

Chapter 1

Purpose And Need For Action

INTRODUCTION

The Salmon River Canyon Project planning area covers approximately 1,800,000 acres within the Central Idaho Mountain Ecological Reporting Unit of the Interior Columbia River Basin. The area is characterized by a 190-mile stretch of the Salmon River, which flows through a deep, dissected canyon topography with numerous secondary drainages and elevation extremes, ranging from approximately 1,350 feet at Pine Bar on the river to 9,610 feet at Beehive Mountain. The canyon is a diverse ecosystem with a complex array of vegetation, wildlife, and fisheries that have evolved with and adapted to fire as the primary natural disturbance process. Please refer to Maps 1 - 1 (*Planning Area Vicinity Map*) and 1 - 2 (*Proposed Action*) for the planning area location.

The planning area is primarily managed by the Nez Perce, Payette, Salmon-Challis, and Bitterroot National Forests, but also contains lands managed by the Bureau of Land Management (BLM), U.S. Park Service, and State of Idaho. Communities within or adjacent to the planning area include North Fork, Shoup, Riggins, Lucille, Slate Creek, White Bird, Pollock, Pinehurst, and Grangeville. Numerous private inholdings are found within National Forest and Bureau of Land Management lands.

The Wild and Scenic River Act designates the Salmon River as "Recreational" from North Fork to Corn Creek, and "Wild" from Corn Creek to Long Tom Creek Bar. The planning area contains portions of two designated wilderness areas, the Frank Church--River of No Return Wilderness and the Gospel Hump Wilderness.

A hazard/risk assessment was completed by the Salmon River Canyon Project Planning Team in 1998. The assessment identified those subwatersheds most likely to experience stand-replacing wildland fire occurring outside the historical range of variability. Based on this analysis, the planning team explored options to reintroduce fire into the Salmon River Canyon ecosystem.

The purpose of this Environmental Impact Statement (EIS) is to disclose the direct, indirect and cumulative effects of the proposed action, and alternatives to the proposed action, to be carried out on the Nez Perce, Payette, and Salmon-Challis National Forests, and Bureau of Land Management land in Idaho County, Idaho, in accordance with the signed Record of Decisions (RODs) for this EIS.

PROPOSED ACTION

The Forest Service is proposing to ignite, using prescribed fire, approximately 214,000 acres (12 percent of the planning area) within the Salmon River Canyon (Map 1 - 2), in areas where fire exclusion has altered the historical fire regimes, and where vegetation densities and fuel accumulations have increased beyond historical levels. Acres to be burned include 209,142 on the Nez Perce, Payette, and Salmon-Challis National Forests, and 5,364 on the

Cottonwood Resource Area of the BLM. The initial scoping letter mailed to the public on May 14, 1998 also included 6,400 acres on the Bitterroot National Forest. These areas were dropped after large fires burned in those areas in 1998. These areas no longer meet the criteria used to determine which areas were in need of treatment.

The proposed action would reduce the potential for large-scale, stand-replacing fire in the historically non-lethal fire regimes. The majority of this acreage (approximately 80 to 90 percent of the burned area) would be a low intensity underburn in ponderosa pine and Douglas-fir forest types. Riparian and non-forested areas may also burn to some extent. Some higher fire intensities will likely occur on small portions (10 to 20 percent) of the area to be burned, due to localized variations in fuel accumulations and forest structural conditions. Private and state lands would not be burned unless written agreements between the Forest Service and property owners were established prior to ignition.

The proposed prescribed burns would primarily occur annually between the months of February and November. For the purposes of this analysis, the Planning team developed a provisional burn schedule for the years 2000 - 2005 (Appendix B). However, completion of this activity is expected to take several years and actual number of acres burned per year will be dependent upon burning conditions and mitigation requirements identified in Chapter Two. Ignition would be accomplished using hand-held torches and helicopter-transported lighting devices. Pre- and post-burn monitoring will evaluate the effectiveness of the proposed activities in reducing fuels and restoring the historic forest structural conditions.

The proposed action would also include a site-specific amendment to the Payette Forest Plan, which would eliminate current specific acreage limitations for prescribed burning in French Creek, Partridge Creek, the west side of California Creek, and Carey Creek.

PURPOSE AND NEED FOR THE PROPOSED ACTION

Changed Forest Conditions and Fire Effects

Prior to European settlement (before 1860), natural fires in the Salmon River canyon expanded over large areas and burned at varying intensities depending upon the variables of slope, elevation, aspect, weather and vegetation condition. Lightning was the primary cause of these historical fires; however, indigenous Native Americans contributed human-caused ignitions for many centuries (Barrett 1980, Barrett and Arno 1982). The combination of lightning and Native American ignitions resulted in frequent, low-intensity fires in the lower elevations (below 6000 ft.), which caused little mortality. However, relatively infrequent, high-intensity fires burned in the upper elevations (above 6000 feet), causing significant mortality to trees of all sizes (Mehringer et al, 1977). Historically, the non-lethal fires occurred in the dry vegetation types found on southerly aspects and resulted in open forests of large, uneven-aged, fire-resistant trees such as ponderosa pine and Douglas-fir. The stand-replacing fires occurred on moist, northerly aspects, and resulted in dense, even-aged forest stands of various tree species, including lodgepole pine, grand fir, and subalpine fir. Between these two extremes, mixed-severity fires caused varying amounts of mortality in overstory trees, and promoted diverse mixtures of all tree species. The periodic disturbance caused by these natural fires created a mosaic of tree sizes, densities, and species that

facilitated nutrient cycling, reduced competition for water between individual trees, and promoted healthy forest vegetation (Agee 1993, Gruel 1983, Skovlin and Thomas 1995).

After 1860, large numbers of sheep and cattle began to graze portions of the canyon, which reduced grass fuels that helped to carry low-intensity fires. Simultaneously, the influence of Native Americans using fire in the canyon declined as the Nez Perce and Shoshone peoples were relocated to reservations (Barrett and Arno 1982). By the early 1900s the demand for timber had increased and the Forest Service began actively suppressing fire. Since the 1930s, the Forest Service has had an effective program of fire suppression to protect forest resources. Although timber harvest was not prolific in the Salmon River canyon due to the rugged and remote terrain, suppression efforts were aggressively used to protect timber management areas adjacent to the canyon from wildland fire originating in the canyon. The combined effect of grazing, logging, road building, and fire suppression has changed the historical role of fire by altering the frequency, size and intensity (fire regime) of fires in the Salmon River canyon, resulting in fire exclusion for approximately 100 years (Agee 1983).

This fire exclusion has resulted in increased fuel accumulations and vegetation densities, as well as a shift in the species composition and size class distribution of trees in the canyon (Barrett 1988, Agee 1993). An area that shows substantial change from historical vegetation patterns is said to be "outside" of the Historical Range of Variability (HRV) (Map 1 - 3, *Forest Vegetation Outside of HRV*). For example, open stands of ponderosa pine have become filled with numerous small diameter, shade tolerant species, such as grand fir and Douglas-fir. Duff has reached unnatural accumulations, which means that even low-intensity burns may cause mortality from concentrated, long-duration heat. These changes are most evident in the lower elevation areas where frequent, non-lethal fire historically predominated. The increased density of fuels and vegetation allow fire to climb into the canopies of overstory trees causing "crown fires." This condition exists over large areas of the canyon where fire has been excluded. This current condition puts entire subwatersheds at risk to uncharacteristic stand-replacing fire (Map 1-4, *Subwatersheds at Risk to Stand-Replacing Wildfire*). The net result of these altered conditions are forests which are less resistant and resilient to fire (Morgan et al 1996). While the number of fire starts has remained constant, these altered conditions have caused an increase in fire intensity in areas which historically experienced nonlethal fires. This can result in significantly higher tree mortality. (Barrett 1988a) Furthermore, these high-intensity fires are costly to suppress and pose significant safety risks to wildland firefighters.

Wildland/Urban Interface

Human population and property values within and adjacent to the planning area have substantially increased within the last century. The intermix of private homes, structures, and recreational facilities within a forest environment is known as the "wildland/urban interface." The interface between human populations and a fire-prone environment poses significant risks to human lives and property values because vegetation densities are often outside the historical range of variability and are pre-disposed to high-intensity fires. The average costs of wildland fire suppression, number of firefighter fatalities, and acreages of high-intensity fires in the last 25 years has exceeded the levels which occurred between 1910 and 1970 (Quigley, 1997).

This proposal is needed to:

1. Initiate the restoration of fire-adapted vegetation types in the Salmon River Canyon through the use of prescribed fire.
2. Protect values at risk, such as private property, cultural resources, and recreational facilities from effects of unwanted wildland fire.
3. Reduce the risk to wildland firefighters involved in suppression activities.
4. Increase the potential to allow natural fire (i.e., Wildland Fire For Resource Benefits) to take its course within wilderness and restore fire as a natural process where fire exclusion has altered the natural conditions and historic fire behavior patterns.
5. Increase the probability that natural ignitions will burn at historic intensities in the low intensity, frequent fire regimes.

Need for Payette Forest Plan Amendment

The Payette Forest Plan identifies specific limits for acreages which may be burned in Management Areas 10, 12, and 13, which include portions of the planning area. These acreage limitations will be eliminated in a Forest Plan Amendment.

For Management Area 10, which includes French Creek and Partridge Creek, the Forest Plan states, "In Addition To The Forestwide Standards And Guidelines, The Following Management Will Apply: Utilize prescribed fire to treat an estimated 1100 acres per decade of natural fuels" (Payette Forest Plan, pages IV-249 and IV-253). The proposed action (Unit 13) includes ignition of approximately 8,500 acres within this management area.

For Management Area 12, which includes Carey Creek, the Payette Forest Plan states, "In Addition To The Forestwide Standards And Guidelines, The Following Management Will Apply: ...Utilize prescribed fire to treat an estimated 300 acres per decade of natural fuels" (Payette Forest Plan, pages IV-258 and IV-263). The proposed action (Unit 10) includes ignition of approximately 2,100 acres within this management area.

For Management Area 13, which includes the west side of California Creek, the Payette Forest Plan states, "In Addition To The Forestwide Standards And Guidelines, The Following Management Will Apply: Utilize prescribed fire to treat an estimated 200 acres per decade of natural fuels" (Payette Forest Plan, pages IV-267 and IV-270). The proposed action (Unit 13) includes ignition of approximately 1,800 acres within this management area.

NATIONAL FOREST AND BLM MANAGEMENT DIRECTION

The Payette National Forest goal for fire and fuels is to "Provide a fire management capability that is cost efficient and will provide protection of the Forest resources and support specific management objectives using prescribed fire." Specific objectives related to this goal are to "Increase the use of prescribed planned and unplanned ignitions," and to "Develop fuel treatment projects that consider multi-resource benefits, including treatment of

natural fuels that will reduce the size and intensity of wildland fires and maintain fire-dependent ecosystems." (Payette Forest Plan, page IV-124)

The Nez Perce National Forest goal for fire management is to "Protect resource values through cost-effective fire and fuels management, emphasizing fuel treatment through the utilization of material and using prescribed fire." (Nez Perce Forest Plan, page II-2).

The Salmon-Challis National Forest goal for fire management is to "Use prescribed fire to accomplish resource management objectives, such as reducing fuel load buildup, wildlife habitat improvement, etc." (Salmon-Challis Forest Plan, page IV-71).

The Nez Perce National Forest Plan and Record of Decision (October 8, 1987), the Land and Resource Management Plan for the Salmon National Forest and Record of Decision (January 11, 1988), and the Payette National Forest Land and Resource Management Plan and Record of Decision (May 6, 1988), provide direction for management of the Forests and are incorporated by reference. The Nez Perce National Forest, the Payette National Forest, and the Salmon National Forest Final Environmental Impact Statements (FEIS) contain discussions of associated environmental impacts. In order to eliminate repetition and focus on site-specific analysis, this analysis is tiered to these documents where appropriate. Other materials incorporated by reference are identified in this document.

The BLM Land Management Plan Standards for Fire Operations (1998) states the goal for fire use as "Prescribed fire is used to alter, maintain, or restore vegetative communities, achieve potential future condition, and to protect life, property, and values that would be degraded by wildland fire."

Development of this EIS is based on direction contained in the National Forest Management Act of 1976 (NFMA) and its implementing regulations 36 CFR 219; the National Environmental Policy Act of 1969 (NEPA) and the Council on Environmental Quality (CEQ) regulations 40 CFR 1500-1508; the National Historic Preservation Act and its accompanying regulations 36 CFR 800; the Federal Water Pollution Control Act (Clean Water Act) together with regulations in 40 CFR 130; the Central Idaho Wilderness Act of 1980, the Endangered American Wilderness Act of 1978, the Wilderness Act of 1964, and the Endangered Species Act along with regulations in 50 CFR 402.06.

General Desired Future Conditions for the Salmon River Canyon

The Nez Perce, Payette, and Salmon-Challis National Forest Plans and BLM Fire Management Plans identify general desired future conditions related to this proposal for those lands within the planning area. Below are the general desired conditions discussed within these plans.

- Utilize fire to improve and maintain dry forest, shrub, and grassland types. Restore and maintain fire adapted species in areas where fire has played an important role in sustaining these species over time.
- Maintain size and age class structures and patch sizes consistent with historic fire regimes.

- Utilize fire and fuels management where public safety is a concern.
- Allow fire to play its role within the ecosystem of the Salmon River Canyon to the greatest extent possible, given other resource considerations. Use prescribed fire (natural and management ignited) to meet other management Desired Future Conditions.

Specific Desired Conditions

The Nez Perce, Payette, and Salmon-Challis National Forest Plans also identify specific Desired Future Conditions related to this proposal for lands within the planning area. Below are the area-specific desired conditions discussed within these plans.

Non-wilderness areas:

- Reduce the potential for epidemic insect and disease infestation.

Frank Church-River of No Return (FCRONR) and Gospel Hump Wilderness areas:

- Restore vegetative conditions to a level where natural ignitions can generally be allowed to burn under existing wilderness prescribed natural fire management plans, in areas where previous fire suppression efforts have reduced or eliminated opportunities for wildland fires with resource management objectives.

The primary objective of prescribed burning on Cottonwood Resource Area BLM lands is to restore and maintain the natural vegetation, productivity, diversity, and stability of forest and grassland ecosystems. This includes enhancement of big game distribution, reduction of fuel loadings to historic levels, and minimizing the threat of catastrophic wildland fire.

PROJECT RELATIONSHIP TO INTERIOR COLUMBIA BASIN ECOSYSTEM MANAGEMENT PROJECT

During the fall of 1996, the scientific findings for the Interior Columbia Basin Ecosystem Management Project (ICBEMP) were released. This project assessed the health of the upper Columbia River Basin as a whole. ICBEMP is the first step in providing a scientifically sound, ecosystem-based strategy for managing all Forest Service and Bureau of Land Management administered lands within the Basin. Although the scientific findings are not part of the current Forest Plans, they are used here to help define the existing conditions, and are expected to provide guidance for revision of the Forest Plans.

The Salmon River Canyon Project is located in Forest and Range Clusters #2 and #3. A Forest and Range Cluster, as defined by ICBEMP, is a group of subbasins where vegetative and ecological conditions are similar. The primary risks to ecological integrity related to this proposal are listed below. The existing condition of the planning area was reviewed in light of the ICBEMP findings for these Forest Clusters. The proposed action is designed to treat those areas where a closer analysis most supported these findings in the Scientific Report. The following displays the risks to the ecological integrity and how the Salmon River

Canyon Project analysis addresses the primary ICBEMP findings for Forest and Range Clusters #2 and #3.

Primary risks to ecological integrity

- Fire severity in lower elevations and dry forest types, especially in late/old stand structures
- Aquatic integrity reduced by low forest integrity in dry and moist forest types
- Fish and aquatic systems from dry vegetation types with fire severity/frequency changes
- Elevated fuel and fire risks from conifer invasion

Primary opportunities to address these risks

- Reduction of fire threat in lower elevations
- Reduction of fire severity through restoration practices
- Restoration of vegetation and fuels treatments in dry forest types
- Application of prescribed fire to reduce risks from fire, insects, and disease in forested areas

DECISIONS TO BE MADE

The Forest Supervisors for the Nez Perce, Payette, and Salmon-Challis National Forests are the Deciding Officials. In the Record Of Decision (ROD) of this EIS, they will decide:

1. Whether or not to implement the proposed action, an alternative to the proposed action, or to defer activities proposed for the present.
2. What mitigation and/or monitoring, if any, will be included in the decision.
3. The Payette National Forest Supervisor will decide whether or not to amend the Payette National Forest Plan.

SCOPING AND PUBLIC INVOLVEMENT

The NEPA scoping process (40 CFR 1501.7) was used to identify the issues and opportunities specified by NFMA (36 CFR 219.12(b.)). This process is briefly outlined below.

1. Appropriate government agencies were contacted, such as the U. S. Fish and Wildlife Service, National Marine Fisheries Service, the Idaho Department of Fish and Game, Idaho

Department of Lands, county commissioners, state and federal legislative offices, the Shoshone-Bannock Tribe, and the Nez Perce Tribe.

2. Forest, Ranger District, and BLM specialists were contacted to solicit issues related to the proposed action.
3. The project leader reviewed the Forest Plans and Final Environmental Impact Statements for the Nez Perce, Bitterroot, Salmon-Challis, and Payette National Forests.
4. A proposed action was developed based on the current existing condition and the desired future condition for the Salmon River Canyon ecosystem.
5. A Public Involvement Strategy was developed and approved by leadership teams from the Nez Perce, Payette, Bitterroot, and Salmon-Challis National Forests. This strategy included:
 - Public meetings in Missoula and Hamilton, Montana, and in Salmon, Riggins, Grangeville, Lewiston, Orofino, Boise, Kamiah, McCall, and Elk City, Idaho in 1997. These meetings notified the public of a potential proposed federal action, and identified preliminary areas of public concern. The meetings were advertised through news releases to local newspapers, radio stations, and over 3,600 letters sent to mailing lists from the Payette, Nez Perce, Bitterroot, and Salmon-Challis National Forests.
 - A follow-up letter was sent to approximately 4,500 people in 1997. This list was developed from the original list, other members of the public who attended the public meetings, and adjacent landowners, representatives, and tribal members who may not have been contacted in the original efforts. The letter included a card to be returned for further involvement.
 - From these cards, approximately 450 scoping letters were sent out following development of the proposed action. These recipients were those who responded to the follow-up letter, adjacent landowners who did not respond but could be affected by the project, tribal representatives and members, and federal agencies.
 - News articles in the Lewiston Morning Tribune, Idaho County Free Press, Star News, and the Idaho Statesman, as well as radio stations within the planning area (see Project File for complete list) briefly explained the proposed action and requested comments on any issues associated with the proposed action.
 - Open houses were held in McCall, Grangeville, Elk City, Lewiston, Riggins, Salmon, Hamilton, and Missoula in 1998.
 - Field trip with representatives of U.S. Fish and Wildlife Service, National Marine Fisheries Service, Idaho Department of Fish and Game, and the Nez Perce Tribe.
 - Presentation at Resource Organization on Timber Supply (ROOTS) meeting in Lewiston, Idaho.

- Presentation at the annual Region One -- Forest Service Wilderness meeting in Missoula, Montana.

6. An interagency Level 1 team was identified to expedite consultation with U.S. Fish and Wildlife Service and the National Marine Fisheries Service.
7. A Notice of Intent was printed in the Federal Register.
8. Public comments were analyzed by the National Content Analysis Enterprise Team to identify issues.

ISSUES

Preliminary issues were identified through consultation with Forest Service resource specialists, preliminary public meetings, and examination of existing resource data. Significant issues were identified after public responses to scoping were received. Issues were grouped by the following steps:

1. Issues beyond the scope of the project decision.
2. Issues addressed by Forest Plan Standards and Guidelines.
3. Issues which can be addressed with mitigation measures or design features common to all alternatives.
4. Issues which can be addressed by measuring the effects of different alternatives, and comparing/contrasting the differences.
5. Issues which can be addressed by developing alternatives to the proposed action.

This process is referred to as the Disposition of Issues, and is addressed in Appendix C. Issue categories numbered three, four and five are discussed below.

ISSUES USED TO DEVELOP ALTERNATIVES *(Category 5)*

Commercial Timber

Background: A portion of the proposed action is within areas identified within the Forest Plans as suitable for timber production. These lands are managed, in part, for the harvest of commercial timber.

Issue: The proposed action may result in burning commercial timber that could be harvested, resulting in the loss of timber value or opportunities for commercial timber sales. This issue will be addressed by disclosing the acres of burning on areas identified as suitable for timber harvest. In addition, Alternatives 2, 3, 6, and E were developed to address this issue.

Season of Burning

Background: Vegetation responds to fire differently during different times of the year. Areas that burn with low intensity during dormant periods (that is, when plant growth is not occurring) generally respond with vigorous growth the following growing season. High intensity fire during the initial growth period in the non-dormant season (generally spring and early summer) may be lethal to certain native perennial species, by slowing or preventing growth and reproduction. This may allow invasion by exotic plant species, including noxious weeds. Most naturally ignited fires occur in the late summer and fall dormant season when native grasses, forbs, and shrubs are more resistant to fire effects.

Issue: Prescribed burning in the non-dormant season may be lethal to certain native grasses, forbs, and shrubs, depending on fire intensity. This issue will be addressed by disclosing the predicted effects on native vegetation for each alternative. In addition, Alternative D was developed to address this issue.

Wilderness

Background: The proposed action includes burning within two designated wilderness areas: the Frank Church--River of No Return Wilderness and the Gospel Hump Wilderness. These Wildernesses are recognized as areas "... where the earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain... retaining its primeval character and influence....which is protected and managed so as to preserve its natural conditions." From the Wilderness Act of 1964 (public law 88-577).

Issue: The proposed action may affect natural processes and current wilderness conditions. Planned ignition in the wilderness may make these areas less "wild," because prescribed fires may not occur under the same conditions as natural ignitions, and because fire management activities may temporarily increase during prescribed burning. This issue will be addressed by disclosing the effects on the wilderness resources and the natural processes within the wilderness boundaries. In addition, Alternative C was developed to address this issue.

Fire and Fuels

Background: The proposed action would reduce the current fuel levels to be more consistent with the historic levels that existed within the planning area. Some public responses suggested that alternative methods of fuel reduction may achieve the same goals as the proposed action.

Issue: The purpose and need for this proposal could be achieved using alternative methods of fuel reduction, such as commercial thinning and grazing. This could provide for increased economic opportunities while reducing ground fuels, which can act as ladder fuels in an intense wildfire.

Issue: The purpose and need for this proposal could be achieved by allowing natural ignitions to burn without suppression. This would reduce fuels while reducing active management practices.

These issues were used to develop Alternatives 1, 2 and 3. These alternatives were eliminated from detailed study. A discussion of the alternatives and the rationale for their elimination from detailed study can be found in Chapter Two of this document.

ISSUES USED TO DRIVE THE ANALYSIS (*Categories 3 and 4*)

Air Quality

Background: Fire, whether through natural ignition or through management ignition, results in smoke and temporary degradation of air quality. Often the conditions are favorable for management- ignited fires when burning for fuels reduction, slash disposal, and pasture/crop improvement is occurring on state and private lands. Thus smoke produced from this project may be cumulative to other sources of smoke. In central Idaho, prevailing winds often carry the smoke from west to east and may affect the air quality of local communities immediately east of the planning area. In addition the smoke may settle into the Salmon River Canyon and affect canyon users.

Issue: The proposed action may result in degradation of air quality in the Salmon River Canyon and within communities downwind from the burning activities, and may limit further smoke-producing activities as restricted by the Clean Air Act and Department of Environmental Quality standards. This issue will be addressed by disclosing the predicted level of particulate matter dispensed for each alternative and the effects of those particulates on local communities.

Noxious Weeds

Background: The Salmon River Canyon has significant infestations of noxious weeds in certain areas. Some areas are inherently susceptible to noxious weed invasion, with or without disturbance or prior infestations. Fire may increase the chance of invasion by noxious weeds and other exotic plant species by removing the canopy cover of native plants and trees, thereby creating the bare mineral soil and lack of canopy cover which is required for the establishment of many weed species.

Issue: The proposed action may result in an increase in the existing weed infestations, and may increase the risk of spread of noxious weeds and other exotic plant species into uninfested areas. This issue will be addressed by disclosing the predicted rate of spread of noxious weeds in known noxious weed locations, and the possible spread into habitat identified as susceptible to noxious weed infestation.

Threatened, Endangered, and Sensitive Plants

Background: As described above, vegetation responds to fire differently during different times of the year. Prescribed burning during the non-dormant season may affect native plant species, including rare species which require special management.

Issue: The proposed action may have lethal effects on native Threatened, Endangered, and Sensitive plant populations, depending on fire intensity and season of burning. This issue

will be addressed by disclosing the effects of fire on listed species and the acres of habitat for these species proposed for burning.

Water Quality and Fisheries

Background: Fire temporarily removes vegetation which filters sediment, stabilizes the soil, and shades streams. This could result in temporary increased sediment delivery to streams, or temporary increases in water temperature following the removal of shade-producing vegetation along stream banks. Many streams in the planning area provide habitat for resident and anadromous fish, including several species listed as Threatened under the Endangered Species Act (ESA). Water from these streams is used for a variety of purposes, including drinking water for recreational users and private residences.

Through removal of portions of the forest canopy and alteration of evapotranspiration, fire can change water yield and timing of peak flows. Depending on the size and severity of the fire, monthly and annual peak flows may occur earlier in the year due to changes in snowmelt timing. Evapotranspiration rates may also decrease, thus increasing overland flows.

Issue: The proposed action may affect sediment levels, stream temperatures, evapotranspiration rates, and other habitat components in streams used for spawning and rearing by anadromous and resident fish species. This includes occupied and critical habitat for these species. This issue will be addressed by disclosing the effects of the alternatives on the habitat for anadromous and resident fisheries found within the planning area.

Issue: The proposed action may increase sediment in water used for personal or public drinking purposes. This issue will be addressed by disclosing the predicted changes in sediment resulting from the alternatives.

Recreation

Background: The Salmon River Canyon planning area is used by members of the public for a wide range of recreational activities, including whitewater rafting, fishing, hiking, and hunting. These activities are dependent on access throughout the year.

Issue: The proposed action may result in access restrictions during burning operations, thereby limiting recreational opportunities. This issue will be addressed by disclosing the predicted impacted impacts on hunters, hikers, anglers, and river rafters within the planning area.

Cultural Resources

Background: The Salmon River Canyon has a long history of human use. The area of potential effect for the proposed project includes hundreds of historic properties, including ancient native American campsites, historic mines, homesteads, and sites of cultural significance to the Shoshone Bannock, Nez Perce, and other Indian tribes.

Issue: The proposed action may have an adverse effect on historic properties and places of cultural or religious significance to Indian tribes. This issue will be addressed by disclosing the acres burned by alternative.

Social Economics

Background: Many businesses in the communities adjacent to the planning area rely, either directly or indirectly, on tourism. Many hunting and fishing outfitters and guides depend on this area for their livelihood.

Issue: The proposed action may affect the quality of experience for recreational users and commercial outfitters, resulting in a loss of revenue. This alternative will be addressed by disclosing the predicted impacts to commercial outfitters.

Range

Background: The planning area contains a number of livestock grazing allotments which contain all or part of some of the proposed burn areas. To minimize the effects of prescribed fire on grazed vegetation, specific pastures or allotments may be temporarily closed and/or pasture rotation changed before and after ignition.

Issue: The proposed action may result in temporary changes to pasture rotation within allotments, resulting in an economic hardship to permittees. This issue will be addressed by disclosing the effects on grazing permittees in those allotments affected by planned burn units.

Wildlife

Background: Fire suppression has resulted in changes in the historic habitat conditions within the planning area. Late seral species may have benefitted from the changes, while habitat has been reduced for early seral species or those inhabiting stands with open or mixed structures.

Issue: The proposed action may affect wildlife species, including Threatened, Endangered, and Sensitive species, by changing habitat conditions, including a reduction of vegetative cover. This issue will be addressed by disclosing the effects on these species' habitat by alternative.

Issue: The proposed action may result in fatalities to ground nesting birds and small mammals, and may indirectly result in improvements in big game habitat due to increased forage. This issue will be addressed by disclosing the effects on habitat for these species.