue to advance the ability of motorized vehicles to travel in previously inaccessible terrain.

Effects Common to All Alternatives

Effects from Vegetation—Riparian and Wetlands Management

Measures implemented to protect riparian and wetland areas could directly affect transportation and travel management if routes are restricted or closed to protect sensitive resources. Effects would be short or long term depending on if the route is temporarily or permanently restricted. Closures would be evaluated for need for long-term management prior to closing. Closures for resource protection could result in an overall net decrease of available BLM-administered routes in the planning area.

Effects from Wildlife and Special Status Wildlife Management

Wildlife management activities under all alternatives could directly affect transportation and travel management if routes are restricted or closed to protect wildlife and special status species, including their vegetation and habitat needs. Effects would be short or long term depending on if the route is temporarily or permanently restricted.

Effects from Special Status Plants

Modifying activities to avoid or minimize adverse impacts to listed plants could directly affect transportation and travel management if routes are restricted or closed to protect listed plants species.

Effects from Wildland Fire Management

Route restrictions and closures could occur during wildland fire management activities, directly affecting transportation and travel management. Short-term effects could include an increase of fire-management equipment traffic on BLM-administered routes, an increase of motorized vehicle traffic on routes that remain accessible until fire management activities stop, and an increase of motorized and nonmotorized conflicts on the remaining accessible routes.

Effects from Cultural Resources Management

Under all alternatives, protective measures for cultural resources would affect transportation and travel management when restrictions are implemented to protect cultural values at specific sites. Restrictions on roads could directly affect visitors by limiting accessibility to some sites and would result in an overall reduction in available routes.

Effects from Livestock Grazing Management

Adjusting grazing allotments with fence modifications Grazing management could directly affect transportation and travel management by adjusting current use and altering routes. Short-term effects would include increased use of the route network for livestock grazing management purposes, such as maintaining livestock developments. New routes established for livestock grazing management could also increase overall route density on BLM-administered lands, thereby expanding the route network.

Effects from Minerals Management

Minerals management, including heavy equipment and truck traffic on the network of routes within the CFO planning area, would directly affect transportation and travel management. However, most effects would be short term and would only occur during mineral-development activities. New routes established for mineral development could also increase overall route density on BLM-administered lands, thereby expanding the route network.

Effects from Transportation and Travel Management

There are approximately 341 miles of existing BLM-administered routes on BLM-administered lands within the CFO. All BLM-administered lands within the planning area would be designated as Open, Closed or Limited. In Open areas, all types of motorized vehicle use would be permitted anywhere at all times (on roads or cross country); Limited designations would restrict motorized vehicles to either existing routes (Alternative A) or designated routes (Alternatives B, C, and D); and Closed areas would prohibit off-road motorized vehicle travel yearlong, and would allow motorized vehicle travel on previously established existing routes to private inholdings or mining claims, where those routes are identified in the BLM designated route system. In general, most route restrictions allow motorized vehicle travel only when authorized by the BLM. Effects vary depending on how much a route is used and the level of restriction placed on the route. Indirect effects would also occur on unrestricted (open) routes because motorized vehicle use would be confined to a reduced route network or density.

Under all alternatives, nonmotorized travel (e.g., pedestrian, equestrian, and mechanized uses such as mountain bikes) would continue on over 99 percent of BLM-administered lands in the planning area (143,076 acres). Mechanized uses would continue to be prohibited in the 750-acre Wilderness. There would be no change from current management, and opportunities would continue for visitors who access public lands by foot, horse, or bicycle.

Over-snow motorized travel would remain Open on 100,861 acres of the planning area, maintaining opportunities for visitors who travel by these modes of transportation on approximately 71 percent of the CFO. Restrictions placed on over-snow motorized travel within the Craig Mountain WMA would create short-term effects on users who prefer to recreate in these areas during restricted periods (November 26 through March 15) and would create long-term effects as a result of permanently closed areas. Within the Craig Mountain WMA, over-snow motorized travel would be Open on 105 acres and Closed on 24,779 acres. With adequate snow cover (18 inches), the Upper Mountain Area would remain Open to over-snow travel from November 26 through March 15.

Effects from Lands and Realty Management

Land acquisitions could increase the overall route network and expand both motorized and nonmotorized opportunities.

Effects from ACEC/RNA Management

Management within ACECs and ACEC/RNAs could affect transportation and travel management. Routes determined to be affecting values for which the designations were established could be relocated, reconstructed, or decommissioned.

Effects from National Trails Management

Continued protection of 21 miles of National Trails within the CFO would maintain the values found along the trail. Access would be maintained, and nonmotorized opportunities would continue.

Effects from Native American Tribal Uses Management

Transportation and travel management activities could be restricted or excluded if routes are interfering with the maintenance and protection of natural and cultural resources important for exercising Native American traditional uses.

Alternative A

Effects from Soils Management

Under Alternative A, prioritizing the existing road network based on sensitive land types could result in altering the existing road network to protect sensitive soils. Roads could be decommissioned, obliterated, or partially recontoured. These measures could affect existing routes by condensing current use on fewer roads, and impacts could be long or short term, depending on whether the route closures would be seasonal or permanent. Closures would be evaluated for need for long-term management prior to closing.

Effects from Water Resources Management

Managing water resources to protect and maintain healthy watersheds could affect transportation and travel management. Routes that cross streams or contribute to nonpoint source pollution, contributing to the degradation of water quality, would be temporarily or permanently closed.

Effects from Forest Products Management

Route restrictions and closures could occur during forest product management activities, directly affecting transportation and travel management. Short-term effects could include an increase of forestry-related traffic on BLM-administered routes, an increase of motorized vehicle traffic on routes that remain accessible until forest product management activities stop, and an increase of motorized and nonmotorized conflicts on the remaining accessible routes. Long-term effects include an increase in the number of routes accessible on public lands through the establishment of new logging roads. This would affect opportunities for both motorized and nonmotorized users overall by increasing road density in the CFO.

Effects from Recreation Management

The ROS setting provides a framework for identifying the types of recreation activities that the public might desire, which is directly related to transportation and travel management opportunities in those areas. In sum, the ROS setting for this alternative would maintain approximately 23 percent of the planning area as primitive and available for nonmotorized opportunities (comprised of 14,381 acres Primitive and 18,816 acres Semiprimitive Nonmotorized). The remaining 77 percent (26,206 acres Semiprimitive Motorized, 55,988 acres Roaded-Natural, 27,349 acres Semi-Urban, 40 acres Urban, and 1,046 acres undesignated) would remain open to motorized opportunities and would encourage a wide variety of recreation uses and activities. Motorized opportunities would be subject to area designations (Open, Limited, and Closed) and route designations.

Effects from Transportation and Travel Management

Alternative A would provide the most motorized and mechanized public access of any of the alternatives. Transportation and travel management would continue to recognize 85,308 acres (59 percent) as Open, 40,437 acres (28 percent) as Limited, and 18,054 acres (13 percent) as Closed. This alternative would retain more than half of the planning area as Open to cross-country travel, thereby providing the greatest opportunity to those who wish to travel by motorized vehicle. Areas designated as Open that receive regular cross-country use include Pardee, the Lucile Caves area

(excluding the ACEC), and portions of Elk City Township. The BLM would continue to manage approximately 33 miles of routes within Open areas as closed to motorized vehicles to protect wildlife and cultural resources, which would preclude unrestricted cross-country travel within some Open areas. Most restricted routes are segments that were once a road but may or may not be passable because of not being maintained or due to natural causes. Therefore, cross-country travel in Open areas would not likely be affected by these route restrictions.

Under Alternative A, Limited areas would continue to be limited to existing routes, which could result in additional route creation because what constitutes an existing route can be difficult for the public to discern on the ground. Limited areas would continue to contain approximately 41 miles of existing BLM-administered routes that are open yearlong; however, 12 of the 41 miles (30 percent) do not have legal public access so likely receive little or no use. Restrictions would continue on 31 miles of routes within Limited areas, all of which would continue to have full vehicle closures yearlong. Within Closed areas, the BLM would maintain about 21 miles of routes open to motorized vehicle use yearlong. Maintaining some open routes within Closed areas would allow travel for specific purposes in otherwise restricted areas.

Effects from ACEC/RNA Management

Management within ACECs and ACEC/RNAs could affect transportation and travel management. Routes determined to be affecting values for which the designations were established could be relocated, reconstructed, or decommissioned.

Alternative B

Effects from Soils Management

Effects would be similar to those identified under Alternative A. Under Alternative B, implementing BMPs and expanding minimum requirements for protecting soil from ground-disturbing activities could directly affect transportation and travel management by increasing restrictions on road planning. Activities such as soil stabilization and reclamation could require seasonal or permanent route closures. Overall, these measures would increase route restrictions and closures compared to Alternative A.

Effects from Water Resources Management

Effects would be similar to those identified under Alternative A. Alternative B would implement additional BMPs that supplement basic guidelines for road planning, construction, drainage, and maintenance. Measures such as limiting transportation networks in riparian areas, minimizing stream crossings, and avoiding certain roads during wet periods would affect travel within the planning area. Direct short-term affects would occur during seasonal closures, and long-term effects would occur if routes were decommissioned, preventing access to previously accessible areas.

Effects from Vegetation—Riparian and Wetlands Management

Effects on transportation and travel management could increase because Alternative B would introduce additional conservation measures. Under Alternative B, RCA stream buffers would total 6 percent less than RHCAs in Alternative A. Routes that occur within RCAs that are failing to meet riparian management objectives or that are adversely affecting special status fish would be relocated, reconstructed, or decommissioned. In sum, all routes would have additional criteria to meet, and the number of new roads in RCAs would be limited and would not be allowed unless long-term

management needs could be identified. Temporary roads would be decommissioned in a maximum of three years after completion of construction.

Effects from Wildlife and Special Status Wildlife Management

No net increase in routes designated as open for motorized vehicle use of roads or trails on BLM lands and on BLM-controlled roads and trails would be allowed in priority management areas totaling 101,526 acres. Transportation and travel management would be directly affected in these areas. Current levels of OHV use could be sustained; however, as the number of recreational users increases and trail density increases, it could become necessary to restrict the level of motorized vehicle use. Opportunities for nonmotorized and mechanized uses in these areas would be expanded.

Measures to decommission or partially or fully obliterated roads and trails in restoration and conservation watersheds totaling 64,481 acres (3 percent more acres than prescription watersheds under Alternative A) would reduce the amount of available routes and trails for all users who depend on this transportation network.

Effects from Aquatic Resources, Fish, and Special Status Fish Management

Measures to protect and improve aquatic resources, fish, and special status fish could directly affect transportation and travel management if route restrictions or closures are implemented for resource protection. Effects would be short or long term depending if the route is seasonally or permanently restricted. Alternative B also establishes land use standards and guides within the RCA stream buffers, as discussed above in Effects from Vegetation—Riparian and Wetlands Management. The additional emphasis on restoration actions (**Appendix C**, Conservation and Restoration Watersheds [see Volume II~~I~~]) could affect routes within the planning area if routes are determined to be a contributing cause of degradation.

Effects from Paleontological Resources Management

Under Alternative B, developing protective measures for paleontological resources could affect transportation and travel management if restrictions are implemented to protect identified paleontological resources at specific sites. Restrictions on roads could directly affect visitors by limiting accessibility to some sites and would result in an overall reduction in routes available to access public lands.

Effects from Forest Products Management

Effects would be similar to those identified under Alternative A. Under Alternative B, the BLM would implement BMPs that supplement basic guidelines for road planning, construction, drainage, and maintenance. Additional requirements could directly affect transportation and travel management by increasing route restrictions. Overall, these measures would increase route restrictions and closures compared to Alternative A.

Effects from Recreation Management

Similar to Alternative A, the BLM would continue to manage public lands for a variety of recreational activities within all ROS settings. Effects on transportation and travel management would be similar to those identified under Alternative A. Under this alternative, the ROS setting establishes approximately 30 percent of the planning area as primitive and available for nonmotorized opportunities (comprised of 6,200 acres Primitive and 36,495 acres Semiprimitive Nonmotorized). The remaining 70 percent (23,593 acres Semiprimitive Motorized, 54,867 acres

Roaded-Natural, 22,478 acres Semi-Urban, and 40 acres Urban) would be open to more motorized and developed activities. This alternative increases nonmotorized experiences by approximately 7 percent compared to Alternative A. As a result, motorized activities would be limited, but nonmotorized uses would be expanded. As under Alternative A, motorized opportunities would be subject to area designations (Open, Limited, and Closed) and route designations.

Under Alternative B, no competitive use zones would be designated in the Lower Salmon River Scenic SRMA, the Lolo Creek SRMA, and in the Wilderness. This would preclude activities such as OHV and motorcycle racing, limiting opportunities for users who desire these activities on BLM-administered lands.

Effects from Transportation and Travel Management

There would be long-term changes to existing motorized vehicle use area designations, including the total elimination of Open areas and the conversion of all areas Limited to existing routes yearlong to areas Limited to designated routes yearlong (and tripling the total acreage of Limited areas to 125,729 acres). There would be no change to Closed area acreage. Eliminating Open area designations would have a long-term direct effect on OHV use by eliminating the area of cross-country travel permitted on BLM-administered lands.~~Eliminating Open area designations would have a long-term direct effect on OHV use by reducing the area of cross-country travel permitted on BLM-administered lands.~~ Areas of high use such as Pardee, Lucile Caves, and portions of the Elk City Township would be directly affected. OHV users in those areas would be restricted to designated routes, and cross-country travel would not be allowed for the general public.

Route designation criteria under this alternative would consider several measures, including designating new routes for motorized travel, closing routes seasonally or yearlong, designating specific modes and types of permitted use, and establishing trail densities. This would affect all recreational users by allowing a balance of uses to protect resource values and to minimize conflicts between different users. Within Limited areas, approximately 254 miles of routes would remain open yearlong (an average route density of 1.29 miles per square mile), almost half of which do not have legal public access so likely receive little or no use. The remaining 109 miles of routes within Limited areas would be subject to vehicle restrictions, the majority (93 percent) of which would be closed yearlong to motorized use. A total of 101 miles of restrictions would be identified for full vehicle closures yearlong, a 70-mile increase compared to Alternative A. Because no Open areas would be designated under this alternative, route closures that currently exist within Open areas would instead be closed within Limited areas, accounting for a large portion of the increase of routes with full vehicle closures yearlong.

About 10 miles of routes within Closed areas would remain open yearlong, maintaining access for specific purposes in otherwise restricted areas. This is a 9-mile decrease compared to Alternative A. The reduction in OHV opportunities in some areas could increase route densities in other areas. Furthermore, eliminating all Open areas and designating all routes within the planning area would create long-term effects on both motorized and nonmotorized users, and would eliminate cross-country motorized vehicle use opportunities on all BLM-administered lands in the CFO. By providing public information such as maps, signs, and kiosks as part of implementing the travel management plan, potential user conflicts would be minimized.

Alternative C

Effects from Soils Management

Effects would be the same as those described under Alternative B.

Effects from Water Resources Management

Effects would be the same as those described under Alternative B.

Effects from Vegetation—Riparian and Wetlands Management

Under Alternative C, effects on transportation and travel management from riparian and wetlands management would be similar to those impacts described under Alternative B; however, RCAs would be expanded by 21 percent over Alternative B (and 14 percent over Alternative A). This could increase the impact on transportation and travel management compared to Alternative B by requiring additional route closures to ensure riparian management objectives are met and that special status fish are not adversely affected.

Effects from Wildlife and Special Status Wildlife Management

Effects on transportation and travel management would be similar to those described under Alternative B. Under Alternative C, the same 12 areas as in Alternative B, plus 1 additional area, would be identified for either a no net increase in routes designated open for motorized vehicle use (8 areas totaling 75,772 acres) or management emphasis to decrease routes open for motorized vehicle use (5 areas totaling 38,733 acres). Wildlife and special status wildlife management actions under this alternative would result in the greatest direct effect on transportation and travel management. Although current levels of OHV use could be sustained in some areas, prohibiting a net increase and striving for a net decrease of routes designated open for motorized vehicle use would directly limit access to the identified watershed areas. Opportunities for nonmotorized and mechanized uses in these areas would be expanded.

Measures to decommission or partially or fully obliterated roads and trails in restoration and conservation watersheds totaling 68,359 acres (3 percent more than prescription watersheds under Alternative A) would reduce the amount of available routes and trails for all users who depend on this transportation network. This reduction would be 6 percent more than Alternative B.

Effects from Aquatic Resources, Fish, and Special Status Fish Management

Effects would be similar to those described under Alternative B. Similar to Alternative B, Alternative C establishes land use standards and guides within RCA stream buffers; however, Alternative C has the largest default buffers compared to all Alternatives. The emphasis on restoration actions (**Appendix C**, Conservation and Restoration Watersheds [see Volume II~~I~~]) plus the increase in buffer size could increase the effects on transportation and travel management in comparison to other Alternatives.

Effects from Paleontological Resources Management

Effects would be the same as those described under Alternative B.

Effects from Forest Products Management

Effects would be the same as those described under Alternative B.

Effects from Recreation Management

Effects would be the same as those described under Alternative B.

Effects from Transportation and Travel Management

Effects would be the same as those described under Alternative B.

Alternative D

Effects from Soils Management

Effects would be the same as those described under Alternative B.

Effects from Water Resources Management

Effects would be the same as those described under Alternative B.

Effects from Vegetation—Riparian and Wetlands Management

Under Alternative D, impacts would be similar to those described under Alternative B; however, RCA stream buffers would be reduced by 9 percent from Alternative B (and by 15 percent from Alternative A). This could decrease the impact on transportation and travel management in comparison to Alternatives A, B, and C by requiring fewer route closures to ensure that riparian management objectives are met and that special status fish are not adversely affected.

Effects from Wildlife and Special Status Wildlife Management

Priority management areas to protect watersheds, and effects as a result of protecting these areas, would be similar to those described under Alternative B. Measures to decommission or partially or fully obliterated roads and trails in restoration and conservation watersheds (21 percent less than prescription watersheds under Alternative A) would reduce the amount of available routes and trails for all users who depend on this transportation network. Therefore, fewer route restrictions would occur, providing users more opportunities to access watershed areas.

Effects from Aquatic Resources, Fish, and Special Status Fish Management

Effects would be similar to those described under Alternative B. Similar to Alternative B, Alternative D establishes land use standards and guides within RCA stream buffers; however, Alternative D has the smallest default buffers compared to all Alternatives. Despite the emphasis on restoration actions (**Appendix C**, Conservation and Restoration Watersheds [see Volume II~~I~~]), the decrease in buffer size would decrease the effects on transportation and travel management in comparison to other Alternatives.

Effects from Paleontological Resources Management

Effects would be the same as those described under Alternative B.

Effects from Forest Products Management

Effects would be the same as those described under Alternative B.

Effects from Recreation Management

Effects on transportation and travel management related to SRMA designations, ROS settings, and competitive use zones would be the same as those described under Alternative B.

Effects from Transportation and Travel Management

Effects would be similar to those described under Alternative B. The main difference between Alternative D and Alternatives B and C is that Alternative D would maintain 23,189 acres as Open for cross-country travel rather than eliminating all Open areas (as would be the case under Alternatives B and C). Open areas under Alternative D would be reduced by 73 percent (62,119

acres) from Alternative A. Approximately 28 percent fewer acres would be Limited to designated routes under Alternative D; Limited areas would total 102,542 acres. As in all other alternatives, approximately 18,000 acres would remain Closed. Open areas under Alternative D would see an increase in cross-country travel as other currently popular Open areas are changed from Open to Limited, thereby restricting cross-country travel. Conflicts between users could continue, as the density of OHV users would increase in smaller and more-confined areas. Nonmotorized users in these areas would undergo a diminished recreation experience because of noise, exhaust fumes, and wheel tracks left behind from motorized cross-country travel.

Effects from route designation criteria would be similar to those described under Alternative B. Within Limited areas, approximately 228 miles of routes would remain open yearlong, about one-third of which do not have legal public access so likely receive little or no use. Similar to Alternatives B and C, the remaining 109 miles of routes within Limited areas would be subject to vehicle restrictions, and approximately 101 miles would be full vehicle closures yearlong, a 71-mile increase compared to Alternative A (and the same as Alternatives B and C). Because Open areas under Alternative D would be reduced by 62,119 acres (73 percent), route closures that currently exist within Open areas would instead be closed within Limited areas, accounting for a large portion of the increase of routes with full vehicle closures yearlong. Effects of routes open within Closed areas would be the same as those described under Alternative B.

Cumulative Effects

Historically, the scattered and fragmented lands that dominate the CFO planning area and the areas rough terrain have been a physical constraint affecting off-road use in the planning area. Past actions such as mineral exploration and development, livestock grazing, forestry practices, and changes to management on lands surrounding the CFO have also contributed to affects on transportation and travel management.

Most past activities are anticipated to continue at a similar level in the foreseeable future. Surface-disturbing activities may contribute to route restrictions and alterations as some areas and existing routes and trails become more heavily traveled and nonmotorized opportunities may be reduced as more development occurs. New routes could increase access to remote areas that were previously inaccessible by motorized vehicles. Accessibility to BLM-lands may change as land acquisitions and disposals continue. Land exchanges would generally result in an increased amount of public land available and accessible to the public.

Idaho's rapidly increasing population would continue to put pressure on the BLM to adequately manage travel and transportation on public lands. Public use of existing routes and trails would continue to increase as population increases. From 1999 to 2003, motorbike and all-terrain vehicle registrations increased approximately 88 percent, and snowmobile registrations increased 13 percent from 2000 to 2004 (Idaho Department of Parks and Recreation 2004). These increases indicate a need for continuing effective transportation and travel management planning throughout the CFO and in surrounding areas.

Alternative A maintains the greatest percentage of land (59 percent) Open to cross-country travel, resulting in the largest opportunity to contribute to motorized and nonmotorized travel. Alternative D would maintain 16 percent of the CFO as Open, while Alternatives B and C do not reserve any

land as Open. Alternatives B and C would provide greater opportunities for nonmotorized travel but overall, would limit motorized travel.

4.3.7 Lands and Realty

Goals: 1) Meet the needs of government agencies and the public for various realty authorizations, access, and land ownership adjustments; and 2) Meet the needs of government agencies and the public for resource protection through public land and minerals withdrawals, acquisition of conservation easements, and resolution of unauthorized use.

Summary

The term "realty authorizations" includes all types of authorizations to use public land that are included in the lands and realty program. These include rights-of-way, land leases, land use permits, Memorandums of Understanding, Cooperative Agreements, reservations to other federal agencies, and license agreements, among others. The term "realty actions" includes all lands and realty activities such as realty authorizations, land tenure actions, and withdrawals, among others.

Alternative A is the only alternative that would specifically prohibit realty authorizations in ACECs (rights-of-way would continue to be prohibited in 20,463 acres of designated ACECs or ACEC/RNAs). In all four alternatives, rights-of-way would be prohibited in both Wilderness Areas and WSAs (11,622 acres). Alternative C would impose the greatest amount of potential limitations based on site-specific analysis for permitting realty authorizations. Alternative C has the most restrictions on allowable uses within ACECs and ACEC/RNAs and would designate the largest amount of land as VRM Class I, the most-restrictive classification. Alternative D would have the fewest restrictions on land uses and realty authorizations within ACECs and ACEC/RNAs and the fewest acres designated VRM Class I and II. Alternative D would best meet the needs of government agencies and the public for realty authorizations, access, and land ownership adjustments, followed by Alternatives B, A, and then C.

All alternatives would similarly meet the needs of government agencies and the public for resource protection through public land withdrawals, acquisition of conservation easements, and resolution of unauthorized use. **Table 4-~~57~~ 58** identifies the indicators that were used to analyze effects on lands and realty under each alternative.

Table 4-58
Comparison of Lands and Realty Indicators by Alternative

Indicator	Alternative A	Alternative B	Alternative C	Alternative D
Acres of CFO lands where realty authorizations prohibited	21,213	750	750	750
Acres of land tenure adjustment (retention and potential disposal)	96,465 retention; 35,361 available for disposal (12,000 acres of acquired lands not available for disposal)	113,728 retention; 30,098 available for disposal	113,728 retention; 30,098 available for disposal	113,728 retention; 30,098 available for disposal

Source: BLM 2004a

Methods of Analysis

Indicators

Indicators are used to identify the level of impact. For lands and realty management, the indicators used for impact analysis are identified in **Table 4-~~57~~58**, Comparison of Lands and Realty Indicators by Alternative.

Methods and Assumptions

Potential impacts on lands and realty from each alternative are based on interdisciplinary team knowledge of the resources and the planning area and information gathered from the public during the planning process. Impacts were identified using best professional judgment and were assessed according to the following assumptions:

- Retaining larger blocks of public land is advantageous to the BLM's management of all resources and programs since there are increased opportunities to develop long-term habitat and species management plans, watershed management plans, public recreation opportunities, manage forest/vegetal products, administer livestock grazing, protect cultural resources, etc.;
- Further consolidation of public lands and elimination of scattered parcels of public land that lack access and are difficult to manage is beneficial to the BLM and the public; and
- Access to public lands, for both the public and the BLM, and availability of public lands to meet public demands is a high priority of the Lands and Realty program.

Effects Common to All Alternatives

Effects from Soils Resources Management

Soil resources would have the same potential effect on lands and realty actions under all alternatives. When realty authorizations are proposed that would include ground disturbing activities on fragile or erosive soils, the proposed authorization may need to be relocated, redesigned, or denied.

Effects from Water Resources Management

Water resources would have the same potential effect on lands and realty actions under all alternatives. When realty authorizations are proposed that could affect water quality or water use, the proposed authorization may need to be relocated, redesigned, or denied.

Effects from Vegetation—Riparian and Wetlands Management

Realty authorizations proposed in protective riparian buffer areas would analyzed for potential impacts. Realty authorizations that would result in unacceptable levels of disturbance to these areas may need to be relocated, redesigned or denied.

Effects from Wildlife and Special Status Wildlife Management

Proposed realty authorizations that would impact the habitat of special status species may need to be relocated, redesigned or denied. All alternatives would require minimal or no disturbance within 1 mile of occupied gray wolf denning sites and rendezvous locations and within 100 yards of occupied raptor nests. This could conflict with some proposed realty actions; however, such conflicts would be infrequent since consideration is currently given to impacts to raptors and few, if any, realty actions are likely to occur in areas inhabited by wolves.

Effects from Aquatic Resources, Fish and Special Status Fish Management

Proposed realty authorizations that would impact the habitat of special status species may need to be relocated, redesigned or denied.

Effects from Special Status Plants Management

Proposed realty authorizations that would impact the habitat of special status species may need to be relocated, redesigned or denied.

Effects from Cultural Resources Management

Cultural resources would have the same potential effect on lands and realty actions under all alternatives. If important cultural resources were found on public lands, a realty authorization may need to be relocated, redesigned, or denied. The presence of significant cultural resources on public lands could prevent the disposal of public lands through land tenure actions. Cultural resources could reduce the acres available for realty authorizations and could limit land tenure adjustment opportunities.

Effects from Minerals Management

Mining claims and associated mining activities could conflict with right-of-way uses, public access, and other realty authorizations. They also could limit land tenure adjustment opportunities because public lands with valid mining claims cannot be disposed.

Effects from Lands and Realty Management

Under all alternatives, 750 acres of Wilderness Areas would exclude the granting of all rights-of-way and most realty authorizations. There are many other areas where realty authorizations may be denied if they would be incompatible with other authorized uses or result in unacceptable impacts to specific resource values such as species (and their habitat) listed under the ESA, cultural resources, certain VRM classifications, wetlands and floodplains, ACEC/RNAs, critical watersheds, and others. It is not possible to identify all of the possible reasons or areas for which realty authorizations may be found unacceptable. The granting or denial of a realty authorization is the BLM's discretion based upon whether or not the proposed action (including mitigation measures) would result in unacceptable impacts to any resources or values. They must be evaluated case by case. In some instances, one type of realty action may be acceptable in a given location, while a different type of action would be unacceptable.

Effects from Native American Tribal Uses Management

No specific effects have been identified from management actions regarding Native American tribal uses. The BLM would continue to consult with tribes regarding treaty rights, cultural access and use of plants, animals, fish and habitats. Consultation could result in identifying areas where land tenure adjustments or right-of-way actions may need to be modified to accommodate or maintain tribal uses or to avoid resources important to tribes. However, it is unlikely that accommodating tribal uses would be inconsistent with lands and realty goals and objectives within the CFO in the long term.

Alternative A

Effects from Vegetation—Riparian and Wetlands Management

Under Alternative A, riparian and wetlands management would maintain 24,920 acres of buffers around lakes, rivers, and streams to prevent damage to riparian and wetlands habitats. These buffers

would protect the soil and vegetative cover, thus limiting the use of these areas for some realty authorizations that would cause unacceptable levels of disturbance.

Effects from Aquatic Resources, Fish, and Special Status Fish Management

Prescription watersheds would identify 66,077 acres to be managed to promote activities that help achieve fisheries and water quality objectives and DFCs. Management of these watersheds could restrict ground-disturbing activities in high-priority watersheds, although the focus of the management would vary. Implementing these management actions could limit realty actions in those areas.

Effects from Visual Resources Management

Class I VRM lands (12,704 acres) could constrain some realty authorizations, although they are not designated as exclusion areas. These lands could be available for fewer land tenure adjustment opportunities because of their high visual resource qualities; however, it is possible that in certain circumstances they could be subject to adjustment.

Realty authorizations would continue to be limited but not prohibited on the 41,195 acres of Class II VRM lands, depending on the extent and permanence of any disturbance. More of ~~T~~these lands could be ~~more~~ available for disposal actions than Class I lands. VRM designation of Class III and IV lands, which total 62,289 acres and 27,639 acres, respectively, would probably not affect lands and realty management.

Effects from Lands and Realty Management

Realty Authorizations. Alternative A is the only alternative that would specifically prohibit realty authorizations in ACECs (rights-of-way would continue to be prohibited in 20,463 acres of designated ACECs or ACEC/RNAs). There would be no changes in the granting or administration of realty authorizations.

Land Tenure Adjustment. Under Alternative A, all public lands within the management areas identified in the Land Tenure Adjustment Plan Amendment would continue to be retained (96,465 acres). Public lands outside the management areas, known as the Adjustment Area (35,361 acres), would continue to be available for consideration of disposal. The BLM would continue to acquire private lands by land exchange, purchase, and donation when such lands contain important resource values, consolidate surface and subsurface interests, provide access to public lands, or eliminate inholdings in the management areas. Acquisition of private lands in the adjustment area would be possible, although the overall objective would be to consolidate public lands.

Access and Easements. Under Alternative A, road easement acquisition will be initiated only after development of activity plans including road use plans with a route analysis with early and frequent involvement of affected parties.

Withdrawn Lands. Under Alternative A, 18,532 acres of public lands and 8,062 of reserved mineral estates would continue to be withdrawn from mineral entry. Although the Salmon River withdrawals are due to expire in 2006 and 2008, respectively, a renewal of these withdrawals is currently being processed.

Effects from ACEC/RNA Management

Under Alternative A, ACEC and ACEC/RNA designations would prohibit new rights-of-way on 20,463 acres. Alternative A would designate 25,600 acres as ACECs and ACEC/RNAs.

Alternative B

Effects from Vegetation—Riparian and Wetlands Management

Under Alternative B, riparian and wetlands management would maintain 22,847 acres of buffers around lakes, rivers, and streams to prevent damage to riparian and wetlands habitats, 6 percent less area than under Alternative A RHCA buffers. Within these RCA stream buffers, development and relicensing of hydroelectric facilities would be limited to those projects meeting certain standards for fish passage and habitat requirements and applicants would be encouraged to locate (or relocate) hydroelectric facilities outside RCA stream buffers where feasible. This would complicate the granting or renewal of permits or licenses for hydroelectric development and would limit the amount of lands available for such development.

The riparian management objectives would be considered when BLM grants or renews realty authorizations within RCA stream buffers or in areas that could affect RCAs. Authorizations would be subject to stipulations or mitigation measures designed to avoid effects that could interfere with the attainment of the riparian management objectives or that could impact ESA-listed fish. This obligation to ensure that riparian management objectives are met could reduce the number and scope of realty authorizations by reducing the amount of area available for such activities. It may be necessary to realign or relocate BLM easements across private lands and realty authorizations on public land to avoid RCAs or effects on RCAs.

Land tenure adjustment also would be affected by riparian and wetlands management actions since the disposal of public lands with RCA stream buffers may be difficult or undesirable, resulting in fewer lands available for land tenure actions.

Effects from Aquatic Resources, Fish, and Special Status Fish Management

The Aquatic and Riparian Management Strategy (**Appendix F** [see Volume II~~I~~]) would identify 64,481 acres in 33 watersheds to be managed for restoration (32 watersheds) and conservation (1 watershed), 2 percent less than prescription watersheds under Alternative A. Both levels of management could restrict ground-disturbing activities in high-priority watersheds, although the focus of the management would vary. Implementing these management actions could limit realty actions in those areas.

Effects from Visual Resources Management

Impacts would be the same as those described under Alternative A.

Effects from Renewable Energy Management

Under Alternative B, development of electrical generation using biomass would be encouraged. If this type of energy development occurs on, or near, public lands, there would be an increase in the number of realty authorizations such as leases, permits, and rights-of-way (for transmission lines, access roads, etc.).

Effects from Lands and Realty Management

Rights-of-way. Under Alternative B, priority for rights-of-way would be granted to energy-related projects. Exclusion areas where no realty authorizations would be allowed are Wilderness Areas (750 acres). Avoidance areas would include some ACECs and RNAs, designated or proposed wild and scenic rivers, and some areas with special resource values. Prior to granting rights-of-way in avoidance areas, applicants would be required to implement mitigation to limit impacts to valuable resources or interference with other uses. No right-of-way corridors are identified under Alternative B; however, applicants would be encouraged to consolidate linear rights-of-way which would reduce widespread impacts. The BLM would consider establishing right-of-way corridors in the future if they are needed and feasible. Under Alternative B, fewer acres would be available for realty authorizations than under Alternative A, and restrictions or limitations would be imposed on such authorizations on a larger amount of land.

Land Tenure Adjustment. Under Alternative B, the BLM would retain ownership of more public lands than in Alternative A. There are 113,728 acres of public land identified in **Appendix M**, Land Tenure Adjustments (see Volume III), as management blocks (18 percent more than retained lands in Alternative A). Some lands within most management areas could be transferred out of federal ownership if there is not a substantial overall reduction in the amount of federal land within the management area. Scattered and isolated public lands outside the management blocks (30,098 acres) would potentially be available for disposal. Priority would be given to disposal of public lands through land exchanges that would serve to consolidate public land ownership.

Access and Easements. Under Alternative B, the BLM would seek to acquire access to inaccessible federal lands. This can be achieved by acquiring public ownership of property or easements across non-federal land. Implementing this alternative would result in the public and agency personnel obtaining access to more public lands.

Withdrawn Lands. Under Alternative B, the 18,532 acres of public land and 8,062 acres of reserved mineral estate withdrawn along the Salmon River would be considered for renewal. Any public lands along the Salmon River which are not currently withdrawn will be considered for withdrawal. This may result in a small increase in the amount of public land that is withdrawn than currently exists under Alternative A.

Effects from ACEC/RNA Management

Alternative B would not prohibit new realty actions (including rights-of-way) in any ACECs or ACEC/RNAs. New applications for rights-of-way in ACECs would be considered on a case-by-case basis. Alternative B would designate ~~34,528~~36,153 acres as ACECs and ACEC/RNAs.

Alternative C

Effects from Vegetation—Riparian and Wetlands Management

Under Alternative C, riparian and wetlands management would maintain 27,624 acres of buffers around lakes, rivers, and streams to prevent damage to riparian and wetlands habitats, 14 percent more area than RHCA buffers under Alternative A. Impacts would be similar to those described under Alternative B.

Effects from Aquatic Resources, Fish, and Special Status Fish Management

Effects would be similar to those described under Alternative B, except that under Alternative C, more watersheds would be managed as conservation watersheds (3) and restoration watersheds (~~40~~37) totaling 68,359 acres; therefore, the geographic scope of limitations on ground-disturbing activities, including some realty authorizations, would be 6 percent greater than Alternative B and 3 percent greater than prescription watersheds in Alternative A.

Effects from Renewable Energy Management

Effects would be the same as those described under Alternative B.

Effects from Lands and Realty Management

Effects would be the same as those described under Alternative B.

Effects from ACEC/RNA Management

Effects from ACEC/RNA management under Alternative C would be similar to those under Alternative B, except Alternative C would designate 60,661 acres as ACECs and ACEC/RNAs, more than double that in Alternative A and ~~57~~ 40 percent more than Alternative B.

Alternative D

Effects from Vegetation—Riparian and Wetlands Management

Under Alternative D, riparian and wetlands management would maintain 20,710 acres of buffers around lakes, rivers, and streams to prevent damage to riparian and wetlands habitats, 15 percent less area than under Alternative A. Impacts would be similar to those described under Alternative B.

Effects from Aquatic Resources, Fish, and Special Status Fish Management

Effects would be similar to those under Alternative B. However, under Alternative D, fewer watersheds would be managed as conservation watersheds (~~1~~three) or as restoration watersheds (~~27~~24), totaling 52,118 acres; therefore, the geographic scope of limitations on ground-disturbing activities, including some realty authorizations, would be 19 percent smaller than under Alternative B and 21 percent smaller than prescription watersheds under Alternative A.

Effects from Visual Resources Management

Effects would be similar to those described under Alternative A, except that, in Alternative D, 43 percent fewer lands would be classified as VRM Class I (7,205 acres), which would result in fewer restricted acres than Alternative A.

Effects from Renewable Energy Management

Effects would be the same as those described under Alternative B.

Effects from Lands and Realty Management

Effects would be the same as those described under Alternative B.

Effects from ACEC/RNA Management

Effects from ACEC/RNA management under Alternative D would be similar to those under Alternative B, except Alternative D would designate 23,922 acres as ACECs and ACEC/RNAs,

Cumulative Effects

Realty Authorizations. Effects of past actions include various authorizations and agreements to use BLM land such as right-of-way grants and road use agreements under several different authorities, permits, and leases pursuant to Section 302 of the FLPMA and Recreation and Public Purposes Act leases. There have been no designations or requests for designations of right-of-way corridors on CFO lands. No new potential right-of-way corridors on BLM lands within the CFO have been identified.

Alternative A would have the greatest effect on realty authorizations, by contributing to an overall reduction in land available for realty actions. Future actions such as ESA listings, increased tribal coordination, implementation of the ICBEMP, etc. could result in limitations imposed on realty authorizations in additional areas. However, in the future there would be increased demands for many kinds of uses on the public lands such as rights-of-way, leases, permits, recreation, and extractive uses as a result of increased population in the area. Overall, the cumulative effects of realty authorizations in the greater planning area would be minimal due to the small percentage of land that is managed by the BLM.

Land Tenure Adjustment. Land tenure adjustments for BLM lands that have occurred within the planning area during the 20-year period following the implementation of the first Land Tenure Adjustment Amendment to the MFP in 1984 include acquisition of 22,050 acres and disposal of 4,943 acres. While the percentage of land managed by the BLM within the planning area is small, acquisitions of key parcels for resource protection and scenic values have made important contributions to the quality of life and the environment in the planning area. Continued realty actions to consolidate parcels and acquire new holdings would result in positive cumulative effects for the planning area.

4.4 SPECIAL DESIGNATIONS

4.4.1 Areas of Critical Environmental Concern and Research Natural Areas

Goal: Maintain or enhance relevant resource values of more than local importance, or protect life and promote safety where natural hazards exist.

Summary

Under Alternative A, 10 ACEC/RNAs have been designated; however, no specific management goals or objectives for management were identified. The goals and objectives under Alternatives B, C, and D is to designate and manage areas as ACEC/RNAs where special management attention is required to protect and prevent irreparable damage to important historic, cultural, or scenic values, fish and wildlife resources or other natural systems or processes, or to protect life and safety from natural hazards. The designation of ACEC/RNAs allows focused management to occur on these lands, which enhances the values for which they were set aside, and minimize detrimental impacts. Alternative C best meets the goal of maintaining or enhancing resource values by designating the most acreage of ACECs and RNAs, followed by Alternatives B, A, and D (**Table 4-~~58~~59**).

Table 4-59
Comparison of ACECs and RNAs Indicators by Alternative

Indicator	Alternative A	Alternative B	Alternative C	Alternative D
Number of ACEC/RNAs	10	~~11~~12	15	8
Acres of ACEC/RNAs	25,600	~~34,528~~36,153	60,661	23,924
ACEC/RNA management	No specific goals	Existing and newly designated ACECs managed to meet relevance and importance criteria	Existing and newly designated ACECs managed to meet relevance and importance criteria	Existing and newly designated ACECs managed to meet relevance and importance criteria

Source: BLM 2004a

The designation of ACEC/RNAs does not prevent appropriate land uses that are not detrimental to the unique features or values that receive special focused management or protection. Appropriate management plans would be developed to enhance the relevance and importance criteria, specific to the ACEC/RNA designation. To ensure protection, conservation, or restoration for specific ACEC/RNA relevance and importance criteria; measures for land uses (e.g., pre-development, development, and post-development) would be incorporated into management plans or would be addressed at the activity or project level.

Methods of Analysis

Indicators

Indicators are used to identify the level of impact. For ACECs and RNAs, the indicators used for impact analysis are identified in **Table 4-~~58~~59**, Comparison of ACECs and RNAs Indicators by Alternative.

Methods and Assumptions

Potential impacts from each alternative are based on interdisciplinary team knowledge of the resources and the planning area, and information gathered from the public during the planning process. Impacts were identified using best professional judgment and were assessed according to the assumption that management prescribed for the potential ACECs would protect the relevant and important values identified during the evaluation process.

Effects Common to All Alternatives

Effects from Wildland Fire Management

The BLM would base suppression methods on resource values (e.g., streams, listed plant populations, cultural sites, WSAs, ACECs, VRM Class I and II areas, slopes and soils, and access), consistent with the Values at Risk identified in **Appendix H**, Wildland Fire Management (see Volume II~~I~~). By taking into consideration the special characteristics of ACECs, fire suppression methods would be designed and implemented to minimize the effects of fire suppression on the special characteristics of ACECs. As a result, ongoing effects would include attempts to preserve the special characteristics of ACECs from fire suppression actions during a wildland fire.

Effects from Minerals Management

ACECs that include lands within the Salmon River withdrawal(s) would be closed to mineral entry. The only difference between the alternatives is that current conditions would be less restrictive than Alternatives B, C, and D. The number of acres of ACECs closed to mineral entry would increase from current conditions but is the same under Alternatives B, C, and D.

Effects from Wilderness and Wilderness Study Areas Management

The 6,178 acres of Snowhole Rapids WSA within the Lower Salmon River ACEC would be closed to leasable minerals and, in most instances, no sales of mineral materials would occur. This reduces chances of surface-disturbing activities occurring in ACECs.

Effects from Native American Tribal Uses Management

No specific effects have been identified from management actions regarding Native American tribal uses. The BLM would continue to consult with tribes regarding treaty rights, cultural access and use of plants, animals, fish and habitats within the ACEC/RNAs. Consultation may result in identifying areas where actions or restrictions on access would need to be modified to accommodate tribal uses. However, it is unlikely that accommodating tribal uses consistent with resource goals and objectives would affect the ACEC/RNA objectives. Consideration of tribal knowledge of natural and cultural resources may also enhance the management of resources within ACEC/RNAs.

Alternative A

Effects from Vegetation—Weeds Management

The BLM would continue weed control efforts by working with partner agencies to inventory, prevent, control, and monitor weed populations. It would also rehabilitate areas that have been affected by weeds. Long-term effects would include protecting native vegetation, such as flora found in ACECs, from weeds.

Effects from Wildland Fire Management

The BLM would manage the following number of urban and rural WUI acres in ACEC/RNAs according to **Table 4-~~59~~60**.

Table 4-60
WUI Locations by ACEC/RNA for Alternative A

ACEC or ACEC/RNA	Urban WUI (acres)	Rural WUI (acres)
Captain John Creek ACEC/RNA	0	748
Craig Mountain ACEC	0	1,129
Elk City Landfill and American Hill Lake ACEC	30	0
Lower Lolo Creek ACEC	2,213	3,678
Lower Salmon River ACEC	937	14,640
Lucile Caves ACEC/RNA	404	0
Wapshilla Ridge ACEC/RNA	0	2
Long Gulch ACEC/RNA	47	0
Skookumchuck ACEC/RNA	18	0
Total	**3,649**	**20,197**

Source: BLM 2004a

Under Alternative A, urban WUI areas would cover 14 percent and rural WUI areas would cover 79 percent of ACEC/RNA designations. Wildland fire prevention and suppression activities would provide for human safety and protect property, and secondarily would also avoid or minimize effects on resource values identified for designation of ACEC/RNA. The Healthy Forest Restoration Act requires that WUI projects implemented under its authority maintain, or contribute to the restoration of presuppression characteristics in existing old-growth forest stands when implementing covered projects.

Effects from Livestock Grazing Management

The BLM would manage the following livestock grazing allotments in ACEC/RNAs according to **Table 4-~~60~~61**.

Table 4-61
Livestock Grazing Allotments by ACEC/RNA for Alternative A

ACEC or ACEC/RNA	Within Livestock Grazing Allotments (acres)
Captain John Creek ACEC/RNA	0
Craig Mountain ACEC	3,881
Elk City Landfill and American Hill Lake ACEC	29
Lower Lolo Creek ACEC	2,778
Lower Salmon River ACEC	14,395
Lucile Caves ACEC/RNA	0
Wapshilla Ridge ACEC/RNA	401
Long Gulch ACEC/RNA	0
Skookumchuck ACEC/RNA	0
Total	**21,484**

Source: BLM 2004a

There would continue to be 21,484 acres of livestock grazing allotments in 25,600 acres of ACEC/RNAs. This accounts for 92 percent of the total area of ACEC/RNAs. Areas where grazing allotments overlap sensitive areas within these designations are often fenced or are not authorized for livestock grazing use, thereby protecting the special values within these designations. There would be no change in the management of livestock grazing allotments from current management.

Effects from Minerals Management

Alternative A would continue to manage minerals activities on lands open to leasing, location, or sale on a case-by-case situation following current laws, policies, and regulations. The BLM would manage areas designated as open and closed to minerals according to **Table 4-~~61~~62**. These minerals designations result from wild and scenic rivers and WSA management.

Table 4-62
Minerals Designations by ACEC/RNA for Alternative A

ACEC or ACEC/RNA	Leasables Open (acres)	Leasables Closed (acres)	Locatables Open (acres)	Locatables Closed (acres)	Salables Open (acres)	Salables Discretionary Closures (acres)
Captain John Creek ACEC/RNA	1,320	0	1,320	0	1,320	0
Craig Mountain ACEC	3,955	0	3,955	0	3,955	0
Lower and Middle Cottonwood Islands ACEC/RNA	43	0	43	0	43	0
Elk City Landfill and American Hill Lake ACEC	29	0	29	0	29	0
Lower Lolo Creek ACEC	3,678	0	3,678	0	3,678	0
Lower Salmon River ACEC	10,021	6,178	963	14,738	10,021	6,178
Lucile Caves ACEC/RNA	403	0	146	257	403	0
Wapshilla Ridge ACEC/RNA	401	0	401	0	401	0
Long Gulch ACEC/RNA	47	0	0	47	47	0
Skookumchuck ACEC/RNA	17	0	2	15	17	0
Total	**19,914**	**6,178**	**10,537**	**15,057**	**19,914**	**6,178**

Source: BLM 2004a

There would be no change in the designation of open and closed areas for mining activities in ACEC/RNAs. Leasable, locatable, and salable mineral activities would continue to be allowed on approximately 75 percent, 40 percent, and 75 percent, respectively, of ACEC/RNAs. Leasable minerals activities would not be constrained by NSO and CSU stipulations. Ongoing effects would continue, such as surface disturbances associated with minerals activities that could damage the special characteristics of ACEC/RNAs.

Effects from Lands and Realty Management

Under Alternative A, no new rights-of-way would be permitted in Lower Lolo Creek ACEC (3,678 acres), Lower Salmon River ACEC (15,702 acre), Craig Mountain ACEC (3,956 acres), Wapshilla Ridge ACEC/RNA (401 acres), and Lucile Caves ACEC/RNA (404 acres), a total of 20,463 acres. In areas where realty authorizations are permitted, the BLM maintains discretionary authority and would only permit actions that do not impair or conflict with an ACEC/RNA.

Effects from ACEC/RNA Management

Alternative A would continue to designate 25,600 acres (or approximately 18 percent of BLM-administered land) of ACECs and RNAs. Ongoing effects would include concern for designating additional ACECs in order to protect, for example, special scenic, recreational, cultural, and

biological resources associated with the Salmon River, American River, and American River Historic Sites District.

Effects from Wild and Scenic Rivers Management

Lands within ACECs that are also identified for inclusion in the NWSRS would be withdrawn from locatable mineral entry. The withdrawal reduces chances of surface-disturbing activities occurring on these lands.

Alternative B

Effects from Vegetation—Weeds Management

The BLM would work with partners in coordinated weed management areas to develop and implement annual treatment strategies. It would also implement treatment strategies outside of weed management areas in accordance with other resource goals. Long-term effects would include protecting native vegetation, such as flora found in ACECs, from weeds.

Effects from Wildland Fire Management

The BLM would manage the following number of urban and rural WUI acres in ACEC/RNAs according to **Table 4-~~62~~63**.

Table 4-63
WUI Locations by ACEC/RNA for Alternative B

ACEC or ACEC/RNA	Urban WUI (acres)	Rural WUI (acres)
Captain John Creek ACEC/RNA	0	748
Lower and Middle Cottonwood Islands ACEC/RNA	43	0
Lower Salmon River ACEC	937	15,137
East Fork American River ACEC	570	0
American River Historic Sites District ACEC	5,256	4,570
Salmon River ACEC	3,044	5,756
Upper Lolo Creek ACEC	635	1,198
Lower Lolo Creek ACEC	2,213	3,678
Wapshilla Ridge ACEC/RNA	0	2
Long Gulch ACEC/RNA	47	0
Lucile Caves ACEC/RNA	136	0
Skookumchuck ACEC/RNA	18	0
Total	**12,899~~26~~4**	**31,089~~29,891~~**

Source: BLM 2004a

Under Alternative B, urban WUI areas would cover 36 percent and rural WUI areas would cover ~~87~~ 86 percent of ACEC/RNA designations. Compared to Alternative A and represented as a percentage of total land containing ACEC/RNA designations, this is an increase of 22 percent and ~~8~~ 7 percent, respectively. Effects would be similar to those described under Alternative A.

Effects from Livestock Grazing Management

The BLM would manage the following livestock grazing allotments in ACEC/RNAs according to **Table 4-~~63~~64**.

Table 4-64
Livestock Grazing Allotments by ACEC/RNA for Alternative B

ACEC or ACEC/RNA	Within Livestock Grazing Allotments (acres)
Captain John Creek ACEC/RNA	0
Lower Salmon River ACEC	13,012
East Fork American River ACEC	461
American River Historic Sites District ACEC	4,034
Salmon River ACEC	5,466
Upper Lolo Creek ACEC	3,210
Lower Lolo Creek ACEC	3,662
Wapshilla Ridge ACEC/RNA	0
Long Gulch ACEC/RNA	0
Lucile Caves ACEC/RNA	0
Skookumchuck ACEC/RNA	0
Total	**29,845~~26,635~~**

Source: BLM 2004a

There would be ~~26,635~~29,845 acres of livestock grazing allotments in ~~34,528~~36,153 acres of ACEC/RNAs. This accounts for ~~77~~ 83 percent of the total area of ACEC/RNAs. Compared to Alternative A, ~~15~~ nine percent fewer acres of ACEC/RNAs would be open to livestock grazing. Additionally, grazing would be removed entirely from the Wapshilla Ridge ACEC/RNA, further protecting unique values. Overall, impacts from grazing management on ACEC/RNAs would be reduced in comparison to Alternative A.

Effects from Minerals Management

Alternative B would be similar to Alternative A; however, because of the implementation of leasing stipulations, all leasable activities and, in most instances, mineral material disposal activities, would be subject to NSO-1 in ACECs. This stipulation reduces chances of minerals activities that could damage the important and relevant ACEC values. The BLM would manage areas designated as open and closed to minerals according to **Table 4-~~64~~65**. These minerals designations result from wild and scenic rivers and WSA management.

The BLM would enforce NSO and CSU stipulations for leasables according to **Table 4-~~65~~66**.

Under Alternative B, ~~100~~ 99 percent of BLM land within ACEC/RNAs open to leasable and saleable mineral activity would contain NSO stipulations, and ~~75~~ 74 percent would contain CSU stipulations (~~20,960~~22,325 acres), in comparison to Alternative A which does not identify any stipulations within these designations. Implementing stipulations would reduce the number of surface disturbances associated with leasable and saleable minerals activities that could damage the special characteristics of ACEC/RNAs.

Table 4-65
Minerals Designations by ACEC/RNA for Alternative B

ACEC or ACEC/RNA	Leasables Open (acres)	Leasables Closed (acres)	Locatables Open (acres)	Locatables Closed (acres)	Salables Open (acres)	Salables Discretionary Closures (acres)
Captain John Creek ACEC/RNA	1,320	0	1,320	0	1,320	0
Lower and Middle Cottonwood Islands ACEC/RNA	43	0	43	0	43	0
Lower Salmon River ACEC	10,021	6,178	963	14,753	10,021	6,178
East Fork American River ACEC	569	0	569	0	569	0
American River Historic Sites District ACEC	6,355	0	6,355	0	6,355	0
Salmon River ACEC	5,758	0	505	5,253	5,758	0
Upper Lolo Creek ACEC	1,624	0	1,624	0	1,624	0
Lower Lolo Creek ACEC	3,678	0	3,678	0	3,678	0
Wapshilla Ridge ACEC/RNA	401	0	401	0	401	0
Long Gulch ACEC/RNA	47	0	0	47	47	0
Lucile Caves ACEC/RNA	135	0	0	135	135	0
Skookumchuck ACEC/RNA	17	0	2	15	17	0
Total	**29,968** ~~**28,344**~~	**6,178**	**15,460** ~~**13,836**~~	**20,203**	**29,968** ~~**28,344**~~	**6,178**

Source: BLM 2004a

Table 4-66
Mineral Leasing Stipulations by ACEC/RNA for Alternative B

ACEC or ACEC/RNA	NSO (acres)	CSU (acres)
Captain John Creek ACEC/RNA	1,320	0
Lower Salmon River ACEC	9,991	9,991
East Fork American River ACEC	569	0
American River Historic Sites District ACEC	6,322	1,550
Salmon River ACEC	5,725	5,700
Upper Lolo Creek ACEC	1,544	1,365
Lower Lolo Creek ACEC	3,677	3,521
Wapshilla Ridge ACEC/RNA	401	0
Long Gulch ACEC/RNA	47	47
Lucile Caves ACEC/RNA	136	136
Skookumchuck ACEC/RNA	15	15
Total	**29,747** ~~**28,203**~~	**22,325** ~~**20,960**~~

Source: BLM 2004a

Effects from Lands and Realty Management

In areas where realty authorizations are permitted, the BLM maintains discretionary authority and would only permit actions that do not impair or conflict with an ACEC/RNA.

Effects from ACEC/RNA Management

Alternative B would designate ~~34,528~~36,153 acres (or approximately ~~24~~ 25 percent of BLM-administered land) ~~of~~ as ACECs and RNAs. This would increase the percentage of BLM-administered land designated as ACECs and RNAs from 18 to 25 percent. Greater protection would be afforded the special values associated with the Upper Lolo Cree, Salmon River, the East Fork American River, and the American River Historic Sites District. However, the Elk City Land Fill and American Hill Lake ACEC would no longer be designated as an ACEC. This area meets the relevance and importance criteria for being an ACEC because of the presence of buried hazardous materials and the potential threat to public safety and welfare. Therefore, public health and safety concerns could develop if this area is no longer designated as an ACEC and is not managed to safeguard the public. The Craig Mountain ACEC also would no longer be designated as an ACEC. This area meets the relevance and importance criteria for being an ACEC because of its high-value scenic, cultural, fisheries, and wildlife resources. Therefore, these special values could receive less protection from, for example, surface-disturbing activities or recreation activities if this area is no longer designated as an ACEC and is not managed to preserve the special resources. Management of forested areas would receive less protection for wildlife resources and for achievement of DFC supporting historical range of variability, particularly old forest stands. In addition, the area provides occupied and suitable habitat for Spalding's silene, a listed plant. Weed encroachment in these populations is an identified threat. Finally, Lucile Caves ACEC/RNA would be reduced in size because it does not fully meet the relevance and importance criteria identified for the original designation, as a result of updated inventories and analysis.

Effects from Wild and Scenic Rivers Management

Effects would be similar to those described under Alternative A, except that lands within ACECs that are also identified for inclusion in the NWSRS (and would be withdrawn from locatable mineral entry) would include more acres under Alternative B.

Alternative C

Effects from Vegetation—Weeds Management

The effects would be the same as those described under Alternative B.

Effects from Wildland Fire Management

The BLM would manage the following number of urban and rural WUI acres in ACEC/RNAs according to **Table 4-~~66~~67**.

Under Alternative C, urban WUI areas would cover 21 percent and rural WUI areas would cover 75 percent of ACEC/RNA designations. In comparison to Alternative A and represented as a percentage of total land containing ACEC/RNA designations, this is an increase of 7 percent and a decrease of 4 percent, respectively. Effects would be similar to those described under Alternative A.

Table 4-67
WUI Locations by ACEC/RNA for Alternative C

ACEC or ACEC/RNA	Urban WUI (acres)	Rural WUI (acres)
American River Historic Sites District ACEC	5,256	4,570
Captain John Creek ACEC/RNA	0	748
Lower and Middle Cottonwood Islands ACEC/RNA	43	0
Craig Mountain ACEC	0	13,539
East Fork American River ACEC	570	0
Little Salmon River ACEC	20	590
Upper Lolo Creek ACEC	635	1,198
Lower Lolo Creek ACEC	2,213	3,678
Lower Salmon River ACEC	937	15,137
Partridge/Elkhorn ACEC	0	576
Salmon River ACEC	3,044	5,756
Wapshilla Ridge ACEC/RNA	0	2
Long Gulch ACEC/RNA	47	0
Lucile Caves ACEC/RNA	136	0
Skookumchuck ACEC/RNA	18	0
Total	**12,919**	**45,794**

Source: BLM 2004a

Effects from Livestock Grazing Management

The BLM would manage the following livestock grazing allotments in ACEC/RNAs according to **Table 4-~~67~~68**.

Table 4-68
Livestock Grazing Allotments by ACEC/RNA for Alternative C

ACEC or ACEC/RNA	Within Livestock Grazing Allotments (acres)
American River Historic Sites District ACEC	4,034
Captain John Creek ACEC/RNA	0
Craig Mountain ACEC	438
East Fork American River ACEC	461
Little Salmon River ACEC	590
Upper Lolo Creek ACEC	1,085
Lower Lolo Creek ACEC	3,210
Lower Salmon River ACEC	12,430
Partridge/Elkhorn ACEC	576
Salmon River ACEC	5,435
Wapshilla Ridge ACEC/RNA	0
Long Gulch ACEC/RNA	0
Lucile Caves ACEC/RNA	0
Skookumchuck ACEC/RNA	0
Total	**28,259**

Source: BLM 2004a

There are 28,259 acres of livestock grazing allotments in 60,661 acres of ACEC/RNAs. This accounts for 47 percent of the total area of ACEC/RNAs. This alternative would have 45 percent less total area of ACEC/RNAs open to livestock grazing than Alternative A, and ~~30~~ 36 percent less total area than Alternative B due to an increase in ACEC/RNA designations. Under this alternative 25 allotments would be retired throughout the CFO and grazing would be eliminated entirely in the Wapshilla Ridge ACEC/RNA, thereby protecting unique values. Overall, impacts from grazing management on ACEC/RNAs would be reduced in comparison to Alternatives A, B and D.

Effects from Minerals Management

The BLM would manage areas designated as open and closed to minerals according to **Table 4-~~68~~69**. These minerals designations result from wild and scenic rivers and WSA management.

Table 4-69
Mineral Designations by ACEC/RNA for Alternative C

ACEC or ACEC/RNA	Leasables Open (acres)	Leasables Closed (acres)	Locatables Open (acres)	Locatables Closed (acres)	Salables Open (acres)	Salables Discretionary Closures (acres)
American River Historic Sites District ACEC	6,355	0	6,355	0	6,355	0
Captain John Creek ACEC/RNA	1,320	0	1,320	0	1,320	0
Craig Mountain ACEC	23,341	0	23,261	80	23,341	0
Lower and Middle Cottonwood Islands ACEC/RNA	43	0	43	0	43	0
East Fork American River ACEC	569	0	569	0	569	0
Little Salmon River ACEC	584	6	583	6	590	0
Upper Lolo Creek ACEC	1,624	0	1,624	0	1,624	0
Lower Lolo Creek ACEC	3,678	0	3,678	0	3,678	0
Lower Salmon River ACEC	10,021	6,178	963	14,753	10,021	6,178
Partridge/Elkhorn ACEC	576	0	576	0	576	0
Salmon River ACEC	5,758	0	505	5,253	5,758	0
Wapshilla Ridge ACEC/RNA	401	0	401	0	401	0
Long Gulch ACEC/RNA	47	0	0	47	47	0
Lucile Caves ACEC/RNA	135	0	0	135	135	0
Skookumchuck ACEC/RNA	17	0	2	15	17	0
Total	**54,469**	**6,184**	**39,880**	**20,289**	**54,475**	**6,178**

Source: BLM 2004a

The BLM would enforce NSO and CSU stipulations for leasables according to **Table 4-~~69~~70**.

Table 4-70
Mineral Leasing Stipulations by ACEC/RNA for Alternative C

ACEC or ACEC/RNA	NSO (acres)	CSU (acres)
American River Historic Sites District ACEC	6,322	1,550
Captain John Creek ACEC/RNA	1,320	1,306
Craig Mountain ACEC	23,162	18,306
East Fork American River ACEC	569	0
Little Salmon River ACEC	590	504
Upper Lolo Creek ACEC	1,544	1,365
Lower Lolo Creek ACEC	3,677	2,404
Lower Salmon River ACEC	9,991	9,952
Partridge/Elkhorn ACEC	576	0
Salmon River ACEC	5,725	5,700
Wapshilla Ridge ACEC/RNA	401	401
Long Gulch ACEC/RNA	47	47
Lucile Caves ACEC/RNA	136	136
Skookumchuck ACEC/RNA	15	15
Total	**54,077**	**41,687**

Source: BLM 2004a

Under Alternative C, 99 percent of BLM land within ACEC/RNA designations open to leasable and saleable mineral activity would contain NSO stipulations, and 77 percent would contain CSU stipulations, implementing the most stipulations of any alternative. Similar to Alternative B, implementing stipulations would reduce the number of surface disturbances associated with leasable and saleable minerals activities that could damage the special characteristics of ACEC/RNAs.

Effects from Lands and Realty Management

The effects would be the same as those described under Alternative B.

Effects from ACEC/RNA Management

Alternative C would designate 60,661 acres (or approximately 42 percent of BLM-administered land) of ACECs and RNAs. This would increase the percentage of BLM-administered land designated as ACECs and RNAs from 18 to 42 percent. Greater protection would be afforded the special values associated with the Salmon River and its tributaries, the East Fork American River, the American River Historic Sites District, Upper Lolo Creek, and Craig Mountain. The effects on the Lucile Caves ACEC/RNA would be the same as Alternative B.

Effects from Wild and Scenic Rivers Management

Same as Alternative B.

Alternative D

Effects from Vegetation—Weeds Management

The effects would be the same as those described under Alternative B.

Effects from Wildland Fire Management

The BLM would manage the following number of urban and rural WUI acres in ACEC/RNAs according to **Table 4-~~70~~71**.

Table 4-71
WUI Locations by ACEC/RNA for Alternative D

ACEC or ACEC/RNA	Urban WUI (acres)	Rural WUI (acres)
Long Gulch ACEC/RNA	47	0
Captain John Creek ACEC/RNA	0	748
Lower and Middle Cottonwood Islands ACEC/RNA	43	0
Lower Salmon River ACEC	937	15,137
Salmon River ACEC	3,043	5,754
Wapshilla Ridge ACEC/RNA	0	2
Lucile Caves ACEC/RNA	136	0
Skookumchuck ACEC/RNA	18	0
Total	**4,224**	**21,641**

Source: BLM 2004a

Under Alternative D, urban WUI areas would cover 18 percent and rural WUI areas would cover 90 percent of ACEC/RNA designations. In comparison to Alternative A and represented as a percentage of total land containing ACEC/RNA designations, this is an increase of 4 percent and 11 percent, respectively. Effects would be similar to those described under Alternative A.

Effects from Livestock Grazing Management

The BLM would manage the following livestock grazing allotments in ACEC/RNAs according to **Table 4-~~71~~72**.

Table 4-72
Livestock Grazing Allotments by ACEC/RNA for Alternative D

ACEC or ACEC/RNA	Within Livestock Grazing Allotments (acres)
Long Gulch ACEC/RNA	0
Captain John Creek ACEC/RNA	0
Lower Salmon River ACEC	15,000
Salmon River ACEC	5,465
Wapshilla Ridge ACEC/RNA	401
Lucile Caves ACEC/RNA	0
Skookumchuck ACEC/RNA	0
Total	**20,866**

Source: BLM 2004a

There are 20,866 acres of livestock grazing allotments in 23,924 acres of ACEC/RNAs. This accounts for 87 percent of the total area of ACEC/RNAs. Alternative D would have 5 percent fewer ACEC/RNA acres open to livestock grazing than Alternative A, and more than Alternatives B

and C. Alternative D would have the least acres designated as ACEC/RNAs, thereby allowing greater risk to resource values identified within the ACEC/RNAs in comparison to Alternatives A, B, and C.

Effects from Minerals Management

The BLM would manage areas designated as open and closed to minerals according to **Table 4-~~72~~73**. These minerals designations result from wild and scenic rivers and WSA management.

Table 4-73
Mineral Designations by ACEC/RNA for Alternative D

ACEC or ACEC/RNA	Leasables Open (acres)	Leasables Closed (acres)	Locatables Open (acres)	Locatables Closed (acres)	Salables Open (acres)	Salables Discretionary Closures (acres)
Long Gulch ACEC/RNA	47	0	0	47	47	0
Lower and Middle Cottonwood Islands ACEC/RNA	43	0	43	0	43	0
Captain John Creek ACEC/RNA	1,320	0	1,320	0	1,320	0
Lower Salmon River ACEC	10,021	6,178	963	14,753	10,021	6,178
Salmon River ACEC	5,758	0	505	5,253	5,758	0
Wapshilla Ridge ACEC/RNA	401	0	401	0	401	0
Lucile Caves ACEC/RNA	135	0	0	135	135	0
Skookumchuck ACEC/RNA	17	0	2	15	17	0
Total	**17,742**	**6,178**	**3,234**	**20,203**	**17,742**	**6,178**

Source: BLM 2004a

The BLM would enforce NSO and CSU stipulations for leasables according to **Table 4-~~73~~74**.

Table 4-74
Mineral Stipulations by ACEC/RNA for Alternative D

ACEC or ACEC/RNA	NSO (acres)	CSU (acres)
Long Gulch ACEC/RNA	47	47
Captain John Creek ACEC/RNA	1,320	0
Lower Salmon River ACEC	9,991	9,991
Salmon River ACEC	5,723	5,698
Wapshilla Ridge ACEC/RNA	401	0
Lucile Caves ACEC/RNA	136	136
Skookumchuck ACEC/RNA	15	15
Total	**17,633**	**15,887**

Source: BLM 2004a

Under Alternative D, 100 percent of BLM land within ACEC/RNA designations open to leasable and saleable mineral activity would contain NSO stipulations, and 90 percent would contain CSU stipulations. Except for Alternative A, which does not identify any stipulations, this alternative would implement the least stipulations of any alternative. Similar to Alternative B, implementing stipulations would reduce the number of surface disturbances associated with leasable and saleable minerals activities that could damage the special characteristics of ACEC/RNAs.

Effects from Lands and Realty Management

The effects would be the same as those described under Alternative B.

Effects from ACEC/RNA Management

Alternative ~~B~~ D would designate 23,924 acres (or approximately 17 percent of BLM-administered land) of ACECs and RNAs. This would decrease the percent of BLM-administered land designated as ACECs and RNAs from 18 to 17 percent. Greater protection would be afforded the special values associated with the Salmon River. The effects on the Lucile Caves ACEC/RNA would be the same as those described under Alternative B.

Effects from Wild and Scenic Rivers Management

Same as Alternative B.

Cumulative Effects

Past actions and events contributing to cumulative effects within or adjacent to ACEC/RNAs have resulted primarily from surface-disturbing activities and population growth.

Utilization of natural resources within the CFO planning area is expected to remain at current or slightly increased levels As a result, surface disturbing activities affecting ACEC/RNAs could continue, however, the BLM maintains discretionary authority over most land uses and would only permit actions that do not impair or conflict with an ACEC/RNA, reducing cumulative effects on these areas. As population increase, activity and use within or adjacent to ACEC/RNAs increases. An increasing population could continue to build housing closer to ACEC/RNAs, thereby affecting the scenic quality and visual resources of the area.

As there are no mineral lease stipulations under Alternative A, surface-disturbances associated with leasable and saleable minerals activities could continue in ACEC/RNAs. These activities would be limited under Alternatives B, C, and D, which would implement NSO and CSU stipulations in ACEC/RNAs, and rights-of-way would not be authorized in ACEC/RNAs. The cumulative effects to ACEC/RNAs would depend on the intensity and proximity of surface-disturbing activities.

4.4.2 Back Country Byways

There are no Back Country Byways on BLM-administered lands in the planning area. ~~No alternatives would affect Back Country Byways, because there are no Back Country Byways on BLM-administered lands in the planning area. There would be no effects on Back Country Byways.~~

4.4.3 National Trails

Goal: Manage National Trails to protect the values for which they were designated.

Summary

Under all of the alternatives, measures would continue to be developed to protect National Trail resources on a case-by-case basis. Under Alternatives B, C, and D, sections of the Lewis and Clark and the Nez Perce (Nee-Me-Poo) National Historic Trails (21 miles total) would be inventoried and recorded (**Table 4-~~74~~75**), and information and interpretive materials would be developed for public distribution. Alternatives B and C provides the greatest overall protection to National Trail resources. Alternatives B and C would protect and enhance the Nez Perce (Nee-Me-Poo) and the Lewis and Clark National Historic Trails via designating the new Upper Lolo Creek ACEC.

Table 4-75
Comparison of National Trails Indicators by Alternative

Indicator	Alternative A	Alternative B	Alternative C	Alternative D
Miles of National Trails (BLM land)	21 (No net change)			
Protection and enhancement of National Trails	No net change	Increased protection and enhancement through designation of Upper Lolo Creek ACEC~~No net change~~	Increased protection and enhancement through designation of Upper Lolo Creek ACEC	No net change

Source: BLM 2004a

Methods of Analysis

Indicators

Miles of National Trails and their protection and enhancement are the indicators used to assess impacts to National Trails (**Table 4-~~74~~75**, Comparison of National Trails Indicators by Alternative).

Methods and Assumptions

The four alternatives were reviewed for actions that could affect National Trails. Impact analysis and conclusions are based on interdisciplinary team knowledge of the planning area and review of existing literature. The analysis is based on the assumption that National Trails use would continue to increase over the life of the RMP.

Effects Common to All Alternatives

Effects from National Trails Management

The BLM would develop measures to protect 21 miles of National Trail resources on a case-by-case basis. This would continue to protect known resources, such as the trail setting and archeological resources. Ongoing effects include the potential loss of unknown National Trail resources because of a lack of understanding about site-specific resource values.

Alternative A

Effects from ACEC/RNA Management

There are no protective measures specifically identified for National Trails within any ACECs.

Effects from National Trails Management

There are no actions related to inventorying and recording sections of National Trails or developing interpretive materials for public distribution. This could result in damage to National Trail resources from incompatible uses, such as OHVs.

Alternative B

Effects from ACEC/RNA Management

The BLM would protect and enhance 0.4-mile of the Nez Perce (Nee-Me-Poo) and 0.4-mile of the Lewis and Clark National Historic Trails via designation of the Upper Lolo Creek ACEC. The BLM would cooperate with partners in managing these trails. This would help preserve the integrity of the trails from, for example, misuse and land-disturbing activities.

~~Effects would be the same as those described under Alternative A.~~

Effects from National Trails Management

The BLM would inventory and record 21 miles of the Lewis and Clark and the Nez Perce (Nee-Me-Poo) National Historic Trails and would develop information and interpretive materials for public distribution. Documentation of site-specific resource values would improve the understanding of and protection of National Trail resources. These actions would also inform the public about the value of National Trail resources, thereby increasing the likelihood of preserving National Trail resources, such as the trail setting and archeological resources.

Alternative C

Effects from ACEC/RNA Management

The BLM would protect and enhance 0.4-mile of the Nez Perce (Nee-Me-Poo) and 0.4-mile of the Lewis and Clark National Historic Trails via designation of the Upper Lolo Creek ACEC. The BLM would cooperate with partners in managing these trails. This would help preserve the integrity of the trails from, for example, misuse and land-disturbing activities.

Effects from National Trails Management

The effects would be the same as those for Alternative B.

Alternative D

Effects from ACEC/RNA Management

Effects would be the same as those described under Alternative A.

Effects from National Trails Management

The effects would be the same as those for Alternative B.

Cumulative Effects

Past actions and events that have affected National Trails include archaeological investigations, illegal activities (e.g., cultural resource site vandalism or collecting), and development and maintenance activities (e.g., grazing, mining, recreation use, and OHV use).

In the foreseeable future, archaeologists would continue to inventory, identify, document, and preserve National Trail resources. Illegal activities and development and maintenance activities

would continue and threaten the discovery of, quality of, and integrity of National Trail resources on BLM-administered lands, as well as elsewhere in the cumulative effects analysis area.

Implementation of any of the proposed alternatives would not contribute to a significant change in National Trail resources.

4.4.4 Wild and Scenic Rivers

Goal: Fulfill the BLM's obligations under Section 5(d)(1) of the WSR Act for the life of this RMP.

Summary

By~~Upon~~ finalizing the Wild and Scenic Rivers Eligibility and Suitability Study (**Appendix K** [see Volume II~~I~~]), the CFO has~~will have~~ determined which rivers and streams are suitable for inclusion in the NWSRS. These include two segments determined to be suitable during previous studies, the Lower Salmon River from Long Tom Bar to Hammer Creek and from Hammer Creek to the Snake River confluence. All segments determined to be suitable must be managed for the protection of their outstandingly remarkable values and free-flowing nature until such time as Congress acts upon the determination finding and either designates the river segment in the NWSRS or removes it from consideration. If the segment is removed from consideration by Congress, the BLM would manage the segment according to the management provisions of the RMP.

Under all alternatives, six river segments would be managed for the protection of outstandingly remarkable values as described in the ~~Draft~~ Final Wild and Scenic Rivers Eligibility and Suitability Study Report (**Appendix K** [see Volume II~~I~~]). These river segments include 59 miles of the Lower Salmon River (Long Tom Bar to Hammer Creek), 53 miles of the Lower Salmon River (Hammer Creek to the Snake River confluence), 2.18 miles of Lake Creek, 1.52 miles of Hazard Creek, 1.64 miles of Hard Creek, and 24 miles of Lolo Creek.

The difference between alternatives would be whether the BLM would recommend that Congress designate each particular segment. This recommendation or nonrecommendation could influence the Congressional decision and increase or decrease the likelihood of permanent legislative protection. All alternatives recommend both segments of the Lower Salmon River for designation. Alternatives A, B and D would not recommend any of the four additional segments. ~~Alternatives B and C would recommend all four additional segments, and~~ Alternative C would recommend all four additional segments for inclusion in the NWSRS. ~~Alternative D would recommend only one of the four additional segments (Lolo Creek) for designation.~~ **Table 4-~~75~~ 76** identifies the indicators that were used to analyze effects on wild and scenic rivers under each alternative.

Methods of Analysis

Indicators

Indicators are used to identify the level of impact. For wild and scenic rivers, the indicators used for impact analysis are identified in **Table 4-~~75~~76**, Comparison of Wild and Scenic Rivers Indicators by Alternative.

Table 4-76
Comparison of Wild and Scenic Rivers Indicators by Alternative

Indicator	Alternative A	Alternative B	Alternative C	Alternative D
Miles of rivers or river segments determined suitable previously and carried forward	112	112	112	112
Miles of rivers or river segments determined preliminarily suitable	29	29	29	29
Miles of suitable rivers or river segments recommended for inclusion in the NWSRS	~~0~~112	~~29~~112	~~29~~141	~~24~~112

Source: BLM 2004a

Methods and Assumptions

Potential impacts on wild and scenic rivers from each alternative are based on interdisciplinary team knowledge of the resources and the planning area and information gathered from the public during the planning process. Impacts were identified using best professional judgment and were assessed according to the assumption that most resource uses would be restricted from adversely impacting the outstandingly remarkable values and free-flowing nature of rivers suitable for inclusion in the NWSRS. Wild and Scenic River suitability tends to affect other resource uses rather than be affected.

Effects Common to All Alternatives

Effects from Recreation Management

Continued acquisition of lands and conservation easements within the Salmon River and Lolo Creek SRMAs could provide protection to aquatic habitats from private land uses, including timber harvest. Acquisition and conservation easements would enhance the BLM's ability to manage the segments.

Effects from Wild and Scenic Rivers Management

The two Lower Salmon River segments totaling 112 miles and 29 miles on four segments (Lolo, Lake, Hazard, and Hard Creeks) would be managed for the protection of outstandingly remarkable values and free-flowing nature until Congress should act upon the suitability determinations and either designate the segments or remove them from consideration (**Table 4-~~75~~76**, Comparison of Wild and Scenic Rivers Indicators by Alternative).

Alternative A

Effects from Wild and Scenic Rivers Management

Under Alternative A, the BLM would not recommend any additional segments for inclusion in the NWSRS.

Alternative B

Effects from Aquatic Resources, Fish, and Special Status Fish Management

Nine subbasins in the Lower Salmon River would be classified as restoration watersheds. Improvements to the riparian and aquatic condition of these watersheds would indirectly enhance the resource values of the Lower Salmon River segment.

Effects from Wild and Scenic Rivers Management

~~Four~~ No additional river segments ~~29~~ would be recommended for designation in the NWSRS. Management of suitable segments would be coordinated with the Idaho Department of Water Resources and Forest Service. ~~This would increase the chances for the segments to be designated, thereby affording the segments greater protection.~~

Alternative C

Effects from Aquatic Resources, Fish, and Special Status Fish Management

Ten subbasins in the Lower Salmon River would be classified as restoration watersheds. Improvements to the riparian and aquatic condition of these watersheds would indirectly enhance the resource values of the Lower Salmon River segment.

Effects from Wild and Scenic Rivers Management

Four additional river segments totaling 29 miles would be recommended for designation in the NWSRS. This would increase the chances for the segments to be designated, thereby affording the segments greater protection. Management of suitable segments would be coordinated with the Idaho Department of Water Resources and Forest Service. ~~Effects would be the same as those described under Alternative B.~~

Alternative D

Effects from Aquatic Resources, Fish, and Special Status Fish Management

Effects would be the same as those described under Alternative B.

Effects from Recreation Management

Increasing the use of Lolo Creek by issuing commercial permits could result in shoreline and aquatic habitat degradation. Increased use could result in increased impacts from people walking in the streambed and disturbing salmon eggs (redds) and bank disturbance from people coming in and out of the river channel in areas with limited access.

Effects from Wild and Scenic Rivers Management

~~Effects would be similar to those described under Alternative B, except under Alternative D only one of the four additional segments (Lolo Creek) would be recommended for designation in the NWSRS, increasing the chances for one 24-mile segment to be designated, but reducing the overall recommendation, in comparison to Alternatives B and C, by 5.34 miles~~Same as Alternative B.

Cumulative Effects

Wild and scenic river eligibility and suitability determinations are based on current conditions. Consequently, the effects of past actions are not really a factor unless such actions effect a segment previously determined suitable, such as the two Salmon River segments. Since the Salmon River segments were determined suitable BLM has managed for the protection of its river values and past actions have not affected these values. The four segments which have been found to be preliminarily suitable were evaluated based upon current ~~conditions,~~conditions; consequently past actions were determined not to be a factor.

All RMP alternatives include management of two segments of the Lower Salmon River determined suitable and four additional segments identified as preliminarily suitable for designation within the NWSRS. The two segments of the Lower Salmon River are currently managed as suitable based on a prior study. The other four segments include Hazard, Hard, Lolo, and Lake Creeks which ~~are being~~were studied concurrently with the RMP process.

There are National Forest lands located adjacent to (upstream of, downstream of, or in some cases intermingled with) the segments. Management activities on these adjacent National Forest lands could impact the outstandingly remarkable values within these segments. The National Forest Plan revisions, in most cases, will include a Wild and Scenic River~~s~~ suitability determination similar to the Cottonwood RMP for these segments. This determination, if concurrent with the BLM determination in the same watersheds, would complement BLM management measures, potentially enhancing the outstandingly remarkable values. If the Forest Service determines that these adjacent segments are not suitable, it would result in management challenges for the BLM, which could make protection of the outstandingly remarkable values on BLM-administered lands infeasible. In particular, a final suitability determination of the Hazard and Hard Creek segments (BLM portions) are dependent upon a similar determination on the Forest Service segments. Consequently, cumulative effects on Wild and Scenic Rivers are likely to occur as a result of National Forest Plan Revisions, but whether these would enhance or degrade river values cannot be determined until Forest Plan revisions are complete.

The Idaho Department of Water Resources completed the Comprehensive Water Plan – Part B on the Little Salmon River Basin in October 2001. The plan designated Hazard and Hard Creeks as State protected recreational rivers. BLM would coordinate protective management of these segments with the Idaho Department of Water Resources.

~~Alternatives B and C~~ Alternative C would recommend the largest amount (29 miles) of suitable segments for inclusion in the NWSRS, therefore contributing to the continuation of preserving these segments by managing them for the protection of their outstandingly remarkable values and free-flowing nature. Alternatives A, B, and D would not recommend any segments for inclusion in the NWSRS. However, following coordination with the Idaho Department of Water Resources and Forest Service, the BLM would determine whether or not to recommend the 2.18-mile Lake Creek segment.~~contribute to a lesser extent by recommending 24 miles., and no additional miles would be recommended under Alternative A.~~

4.4.5 Wilderness and Wilderness Study Areas

Goal: Manage wilderness areas and WSAs to maintain wilderness characteristics.

Summary

Under all of the alternatives the following protective management of wilderness and WSAs would continue: discretionary and nondiscretionary closures to leasable and salable minerals, prohibiting motorized and mechanized vehicles in wilderness areas, excluding realty authorizations and managing wilderness areas and WSAs to maintain wilderness characteristics. These alternatives also establish management parameters for the WSAs should Congress release them from wilderness consideration. **Table 4-~~76~~ 77** identifies the indicators that were used to analyze effects on wilderness and WSAs under each alternative.

Table 4-77
Comparison of Wilderness and Wilderness Study Areas Indicators by Alternative

Indicator	Alternative A	Alternative B	Alternative C	Alternative D
Acres of Wilderness Areas	750 (No net change)			
Acres of WSAs	12,034 (No net change)			

Source: BLM 2004a

Methods of Analysis

Indicators

For wilderness areas and WSAs, the acres and overall protection of these areas are the indicators used to assess impacts, as shown in **Table 4-~~76~~77**, Comparison of Wilderness and Wilderness Study Areas Indicators by Alternative.

Methods and Assumptions

The four alternatives were reviewed for actions that could affect wilderness and WSAs, the impacts of which are discussed below. Impact analysis and conclusions are based on interdisciplinary team knowledge of the planning area and review of existing literature. The analysis is based on the assumption that wilderness would continue to be managed in accordance to the Wilderness Act of 1964, and subsequent wilderness legislation and WSAs would continue to be managed under the Interim Management Policy for Lands under Wilderness Review (BLM Handbook H-8550-1). This would remain in effect until such time as Congress either designates all or portions of the WSA as wilderness or releases the WSA or portions of WSAs from any further wilderness consideration, at which time the lands would revert back to general land use management.

The six practical effects of the Interim Management Policy for Lands under Wilderness Review are:

- The general standard for interim management is that lands under wilderness review must be managed so as not to impair their suitability for preservation as wilderness. This is referred to as the nonimpairment standard and applies to all uses and activities except those that the FLPMA specifically exempts from this standard (such as grandfathered uses);
- Permitted activities in WSAs (except grandfathered and valid existing rights) are temporary uses that create no new surface disturbance or involve permanent placement of structures;
- Those grazing, mining, and mineral leasing uses that existed on October 21, 1976 (the date FLPMA was approved) may continue in the same manner and degree as on that date, even if this would impair wilderness suitability;

- Lands under wilderness review may not be closed to appropriation under the mining laws in order to preserve their wilderness character;
- Valid existing rights must be recognized; and
- All lands must be managed to prevent unnecessary or undue degradation.

Effects Common to All Alternatives

Effects from Minerals Management

Under all alternatives, the Frank Church Wilderness (750 acres) would remain closed to leasable, locatable, and mineral material development. The Snowhole Rapids WSA (6,463 acres) and Marshall Mountain WSA (5,571 acres) would remain closed to leasing, and in most cases would remain closed to sale or free use of mineral materials. Although WSAs are not withdrawn from locatable mineral activities, they are subject to more restrictive federal regulations designed to protect the wilderness characteristics~~The Marshall Mountain WSA would not be withdrawn from locatable mineral development, but would be subject to more protective regulations; the Snowhole Canyon WSA would continue to be withdrawn from locatable mineral development under the existing administrative withdrawal and under VRM 1 classification. Restrictions placed on mineral development in these designations would protect the wilderness characteristics~~.

Effects from Transportation and Travel Management

The BLM would allow all types of nonmotorized travel yearlong on all BLM-administered lands in the CFO, except on 750 acres of the Frank Church/River of No Return Wilderness, where no mechanized use is allowed. This would continue to protect wilderness characteristics from the effects of motorized vehicle use, such as noise and scarring of the terrain.

Effects from Wilderness and Wilderness Study Areas Management

The BLM would manage the Wilderness and WSAs to maintain wilderness characteristics. This would continue to protect the characteristics of wilderness areas and WSAs.

Alternative A

Effects from Recreation Management

The BLM would consider competitive use permits on a case-by-case basis. There would be no new effects, and ongoing effects would continue.

Effects from Lands and Realty Management

There are no actions related to exclusion areas in the Wilderness or WSAs. Potential effects from certain forms of development (such as rights-of-way) in the Wilderness and WSAs would continue.

Effects from Wilderness and Wilderness Study Areas Management

There are no actions related to the management of WSAs should Congress release them from wilderness consideration. Due to a lack of specified management actions, there could be long-term effects if lands were released and no protective measures remained in place for sensitive natural resources that were previously identified in these designations.

Alternative B

Effects from Recreation Management

The BLM would designate wilderness areas for no competitive use. This would prevent competitive uses, such as group events and outings, from occurring in wilderness areas, thereby providing additional protection to the primitive characteristics of wilderness areas.

Effects from Lands and Realty Management

Exclusion areas where no realty authorizations would be allowed include the Wilderness (750 acres). This would protect the characteristics of the Wilderness from surface disturbances, such as rights-of-way.

Effects from Wilderness and Wilderness Study Areas Management

Should the WSAs be released from wilderness consideration by Congress, the BLM would manage lands within the Snowhole Rapids WSA in conformance with the Lower Salmon River Scenic SRMA, under VRM Class I and Semiprimitive Nonmotorized ROS, as open to mineral location, and as open to mineral leasing with NSO and CSU restrictions. Also, the BLM would manage lands within the Marshall Mountain WSA to conform with VRM Class II and Semiprimitive Motorized ROS, as open to mineral location, as open to mineral leasing with NSO restrictions (on all acres), and as open to mineral leasing with CSU restrictions (only on 74 acres). These management guidelines would not be as protective as current WSA management guidelines, because, for example, mineral leasing would be allowed. Therefore, the wilderness characteristics for which the areas were designated WSAs could be diminished should the WSAs be released from wilderness consideration by Congress.

Alternative C

Effects from Recreation Management

The effects would be the same as those described under Alternative B.

Effects from Lands and Realty Management

The effects would be the same as those for Alternative B.

Effects from Wilderness and Wilderness Study Areas Management

The effects would be the same as those for Alternative B.

Alternative D

Effects from Recreation Management

The effects would be the same as those for Alternative B.

Effects from Lands and Realty Management

The effects would be the same as those for Alternative B.

Effects from Wilderness and Wilderness Study Areas Management

The effects would be the same as those for Alternative B.

Cumulative Effects

Historical and projected population increases influence wilderness areas and WSAs, which are typically used for primitive recreation. The CFO planning area's projected 11-percent population

growth and Idaho's projected 35-percent population growth over the next 20 years would continue to increase demand for primitive recreation areas in and around the CFO planning area. Use of these areas, especially the Frank Church/River of No Return Wilderness, would intensify as population increases.

The Frank Church/River of No Return Wilderness is over 2.3 million acres spanning 6 National Forests, of which less than 0.5-percent is on BLM-administered lands in the CFO. Additionally, there are another 1.7 million acres of other Wilderness Areas within or immediately adjacent to the 6-county planning area, including the Selway-Bitterroot Wilderness (1.3 million acres on National Forest lands), Gospel Hump Wilderness (205,000 acres on National Forest lands), and Hells Canyon Wilderness (215,000 acres on National Forest and BLM [Vale District, Oregon] lands). As such, there are ample other Wilderness Area opportunities to attract and accommodate this population growth. Implementing protective management would cumulatively protect these areas from development and surface-disturbing activities while meeting the increasing population demands.

4.4.6 Watchable Wildlife Viewing Sites

Goal: Maintain or enhance wildlife habitats and opportunities for wildlife viewing areas.

Summary

All of the alternatives would continue to maintain or improve wildlife habitat resources and would provide wildlife viewing opportunities for the existing watchable wildlife areas. Alternatives B, C, and D would also support management efforts that designate new high-value wildlife viewing areas, provide information and educational materials and promote opportunities to cooperatively manage high-value areas. These additional actions would increase watchable wildlife viewing opportunities, education, and monetary support through partnerships. **Table 4-~~77~~ 78** identifies the indicators that were used to analyze effects on watchable wildlife viewing sites under each alternative.

Table 4-78
Comparison of Watchable Wildlife Viewing Sites Indicators by Alternative

Indicator	Alternative A	Alternative B	Alternative C	Alternative D
Number of watchable wildlife areas	4 (No net change)			
Acres of watchable wildlife areas	24,435 (No net change)			
Support efforts to designate new areas, provide information, and cooperatively manage areas	No net change	Increased		

Source: BLM 2004a

Methods of Analysis

Indicators

Indicators used to evaluate impacts include the number and size of watchable wildlife viewing sites, and how each alternative would or would not support efforts to designate new areas, provide

information about areas, and cooperatively manage areas (**Table 4-~~77~~78**, Comparison of Watchable Wildlife Viewing Sites Indicators by Alternative).

Methods and Assumptions

The four alternatives were reviewed for actions that could affect watchable wildlife viewing sites. Impact analysis and conclusions are based on interdisciplinary team knowledge of the planning area and review of existing literature. The analysis is based on the assumption that use of watchable wildlife viewing sites would continue to increase over the life of the RMP.

Effects Common to All Alternatives

Effects from Watchable Wildlife Viewing Sites Management

The BLM would implement actions to maintain or improve wildlife habitat resources and to provide wildlife viewing opportunities on over 235 miles and 24,000 acres, including the Lower Salmon River Canyon (87 miles), Middle Salmon River Canyon (80 miles), Snake River in Hells Canyon (68 miles), and Craig Mountain WMA (24,200 acres).

Alternative A

Effects from Watchable Wildlife Viewing Sites Management

There would continue to be no specific actions related to designating new watchable wildlife viewing sites, to providing information and educational materials, or to forming cooperative management partnerships. There would continue to be difficulties in identifying and developing new watchable wildlife viewing sites and in educating the public about the value of biological resources.

Alternative B

Effects from Watchable Wildlife Viewing Sites Management

The BLM would support management efforts that designate new high-value wildlife viewing areas for the public, support efforts that provide information and educational material that enhance wildlife viewing opportunities and enjoyment, and promote opportunities to cooperatively manage high-value areas for viewing wildlife with partners, such as the Idaho Department of Fish and Game Red River Ranch. Although no specific areas are identified for future watchable wildlife viewing sites, these activities would aid in establishing new sites and educating the public about biological resources.

Alternative C

Effects from Watchable Wildlife Viewing Sites Management

The effects would be the same as those for Alternative B.

Alternative D

Effects from Watchable Wildlife Viewing Sites Management

The effects would be the same as those for Alternative B.

Cumulative Effects

Cumulative effects on watchable wildlife viewing sites affect habitat for wildlife and disturbances to wildlife. Numerous cumulative projects, such as mineral development, timber harvesting, and motorized recreation, have the potential for diminishing habitat and disturbing wildlife. Assuming

watchable wildlife viewing sites preserve sufficient habitat for wildlife and limit disturbances to wildlife, cumulative effects would be minimal.

4.5 SOCIAL AND ECONOMIC CONDITIONS

4.5.1 Native American Tribal Uses

Goal: Manage natural and cultural resources consistent with treaty and trust responsibilities to Native American tribes.

Summary

This section presents potential impacts from management actions on Native American tribal use of BLM-administered lands in the planning area. Alternative A would maintain current management practices and therefore would not induce any changes to the indicators listed below. The growth and concentration of recreation, including hunting, fishing, and gathering, could impact the availability of resources, disturb culturally important areas, or interfere with religious uses. In general, Alternatives B, C, and D propose more actions than Alternative A designed to improve water quality, fisheries, and plant and animal habitat and restore watersheds. These actions would be consistent with maintaining Native American tribal uses under treaty rights in the long-term. These alternatives would also further restrict cross-country travel and surface occupancy for mineral development and create more closures and exclusion and avoidance zones. These actions would provide additional protection to natural and cultural resources that may be used or that may be important to tribes. Temporary loss of access during treatments or permanent changes in access or permitted activities may affect tribal uses. Further government-to-government consultation with tribes would be needed as actions are implemented to determine whether there are tribal uses present that could be impacted and to resolve impacts. Overall, Alternative C, followed by Alternative B, D, then A would provide the most protective measures for tribal use of the CFO, primarily due to a reduction in ground disturbances and incompatible activities and the emphasis on resource conservation and protection.

The following resources are not addressed because management of these resources is not expected to affect Native American tribal use: air quality, geology, soils, paleontology, VRM, national trails management, and public safety. **Table 4-~~78~~ 79** identifies the indicators that were used to analyze effects on Native American tribal uses under each alternative.

Table 4-79
Comparison of Native American Tribal Uses Indicators by Alternative

Indicator	Alternative A	Alternative B	Alternative C	Alternative D
Changes in availability, access, or land use that would affect the natural resource base used by the tribes, including fish, game, plants, minerals, and springs	No changes in availability, access, or land use would occur, so no net changes in the natural resource base are expected under Alternative A. In time recreational uses and public presence in some areas could affect the availability of resources, disturb culturally significant areas and inhibit religious use.	Vegetation treatment programs and animal habitat enhancement could enhance traditional tribal uses for those species and habitats. However, temporary, seasonal, and permanent closures of roads and other areas for treatment programs, public health and safety, or other reasons, while protecting resources, could also limit tribal access to and availability of resources in those areas. Increased recreational uses and public presence in some areas could affect the availability of resources, disturb culturally significant areas, and inhibit religious use.		
Changes in access to or impacts on cultural resource sites, including ethnographic resources and traditional cultural properties	No changes in management are expected, so no net changes to access or impacts on cultural resource sites, ethnographic resources, or traditional cultural properties are expected.	Ground disturbances, possible erosion, and increased public access associated with most resource management objectives could directly affect culturally significant areas and tribal use. Temporary, seasonal, and permanent closures of roads and other areas for treatment programs or other reasons, while protecting resources from additional public access and potential vandalism and looting, could also limit tribal access to and availability of resources in those areas. Additional efforts above and beyond those of current management to increase tribal consultations could better protect tribal use, tribal access, and cultural resources. Alterations in the setting of traditional cultural properties and ethnographic resource collection areas by promoting incompatible uses, such as harvesting, prescribed fires, VRM designations, and increased recreational and motorized uses, could affect tribal use and access.		

Table 4-~~78~~79
Comparison of Native American Tribal Uses Indicators by Alternative *(continued)*

Indicator	Alternative A	Alternative B	Alternative C	Alternative D
Changes in general ecosystem health, water quality, and riparian function	No changes in current management are expected under Alternative A. As more people use the CFO, more demands combined with static management will decrease the general ecosystem health.	Efforts to maintain native plants, animals, and habitats in general could enhance the general ecosystem, water quality, and riparian areas for tribal use.		
Changes in land tenure or land use that could impair future exercise of treaty rights	No changes in land tenure or land use are expected to occur under Alternative A. No net changes or impairments to the future exercise of treaty rights are expected.	New restrictions on actions that would otherwise increase the likelihood of impacts on tribal use. The increase in CFO land would decrease the possibility for loss of federal protection of cultural resources and tribal treaty rights. However, the loss of transferred lands would increase the likelihood of these impacts in those areas.		

Methods of Analysis

Indicators

Indicators are used to identify the level of impact. For Native American tribal uses, the indicators used for impact analysis are identified in **Table 4-~~78~~79**, Comparison of Native American Tribal Uses Indicators by Alternative

Methods and Assumptions

Native American tribal uses considered in this analysis are based on rights established by treaty and the unique trust relationship between tribes and the federal government. The federal trust responsibility includes the obligation to protect tribal lands, trust assets, and treaty rights and to carry out the mandates of federal law. A variety of federal laws, executive orders, regulations, and BLM guidance related to land use, subsistence, endangered species, and cultural resources specifically address tribal rights in the context of this trust relationship. These rights include consulting with tribal representatives on identifying and protecting cultural and sacred sites, provisions for reasonable access to these sites, and access for tribal members to harvest and gather plant, animal, and aquatic resources. While the focus of this section is on treaty rights and traditional uses, there is necessarily some overlap with cultural resources and other resources in the impact discussion.

There are no lands in the CFO that are formally held in trust for tribes by the BLM, nor are tribes dependent on commodity resources from lands managed by the CFO. Members of the Nez Perce Tribe exercise their hunting, fishing, and gathering rights on federal lands outside the boundaries of their reservation, including BLM-administered within the CFO. These pursuits include fishing for resident and anadromous ~~game~~ fish species, hunting large and small game, and gathering natural resources for subsistence and cultural purposes. Specific locales of cultural, traditional use, or

religious significance may also be considered by the tribes to be traditional cultural properties. Impacts to traditional cultural properties are discussed in Section 4.2.13, Cultural Resources.

To analyze impacts of the RMP alternatives on Native American tribal uses within the CFO, certain assumptions were made. These assumptions include:

- The extent of current tribal use is not known. It is expected that the demand from Native Americans to exercise their treaty rights and traditional uses on BLM-administered lands will continue and potentially increase in the future;
- There is little specific information on the exact species sought or locations used by Native Americans exercising treaty rights or traditional uses in the CFO. Culturally important locations are often not discussed outside of the community and may be present in the CFO. The Nez Perce Tribe has expressed concerns over natural resource management, especially as it pertains to water quality and its relationship with fisheries;
- Within the CFO, Nez Perce tribal members hunt and gather a variety of plant and animal species. It is anticipated that many of the species targeted by tribal users are the same as those sought by other communities;
- The BLM, as a federal agency, will continue to maintain government-to-government relationships with federally recognized Indian tribes. Ongoing consultation with and participation by tribes in resource management planning is necessary to determine whether actions would impact Native American tribal uses. Typically, planning-level impact analysis can only identify trends or potential impacts. Implementation-level impact analysis is needed to determine whether there are Native American tribal uses present, whether there would be impacts, and what the context, intensity, and duration of those impacts would be. Focused consultation with the affected community is required to resolve impacts. Overall impacts could be minimized with mitigation measures, including avoidance;
- The BLM will continue to comply with Section 106 of the NHPA for undertakings under each of the RMP alternatives. Tribal groups have a special role in the Section 106 process in the identification, evaluation, effect determination, and resolution of adverse effects on cultural resources, including ancestral sites and traditional cultural properties. Likewise, the BLM would continue to respect the consultation roles and rights of tribes under Archaeological Resources Protection Act, Native American Graves Protection and Repatriation Act, American Indian Religious Freedom Act, NEPA, FLPMA, ESA, executive orders, regulations, and BLM guidance; and
- The current road network provides sufficient access to traditional use areas for tribal members.

Effects Common to All Alternatives

Effects from Cultural Resources Management

Under all alternatives, cultural resource management is complementary to maintaining and protecting tribal uses. Consultation with Native American tribes in the context of cultural resource management activities can help identify those uses, places, and activities that are important to the tribes, and thus provide support and protection of tribal use of resources. Identifying opportunities for cultural heritage education could limit the possibilities for vandalism and improper activities at traditional cultural properties and other sites by educating the public of cultural values. Creating

cultural resource management plans could provide additional protections to culturally significant areas and tribal uses.

Effects from Minerals Management

Very little mineral activity is expected through the life of the RMP. Current management of minerals within the CFO would retain 120,532 acres as open to locatable mineral exploration and development and 129,623 acres as open to fluid and solid mineral leasing and mineral material disposal. The areas open to exploration, development, leasing, and/or material disposal could experience increased incidence of impacts on tribal use (compared to areas that are closed) from change in access, physical disturbance of habitat, or locations and intrusions to setting. Implementing site-specific management criteria in ACECs and other areas could limit such impacts where cultural and ethnographic resources exist.

Effects from Wild and Scenic Rivers Management

Under all alternatives, protecting the outstandingly remarkable values of segments found suitable for inclusion in the NWSRS could enhance or maintain the ecosystem and natural resource base within the river segments, while doing the same for the setting and integrity of traditional cultural properties and other culturally significant areas.

Effects from Wilderness and Wilderness Study Areas Management

Maintaining the wilderness characteristics of wilderness areas and WSAs would retain the setting and integrity of culturally significant areas.

Effects from Watchable Wildlife Viewing Sites Management

Maintaining or improving habitat conditions in wildlife viewing areas could retain or enhance the general ecosystem and natural resource base used by the Nez Perce. Increasing recreational opportunities in these areas, however, could increase the possibility for impacts to culturally significant areas by affecting their setting and/or integrity.

Alternative A

Effects from Water Resources Management

Efforts to maintain or improve watersheds and waterways can protect the natural resource base and fisheries from degradation. The Nez Perce have identified water quality and restoration of fisheries as important to their tribal uses. Tribes are working with US EPA and IDEQ in developing TMDLs. Implementing the MFP Road Guidelines (BLM 1981a), Riparian Management Guidelines (BLM 1985e), PACFISH prescription watersheds (BLM and Forest Service 1995), and Fisheries and Water Quality Objectives and Sediment Budgets (BLM 1985d) provide protection of these resources under Alternative A but do not provide the degree of protection and enhancements as other alternatives.

Effects from Vegetation—Forests Management

Alternative A would minimize the availability of natural resources in areas that are intensively or extensively managed. Custodial management areas would maximize the availability of natural resources. Fewer protocols for management and treatment programs would be available under Alternative A.

Effects from Vegetation—Weeds Management

Weeds management could restore native plant resources that would be available for tribal use. Under Alternative A, areas where rehabilitation or restoration could be successful would be identified, but actions would be limited to areas where it would also be cost effective. Fewer measures to improve ecosystems and the natural resource base through weeds management would be available under Alternative A than under the other alternatives.

Effects from Vegetation—Riparian and Wetlands Management

Actions to promote and restore healthy ecosystems in riparian areas would benefit fisheries and plant and animal resources that have been used traditionally by tribes. The protection of such areas could therefore benefit those sites and their use by tribes. Alternative A provides RHCA buffers totaling 24,290 acres.

Effects from Wildlife and Special Status Wildlife Management

The natural resource base used by the Nez Perce and general ecosystem health can be enhanced by efforts to protect or improve wildlife, special status, and non-special status species. Efforts include ongoing and project-specific review of activities to determine impacts to federally listed species and their habitats. However, actions to monitor and protect listed species are minimal compared to other alternatives. Listed species, including bald eagle, Canada lynx, gray wolf, and yellow-billed cuckoo, and one habitat type, elk habitat, would have management that is specific to that species or habitat. Although habitat treatments could enhance the natural resource base used by the Nez Perce, any area closures or use restrictions that would result from management actions could temporarily impact tribal access to the affected areas. Similarly, permanent nondisturbance buffers around active raptor nests could preclude Native American access to affected areas and limit the availability of natural resources within the buffer zone.

Effects from Aquatic Resources, Fish, and Special Status Fish Management

Under Alternative A, management of aquatic resources, fish, and special status fish would focus on sensitive areas. These efforts could enhance general ecosystem health and increase the numbers of such resources within the natural resource base used by the Nez Perce. However, this availability could be counterbalanced by limited tribal access resulting from the imposition of use restrictions in sensitive areas.

Effects from Special Status Plants Management

Efforts to restore and protect special status plants and their habitats could improve and increase the availability of the natural resource base used by the Nez Perce. Monitoring, surveys, inventories, and adjusting actions to avoid impacting listed and BLM sensitive plants would ensure populations are maintained and protected.

Effects from Wildland Fire Management

Wildland fires, whether naturally occurring or prescribed, could improve the general ecosystem health and ultimately the natural resource base used by the Nez Perce. However, fire could also damage locations and temporarily remove tribal access to and the availability of natural and cultural ethnographic resources. Additionally, although protocols for fire suppression techniques call for coordination with the BLM archaeologist and the Nez Perce, as well as avoidance of known cultural resources, techniques could damage resources through ground disturbance or the application of chemicals.

Rehabilitation efforts to mitigate the adverse effects of fire could contribute to the recovery of ecosystem health and the natural resource base used by the Nez Perce following a fire.

Effects from Forest Products Management

Removal of vegetation from the CFO decreases the availability of the natural resource base used by the Nez Perce and could temporarily limit tribal access to areas of active harvesting. Alternative A could offset these impacts by disallowing timber harvest activities where they could destroy or degrade riparian areas, thereby protecting riparian function and resources that are possibly used by the tribe. Similarly, snag management under forest product management aims to preserve the habitat of wildlife that could be used by the tribe, maintaining the availability of those species.

Current ASQ, estimated at 6,600 MBF would continue on an estimated average annual usage area of 358 acres. The removal of timber could be a long-term impact because of changes in setting. Short-term impacts could also occur from temporary loss of access to use locations during treatment or closures.

Effects from Livestock Grazing Management

The Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management (BLM 1997a) (**Appendix A** [see Volume II~~I~~]) provide protective measures for ecological health, wildlife habitat, and significant cultural and archaeological values. Additional standards for maintaining or improving native plant communities and general ecosystem health, including riparian function, are also included. Such measures could protect tribal use of the natural resource base and culturally significant areas by reducing physical damage to sites and restricting incompatible uses.

Effects from Minerals Management

Under Alternative A, no stipulations on lands open for leasing and mineral material development would be identified, providing only a minimum level of protection as required by law. The potential for impacts on tribal uses of the natural resource base from minerals management would be the greatest under this alternative.

Effects from Recreation Management

Recreational use, including fishing, hunting, plant gathering, and vehicle use, would increase. The availability of these natural resources for tribal uses could be affected, and there would be an increase in the potential for impacts to culturally important areas through physical disturbances and alterations to setting. Infrastructure that supports recreation can provide Native Americans with better access to resources, but it can also increase the intensity of use leading to impacts. Under Alternative A, the entire CFO planning area would be subject to these effects to varying degrees based on intensity of use in designated areas.

It is assumed that in coordinating issuance of commercial permits with the Idaho Outfitters and Guides Licensing Board, consideration would be given to the effects of such permitting on tribal use of natural and cultural resources and traditional cultural properties.

Continuing land acquisitions within the Salmon River, Lolo Creek, and Clearwater River SRMAs could increase use areas and resources available to tribes in the CFO.

Effects from Transportation and Travel Management

It is assumed that the existing road network provides sufficient access for Native American tribal uses. Under Alternative A, 85,308 acres (59 percent) would continue to be managed as Open to cross-country motorized vehicle use, while 40,437 acres (28 percent) would be managed as Limited to existing routes, and 18,054 acres (13 percent) would be designated as Closed to off-road motorized vehicle use. Impacts from vehicle use would be more likely to occur in Open areas than in Limited areas. Motorized vehicles and mechanical transportation methods can physically damage use locations and culturally significant areas through crushing, ground disturbances, and erosion. Establishing use restrictions in areas with known high resource values could provide additional protection to resources used by the Nez Perce. Closed areas would not risk any of these impacts, with the exception of times when it is necessary to allow emergency vehicle passage.

New roads can provide improved access to Native Americans seeking out resource uses, but they can also increase the possibility of impacts on culturally significant areas. However, designing the road network to avoid adverse effects to water quality and fish habitat could protect the general ecosystem, riparian health, and natural resource base used by the Nez Perce. Closing or demolishing roads could impede Native American access to and the availability of resources.

Effects from Lands and Realty Management

Alternative A would consider disposal of 35,361 acres (25 percent) and would retain 96,465 acres (67 percent). Changes in land tenure that remove land from federal control could affect tribal access to use areas, protection of tribal treaty rights, and preservation of resources important to tribes. Land tenure adjustments would be subject to further review, including government-to-government consultation. The criteria and priorities for acquisition and disposal of land would include consideration of unique and important resources. Acquiring new land could provide access and use rights and further enhance protection of resources important to tribes.

Effects from ACEC/RNA Management

Alternative A would designate 25,600 acres (18 percent of the CFO) as ACECs or ACEC/RNAs. Establishing or maintaining RNAs and ACECs can increase or maintain the amount of land afforded protection of the natural resource base, ecosystems, and riparian areas mandated by those designations. Such protective measures could include prohibiting or limiting timber harvest, road construction, right-of-way designations, livestock grazing, or prescribed burning. The natural resource base and cultural and ethnographic resources used by the Nez Perce are typically improved by goals in RNAs and ACECs. Goals in these areas typically seek to protect or enhance ecosystem health, water quality, riparian function, and/or cultural and scenic values. Expanding such areas would increase the total area within which these goals and effects would be applicable.

Effects from Native American Tribal Uses Management

Actively working with Native American tribes to identify culturally significant natural resources would ensure that the concerns of tribes for the natural resource base they use are addressed in management decisions. The collection of vegetal resources, consistent with other resource goals and objectives, would also ensure the ability of tribes to exercise their tribal treaty rights for such activities.

Alternative B

Effects from Water Resources Management

Effects from water resources management under Alternative B would be similar to Alternative A, except that Alternative B would provide more improvements and protections of these resources. Implementing BMPs and monitoring and restoration programs for water resources management could further protect these resources from degradation that could impact use by the Nez Perce. The development of interdisciplinary monitoring plans for long-term activities and programs, requirements for tribal cooperation in achieving or maintaining beneficial use criteria, and water quality standards would ensure Native American concerns and treaty rights are considered in the planning process. Additionally, maintaining claim files, databases, and maps for water rights could maintain a record of tribal water rights and ensure their consideration in the planning process.

Remediation plans that include road or area closures could impede tribal access to and the availability of traditional cultural properties and ethnographic resources. Ground disturbances associated with remediation plans or removal of hazardous materials and structures could further impact the integrity of use locations. However, the removal of hazardous materials could ultimately improve resource availability.

Effects from Vegetation—Forests Management

Treatment projects that enhance forest health ~~vigor~~ and/or habitat diversity in WUI areas under Alternative B could increase the availability of natural resources within the ecosystem; this effect would be limited by the possibilities for improvements by restricting such projects to WUI areas. Using site-specific analysis for programs and projects could reduce the potential for impacts to the integrity and sacred quality of traditional cultural properties and other use locations.

Promoting the use of high-risk or damaged stands for timber harvest would enhance the ecosystem and natural resource base used by the Nez Perce by removing high-mortality vegetation and promoting the establishment of healthier vegetation. However, during treatment of high-mortality stands, safe tribal access to the affected areas could be impeded.

Effects from Vegetation—Weeds Management

Implementing physical, mechanical, biological, or chemical control methods for invasive plants could cause ground disturbances. This could impact use areas or other locations. Additionally, tribal access to the treatment areas could be restricted during treatment periods. However, rehabilitating treated areas to provide competitive plant communities and avoid reestablishment of invasive plant populations could counterbalance some of these effects by providing additional or new availability of ethnographic resources.

Effects from Vegetation—Rangelands Management

Using interdisciplinary-based management changes or projects to meet rangeland management objectives would ensure the consideration of cultural and tribal concerns and treaty rights are considered in the planning process. By prioritizing the use of native species, the natural resource base used by the Nez Perce would be improved. Similarly, implementing actions to convert nonnative plant communities to desired plant communities could improve the health of the ecosystem and natural resource base used by the tribe. Alternative B would promote native plant community health in two separate areas to achieve resource objectives.

Effects from Vegetation—Riparian and Wetlands Management

Riparian and wetlands management under Alternative B would result in effects similar to Alternative A. However, Alternative B would provide smaller RCA buffers (totaling 22,847 acres). New adaptive management actions under Alternative B would more effectively restore or improve the natural resource base of ecosystems used by the Nez Perce by altering management as necessary if actions are realized to be ineffective or other resources are being negatively impacted. However, the actions necessary to create these improvements in RCA stream buffers could sometimes necessitate road closures or treatment programs that could restrict tribal access to affected areas and limit the availability of resources from those areas.

Effects from Wildlife and Special Status Wildlife Management

Impacts from wildlife and special status wildlife management under Alternative B would be similar to Alternative A, except the numerous additional efforts to protect or improve wildlife, special status, and non-special status species would further enhance the natural resource base used by the Nez Perce, as well as general ecosystem health. These new efforts would include the addition of specific protection protocols for more species, habitats, and active raptor nests. This would enhance the natural resource base used by the Nez Perce. Additionally, new adaptive management could allow for flexibility in the efforts. Fewer restrictions on tribal access to buffer areas around active raptor nests would enhance tribal access in the affected areas. Although the buffer would be the same size under all alternatives, under Alternative B, the restriction would be only temporary.

By including new management that could improve populations of listed species to the point that they could be delisted could enhance the ability of the Nez Perce to exercise their tribal treaty rights.

Effects from Aquatic Resources, Fish, and Special Status Fish Management

Alternative B would provide more and mostly new protective and conservation measures for aquatic resources, fish, and special status fish than Alternative A. The additional area and resources afforded protection under Alternative B would enhance the general ecosystem, riparian functions, and availability of the natural resource base used by the Nez Perce.

Effects from Special Status Plants Management

Effects from special status plants management under Alternative B would be similar to Alternative A, but in addition to maintaining and restoring special status plant species' habitats, Alternative B also would implement conservation and restoration measures identified within Recovery Plan(s), contributing towards recovery and delisting. Alternative B would provide new measures to control invasive plants, possibly establish new populations of listed and BLM sensitive plants, and possibly conduct land tenure adjustments that support conservation and restoration efforts. These new goals and actions would contribute additional enhancements to the availability of the natural resource base used by the Nez Perce.

Effects from Wildland Fire Management

The effects from wildland fire management under Alternative B would be slightly less than Alternative A in actions to reduce the potential for stand-replacing fire in WUIs or areas in community wildfire protection plans. This would provide additional enhancements to ecosystem health and the natural resource base used by the Nez Perce. However, all methods could also represent additional possible impacts on use locations and ethnographic resources. Emphasis on

biomass use as the preferred solution to meet natural resource management objectives could limit the availability of the natural resource base used by the Nez Perce.

Effects from Forest Products Management

Under Alternative B, forest products management would provide new objectives and actions and would modify existing ones. Collection of forest and vegetal products would be allowed based on tribal and public demand, allowing tribal access and input. Although such activity would be permitted ~~only where~~when consistent with ~~forest management and~~ other resource goals, the Tribe's treaty rights would ensure their access to and the availability of necessary resources.

Under Alternative B, the estimated annual PSQ for timber harvesting would be 3,129 MBF with an estimated average annual usage area of 242 acres (an estimated 32-percent decrease from current management). This decreases the possibility of impacts on use and cultural areas from changes in setting and tribal access from area closures. Forest product management would focus on stands susceptible to fire or disease, which could enhance the quality and integrity of setting at locations by improving the viewshed and protecting the area from fire damage. However, treatment programs could temporarily restrict access to the affected areas.

Adoption of Road Construction Guidelines and the Aquatic and Riparian Management Strategy (**Appendix F** [see Volume II~~I~~]) under Alternative B would minimize impacts to tribal use of the CFO by preventing disturbances. Although both aim to maintain access to areas, required closures would limit tribal access to and the availability of the natural resource base used by the Nez Perce.

Effects from Livestock Grazing Management

Effects from livestock grazing management under Alternative B would be similar to Alternative A, except that site-specific and adaptive management under Alternative B would provide better protection for use locations and ethnographic resources.

Effects from Minerals Management

Under Alternative B, NSO stipulations would be placed on 43,590 acres and CSU stipulations on 42,403 acres open to leasable and salable minerals activities. These more-specific designations would aim to protect ACECs but would also provide more-protective measures for river corridors, withdrawal areas, the natural resource base, cultural resources, and VRM Class I and II areas. Additional TL and seasonal restrictions would be placed on mineral activities on open lands to protect wildlife, which is part of the natural resource base used by the Nez Perce. Implementing site-specific management criteria would limit impacts where use areas and ethnographic resources exist.

Effects from Recreation Management

Effects from recreation management under Alternative B would be similar to those from Alternative A. Emphasizing big game hunting in the Craig Mountain WMA would benefit the Nez Perce's use of the area and the availability of the natural resource base. However, emphasizing additional, non-hunting activities in the area would contribute to an increased public presence in other areas that may be considered culturally significant.

Effects from Renewable Energy Management

Analysis of proposed renewable energy developments on a case-by-case basis for consistency with other resource management goals would ensure that the concerns of the Nez Perce are addressed and that cultural, ethnographic, and natural resources used by the Tribe are minimally affected.

Effects from Transportation and Travel Management

Effects from transportation and travel management under Alternative B would be similar to those under Alternative A, except that there would be no Open areas under Alternative B, thereby eliminating the identified impacts from Open cross-country travel. Limited areas would triple compared to Alternative A and would be established on 125,729 acres, and Limited areas would further limit motorized travel to designated routes, rather than existing routes under current management. Closed areas would essentially be similar to Alternative A. Closed areas would continue to not be susceptible to impacts with the exception of times when it is necessary to allow emergency vehicle passage.

Route modifications would be based on access needs and natural and cultural resource constraints and would involve coordination with tribes and interdisciplinary review. Allowing route modifications based on these principles would ensure protection of tribal access to and the availability and preservation of resources. Establishing an annual environmental/resource monitoring plan in key or problem areas, including cultural resources, riparian and wetland areas, and vandalism, would further enhance this protection.

Effects from Lands and Realty Management

Effects from lands and realty management under Alternative B would be similar to those under Alternative A, but with additional restrictions on actions that would otherwise increase the likelihood of impacts on tribal use. The total amount of land that would be considered for disposal would be 30,098 acres, while the amount of land retained would be 113,728 acres. This increase in retained land would increase the amount of land where federal protections for resources would be applied. The expansion of the Salmon River withdrawals and efforts to acquire conservation easements on nonfederal lands would further increase federally protected areas.

Effects from ACEC/RNA Management

Effects from ACEC/RNA management under Alternative B would be similar to those described under Alternative A, except Alternative B would designate ~~34,528~~36,153 acres as ACECs and ACEC/RNAs, ~~6~~ 7 percent more than Alternative A. With these additional ACEC/RNA designations, Alternative B would protect more of the ecosystem and natural and ethnographic resources and locations used by the Nez Perce.

Effects from Native American Tribal Uses Management

Effects from Alternative B's management of Native American tribal uses would be similar to those under Alternative A. However, Alternative B would improve the availability of the natural resource base used by Native Americans by incorporating important habitat information into monitoring protocols.

Alternative C

Effects from Water Resources Management

Effects would be the same as those described under Alternative B.

Effects from Vegetation—Forests Management

Effects would be the same as those described under Alternative B.

Effects from Vegetation—Weeds Management

Effects would be the same as those described under Alternative B.

Effects from Vegetation—Rangelands Management

The impacts from rangeland management under Alternative C would be similar to Alternative B but with additional promotion of native plant community health to achieve resource objectives. This would further enhance the natural resource base used by the Nez Perce within the CFO.

Effects from Vegetation—Riparian and Wetlands Management

Effects would be similar to those described under Alternative B, except RCA buffers would be larger than under any other alternatives.

Effects from Wildlife and Special Status Wildlife Management

Impacts from wildlife and special status wildlife management under Alternative C would be similar to Alternative B but with additional efforts to protect or improve habitats and wildlife, special status, and non-special status species, which would enhance the natural resource base used by the Nez Perce, as well as enhancing general ecosystem health. The same species and habitats are protected, but Alternative C could provide enhancements in a larger area than Alternative B. Conservation and restoration projects, including areas to achieve DFC, would instead focus on priority subwatersheds in BLM forested contiguous areas that are more than 500 acres. Through this action, more area within the ecosystem and natural resource base would benefit from DFC than under Alternative B. However, treatment actions could reduce tribal access through roadway closure or decommissioning.

Effects from Aquatic Resources, Fish, and Special Status Fish Management

The impacts from aquatic resources, fish, and special status fish management under Alternative C would be similar to under Alternative B. However, Alternative C would apply management actions in more designated areas than any other alternative. This would result in a larger area that would experience the effects of this resource management.

Effects from Special Status Plants Management

Effects would be the same as those described under Alternative B.

Effects from Wildland Fire Management

The effects from wildland fire management under Alternative C would be similar, but slightly higher than Alternative B. However, Alternative C would limit the amount of fuels treatments. This could limit the possible enhancements of ecosystem health and the natural resource base used by the Nez Perce. However, decreasing the land percentages to be treated would limit the possible impacts on tribal use areas and ethnographic resources.

Effects from Forest Products Management

Effects from forest product management under Alternative C would be similar to Alternative B, except that Alternative C would decrease the acreage available for timber harvesting more than Alternative B. Alternative C would decrease the estimated annual PSQ for timber harvesting to 3,101 MBF, a slight reduction in comparison of Alternative B, with an estimated average annual usage area of 191 acres (an estimated 47-percent decrease from current management). Compared to current management, this decreases the possibility of impacts on use areas from changes in setting, tribal access from area closures, and ethnographic resources from their removal through harvesting.

Effects from Livestock Grazing Management

Effects from livestock grazing management under Alternative C would be similar to Alternative B but with additional areas removed from grazing availability. The further reductions in grazing area within the CFO could increasingly limit the possibility for impacts on tribal use from unlikely limited access and incompatible uses near traditional use areas.

Effects from Minerals Management

Alternative C management of minerals would be similar to Alternative B and would have similar effects. Alternative C would restrict more lands open to leasing by stipulating 68,854 acres as NSO and 59,122 acres as CSU. These increases would provide more protection for tribal use of and access to resources than all other alternatives.

Effects from Recreation Management

Effects would be the same as those described under Alternative B.

Effects from Renewable Energy Management

Effects would be the same as those described under Alternative B.

Effects from Transportation and Travel Management

Effects would be the same as those described under Alternative B.

Effects from Lands and Realty Management

Effects would be the same as those described under Alternative B.

Effects from ACEC/RNA Management

Effects from ACEC/RNA management under Alternative C would be similar to those under Alternatives A and B but with more protection of the ecosystem and natural and ethnographic resources and use areas. The increased protection stems from the increase in ACEC/RNA designations, as Alternative C would designate 60,661 acres as ACECs and ACEC/RNAs, more than double than in Alternative A and ~~76~~ 40 percent more than Alternative B.

Effects from Native American Tribal Uses Management

Effects would be the same as those described under Alternative B.

Alternative D

Effects from Water Resources Management

Effects would be the same as those described under Alternative B.

Effects from Vegetation—Forests Management

Effects from forest management under Alternative D would be similar to those under Alternative B.

Effects from Vegetation—Weeds Management

Effects would be the same as those described under Alternative B.

Effects from Vegetation—Rangelands Management

The impacts from rangeland management under Alternative D would be similar to Alternative B.

Effects from Vegetation—Riparian and Wetlands Management

Effects would be the same as those described under Alternative B, except RCA buffers would be smaller than under any other alternatives.

Effects from Wildlife and Special Status Wildlife Management

Effects would be the same as those described under Alternative B.

Effects from Aquatic Resources, Fish, and Special Status Fish Management

The impacts from aquatic resources, fish, and special status fish management under Alternative D would be similar to Alternative B but would apply management actions in fewer designated areas.

Effects from Special Status Plants Management

Effects would be the same as those described under Alternative B.

Effects from Wildland Fire Management

Effects would be the same as those described under Alternative C.

Effects from Forest Products Management

Alternative D would increase the average annual acreage available for timber harvesting (361 acres, a 1-percent increase from current management) compared to the other alternatives, and the estimated annual PSQ for timber harvesting would increase to 4,823 MBF, an increase in comparison to Alternatives B and C but a 27-percent decrease from current management. Compared to current management, this would have little change on the area where impacts on tribal use areas from changes in setting, tribal access from area closures, and ethnographic resources from harvesting would be possible.

Effects from Livestock Grazing Management

Effects would be the same as those described under Alternative B.

Effects from Minerals Management

Alternative D management of minerals would be similar to Alternative B and would have similar effects. Alternative D would restrict fewer lands open to leasing by stipulating 35,045 acres as NSO and 32,013 acres as CSU. Except for Alternative A, which does not identify stipulations, these decreases would provide the least protection for tribal use of and access to resources.

Effects from Recreation Management

Effects from recreation management under Alternative D would be similar to those under Alternative B but could increase public access to recreation areas. Although this could ease tribal access to such areas, the possible increased public presence could also lead to increased incidents of vandalism, physical disturbances, and incompatible uses at or near traditional use areas.

Effects from Renewable Energy Management

Effects would be the same as those described under Alternative B.

Effects from Transportation and Travel Management

Effects would be similar to those under Alternative B, except that Alternative D would maintain 23,189 acres as Open to cross-country motorized travel, which represent 27 percent of areas currently Open under Alternative A. As under Alternative B, motorized vehicle use in Limited areas would be restricted to designated routes, except that under Alternative D, Limited areas would

comprise 102,542 acres, 18 percent less than under Alternative B. The reduction in areas designated as Limited would reduce the area that could receive additional protections of a Limited designation.

Effects from Lands and Realty Management

Effects would be the same as those described under Alternative B.

Effects from ACEC/RNA Management

Effects would be similar to those under Alternative A, but with less protection of the resources and locations used by the Nez Perce because Alternative D would designate slightly fewer ACEC/RNAs. Alternative D would designate 23,924 acres as ACECs and ACEC/RNAs, 1,676 acres (7 percent) less than current management.

Effects from Native American Tribal Uses Management

Effects would be the same as those described under Alternative B.

Cumulative Effects

The area of analysis for cumulative impacts to Native American values and tribal uses is the six Idaho counties in which the CFO is located: Latah, Clearwater, Nez Perce, Lewis, Idaho, and Adams Counties. Past actions and events that have affected tribal resources include loss of setting, incremental disturbances from use or access, changes in species populations, the effects of natural processes such as erosion and weathering, loss of access to traditional cultural properties, and effects from vandalism and unauthorized collection.

Many of these historical affects on tribal uses would continue in the foreseeable future. Access to and use of natural and cultural resources on public lands could be limited by land tenure adjustments that reduce public land holdings; by wildfires and suppression techniques; and by increases in mineral development. Similarly, the expected increase in private land ownership could make tribal access to portions of northern Idaho increasingly difficult. Increased road construction could improve access, but it could also lead to increased vandalism and looting.

The availability of ethnographic resources could be affected by fluctuations in species populations. Wildfires, plant diseases and insect infestations, noxious weed invasions, increases in human populations, projected declines in fish and wildlife populations, and limited and poor water quality streams could reduce the number of plant and animal species available for hunting and collecting for cultural or subsistence purposes.

Traditional cultural properties and other culturally significant areas could also be impacted by increased size and occurrence of wildfires; fire suppression techniques; fuels treatment programs; changes in the natural resource base brought about by insect and disease activity, invasive noxious weed species, or other management plans; road construction; increases in human populations; and demand for recreation opportunities. Such actions could increase the likelihood for tribal access to traditional cultural properties to be temporarily impeded, the setting of traditional cultural properties and other cultural sites to be disrupted, vandalism to occur at traditional cultural properties and culturally significant areas, ethnographic resources to be reduced or removed from traditional use areas, and ground disturbances to occur that could eliminate traditional areas or impact the integrity of traditional cultural properties. However, actions that restore or improve the natural resource base around traditional cultural properties or culturally significant areas could improve the setting of such

locations and enhance their use; such actions include the development of regional management programs and the projected reduction in livestock grazing, timber harvesting, and mining. Continued tribal coordination efforts could continue to ensure protection of specific areas from the above effects.

All alternatives could contribute to the continuation of tribal coordination to ensure protection of specific areas from effects identified above. Alternative A could contribute by maintaining tribal treaty rights and use of BLM public lands. Alternative B could contribute by preserving and protecting natural resources, decreasing risk for degradation of ethnographic and natural resources and impacts on the integrity and setting of traditional cultural properties and traditional use areas. Alternative C could contribute to a similar extent as Alternative B, but with greater emphasis on preserving and protecting natural resources. Alternative D could contribute by increasing risks that could limit tribal access, degrade ethnographic resources and natural resources used by the Nez Perce, and impact the integrity and setting of traditional cultural properties and traditional use areas. This increased risk would be caused by the focus of Alternative D on developing economically viable resources.

4.5.2 Public Safety—Abandoned Mines and Hazardous Materials

Goal: Protect the public and the environment from exposure to hazards associated with hazardous materials and AMLs.

Summary

Nearly all management activities on CFO lands could affect public safety to some extent. The AML and HMM programs are part of the BLM's public safety efforts. Current AML and HMM actions in the CFO are not predicated on specific previous decision documents because the programs were not in existence at the time of the MFP (BLM 1981a). The AML and HMM programs focus on immediate and urgent threats to human health and the environment. Most of the hazardous materials issues are associated with illegal dumping and past mining activities and AMLs.

Essentially any management activity that improves access to BLM-administered lands increases the likelihood that the public and BLM employees could come into contact with AMLs, hazardous material sites, and other hazard sites. and safety from each alternative. Alternatives B and C do not allow cross-country travel and would best protect the public from exposure to hazardous materials and abandoned mine sites. The proposed public safety management deals with the identification, tracking, taking corrective actions and protecting hazard sites. Current management has limited procedures and safeguards, along with effective protection of old landfills. Alternative B adds procedures and safeguards for hazard sites and protection for significant sites. Alternative C has some added restrictions on hazard sites more than Alternative B and Alternative D is nearly the same as Alternative B with slightly less restrictions but at more sites. Long-term management of any completed AML environmental cleanup projects and physical safety closures should include periodic maintenance and monitoring to determine success and stability of these measures. Provision should be made to document locations and protect mine-stabilization efforts and/or repositories and safety mitigation from future disturbance.

Table 4-~~79~~ 80 identifies the indicators that were used to analyze effects on public health and safety from each alternative.

Table 4-80
Comparison of Public Safety—Abandoned Mines and Hazardous Materials Indicators by Alternative

Indicator	Alternative A	Alternative B	Alternative C	Alternative D
Access to BLM lands	Most access; allows cross-country travel	Less access than Alternative A	Similar to Alternative B	More access than Alternative B and less than Alternative A
Procedures and safeguards	Limited	More protective than Alternative A	Like Alternative B but slightly more protective	Similar to Alternative B; Less than Alternative C

Methods of Analysis

Indicators

Indicators are used to identify the level of impact. For abandoned mines and hazardous materials, the indicators used for impact analysis are identified in **Table 4-~~79~~80**, Comparison of Public Safety—Abandoned Mines and Hazardous Materials Indicators by Alternative.

Methods and Assumptions

The alternatives were reviewed for actions that would affect the public and the environment by exposure to hazardous materials and AMLs, based on the following assumptions:

- The population of the CFO planning area will continue to increase, and there will be a corresponding increase of use of public lands;
- Promotion of the areas within the CFO as vacation and outdoor recreational destinations by certain interested parties will continue and potentially result in an increasing number of visitors encountering hazards on public lands; and
- Interest in mineral extraction on public lands within the CFO will persist into the future.

Effects Common to All Alternatives

Effects from Air Quality Management

Air quality management objectives would generally protect public safety by minimizing airshed degradation. The impacts of air quality on the status of AML and other hazardous sites would be negligible. The air quality program could have bearing on ground-disturbing activities of the AML and HMM programs in terms of fugitive dust (PM_{10} and $PM_{2.5}$) and other emissions.

Effects from Soils Management

Soils management objectives would complement those of the AML and HMM programs. Soils management could have a measurable impact on public safety. Actions that specify the avoidance of sensitive land types, which should include AMLs and hazardous sites, and the prioritization of existing roads, which may include road closure, would be protective of public safety. Implementation of BMPs for projects that entail soil-disturbing activities (**Appendix B**, Best Management Practices [see Volume II~~I~~]) under Alternatives B, C, and D would have greater potential to help reduce the effects of erosion of hazardous materials. Erosion protection, site

stabilization, and better vegetative cover would reduce exposure and movement of contaminated soils and also would reduce runoff and flood potential. Soils management would only limitedly affect the mitigative and remediative ground-disturbing activities of the AML and HMM programs.

Effects from Water Resources Management

Water resources management goals and objectives would complement hazardous site cleanup efforts across alternatives. Watershed and stream improvements would reduce the potential for erosion and migration of contaminants. The specified cooperation with adjacent landowners, agencies, tribes, communities, and municipalities would help remediate and restore AML and hazardous waste sites. Actions to maintain, improve, and restore water quality, including compliance with state and federal standards and regulations to protect watersheds and implementation of BMPs, would be applicable to the remediative and restorative programs for AMLs and other hazard sites.

Effects from Vegetation—Forests Management

Fuels reduction with a more resilient forest, similar to historic conditions, would help ensure public safety from the standpoint that the public would be less likely to be injured by wildfire. However, forest management actions could cause undesirable ground disturbance on or around AML and hazardous material sites. In addition, logging requires road construction, thereby potentially increasing access to hazardous sites. The potential of these impacts occurring depend on amount of timber harvested, which would vary by alternative.

Effects from Vegetation—Weeds Management

Weeds management would affect public safety. Weeds are common at AML/hazardous material sites. The invasive species and noxious weeds program helps control weeds in and around these types of sites. Weed control is part of public safety cleanup and follow-up efforts. The revegetation of areas treated for weeds would complement the objectives of the AML and HMM programs. However, one possible short-term impact of weeds management on public health and safety is that weeds, even noxious weeds, can provide surface stabilization in poor or disturbed soils at AML and hazardous materials sites, where other more desirable species of flora refuse to grow. The removal of such flora without rapid implementation of other measures could further impact on- and off-site conditions.

Effects from Vegetation—Rangelands Management

Many AML/hazardous material sites have limited vegetation, so improving rangeland conditions would affect site stability and public safety. Improving watershed conditions would help protect sites, like contaminated floodplains.

Effects from Vegetation—Riparian and Wetlands Management

Many AML/hazardous materials sites have limited vegetation, so improving riparian and wetland conditions would help protect AMLs and other hazardous materials sites, thereby protecting public health and safety. Wetlands and good riparian conditions would aid in removing and storing contaminants. All the alternatives would improve streams and establish RHCA and RCA buffers, all aiding in removing and storing contaminants. The differences among alternatives would not result in measurable impacts on public safety.

Effects from Wildlife and Special Status Wildlife Management

Fencing, avoidance of sensitive areas, and grazing restrictions under Alternative A would reduce the likelihood of the public coming into contact with AMLs, hazardous material sites, and other hazard

sites. Alternatives B, C, and D would be more protective than Alternative A in terms of public safety by specifically protecting the habitats of more species (maintaining buffers means less human access) and enhancing riparian and wetland areas. Bat considerations would be a major inventory item and constraint in future closure of mine adits and tunnels. The differences among alternatives would not result in measurable impacts on public safety.

Controls on vehicle use and closures under Alternative A would reduce the likelihood of the public coming into contact with AMLs, hazardous material sites, and other hazard sites. The other alternatives are more protective by not allowing a net increase in, or resulting in a decrease of, motorized vehicle use of BLM-administered routes (less access means less likelihood of exposure).

Effects from Aquatic Resources, Fish, and Special Status Fish Management

Conservation and restoration of special status fish habitats would improve water quality and thereby enhance public safety, as would promoting actions that achieve good-quality aquatic and riparian habitats. Alternative C has the greatest potential to protect public safety through managing the most watersheds (68,359 acres), followed by Alternative A (66,077 acres). The differences among alternatives would not result in measurable impacts on public safety.

Effects from Special Status Plants Management

Impact of special status plants management on public safety would be negligible. However, implementation of conservation easements and ACEC designations would help reduce access to, thus possible exposure to, hazards.

Effects from Wildland Fire Management

Wildfire management would affect public safety by reducing the likelihood that the public would be injured by wildfire. The FMPs would assist in protecting AML/hazardous material sites across alternatives. One possible impact is the emphasis on biomass use under Alternatives B, C, and D, which could cause ground disturbance on or around AML and other hazard sites. The differences among alternatives would not result in measurable impacts on public safety.

Effects from Cultural Resources Management

Cultural resources management could preserve old mine structures, which could threaten the public safety because of chemical and physical hazards that may be present. Such inventories would aid in AML and physical hazard identification.

Effects from Visual Resources Management

Visual resources are a concern during site cleanups and generally improve the appearance of AML and hazardous material sites in the long term (for example, by allowing the regeneration of vegetative cover when absent).

Effects from Forest Products Management

Logging within the WUI would reduce the risk of wildfire to communities and private property and would have an indirect effect on public health and safety from the standpoint of protecting the public from wildfire injury. However, logging on or near AML and other hazardous material sites could produce unwanted ground disturbance. In addition, logging requires road construction, thereby potentially increasing access to hazardous sites. The potential of these impacts occurring depend on the number of acres harvested, which would vary by alternative.

Effects from Livestock Grazing Management

Livestock grazing could impact public health and safety where grazing animals gain access to disturbed sites resulting in increased site disturbance. Grazing could also reduce or degrade vegetation used to stabilize conditions on or near AML and other hazardous material sites. Range improvements also could disturb hazardous materials, as could weed-control efforts. Many AML/hazardous material sites have limited vegetation, so improving rangeland conditions would affect site stability and public safety. Improving watershed conditions would help protect sites, like contaminated floodplains. Improved range management can also improve and control access which can also aid in protecting hazard conditions. Impacts would depend on the character of specific allotments. Overall, impacts from livestock grazing management on public health and safety would not affect long-term rehabilitation and stability of sites.

Effects from Minerals Management

Minerals management would impact public safety and the efforts of the AML and HMM programs. Based on the previous mineral extraction activities that have occurred on public lands within the CFO, these activities generally affect water quality, soil quality, and, as a result, public safety. The impact of extracting salables such as sand and gravel and geothermal ventures would have less impact on public safety than that of mining, and the extraction of petroleum minerals. Reopening closed mining sites would undo reclamation measures that have been employed and to increase the likelihood that contaminants would be released into the environment. No minerals activities on lands withdrawn from the mining laws and lands closed to the mineral laws would improve public safety.

Effects from Recreation Management

Increased recreational demand and use of public lands would increase the likelihood that the public could come into contact with AML or other hazardous sites. SRMAs, which would be managed for intensive recreation use, increase this likelihood. Contrarily, SRMA activity plans could include restrictions that help protect AML and hazardous material sites. Recreation programs assist in collecting solid waste, which would mitigate illicit solid waste dumping. Recreation program maintenance, signage, and information efforts aid in reducing exposure to physical hazards and other types of hazards.

Effects from Renewable Energy Management

The renewable energy program could affect AML sites, hazardous material sites, and public safety by improving access and by causing ground-disturbing activities resulting from the acquisition of biomass and during the development of fluid minerals. Protection of public health and safety would continue, however, as right-of-way grants would not be issued in areas that would jeopardize remediation activities.

Effects from Lands and Realty Management

The lands and realty program could affect public health and safety through inadvertently providing access to hazard sites, designating rights-of-way or authorizing ground-disturbing activity on or near hazard sites, or authorizing development near hazard sites. Public health and safety would continue to be protected because such authorizations or designations would not be issued in areas that would jeopardize remediation activities.

Effects from Watchable Wildlife Viewing Sites Management

Watchable wildlife viewing sites could impact public safety across alternatives by increasing access and bringing the public into contact with AMLs, hazardous materials sites, and other hazard sites.

Effects from Native American Tribal Uses Management

Native American tribal uses could impact public safety across alternatives by encouraging Native Americans to access traditional use areas for purposes of collection, hunting, and other traditional uses, which could also expose them to hazard sites.

Effects from Public Safety—Abandoned Mines and Hazardous Materials Management

The AML and HMM programs focus on immediate and urgent threats to human health and the environment. Most of the hazardous materials issues are associated with illegal dumping and past mining activities and AMLs. Implementation of management actions that could reduce BLM employee and the public's health risk and exposure to AML sites, hazardous materials sites, solid waste sites, and other hazard sites would include:

- Identifying, prioritizing, and ranking high-risk sites in need of corrective actions in terms of ease of access by the public;
- Continuing to maintain inventories of AML sites and hazardous material sites;
- Inspecting and mitigating new physical and chemical hazards to ensure public safety;
- Correcting physical hazards and cleaning up and reclaiming hazardous sites;
- Conducting periodic evaluations of closed sites to ensure protection of human health and the environment; and
- Safeguarding human health, preventing environmental damage, and limiting BLM liability from hazards by appropriate use authorization actions on public lands.

Alternative A

Effects from Geology Management

Alternative A would not promote scientific, educational, and recreational use and access to unique geological features with the development of recreational trails. Increased access to public lands increases the likelihood of exposure to AMLs, hazardous material sites, and other hazard sites. Thus, Alternative A is the most protective of public safety by not increasing access to public lands.

Effects from Forest Products Management

Based on timber harvest output since 1992, the current annual ASQ is estimated at about 6,600 MBF on approximately 35,757 acres. This estimate serves as a baseline for comparing alternatives.

Effects from Recreation Management

Alternative A would designate three SRMAs totaling 26,682 acres. The likelihood that the public could come into contact with AML or other hazardous sites would be increased in these SRMAs.

Effects from Transportation and Travel Management

The transportation and travel management program could affect public safety through inadvertently providing access to hazard sites and producing ground-disturbing activity on or near AML sites and hazardous material sites. Alternative A has the least potential to protect public safety because it offers the most acreage for Open, cross-country OHV use (85,308 acres). The Open designation presents the greatest potential for encountering AML, hazardous material sites, and other hazard

sites. Alternative A also provides for fewer miles of yearlong vehicle use closure for roads, fewer miles of yearlong vehicle use closure for trails, and fewer miles for all-terrain vehicle use only when compared to Alternatives B and C.

Effects from ACEC/RNA Management

ACEC/RNA management could affect public safety by limiting access to or prohibiting manipulation of BLM-administered lands, thereby reducing exposure to AMLs, hazardous materials sites, and physical hazard sites. ACEC designations for watersheds, stream features, lakes, wetlands, riparian areas, and forest areas would also positive affect water quality, and thus further the goals of the AML and HMM programs. Alternative A includes 10 ACEC/RNA designations totaling 25,600 acres. In particular, the existing Elk City Dump/American Hill Lake ACEC under Alternative A would continue to protect the public from hazards present at that site.

Effects from Public Safety—Abandoned Mines and Hazardous Materials Management

Alternative A would have the least potential to protect public safety, mainly because of the comparative lack of management actions outlined under Alternative A when compared to the other alternatives. Current AML and HMM actions in the CFO are not predicated on specific previous decision documents because the programs were not in existence at the time of the MFP (BLM 1981a). In comparison to Alternatives B, C, and D, which share numerous management actions in common, Alternative A does not outline specific site inventorying practices or subsequent hazard remediation, monitoring, or tracking.

The HMM program has dealt with some hazardous and solid waste materials at sites and from dumping in the CFO. Mine and AML sites with hazardous conditions have been investigated to a limited extent under the AML and HMM programs. Physical hazards at these sites have been addressed under other programs, as required, although hazards have not been inventoried. If mine water issues are present at these sites, they have not been investigated.

Alternative A continues an ACEC to protect the Elk Creek Landfill and the NWSRS withdrawals to protect the Blackhawk Bar and Riggins Landfill to protect public health and safety.

Alternative B

Effects from Geology Management

Alternative B, like Alternatives C and D, promotes scientific, educational, and recreational use and access to unique geological features with the development of recreational trails. Increased access to public lands increases the likelihood of exposure to AMLs, hazardous material sites, and other hazard sites.

Effects from Forest Products Management

Alternative B would offer 3,129 MBF of timber for extraction on 40,598 acres. This constitutes approximately 47 percent of the timber that would be extracted under Alternative A on about 12 percent increase of the base acreage that could be disturbed. As such, Alternative B would be more protective of public safety by offering less timber for extraction, but on a larger base acreage for ground disturbance.

Effects from Minerals Management

Alternative B would protect public safety on 43,590 acres open to leasable and salable minerals activities with NSO stipulations and 42,403 acres with CSU stipulations.

Effects from Recreation Management

Alternative B would designate 5 SRMAs totaling 55,201 acres. The likelihood that the public could come into contact with AML or other hazardous sites would be increased in these SRMAs, which would affect double the acreage of SRMAs under Alternative A.

Effects from Transportation and Travel Management

Alternative B would have the greatest potential to protect public safety from transportation and travel management impacts because no areas would be Open for cross-country OHV use; all areas would be Limited or Closed. Alternative B would also provide more miles of yearlong vehicle use closure for roads, more miles of yearlong vehicle use closure for trails, and more miles for all-terrain vehicle use only when compared to Alternative A.

Effects from ACEC/RNA Management

Impacts of ACEC management on public health and safety would be similar to those described under Alternative A, except that Alternative B would designate ~~11~~ 12 ACEC/RNAs totaling ~~34,528~~36,153 acres, a ~~6~~7 percent increase in comparison to Alternative A. Also, the existing Elk City Dump/American Hill Lake ACEC under Alternative A would not continue to be an ACEC under Alternatives B, C, and D. As such, the public would not be protected from hazards present at the site. Protection of historical mining sites through the designation of the American River Historical Sites District ACEC under Alternatives B, C, and D would also be protective of public safety.

Effects from Public Safety—Abandoned Mines and Hazardous Materials Management

Similar to Alternative A, Alternative B would place emphasis on identifying potential hazard sites, such as hazardous material sites, solid wastes, and other hazards sites. However, unlike Alternative A, Alternative B also emphasizes identifying AMLs.

Hazard sites would be assessed for level of risk and subsequently prioritized for mitigative and remediative actions across alternatives, but Alternative B specifies additional follow-up actions. Physical hazards would be ranked for corrective actions. Recreation facilities and use areas would be regularly assessed for safety hazards, and corrective actions would be taken to correct these hazards, when necessary. An inventory of AML and hazardous material sites with site files and databases would be maintained. Physical safety hazards would be corrected and hazardous materials sites would be cleaned up.

Correcting physical safety hazards and cleaning up hazardous material sites is an action that is consistent across alternatives, but Alternative B also specifies that site cleanup and reclamation be conducted in accordance with the National Oil and Hazardous Substances Pollution Plan (Federal Register 1994) and the Comprehensive Environmental Response, Compensation, and Liability Act. Alternative B also specifies that BLM employees who work around contaminated areas and other hazard areas be property trained and equipped to do so.

Alternative B specifies that public land records be noted with the location of closed landfills and that files be maintained about closed landfills and other closed/remediated sites. For comparison, Alternative A highlights an ACEC to protect the Elk Creek Landfill and NWSRS withdrawals to protect the Blackhawk Bar and Riggins Landfills. The withdrawals and another ACEC by other management programs continue the protection also.

Conversely, Alternative B would be more protective of public safety than Alternative A with regard to ensuring that the remedies employed at closed/remediated sites remain protective. The effectiveness of corrective actions at sites where hazardous substances remain would be monitored

following written monitoring plans. The performance of remedies implemented at sites where hazardous substances remain would be reviewed no less than every five years to ensure the remedies remain protective. All actions authorizing the use of, or potential for disturbance, of closed and remediated sites on public lands, where potentially hazardous substances remain at the site, would comply with federal and state regulations, and where appropriate, special stipulations would be developed as part of the permit, lease, or other action to ensure human and natural resource safety.

Alternative B specifies that closed and remediated sites where hazardous substances remain and sites with significant known hazardous conditions can be restricted by NSO stipulations and special conditions requiring no disturbance of the hazardous materials present unless they are properly handled and the parties doing so are appropriately bonded. Mineral developments would be appropriately handled and the involved parties would be bonded. Also, sites with significant known hazardous conditions would also be closed to motorized vehicles where appropriate.

Alternative B would be more protective of public safety and would limit BLM liability more than Alternative A by applying special stipulations, beyond those of state of federal regulations, to permits, leases, plans, or other actions involving potential use of hazardous materials on public lands, when deemed appropriate. Alternative B also specifies periodic review not only of compliance with state and federal regulations, but also with the special stipulations.

Alternative B would also be more protective of public safety and would limit BLM liability more than Alternative A by specifying that exchange or disposal of lands with hazardous materials can be done only with Potentially Responsible Parties. Alternative B would not permit unauthorized treatment, storage, or disposal of hazardous materials on public lands and specifies corrective actions on all unauthorized actions found.

Alternative C

Effects from Geology Management

Impacts would be the same as those described under Alternative B.

Effects from Forest Products Management

Alternative C is more protective of public safety than Alternatives A and B by offering the least board feet of timber for extraction (3,101 MBF) and the least base acreage for ground disturbance (34,611 acres).

Effects from Minerals Management

Alternative C has the greatest potential to protect public safety by making the most lands open to leasable and salable minerals activities subject to NSO and CSU stipulations (68,854 acres and 59,122 acres, respectively). Overall, Alternative C would impose NSO and CSU constraints on 37 percent more open areas than Alternative B.

Effects from Recreation Management

Impacts of SRMA designation under Alternative C would be the same as those described under Alternative B.

Effects from Transportation and Travel Management

Impacts on public health and safety from transportation and travel management under Alternative C would be the same as those described under Alternative B.

Effects from ACEC/RNA Management

Impacts of ACEC management on public health and safety would be similar to those described under Alternative B, except that Alternative C would designate the most (15) ACECs totaling 60,661 acres, which is twice as much land in comparison to Alternative A, and 18 percent more land in comparison to Alternative B.

Effects from Public Safety—Abandoned Mines and Hazardous Materials Management

Impacts would be similar to those described under Alternative B, except as follows. Alternative C would provide more potential to protect public safety and environmental health than Alternative B because it would close under the mineral laws closed and remediated sites where hazardous substances remain and at sites with significant identified hazardous materials. However, Alternative C would not close significant hazardous materials sites to motorized vehicles, where appropriate. Such increased use of public lands would result in:

- An increase in dumping and releases;
- An increase in the number of people accessing hazard sites; and
- An increase in the disturbance of hazard sites.

Alternative D

Effects from Geology Management

Impacts would be the same as those described under Alternative B.

Effects from Forest Products Management

Alternative D is less protective of public safety than Alternatives B and C but more protective than Alternative A by offering 4,823 MBF for timber for extraction on 45,190 acres.

Effects from Minerals Management

Compared to Alternatives B and C, Alternative D would have the least potential to protect public safety by making the least acreage open to leasable and salable minerals activities subject to NSO (35,045 acres) and CSU stipulations (32,013 acres). This would constitute about 46 percent fewer lands with stipulations than Alternative C, and about 25 percent fewer lands with stipulations than Alternative B.

Effects from Recreation Management

Impacts of SRMA designation under Alternative D would be similar to those described under Alternative B.

Effects from Transportation and Travel Management

Alternative D has less potential to protect public safety than Alternatives B and C, but more potential to protect public safety than Alternative A. Alternative D would offer approximately 73 percent less acreage for Open, cross-country OHV use than Alternative A (23,189 acres Open under Alternative D and 85,335 acres Open under Alternative A). More than 150 percent of lands would be Limited under Alternative D than under Alternative A, but 19 percent fewer lands would be Limited under Alternative D than under Alternatives B and C. Alternative D, like the Alternative A, would provide fewer miles of yearlong vehicle use closure for roads, fewer miles of yearlong vehicle use closure for trails, and fewer miles for all-terrain vehicle use only, when compared to Alternatives B and C.

Effects from ACEC/RNA Management

Impacts of ACEC management on public health and safety would be similar to those described under Alternative B, except that Alternative D would designate the fewest (eight) ACECs totaling 23,924 acres, which is a slight decrease (1 percent) in comparison to Alternative A.

Effects from Public Safety—Abandoned Mines and Hazardous Materials Management

Impacts would be similar to those described under Alternative B, except as follows. Alternative D would have NSO restrictions and bonding for all sites with hazardous materials instead of sites with significant known hazardous materials, but would not close them to motorized vehicles. Compared to Alternative C, Alternative D would not close sites under the mineral laws. Overall, Alternative D has more potential to protect public safety than Alternative A but less potential than Alternatives B and C.

Cumulative Effects

Effects of past actions and natural events that have affected public safety generally stem from activities in the CFO planning area that have improved access, such as land tenure actions, and caused ground disturbances such as timber, grazing, mineral, and recreation activities.

Any foreseeable future activities that could have an effect on public safety would be mitigated by management actions that specify surface use restrictions such as closures, withdrawals, no surface occupancy, and seasonal restrictions. Protective buffers, special designations, and avoidance areas also would help mitigate cumulative effects to public safety. Activities that lead to cumulative public safety effects in the CFO would be interrelated and synergistic: increased access would lead to greater likelihood of exposure to chemical and physical hazards that may be present and to increased ground disturbance, which in turn destabilizes AML and hazardous materials sites, diminishing public safety.

The continuance of land tenure actions that consolidate BLM-administered lands could result in exchanging lands near AML, hazardous material sites, and other hazard sites. The exchange of lands near hazard sites would increase as consolidation of holdings progresses.

Domestic livestock have grazed and will continue to graze most of the CFO planning area, including BLM-administered lands, Nez Perce and Coeur d'Alene Reservation lands, private lands, State of Idaho lands, and Clearwater, Payette, Nez Perce, and Idaho Panhandle National Forest lands. Livestock grazing increases access, causes ground disturbance, and reduces foliage, thereby impinging on hazard sites.

Timber has been and is harvested on private lands, State of Idaho lands, BLM-administered lands, and National Forest lands. Despite the decline in timber sales from National Forests in Idaho as a result of the North Idaho Timber Management Plan (in 1982) and the anticipated further decline in timber sales in the foreseeable future, logging will continue on public lands at a reduced rate and on private lands at a projected increasing rate. Continuing logging activities would result in future access to and ground disturbance on or around AMLs, hazardous materials sites, and other hazards sites.

Mineral revenues in the CFO and Clearwater, Idaho, and Latah Counties make up a small percentage of Idaho's total mineral revenues, and these have diminished in royalty value over time. Renewed interest in hard-rock mining for gold may occur in the foreseeable future if gold prices increase. Future mining for gold would likely be geographically confined to areas around Elk City and

Marshall Mountain. Close oversight of future gold mining activity would be required to reduce effects to water quality and public safety.

Development of various industrial minerals in the CFO planning area, including sand, gravel, and aggregate; dimension stone; and limestone, is expected to continue to expand in response to urban growth and construction in Idaho. Development of industrial minerals and/or salables can impact public safety through increasing access, ground-disturbing activity, fugitive dust, and creation of physical hazards. Runoff from industrial mineral sites could cause sedimentation of nearby stream features and affect the reproduction of aquatic species. Petroleum products would be required to run mineral extraction equipment, and hazardous substances could be used to service this equipment. The increased presence of heavy trucks on secondary roads in the CFO required to transport salable minerals could also be a public safety issue.

Past exploration activity in the CFO for oil and gas, geothermal, and solid leasables (both energy and non-energy) has been low. The potential for these resources is also low. Future prospecting for these resources could impact public safety by improving access and creating ground disturbance.

Road construction associated with timber harvesting and mining on BLM-administered lands, private lands, State of Idaho lands, and Clearwater, Payette, Nez Perce, and Idaho Panhandle National Forest lands has recently slowed because of less harvesting and mining activity on National Forest and BLM lands when compared with the recent past. However, this activity is expected to continue at a steady rate on BLM-administered and National Forest lands and at an unknown rate on private and State of Idaho lands. Road construction has a generally negative effect on public safety by causing ground disturbance and increasing access and the likelihood that the public will come into contact with hazards. Increased access could also lead to an increase in illicit dumping of materials, both of the hazardous and relatively innocuous solid waste varieties.

The continuing increase in Idaho's population affects public safety by increasing the number of people that would visit BLM-administered lands and encounter the chemical and physical hazards that are present; increasing the number of people that can cause ground disturbance, either by foot travel or vehicular traffic; and increasing the number of people that may engage in illicit disposal activities.

Increased recreation use increases the likelihood that AML sites, hazardous material sites, and other hazard sites could be encountered by motorized off-road vehicle users, mountain bikers, hikers, hunters, and other recreationists. Recreation has increased, and use patterns and motorized technology have changed. Recreational activities would continue to contribute to soil effects by foot traffic and off-road vehicle use. An increase in the use of developed recreation sites and campgrounds is likely as the population increases, which could lead to an increase in illicit dumping activity and could result in an increase in releases of petroleum products and hazardous materials.

Noxious weed invasion is increasing and will continue, potentially increasing treatment efforts. Noxious weed treatment efforts could impact public safety by disturbing AML and hazardous material sites, which frequently lack good vegetative cover and have noxious weeds infestations. Use of chemical treatments, such as herbicides, to control noxious weeds also raises human and environmental health issues.

Hazardous fuels reduction, WUI projects, and activities that develop defensible space under the Idaho Statewide Implementation Strategy for the National Fire Plan would be protective of public safety by protecting the public from wildfire. However, such activities could cause ground disturbance and erosion around AMLs and other hazard sites and lead to site instability. Fuels treatments, including prescribed fire and mechanical treatment methods and wildland fire use, is expected to increase.

The development and implementation of ICBEMP would be protective of public safety by maintaining and promoting healthy, productive, and diverse ecosystems and by restoring areas that are degraded. Developing a coordinated multiscale and interagency approach to planning and decision making should also be protective of public safety by expediting the improvement of watersheds and ensuring that AML and other hazard site are avoided. Re-patterning succession and disturbance regimes to reduce events such as uncharacteristically large and severe wildland fires would also protect public safety. However, restoration of natural hydrologic process and disturbance patterns in watersheds, such as presumably unmanaged seasonal flooding, under ICBEMP could have a short-term effect on public safety and environmental health by allowing stream and floodplain sediments that contain toxic metals to be mobilized.

The Cottonwood RMP Alternatives B, C, and D could contribute to protecting public health and safety by outlining assessment, mitigation, and corrective protocols for AML, hazardous material, and other hazard sites, which are absent under Alternative A. The specification of these protocols would generally protect public safety across alternatives by providing specific future management for these items. However, proposed management actions for some resource areas, such as recreation, transportation and travel management, would be less protective of public safety across alternatives.

4.5.3 Social and Economic Conditions

Goal: Provide varied social and economic opportunities through multiple use management.

Summary

This section describes the important social, economic, and environmental justice effects of the management actions described in Chapter 2. Most social and economic effects from the implementation of the alternatives would be indirect as a result of land use decisions and limits or emphasis placed on uses that could affect the dominant industry sectors on BLM-administered lands, including forestry, grazing, tourism and recreation, and minerals development.

The RMP makes land allocations that provide for commercial uses (grazing, timber, tourism, recreation, mining, outfitter/guiding) of BLM lands in designated areas. These commercial uses provide economic benefits to local communities and to the greater public. The RMP alternatives vary in where and how these commercial uses are allowed and/or restricted.

Continued implementation of Alternative A would result in no net change to social and economic conditions in the planning area. Alternative B would be the same as A, or would have a slight decrease in employment and income. Although PSQ is reduced in all action alternatives (from Alternative A), increased fuel-reductions projects are expected to generate new employment opportunities. Alternative C would provide a decrease in employment and income potential (from Alternative A) because of the greatest number of restrictions to commercial uses due to resource protection measures. Alternative D would provide the greatest potential increase (from Alternative

A) in economic benefits because of the least restrictions for resource protection placed on commercial uses.

Table 4-~~80~~ 81 identifies the indicators that were used to analyze effects on social and economic conditions under each alternative. It is not possible to predict if the indirect effects of protective measures would ultimately result in changes in income, employment, or BLM receipts to counties. **Table 4-~~80~~ 81** presents the potential for indirect effects to economic indicators, based on management of the economically important resource uses on BLM-administered lands (management of recreation, forest products, livestock grazing, minerals, and renewable energy), as well as the potential for land tenure adjustments to affect the area available for tribal uses.

Table 4-81
Comparison of Social and Economic Conditions Indicators by Alternative

Indicator	Alternative A	Alternative B	Alternative C	Alternative D
Change in number of jobs	Recreation connected with amenities and resources on CFO lands continues (and increases with population growth) to contribute to local economies. Variations across alternatives for levels of PSQ and AUMs and variations in NSO and CSU restrictions could result in small, localized changes to numbers of jobs in the timber, construction, ranching, and mining industries. Levels of restoration actions also vary among alternatives resulting in small, localized changes to number of jobs in the contracting and construction industries.			
Change in personal income	Recreation connected with amenities and resources on CFO lands continues (and increases with population growth) to contribute to local economies. Variations across alternatives for levels of PSQ and AUMs and variations in NSO and CSU restrictions could result in small, localized changes to personal income in the timber, construction, ranching, and mining industries. Levels of restoration actions also vary among alternatives resulting in small, localized changes to personal income in the contracting and construction industries.			
Change in dollar returns to counties from grazing	No net change	Potential for slight decrease due to reduction in AUMs	Potential for slightly greater decrease than B due to reduction in AUMs	Potential for slight increase from grazing due to increase in AUMs
Identify changes in acres for Nez Perce Tribe to exercise off-reservation tribal rights	No net change			
Identify effects on tribal interests	No net change	Potential for increase due to increased land retention and increased economic coordination		

Source: BLM 2004a

Methods of Analysis

Indicators

Indicators are used to identify the level of impact. For social and economic conditions, the indicators used for impact analysis are identified in **Table 4-~~80~~81**, Comparison of Social and Economic Conditions Indicators by Alternative.

Methods and Assumptions

Impact analyses and conclusions are based on the existing and projected population, employment, income, housing, earnings, social values, economic contribution of BLM lands, and government services conditions presented in Chapter 3, Section 3.5.3, Social and Economic Conditions. This socioeconomic and demographic data within the planning area was examined to determine these resources' sensitivity to the changes in resource management proposed under each alternative. Impacts described in this section are based on the preliminary design of the alternatives under consideration. Effects are quantified where possible, but potential socioeconomic impacts were not modeled.

BLM-administered lands provide locally important values, natural resources, and recreation amenities within the regional economy and are part of the cultural identities of the local communities. As such, changes in management on BLM-administered lands could affect the economies and social well-being of these communities. In addition, BLM contributes directly to local employment and expenditures through hiring for seasonal tasks, such as weed abatement, river patrols, campground maintenance, and archaeological inventories, and awarding contracts for timber sales and recreation site development.

Of the important industry sectors on public lands within the CFO planning area (recreation, forest products, livestock grazing, and minerals activities), recreation is the greatest contributor to the economies of the surrounding communities. By far the greatest influence on the demand for recreation in the planning area is the increasing population and the increasing demand for recreational opportunities (see Section 3.5.3, Social and Economic Conditions, Economic Influence of BLM-managed lands). Because the BLM manages only ~~1.5~~2 percent of planning area lands, changes in management of these BLM-administered lands could contribute but not cause region-wide economic effects on the natural resource and recreation-based industries that rely on them. Wildlife habitat and salmon and steelhead fisheries found on CFO lands contribute to world-class hunting and fishing opportunities that are important economic drivers of local economies.

Forestry is more prevalent on Forest Service and private lands within the planning area, which contain a much larger percentage of the region's commercial timber than BLM-administered lands. The region's forest products industry has been substantially affected by regional fluctuations in the demand and price for timber. Natural resources, particularly forest products, however, continue to be a important source of income and employment for planning area residents. The increasing regional demand for timber has fueled recent investment in mills and milling equipment in the planning area.

Similarly, the amount of livestock grazing occurring on public lands utilizes ~~is~~ a small fraction of the available forage within the planning area boundary. In general, privately-owned parcels provide more forage per acre than public grazing lands.

Public lands in the CFO provide limited opportunities for minerals activities. Currently, there is no potential for fluid leasables on public lands within the planning area. There are no active mineral leases within the planning area. There are 12 permits and plans for locatable minerals within the CFO, two of which are pending and could affect one acre and the remainder are inactive or reclamation efforts. There are three salable minerals (mineral materials) contracts that cover crushed stone used for aggregate, totaling 80 acres in Idaho County. In addition there are two right-of-way

leases for mineral materials covering 35 acres along the Salmon River. Active (not including reclamation) or planned minerals operations now cover approximately 116 acres (0.08-percent of public lands) (see the Mineral Occurrence and Development Potential and Report). Most of the minerals operations are made up of small-scale local miners or junior companies (Sanner 2005).

Renewable energy is increasing in importance as fuel prices increase and greater emphasis is placed on domestic sources; therefore, the socioeconomic effects of management actions on renewable energy, particularly biomass, also is discussed. The effects of management actions as they relate to these sectors are described qualitatively, based on changes in the acreage of land available for each use under each alternative. Dollar values are estimated where available. In the absence of quantitative data, impacts are described using ranges of potential impacts or in qualitative terms, as appropriate. In general, alternatives with restrictions on the most acreage on the resource uses identified above would have the highest potential for increased operations costs and decreased incomes.

Effects Common to All Alternatives

Effects from Soils Management

Management measures designed to limit soil erosion and ground-disturbing activities in sensitive areas could result in increased operating costs and potentially employment reduction in the economic sectors that are active on BLM lands. Land available for timber harvest could be restricted and timber operations costs increased.

In areas of permanent or temporary closure to protect sensitive soils, BLM would change the season of operation for livestock grazing or fence off the affected area, allowing continued grazing outside the exclosure. These measures would not affect the grazing operations or the incomes of ranchers using BLM lands in the planning area. If these actions were not feasible and a relatively large area required restriction, permanent or temporary closure of areas available for grazing could potentially reduce the number of AUMs available to ranchers. Permittees could be required to lease additional private land, purchase additional forage, or reduce livestock numbers during interim periods when grazing is temporarily suspended. These costs to ranchers would result in a loss of income and a reduction in grazing fees to the BLM and returns to counties from grazing. This loss could be offset through the use of vacant unleased allotments. The amount that these effects could be offset would depend on the number of AUMs affected, whether all AUMs in the affected allotments are in use, and the vacant allotments/AUMs available. The potential reduction in leased AUMs would vary by alternative, based on the AUMs in steeply sloped areas; however, steep slopes probably would not be the focus for a reduction of livestock grazing, since these areas receive very little use compared to moderate sloped areas.

Under all alternatives, soils management could limit access for motorized recreation in some areas. Unless these restrictions covered a large area and limited a wide variety of activities, they would be unlikely to result in a reduction of recreational use of BLM-administered lands, for which demand is projected to increase, or a reduction in local sales, employment, and income.

Effects from Water Resources Management

Similar to the economic effects from soils management, management actions to protect riparian areas and water quality would impose restrictions on economic activities on BLM lands, including timber harvest, grazing, minerals development, and recreation. While these measures could potentially increase operating costs, and ultimately result in a reduction in local employment in and

income from these activities, these effects would be unlikely for the reasons described above (in Effects from Soils Management). Road management actions specified in **Appendix F**, Aquatic and Riparian Management Strategy (see Volume II~~I~~), could result in areas where timber is not economically feasible or could require using other potentially more-expensive systems. Water quality protection measures would affect transportation and logging systems. This could reduce timber volume, and thus sales, and BLM receipts.

Management changes in areas where livestock grazing inhibits riparian areas from meeting PFC could result in a reduction in available AUMs and the associated socioeconomic effects on grazing described under Effects from Soils Management. The potential reduction in leased AUMs would vary by alternative, based on the AUMs in riparian areas.

Limiting mineral activities near waters listed on the Clean Water Act 303(d) list for water quality impairment, or restricting mineral activities near water bodies subject to TMDL limitations, could restrict areas open to mining and increase local minerals operators' costs to extract the minerals and decrease their incomes. If these costs became prohibitive, the affected operations could be forced to scale down or cease operating on BLM lands, which could eliminate jobs.

Effects from Vegetation—Forests Management

Forest health and fuel-reduction projects would generate logging byproducts that could be used as biomass fuel. Increased biomass fuels availability could decrease energy costs for timber companies or individuals involved in biomass fuels collection and energy generation or result in increased sales of biomass fuels.

The AUM value of treated lands could increase, potentially allowing for additional grazing, receipts from grazing to the BLM, and returns to counties from grazing.

Improvement of forest habitat for wildlife would increase opportunities for hunting and viewing of wildlife, improving the social value of recreation on public lands. Enhanced opportunities for camping, hiking, and sightseeing that could result from forest products management could draw more visitors, potentially increasing expenditures within the local economy.

Effects from Vegetation—Weeds Management

Under all alternatives, all authorized users of public land, could be responsible for implementing weed-control measures. These measures could result in increased costs to mining operations, which could affect whether individuals or organizations continue mineral activities on BLM lands. If these costs became prohibitive, the affected operations could potentially be forced to scale down, which could eliminate jobs.

Invasive species have resulted in a loss in rangeland values for grazing. Weeds management actions under all alternatives would improve the forage base for livestock grazing and could enhance incomes to ranchers.

Weeds management could improve recreational opportunities and maximize the areas available to visitors. Loss of native habitat due to invasive plant species, which can result in lost hunting and fishing opportunities, would be limited by weed management measures, and potential reductions in areas available for undeveloped camping and hiking as a result of invasive species also would be minimized through weeds management measures.

In addition, BLM would also be working with the counties, private contractors, and local businesses through partnerships to complete weed treatment projects. This could increase revenues to these private entities.

Effects from Vegetation—Rangelands Management

Vegetation treatment areas would receive short-term deferment to allow vegetation to recover. Vegetation management also would result in grazing management adjustments in the season and duration of use. The associated socioeconomic effects on grazing would be the same as those described under Effects from Soils Management, above.

Effects from Vegetation—Riparian and Wetlands Management

Protection measures to conserve or restore RCAs would vary by alternative depending on RCA widths. Volume of timber harvested would decrease for Alternatives B, C, and D compared to baseline conditions in Alternative A (see **Table 4-12**, Comparison of Vegetation—Riparian and Wetlands Indicators by Alternative). ~~Protecting riparian buffers could reduce the potential volumes of timber sales.~~ In addition, a reduction in the timber volume available for sale could reduce the amount and value of timber available for stewardship contracts within local communities, potentially affecting local economies.

Riparian-restoration measures, such as permanently or temporarily closing areas affected by grazing (such as high-erosion or runoff areas), could affect the amount of grazing allowed within the planning area. This could potentially reduce the number of AUMs available to ranchers, as described under Effects from Soils Management. The potential reduction would vary by alternative, based on the AUMs in riparian areas, and by the need for restoration measures.

Improvements in fish habitat as a result of riparian restoration measures could improve salmon and steelhead fisheries, potentially drawing more anglers and benefiting the economies of local river communities, as described under Effects from Aquatic Resources, Fish and Special Status Fish Management. Protection of riparian habitats would improve wildlife habitat and potential increase opportunities for hunting and wildlife viewing. Protection of riparian areas could enhance the quality of recreation experiences.

Route closures and restrictions to protect riparian areas could result in an overall net decrease of available BLM-administered routes. Effects of this are discussed under Effects from Transportation and Travel Management, below. Transportation management measures also could result in increased local contracts to maintain roads, improve stream crossings, and install culverts, increasing local business incomes and potentially generating jobs.

Effects from Wildlife and Special Status Wildlife Management

Providing suitable habitat for and reducing impacts on federally listed species could result in areas where forest product removal would be prohibited or restricted. The effects depend on the listed species and the requirements for each species. These measures, in turn, could limit the potential for timber sales and the receipts associated with such timber sales.

Actions to protect federally listed and BLM sensitive species and their habitats could affect livestock grazing by limiting grazing areas and seasons of use, as described under Effects from Soils Management. In addition, the potential for direct losses of livestock, as a result of predation where wolves are reintroduced, could increase. Increased livestock losses and measures to protect livestock

from predation, such as increasing the number of herd dogs, could increase costs to ranchers and decrease their incomes.

Implementation of measures to protect federally listed species or habitat could increase the costs and decrease the incomes of authorized users. All alternatives would include a 100-yard nondisturbance buffer around raptor nests, which could temporarily exclude some mineral activities during the season that the nondisturbance buffer was in place or require project modifications, which could increase operating costs.

Effects from Aquatic Resources, Fish, and Special Status Fish Management

Fisheries actions that restrict grazing access or alter the timing and duration of grazing could reduce the number of AUMs available to ranchers. The associated costs to ranchers would be the same as those described under Effects from Soils Management, above.

The potential beneficial economic effects of the protection of aquatic resources, fish, and special status fish on salmon and steelhead fisheries, with the resultant direct and indirect angler expenditures, would be substantial (Ben Johnson Associates, Inc. 2005).

Effects from Special Status Plants Management

Management actions to protect special status plants would impose restrictions on economic activities on BLM lands, including timber harvest, grazing, minerals development, and recreation. These measures could increase operating costs and restrict areas of operation, which could ultimately result in reduced income from and local employment in these activities, particularly if operations were forced to scale back to cover increased costs. Actions that could occur under all alternatives that could have these results include restricting or prohibiting forest product removal to avoid or minimize adverse impacts on listed plants and limiting livestock grazing areas and seasons of use to protect federally listed and BLM sensitive plant species. The associated socioeconomic effects on grazing would be the same as those described under Effects from Soils Management. Restricting or excluding recreation activities that are found to impact listed plants would be unlikely to result in a decline in recreational use unless restrictions covered large contiguous areas and a wide variety of activities.

Effects from Wildland Fire Management

In the short term, wildland fire use could reduce the amount of merchantable forest products, which could limit timber sales. Suppressing fires could prevent merchantable forest products from being burned, allowing them to continue growing and increase in value, improving timber sales. In the long term, wildland fire use could result in increased forest health and vigor, creating quality wildlife habitat and stands of merchantable trees, improving timber sales. Treating areas to reduce FRCC or hazardous fuels would produce forest products and opportunities for employment and income.

Fuels treatments and wildland fires could result in deferred livestock use, temporary modifications in grazing patterns or reductions in grazing, or complete removal of livestock from allotments. The associated socioeconomic effects on grazing would be the same as those described under Effects from Soils Management, above. These restrictions would be short-term effects. In the long term, fuels treatments would be expected to open the overstory, and increase the available forage in the understory.

Wildland fire management under any alternative could result in short-term lack of access to authorized activities, which could increase short-term operating costs and cause a short-term decrease in income to these operations. However, if wildland fire management prevented larger future wildland fires, then future access to authorized activities would be protected, ultimately protecting long-term income from these operations.

Hazardous fuels-reduction projects would generate forest byproducts that could be used as biomass fuel. Increased biomass fuels availability could provide opportunities for the generation of electrical energy through biomass utilization and could provide additional jobs and income that this industry would create.

Wildland fire use also could result in a short-term lack of access to recreation in the affected area and displacement of wildlife. It is unlikely that this would result in a reduction in the number of visitors to or the level of hunting activities on public lands, since other areas would still be accessible. Therefore, short-term reductions in the economic activity resulting from recreation and hunting expenditures would not be expected.

Effects from Cultural Resources Management

Minimizing effects to cultural resources through project design could result in small decreases in timber sale volumes and it could result in increases to mining operations costs.

Implementing site-specific measures for cultural resources would protect these resources of interest to the recreating public, potentially increasing the amenity value of recreation on BLM lands. This could draw more visitors and increase expenditures within the local economy. Site specific protections could restrict the development of recreation facilities in certain areas.

Effects from Forest Products Management

Reductions in the sale quantity of timber would reduce the volume of forest products available for processing or use, which would decrease the incomes of local timber harvest operations and could affect jobs.

Short-term effects resulting from livestock exclusion following reforestation could necessitate that permittees lease additional private land, purchase additional forage, or reduce livestock numbers during periods when grazing is temporarily suspended. The associated socioeconomic effects on grazing would be the same as those described under Effects from Soils Management, above.

Effects from Livestock Grazing Management

Requiring adjustments to grazing operations to comply with the Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management (BLM 1997a) (**Appendix A** [see Volume II~~I~~]) could necessitate that permittees lease additional private land, purchase additional forage, or reduce livestock numbers over the long term. The associated socioeconomic effects on grazing would be the same as those described under Effects from Soils Management, above.

Effects from Minerals Management

Mineral development would impact livestock grazing in the short and long term by decreasing the amount of grazing acreage available during construction and operation of such facilities. Salable mineral production would decrease grazing forage in areas closed for excavation and production.

Mineral development along rivers and in recreation areas would impact recreation values through a reduction in scenic values and natural landscapes which are an important part of the recreation experience.

Effects from Recreation Management

Recreation activities that reduce forage through disturbance could affect ranchers' incomes to the extent that expenditures would be made to protect livestock from harassment and ensure that animals receive adequate forage.

Management actions under all alternatives would continue to support an array of recreational opportunities, including boating, camping, hiking, and fishing. These actions would ensure that water- and land-based recreational opportunities continue to be available to the increasing population of the planning area. Special Recreation Permits, which would continue to be administered for commercial, competitive, and organized group recreation activities, would provide a means for monitoring and adjusting to meet the increasing demand for recreation opportunities and reduce user conflicts. These actions would maintain the social value of public lands for existing and additional new users, and maintaining this value would allow for continued expenditures within the local economy by users of public lands.

Effects from Renewable Energy Management

Developing solar, biomass, or wind energy could impact livestock grazing in the short and long term by decreasing the amount of grazing acreage available during construction and operation of such facilities in multiple-use areas.

Renewable energy development also could result in a loss of wildlife habitat and visual impacts that could affect the value of the affected public lands to recreation users. It is unlikely that this effect would cause a decrease in the number of visitors or the amount of recreational use because of overall projected population increases and increases in the demand for recreation opportunities. Visitors would be more likely to increase use of other areas, rather than a reduction in the number of visitors and consequent decline in expenditures in the local economy.

Effects from Transportation and Travel Management

Route reductions and restrictions could reduce the value of BLM lands to visitors involved in OHV recreation, potentially resulting in a decrease in this type of recreational use and a potential decrease in this group's expenditures within the local economies, which could thereby cause a decrease in employment and income. However, the majority of routes identified for closure under all alternatives are already closed to vehicle use or are receiving negligible motorized use. It would be more likely that restrictions or closures would result in more intense use of open routes and Open areas. Between approximately 40 miles (Alternative A) and 100 miles (Alternatives B, C, and D) of routes would be closed yearlong under each alternative, which would restrict access to other activities, such as minerals exploration and development. The potential socioeconomic effects are described above under Effects from Recreation Management.

Route restrictions and cross-country travel restrictions could increase the recreation values for nonmotorized and primitive recreation uses, resulting in a potential increase in economic benefits to local communities and outfitters.

Effects from Lands and Realty Management

Most land tenure adjustments occur in the form of land exchanges, and most lands designated for potential exchange are isolated parcels surrounded by private lands and are difficult to manage for livestock grazing and other uses due to their isolation. When such grazing lands are exchanged, the adjacent rancher is almost always the recipient. Using these isolated, difficult-to-manage parcels in a land exchanges to create larger blocks of public lands elsewhere greatly increases management efficiencies and opportunities, not only for grazing, but all uses of public lands, including recreation, minerals development, and timber harvest. Improved management for grazing could increase the number of AUMs available or allow for the extension of the season of use, limiting the need for and costs to ranchers of obtaining alternate sources of forage. Potential short- and long-term forage loss from rights-of-way and facilities could necessitate that permittees lease additional private land, purchase additional forage, or reduce livestock numbers to compensate for these effects. The associated socioeconomic effects on grazing would be the same as those described under Effects from Soils Management, above.

Exclusion of mineral activities along the Lower Salmon River could limit the extent of minerals operations. However, the minerals on the Lower Salmon River have been withdrawn for 37 years, and BLM mineral reports indicate that there are few, if any, mineral deposits that would be even marginally economically feasible to mine on the Salmon River. It is, therefore, unlikely that continuation of the withdrawals would have new impacts. Prioritizing acquisition of nonfederal lands with high-value resources, including minerals, could offset limitations on minerals activities.

Land acquisitions could improve the value of the recreational resource provided by the planning area to users and as an amenity value in general. Land exchanges could lead to a decline in some uses; however, lands identified for potential land exchanges lack public access and are generally unavailable for public use. The incomes of outfitters that rely on recreation could improve as a result of land exchanges, since land exchanges tend to consolidate areas of high value for recreation and/or wildlife.

The more federal acres that are transferred into private ownership within the CFO, the larger the benefit to due to increases in the tax base. Idaho County, which contains the majority of the public lands in the CFO, receives the maximum payments in lieu of taxes allowable under the current payments in lieu of taxes formula. Because the county is composed primarily of federal lands (mostly Forest Service), a reduction of hundreds of thousands of federal acres would be required before it would receive a reduction in payments in lieu of taxes.

Land exchanges which dispose of public lands for the acquisition of lands that offer public access would benefit the public and the Tribe. The Tribe would be consulted on all proposed land tenure adjustments and impacts to the Tribe would be taken into consideration. Land exchanges generally result in comparatively small changes in the overall federal land base, and most lands designated for potential disposal would be isolated parcels surrounded by private lands. The public, and the Tribe, would have negligible access to, or benefits from, the lands available for disposal.

Effects from ACEC/RNA Management

Restrictions on timber harvesting, grazing, and hydroelectric facility construction within ACECs could have slight impacts on these industries.

Effects from Native American Tribal Uses Management

Consulting with tribes to identify culturally significant plants, important habitats, and traditional use locations could reveal previously unidentified resources that would require protection. Additional restrictions that could be placed on such areas could limit production of forest products in areas not previously identified. These measures could potentially limit timber sales and the receipts associated with such timber sales. These measures also could curtail biomass collection and sales.

Recreation activities could be restricted or excluded by measures to enhance opportunities for Native American traditional uses. For example, recreational uses that would affect important habitats or plants might have seasonal use restrictions. This would be unlikely to generate economic effects unless restrictions resulted in a substantial decline in the number of recreational users.

Tribal consultation to maintain and enhance important natural and cultural resources would be unlikely to alter tribal economic conditions, because much of the tribal employment, income, and finances for services are derived from Nez Perce Tribe-operated casinos in the region.

Effects from Public Safety—Abandoned Mines and Hazardous Materials Management

Actions to clean up newly discovered waste sites could temporarily impact livestock grazing practices, which would have short-term effects similar to those described above under Effects from Soils Management, above.

Access to minerals would be reduced by several health and safety-related proposals, including proposed withdrawals and site restrictions (requiring mining plans and bonding), potentially increasing operating costs and decreasing income based on minerals activities.

In addition, the safety and social well-being of public land users such as recreationists and tribal members engaged in activities on BLM lands, would be protected by the clean up of newly discovered sites and restrictions on sites where potentially hazardous substances remain.

Effects from Social and Economic Conditions Management

Specific social and economic conditions management measures would be undertaken under Alternatives B, C, and D. Actions to provide opportunities for commercial use of natural resources could affect livestock grazing by allowing ranchers to increase their economic livelihood through grazing. Establishment of public and private partnerships would facilitate the creation of biomass fuel-supply chains from CFO forests to private biomass energy facility developers and operators, which could increase incomes and employment on the suppliers' side and reduce local energy costs. Working with the Nez Perce Tribe to develop sustainable economic opportunities also could improve tribal employment and incomes. Specifically providing for economic opportunities, in addition to other forms of multiple use, would encourage the development of programs that would be designed specifically to increase employment and incomes in local communities.

Alternative A

Effects from Soils Management

Under Alternative A, approximately 55,067 acres of grazing allotments would be on BLM lands of 60-percent slope or greater, the greatest acreage of all alternatives except Alternative D. The potential general socioeconomic effects of soils management on livestock grazing are described above under Effects Common to All Alternatives.

Effects from Vegetation—Forests Management

The potential for 760 acres of forested vegetation treatment to be temporarily unavailable for grazing for two years would represent a loss in fees to the BLM and a consequent reduction in returns to counties based on grazing receipts. The cost of treatment to ranchers where reforestation coincides with grazing allotments would be the same as those described under Effects from Soils Management under Effects Common to All Alternatives, above. The potential for this short-term effect would be the greatest under Alternative A because the treatment acreage is the greatest.

Effects from Vegetation—Riparian and Wetlands Management

Under Alternative A, limiting timber extraction in the RHCA buffer zones along Class I and Selected Class II streams except to benefit wildlife or to improve the stream habitat conditions would limit the potential for timber sales and the receipts associated with such timber sales. Under Alternative A, approximately 24,290 acres within RHCAs would have timber harvest restrictions.

Approximately 2,128 acres available for grazing are within riparian habitat. At a value of $1.43 per AUM in 2004 and an average of 0.06 AUMs per acre, a total of approximately $183 in grazing fees could potentially be eliminated by riparian-restoration measures under Alternative A.

Effects from Forest Products Management

The current annual ASQ is estimated at about 6,600 MBF. Assuming all harvested timber is sold, Alternative A would have the highest level of timber sales and associated receipts of all of the alternatives. Given that 1,037,100 board feet were sold in 2004 at a value of $130,479 ($0.13 per board foot), the sale of 6,600 MBF would result in a timber sales value of $858,000.

Effects from Livestock Grazing Management

Under Alternative A, the potential for disruption of recreation patterns and reduced visitor satisfaction as a result of the overlap of permitted grazing with high-use recreation areas, such as SRMAs, could result in a decrease in use of BLM-administered lands that currently experience user conflicts in favor of recreation on other nearby federal lands.

Effects from Minerals Management

Because there are no NSO or CSU restrictions under Alternative A, minerals operations would be more likely to conflict with recreational use both in the short term during active development and production, potentially restricting recreational activities in active locations, and in the long term by affecting the scenic quality and natural landscape that could undermine the quality of the recreational experience. In the short term, this could reduce the social value of public lands and recreational use of public lands during the period of intense minerals activity. In the long term, visitors desiring a natural setting would be more likely to use other planning area BLM-administered lands more intensely, or they could seek out other more-pristine lands.

Effects from Recreation Management

Similar percentages of grazing lands would be located within SRMAs under Alternatives A, B, and C (20, 25, and 24 percent, respectively), exposing livestock to similar levels of disturbance and affording them similar levels of protection.

The potential for effects of recreation management on the costs of minerals activities, incomes from minerals activities, jobs, and returns to counties under Alternative A would be the lowest of the alternatives. Alternative A would include a slightly smaller area where these uses would be restricted.

There would be no restrictions regarding surface occupancy restrictions on developed recreation sites or administrative sites and no CSU restrictions for SRMAs or wild and scenic rivers.

Alternative A would be most likely to provide utility to user groups who favor motorized uses, because a much smaller portion of the planning area would continue to be reserved for primitive experiences, compared to opportunities for activities that include motorized uses. Continued water-based recreation would ensure that local economic activity based on these activities would continue to follow existing trends.

Effects from Transportation and Travel Management

Alternative A would designate the most acreage for Open travel within available grazing areas (approximately 59 percent or 85,308 acres). The effects of cross-county motorized vehicle use, potential new route development, and the increased demand for OHV use could disrupt livestock grazing , which could affect ranchers' costs and incomes.

Access to minerals also would be greatest under Alternative A, which could keep minerals operating costs down, maximizing incomes to minerals operators.

The effects on motorized recreation would be the same as those described above under Effects from Recreation Management. Within the areas designated for Open travel the potential for conflicts with other user groups, such as hunters, anglers, bird watchers, and hikers, would continue and could diminish the level of satisfaction of the users who prefer more primitive, nonmotorized, experiences.

Effects from Lands and Realty Management

Disposal or exchange of forested land could reduce the incomes of local timber harvest operators, if these lands were no longer available for timber harvest. However, if these private lands were available for timber harvest, the potential income for loggers would greater, since in general there are fewer harvest restrictions on privately owned timberland than federal timberland. In addition, since most land tenure adjustments would be the result of exchanges, lands with greater access and greater potential for management that would improve timber harvest could be obtained in place of the exchanged federal lands. Under Alternative A, approximately 5,263 more acres than under Alternatives B, C, and D would be available for land tenure adjustment. The potential for impacts to incomes to local operators as a result of this type of management action, therefore, would be greater.

Effects from ACEC/RNA Management

Livestock grazing could be limited within several ACECs, which could reduce incomes to ranchers and returns to counties from grazing. Grazing would not be allowed in Captain John ACEC/RNA, Long Gulch ACEC/RNA, and approximately one-third of Lucile Caves ACEC/RNA (a total of 1,504 acres). Approximately 1,759 acres of these ACECs are within grazing allotments (including a portion of Lucile Caves ACEC/RNA that is not closed to grazing).

Limiting ground disturbing activities in the Long Gulch ACEC/RNA, Craig Mountain ACEC, and Elk City Dump/American Hill Lake ACEC (3,957 acres) could preclude minerals development in these areas or increase the costs of operations, which also could preclude development and reduce the incomes of minerals operators.

The effects from ACEC/RNA management on biomass fuels are described in Section 4.3.5, Renewable Energy. Limiting the availability of forest byproducts would limit cogeneration potential and potential reductions in energy costs.

Effects from Public Safety—Abandoned Mines and Hazardous Materials Management

Alternative A would not include NSO restrictions for public safety. The increases in operating costs and decreases income from minerals activities that would be associated with NSOs, therefore, would not occur under Alternative A.

Alternative B

Effects from Soils Management

Under Alternative B, approximately 46,152 acres of grazing allotments would be in areas of 60-percent slope or greater, lower than Alternatives A and D.

Effects from Vegetation—Forests Management

The potential for 466 acres of forested vegetation treatment to be temporarily unavailable for grazing for two years would represent a loss in fees to the BLM and a consequent reduction in returns to counties based on grazing receipts. Under Alternative B the cost of treatment to ranchers where reforestation coincides with grazing allotments would be similar to those described under Effects Common to All Alternatives under Effects from Soils Management, above. The potential for this short-term effect would be intermediate between alternatives C and D, since the treatment acreage is intermediate between these two alternatives.

Effects from Vegetation—Riparian and Wetlands Management

Under Alternative B, limiting timber extraction within riparian buffer zones to levels that would enhance or preserve riparian conditions would limit the potential for timber sales and the receipts associated with such timber sales. Under Alternative B, approximately 22,847 acres are within RCA stream buffers, approximately 6 percent less than current conditions.

Under Alternative B, the cost of riparian-restoration measures to ranchers where riparian restoration coincides with grazing allotments would be similar to those described above under Effects Common to All Alternatives under Effects from Soils Management. Approximately 1,880 acres available for grazing would be within riparian habitat, and approximately 27,230 acres of grazing land would be within RCAs.

The increased emphasis for riparian enhancement in restoration and conservation watersheds under Alternative B would promote improvements in the salmon and steelhead fisheries in the planning area, which could result in economic gains to river communities from increased angler expenditures in these communities (see Effects Common to All Alternatives, Effects from Water Resources Management).

Effects from Wildland Fire Management

Use of mechanical treatment on 2 to 6 percent of CFO FRCC 2 or 3 lands would release these potential fuels for timber sale and collection, which could increase incomes for local timber operations and increase BLM receipts from timber activities.

Fuels treatments on up to 40 percent of CFO FRCC 2 or 3 (moderate and high risk) WUI lands would restrict recreational activities in the short term, potentially reducing the incomes of outfitters

who rely on the restricted areas. The potential for this reduction under Alternative B is intermediate between Alternatives C and D, since the treatment acreage is intermediate between these two alternatives.

Effects from Forest Products Management

An estimated PSQ of 3,129 MBF would be 3,471 MBF lower than the current annual 6,600 MBF, resulting in resulting in total receipts of $406,770, assuming the entire projected annual PSQ was harvested and sold.

Effects from Livestock Grazing Management

The closure of three vacant allotments would reduce the potential for increased cattle grazing on BLM lands and the potential for increased returns to counties from grazing. The 13-percent decrease in public lands available for grazing would be lower than under Alternative C.

Under Alternative B, the potential for disruption of recreation patterns as a result of the overlap of permitted grazing with high-use recreation areas, such as SRMAs, could result in a decrease in use of BLM-administered lands that currently experience user conflicts in favor of recreation on other nearby federal lands. The potential for reduced recreation would be slightly higher under Alternative B than Alternative A because acreage overlap between SRMAs and grazing allotments would be 1,745 acres greater under Alternative B than under Alternative A.

Effects from Minerals Management

Due to wildlife considerations, Alternative B would impose 43,590 acres of NSO constraints, 42,403 acres of CSU restrictions, and TLs on leasable mineral and mineral material activities. These restrictions could increase operating costs and decrease the incomes of local minerals operations. If these costs became prohibitive, the affected operations could be forced to scale down or cease operating on BLM lands, which could eliminate jobs.

Under Alternative B, NSO and CSU restrictions would reduce the potential for conflict between recreational and minerals use, maintaining the quality of the recreational experience for visitors, decreasing the likelihood that operations involving leasable minerals would alter use patterns that could result in a reduction in the social value of recreation on public lands.

Effects from Recreation Management

Effects of grazing lands within SRMAs would be similar to those described under Alternative A.

The potential for effects of recreation management on the costs of minerals activities, incomes from minerals activities and jobs under Alternative B would be higher than under Alternative A. Alternative B would include a slightly larger area where these uses were restricted, as well as including NSO and CSU restrictions.

SRMA designations under Alternative B would total 55,201 acres, an approximate 19-percent increase over Alternative A. The potential to increase commercial activity in these areas, stimulate the local economy (potentially increasing incomes and jobs), and draw more recreational visitors would be higher than under Alternative A because Alternative B would promote active development of business plans for recreation sites and SRMAs. Under Alternative B, additional zones would be established for both commercial and competitive uses, providing additional opportunities for

activities such as boating and fishing, which could stimulate the local economy, potentially increasing incomes and jobs.

Effects from Renewable Energy Management

The active pursuit of partnering opportunities to develop biomass energy generating capabilities under Alternative B could decrease energy costs for the entities involved in biomass fuels collection and energy generation and for those who purchase biomass energy, effectively increasing incomes.

Effects from Transportation and Travel Management

Decommissioning or obliterating roads would make them unavailable for most forest vegetation management actions, potentially increasing the cost of forest vegetation management actions. Increased operating costs for minerals activities would decrease the incomes of those involved in local minerals operations. If these costs became prohibitive, the affected operations could be forced to scale down or cease operations on BLM lands in favor of less costly operations.

Under Alternative B, eliminating the Open travel designation would remove the conflicts between cross-country travel and livestock grazing (described under Alternative A) and could decrease the costs of adjusting for these disruptions and increase the incomes of local ranchers.

Under Alternative B, restrictions in motorized travel could increase operating costs, decreasing the incomes of minerals operations on BLM-managed lands. The required consideration of habitat and special status wildlife for route location also could limit access and increase minerals operating costs.

Effects from Lands and Realty Management

Prioritizing the retention of public lands with high-value minerals resources under Alternative B would decrease the likelihood of a reduction in BLM receipts from minerals.

Under Alternative B, the effects on local timber harvest operations as a result of land tenure adjustments would be similar to those described under Alternative A. Approximately 5,263 fewer acres would be available for land tenure adjustment under Alternative B than under Alternative A, and the potential for impacts to the incomes of local operators as a result of this type of management action, therefore, would be lower than under Alternative A.

Effects from ACEC/RNA Management

Effects would be similar to those described under Alternative A, except that a total of 201 acres within the Long Gulch ACEC/RNA, Skookumchuck ACEC/RNA, and Lucile Caves ACEC/RNA (which would be closed to grazing) would be located in grazing allotments under Alternative B. As such, the potential for a reduction in incomes to ranchers and returns to counties from grazing would be lower in Alternative B than in Alternative A.

The acreage of restrictions placed on activities that affect minerals access and entry under Alternative B would be greater than under all other alternatives, except Alternative C. Therefore, it would be more likely that ACEC/RNA management under Alternative B could preclude minerals development in these areas or increase the costs of operations in these areas which also could preclude development and reduce the incomes of minerals operators more than under Alternatives A and D.

The effects from ACEC/RNA management on biomass fuels under Alternative B are described in Section 4.3.5, Renewable Energy. Limiting the availability of forest byproducts would limit cogeneration potential and potential reductions in energy costs. The area over which this would occur under Alternative B would be higher than under Alternative A; therefore, the potential for these effects also would be higher under Alternative B.

Effects from Public Safety—Abandoned Mines and Hazardous Materials Management

Alternative B would include 24 acres of NSO restrictions for areas with known hazardous materials. The minimal acreage covered by these restrictions would be unlikely to increase operating costs or decrease income from minerals activities.

Alternative C

Effects from Soils Management

Under Alternative C, approximately 43,954 acres of grazing allotments (roughly 2,637 AUMs) would be in areas of 60-percent slope or greater, similar to Alternative B and the lowest of all the alternatives. The potential general socioeconomic effects of soils management on livestock grazing are described above under Effects Common to All Alternatives.

Effects from Vegetation—Forests Management

Under Alternative C the costs of treatment to ranchers where reforestation coincides with grazing allotments would be similar to those described under Alternative A. The potential for this short-term effect would be lowest under Alternative C, since the treatment acreage under this alternative is the smallest.

Effects from Vegetation—Riparian and Wetlands Management

Effects of limiting timber extraction within riparian buffer zones would be similar to those described under Alternative B. Under Alternative C, approximately 27,624 acres would be within RCA stream buffers, the largest of all alternatives. In addition, a reduction in timber available for sale could reduce the amount and value of timber available for stewardship contracts within local communities, potentially affecting local social infrastructure and employment.

Under Alternative C, the cost of riparian-restoration measures to ranchers where riparian restoration coincides with grazing allotments would be similar to those described under Alternative A. Approximately 1,765 acres available for grazing would be within riparian habitat.

The increased emphasis for riparian enhancement in restoration and conservation watersheds under Alternative C would promote improvements in the salmon and steelhead fisheries in the planning area, which could result in economic gains to river communities from increased angler expenditures in these communities (see Effects Common to All Alternatives, Effects from Water Resources Management). Alternative C has the highest potential for this type of economic gain, since it has the greatest acreage within restoration and conservation watersheds.

Effects from Wildland Fire Management

The potential for increased timber sales as a result of mechanical treatment of vegetative fuels under Alternative C would be similar to under Alternative B. Restrictions on recreational activities in the short term from fuels treatments would be similar to those described under Alternative B, except that Alternative C would treat up to 20 percent of CFO FRCC 2 or 3 (moderate and high risk) WUI

lands. The potential for restrictions on recreation under Alternative C is the lowest of all alternatives because the treatment acreage is lowest of the alternatives.

Effects from Forest Products Management

A PSQ of 3,101 MBF would be 3,499 MBF lower than the current annual 6,600 MBF, resulting in total receipts of $403,130, assuming the entire projected annual PSQ was harvested and sold. The PSQ under Alternative C represents the highest potential reduction in timber sales.

Effects from Livestock Grazing Management

Under Alternative C, approximately 101,350 acres (6,020 AUMs) would be available for grazing. Effects would be similar to those described for Alternative B, except there would be a 21,382-acre decrease in the amount of land available to grazing under Alternative C. This would decrease the number of AUMs available by 1,184. Under Alternative C, the potential for increased cattle grazing on BLM lands and increased returns to counties from grazing, associated with unleased allotments, would be lower than under Alternative B.

The potential for reduced recreation would be similar to those described under Alternative A, except that the overlap between SRMAs and grazing allotments under Alternative C would be 4 percent greater than under Alternative A.

Effects from Minerals Management

The effects from minerals management on minerals operations under Alternative C would be similar to those described under Alternative B. Alternative C would impose 68,854 acres of NSO constraints, 59,122 acres of CSU restrictions, and TLs for wildlife habitat on leasable mineral and mineral material activities. The potential for economic effects on minerals operations under Alternative C would be the highest of all the alternatives because the acreage of restrictions would be greatest under Alternative C.

The effects from minerals management on recreation under Alternative C would be similar to those discussed under Alternative B. Greater NSO and CSU restrictions under Alternative C would be likely to reduce the potential for conflict between recreational and minerals use further than under Alternative B.

Effects from Recreation Management

Effects of grazing lands within SRMAs would be similar to those described under Alternative A.

The potential for effects of recreation management on the costs of minerals activities, incomes from minerals activities and jobs under Alternative C would be the same as those described under Alternative B.

The effects on incomes and jobs based on recreation, resulting from recreation management, would the same as those described under Alternative B.

Effects from Renewable Energy Management

Effects would be the same as those described under Alternative B.

Effects from Transportation and Travel Management

Effects of transportation and travel management on local minerals operations and livestock grazing would be the same as those described under Alternative B.

Restrictions in areas available for motorized travel would be greater than under Alternative B. This could increase operating costs, decreasing the incomes of minerals operations on BLM-managed lands to a greater extent than under Alternative B.

Effects from Lands and Realty Management

Under Alternative C the potential socioeconomic effects from lands and realty management on minerals activities and timber harvesting would be the same as under Alternative B.

Effects from ACEC/RNA Management

Under Alternative C the potential for impacts to ranchers' incomes as a result of ACEC/RNA management would be the same as under Alternative B.

The acreage of restrictions placed on activities that affect minerals access and entry under Alternative C would be greater than under all other alternatives. Therefore, it would be more likely that ACEC/RNA management under Alternative C could preclude minerals development in these areas or increase the costs of operations in these areas, which also could preclude development and reduce the incomes of minerals operators to a greater extent than under the other alternatives.

The effects from ACEC/RNA management on biomass fuels Under Alternative C are described in Section 4.3.5, Renewable Energy. Limiting the availability of forest byproducts would limit cogeneration potential and potential reductions in energy costs. The area over which this would occur under Alternative C would be the greatest of all the alternatives; therefore, the potential for these effects also would be the greatest under Alternative C.

Effects from Public Safety—Abandoned Mines and Hazardous Materials Management

Effects would be the same as those described under Alternative B.

Alternative D

Effects from Soils Management

Under Alternative D, approximately 61,050 acres of grazing allotments (roughly 3,663 AUMs) would be in areas of 60-percent slope or greater, the highest amount of all the alternatives. The potential general socioeconomic effects of soils management on livestock grazing are described above under Effects Common to All Alternatives.

Effects from Vegetation—Forests Management

Under Alternative D the costs of treatment to ranchers where reforestation coincides with grazing allotments would be similar to those described under Alternative A. The potential for this short-term effect would be intermediate between Alternatives A and B, since the treatment acreage is intermediate between these two alternatives.

Effects from Vegetation—Riparian and Wetlands Management

Effects of limiting timber extraction within riparian buffer zones would be similar to those described under Alternative B. Under Alternative D, approximately 20,710 acres would be within RCA stream buffers, the lowest of all alternatives.

Under Alternative D, the cost of riparian-restoration measures to ranchers where riparian restoration coincides with grazing allotments would be similar to those described under Alternative A. Approximately 2,324 acres available for grazing would be within riparian habitat.

The increased emphasis for riparian enhancement in restoration and conservation watersheds under Alternative D would promote improvements in the salmon and steelhead fisheries in the planning area, which could result in economic gains to river communities from increased angler expenditures in these communities (see Effects Common to All Alternatives, Effects from Water Resources Management). Since Alternative D has the least acreage within restoration and conservation watersheds (as compared with Alternatives B and C), it has the lowest potential among Alternatives B, C, and D for this type of economic gain.

Effects from Wildland Fire Management

The potential for increased timber sales as a result of mechanical treatment of vegetative fuels under Alternative D would be similar as those described under Alternative B, except that Alternative D would use mechanical treatment on 2 to 15 percent of CFO FRCC 2 or 3 (moderate and high risk) WUI lands. The potential for increased timber sales under Alternative D would be the greatest of all alternatives because Alternative D would allow for a greater percentage of mechanical treatments.

Restrictions on recreational activities in the short term from fuels treatments would be similar to those described under Alternative B, except that Alternative D would treat up to 60 percent of CFO FRCC 2 or 3 (moderate and high risk) WUI lands. The potential for this reduction under Alternative D is the highest among the alternatives because the treatment acreage is the greatest under Alternative D.

Effects from Forest Products Management

A PSQ of 4,823 MBF would be 1,777 MBF (27 percent) lower than the current annual 6,600 MBF, resulting in resulting in total receipts of $626,990, assuming the entire projected annual PSQ was harvested and sold. The PSQ under Alternative D represents the lowest potential reduction in timber sales.

Effects from Livestock Grazing Management

Effects would be similar to those described for Alternative A, except there would be a 13,118-acre increase in the amount of land available to grazing under Alternative D. This would increase the number of AUMs available by 1,336. An increase in the number of leased AUMs could increase BLM receipts from grazing and subsequent annual returns to counties derived from grazing receipts. The potential for increased returns to counties from grazing due to increased acreage available to grazing on public lands would be highest under Alternative D, with approximately 11 percent more land available for grazing and 156 percent more land than is currently leased.

The potential for reduced recreational use would be similar to those described under Alternative A. The potential for this effect under Alternative D would be the greatest of all the alternatives because acreage overlap between SRMAs and grazing allotments would be the greatest (28,182 acres greater than under Alternative A).

Effects from Minerals Management

The effects from minerals management on minerals operations under Alternative D would be similar to those described under Alternative B. Alternative D would impose 35,045 acres of NSO constraints, 32,013 acres of CSU restrictions, and TLs for wildlife habitat on leasable mineral and mineral material activities. The potential for economic effects on local minerals operations under Alternative D would be the lowest of Alternatives B, C, and D, because the acreage of restrictions would be lower than those under Alternatives B and C.

The effects from minerals management on recreation under Alternative D would be similar to those discussed under Alternative B. Less-extensive NSO and CSU restrictions under Alternative D would be likely to increase the chances for conflict between recreational and minerals use more than under Alternative B, increasing the potential for a decline the quality of the recreational experience for visitors and in the social value of recreation on public lands.

Effects from Recreation Management

Under Alternative D, the costs of and income from livestock grazing would be more likely to be affected by recreation management than under Alternatives A, B, and C, because approximately 39 percent of available grazing acres would be located in SRMAs, a 19-percent increase from Alternative A and an approximate 25-percent increase from Alternatives B and C.

The potential for effects of recreation management on the costs of minerals activities, incomes from minerals activities and jobs under Alternative D would be lower than under Alternatives B and C. Although Alternative D would include restrictions similar to those described to protect recreation opportunities under Alternative B, additional access would be provided by improved routes in the Craig Mountain WMA.

The potential economic effects on recreation from recreation management regarding SRMA designations and the active development of business plans for recreation sites would be the same as those described under Alternative B. The expansion of potential commercial uses within the Lower Salmon River Scenic SRMA and Lolo Creek SRMA could potentially increase the incomes of permittees above the levels that would be achieved under Alternatives B and C.

Effects from Renewable Energy Management

Effects would be the same as those described under Alternative B.

Effects from Transportation and Travel Management

Under Alternative D, the socioeconomic effects from transportation and travel management on local minerals operations would be the same as those described under Alternative B.

The area designated Open within available grazing areas under Alternative D (18 percent or 23,814 acres of available grazing areas of BLM-administered lands) would be lower than under Alternative A. The socioeconomic effects of cross-county motorized vehicle use, potential new road development, and the increased demand for OHV use on livestock grazing, therefore, would be lower than under Alternative A. However, the effects from the increase in Limited areas could offset any reduction in Open areas.

The effects of travel restrictions on minerals operations would be similar to those described under Alternative B.

Effects from Lands and Realty Management

Effects would be the same as those described under Alternative B.

Effects from ACEC/RNA Management

A total of 1,503 acres within the Long Gulch ACEC/RNA, Captain John Creek ACEC/RNA, and Lucile Caves ACEC/RNA (which would be closed to grazing) would be located in grazing

allotments under Alternative D. The potential for a reduction in incomes to ranchers and returns to counties from grazing, would be under Alternative D would be the same as under Alternative A.

Effects of ACEC/RNA management on minerals activities would be the same as those described under Alternative B.

The effects from ACEC/RNA management on biomass fuels Under Alternative D are described in Section 4.3.5, Renewable Energy. Limiting the availability of forest byproducts would limit cogeneration potential and potential reductions in energy costs. The area over which this would occur under Alternative D would be slightly lower than under Alternative A; therefore, the potential for these effects also would be slightly lower under Alternative D.

Effects from Public Safety—Abandoned Mines and Hazardous Materials Management

Effects on resource uses, including timber harvest, grazing, minerals activities, or recreation, would be slightly less than those described under Alternative B due to the absence of closures to motorized uses.

Cumulative Effects

Past, present, and planned future projects that have affected or would affect the economy, social structure, or tribal interests in the six planning area counties or the major resource uses occurring on BLM-managed lands would result in cumulative socioeconomic impacts. Since the BLM manages only ~~1.5~~2 percent of planning area lands, it is unlikely that changes in management of these BLM-administered lands in combination with other federal, state and local actions, would result in pronounced changes to existing cumulative effects. The following past and current activities have affected the trends in natural resource uses in the planning area and the incomes and employment derived from theses uses. Land tenure adjustments since 1981 have increased public lands available for grazing, timber harvest, minerals activities, recreation, and tribal uses. Past management actions and natural events, including fire, logging, insect and disease outbreaks, road construction, and regulatory restrictions for the protection of endangered species have resulted in a decrease in PSQ and timber harvest levels on BLM-managed lands and all federal lands. Decreasing levels of timber harvest have resulted in a decreased role for forest products within the planning area, resulting in income and employment reductions. Recent increases in regional demand for timber have fueled recent investment in mills and milling equipment in the planning area and could increase the economic activity generated by forest products. Past and current mineral development, recreation, prescribed burning, wildland fires, spread of noxious and invasive weeds, and historic grazing practices, drought conditions, land disposals, OHV use, habitat restoration, and special designations ~~that~~ have resulted in a limited reduction in grazing on public lands. ~~and the associated income from livestock grazing on public lands.~~ Past and ongoing management actions that would increase available forage include the continued application of the Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management (BLM 1997a) (**Appendix A** [see Volume II~~I~~]). Population growth, as well as an increase in the number of annual visitors to Idaho, has created a rising demand for recreation opportunities. Declining fish species have resulted in a decline in recreational fisheries incomes regionally and within local planning area communities. In general, past and ongoing fire management activities have increased the availability of biomass fuels.

Foreseeable future actions that could affect the trends in natural resource uses in the planning area and future incomes and employment derived from theses uses include the following: implementing

the National Fire Plan and fuel-reduction treatments could produce more commercial forest products that were not included in the Cottonwood RMP PSQ determinations, as well as contribute to the availability of biomass fuels as forests across the state are treated to remove excess fuel. More mills would be equipped to handle small-sized forest products, allowing for a greater contribution to the forest products industry. Continued suppression of wildland fires would limit risk to resource values, including timber, livestock grazing, minerals activities, and recreation. The population of the CFO is projected to continue to grow at a rate of 11 percent between 2000 and 2020, resulting in a need for more mineral materials to support infrastructure and building construction and an increasing demand for recreation opportunities. Increased conservation measures could result in more restrictions on mineral activities; however, ~~as~~ if species are delisted under the ESA, increased mineral activities could be allowed in formerly restricted habitat areas. Implementing Forest Plans in National Forests near the CFO would likely restrict surface disturbances and road access related to mineral activities.

The effects on the local economy and social values of past and future actions in combination with the proposed RMP are described below. The combined effects on the local forest products industry would likely be minimal because of the small percentage contributed to the market by BLM-administered lands. Public lands would continue to contribute to the wood products industry in the planning area through the production of commercial forest products, which would provide more income as more mills become equipped to handle small-sized forest products and biomass derived from treatments. Biomass also could contribute to the growth of the developing industry of biomass power generation within the planning area. In addition, local seasonal employment would continue to benefit from these treatment activities. BLM would continue to support the grazing industry through the provision of grazing permits on public lands within the CFO. There would be no perceived change to the cumulative effects for socioeconomics from the management of grazing under any of the alternatives, as none of the alternatives vary greatly from current management. Given the limited participation in minerals activities occurring on planning area public lands, the proposed RMP in combination with current and proposed future management actions in the region would be unlikely to affect local or regional incomes and employment in the minerals industry. BLM would continue to contribute to the mineral materials industry, as the demand for these resources increases with population growth. Land tenure adjustments that could improve management efficiencies and provide additional opportunities for activities that contribute to the local economy, could increase the amount of land available for public uses such as livestock grazing, recreation, and utilities and for management purposes such as timber, wildlife, and fisheries. Permittees who derive their incomes from the use of public lands would benefit from the consolidation of public lands and resource uses. Efforts to improve the status of salmon and steelhead in conjunction with protective measures that would be undertaken under the proposed RMP would move toward the restoration of the salmon and steelhead fisheries, which could inject the state, regional, and particularly the local economy with substantial recreation expenditures (Ben Johnson Associates, Inc. 2005).

The CFO planning area encompasses both low-income populations and the Nez Perce Tribe that were considered regarding issues of environmental justice. No disproportionately high or adverse effects to these populations regarding human health or environmental effects have been identified through the analysis of the RMP alternatives. Proposed management actions are expected to benefit low-income populations by allowing resource utilization on BLM lands, thereby contributing to the support of local industries and resultant jobs and income. The Nez Perce Tribe is expected to

benefit from proposed management actions because of both resource protection and resource utilization measures.

4.6 UNAVOIDABLE ADVERSE IMPACTS

Unavoidable adverse impacts are impacts that remain following the implementation of mitigation measures, or impacts for which there are no mitigation measures. Some unavoidable adverse impacts occur as a result of proposed management under one or more of the alternatives, while others are a result of public use of the BLM-managed lands within the planning area. Potential unavoidable adverse impacts are generally long term and difficult to quantify.

While measures are in place to identify threats to cultural resources and prioritize management actions, some impacts would be unavoidable. There would continue to be impacts to National Register of Historic Places-eligible, unevaluated, and undiscovered cultural resources associated with dispersed recreation activities, OHV use, vandalism, and other types of activities not authorized by the BLM. Natural processes such as erosion and natural decay or deterioration could also result in unmitigated damage to cultural resources.

Vegetation treatments and other authorized activities, as well as unauthorized travel, could cause short-term displacement of wildlife during the activity or treatment and while the treated area regenerates or recovers. There also could be short-term increases in stream sedimentation and soil erosion from these activities. Decreases in the quantity and quality of forage could also result from these activities.

Unauthorized travel on or off roads could cause soil compaction and loss of protective vegetative cover, thereby increasing soil erosion. Weeds introduced by these and other management activities could also cause a reduction in canopy coverage and leave soils subject to increased erosion. Any facility developments, including but not limited to recreation sites, livestock water and other range improvements, and utility and road facilities, that are not properly restored even after mitigation measures are applied could result in increased soil erosion.

Changes in the amount of recreational visitation and associated duration and patterns of use could result in increased conflicts between users and unanticipated changes in resource conditions.

Large-scale, stand-replacing wildland fires that are expected to occur within the planning area over the life of the RMP could quickly change the scenic quality of the landscape without regard to visual resource objectives. Scarring of the landscape could also result from unauthorized cross-country travel.

4.7 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

Irreversible commitments of resources are those that cannot be regained, such as the extinction of a species or the removal of mined ore. Irretrievable commitments are those that are lost for a period of time such as the temporary loss of timber productivity in forested areas that are kept clear for use as a powerline rights-of-way or road.

Mineral and energy development could result in an irreversible loss of vegetation resources, primitive recreational experiences, wildlife habitat, and livestock forage. Reclamation of disturbed areas would reduce the magnitude of these impacts following the action, but changes in migration

patterns and displacement of local populations during the activities could cause an irreversible loss in localized wildlife populations. Irretrievable losses to visual characteristics near mining sites could occur during development and operation.

The extraction and development of mineral resources results in the irretrievable and irreversible loss of those minerals. The withdrawal of areas from leasable, locatable, and salable mineral entry would cause an irretrievable loss of mineral extraction during the life of the RMP.

Undiscovered cultural resources could be unintentionally affected by management activities. Cultural resources are by their nature irreplaceable, so the alteration or elimination of any such resource, be it National Register eligible or not, represents an irreversible and an irretrievable commitment.

The exact nature and extent of any irreversible and irretrievable commitment of resources cannot be defined due to uncertainties about location, scale, timing, and rate of implementation, as well as the relationship to other actions and the effectiveness of mitigation measures.

4.8 RELATIONSHIP OF SHORT-TERM USES OF THE ENVIRONMENT TO LONG-TERM PRODUCTIVITY

Section 102(c) of NEPA requires a discussion of the relationship between local short-term uses of the human environment and the maintenance and enhancement of long-term productivity of resources. As described in the introduction to this chapter, short term is defined as anticipated to occur within one to five years of implementation of the activity. Long term is defined as following the first five years of implementation but within the life of the RMP.

Management activities under all alternatives would result in various short-term effects, such as increased localized soil erosion, damage to vegetation and wildlife habitat, and decreased visual resource quality. Some short-term effects could improve long-term productivity, while others effects could create impairment.

For example, short-term effects such as vegetation treatments would affect long-term productivity for wildlife and rangeland management by increasing available forage. Short-term effects from forest product harvest could reduce the long-term risk of large wildland fires. Short-term effects of wildland fire management and vegetation treatments could result in long-term improvements for scenic quality. On the contrary, short-term effects, such as those associated with mineral development, could result in long-term degradation of wilderness values and scenic quality. Short-term effects associated with route designations, maintenance, and alterations could result in long-term effects on recreation and rangeland management activities, and wildlife movement within corridors.

Management actions and BMPs would minimize the effect of short-term uses and reverse the change during the long term. However, BLM lands are managed to foster multiple uses, and some long-term productivity impacts might occur regardless of management approach. Overall, surface-disturbing and disruptive activities, including mineral and energy development, dispersed recreation, livestock grazing, infrastructure development, vegetation treatments, and human use, would result in the greatest potential for impacts on long-term productivity.