SALMON RIVER CANYON PROJECT

DRAFT ENVIRONMENTAL IMPACT STATEMENT SUMMARY

OCTOBER 1999

Department of Agriculture, Forest Service
Northern and Intermountain Regions
Nez Perce, Payette, Bitterroot and Salmon-Challis National Forests

Abstract: This summary of the Draft Environmental Impact Statement documents the analysis of four action alternatives and a no action alternative The Salmon River Canyon Project planning area covers approximately 1,800,000 acres in Central Idaho. The Salmon River Canyon Planning Team completed a hazard/risk assessment of this area in 1998. The assessment identified those subwatersheds most likely to experience stand-replacing wildland fire occurring outside the historical range of variability (HRV). This assessment identified 45 percent of the planning area to be at risk to burning outside HRV.

The majority of the areas proposed (approximately 80-90 percent) would be a low intensity underburn in ponderosa pine and Douglas-fir forest types. Some higher fire intensities will likely occur on a small portion (10 to 20 percent) of the proposed action areas, due to variations in fuel accumulations and forest structure. The projected burned acreages range from 214,506 acres under the Proposed Action alternative to 121,330 under alternative D.

Comments: This Draft EIS is open to public review and comment for 45 days following publication of the notice of availability in the *Federal Register*. Comments should be directed to Bill Shields, SRCP Team Leader, Nez Perce National Forest, at the address shown below.

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Salmon River Canyon Project
Draft Environmental Impact Statement
Summary

Introduction

This is a summary of the Salmon River Canyon Project draft Environmental Impact Statement (DEIS). It contains highlights of the DEIS. The intent of the DEIS is to explain what the Forest Service is proposing to do, why, and what alternatives to the proposed action were considered in the planning process. Different chapters provide a description of the project area, the affected environment, the alternatives, and the effects of those alternatives, as well as a summary of the public comment process.

The Salmon River Canyon Project

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 with numerous secondary drainages. 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.

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.

Desired Future Condition

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 tree 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.

Some area-specific desired future conditions are discussed in the Forest Plans. For non-wilderness areas, the Desired Future Condition is to:

- Reduce the potential for epidemic insect and disease infestation.

For the Frank Church-River of No Return and Gospel Hump Wilderness areas, the Desired Future Condition is to:

- 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 habitat, reduction of fuel loadings to historic levels, and minimizing the threat of catastrophic wildland fire.

Proposed Action

The Forest Service proposes to ignite approximately 214,000 acres (12 percent of the planning area) within the Salmon River Canyon. The burn units were selected to represent areas where past fire exclusion has altered the historical fire regimes, and where vegetation densities and fuel accumulations have increased beyond historical levels, as determined by fire history studies and potential vegetation type. 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 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. 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 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), fires in the Salmon River canyon spread over large areas and burned at varying intensities. Lightning was probably the primary cause of these historical fires, but indigenous Native Americans ignitions may have been important as well. This combination of lightning and Native American ignitions resulted in frequent, low-intensity fires in the lower elevations (below 6000 ft.), which caused relatively little tree mortality. However infrequent, high-intensity fires burned in the upper elevations (above 6000 feet), and caused significant mortality to trees of all sizes. 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.

After 1860, large numbers of sheep and cattle grazed 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. Since the 1930s, the Forest Service has had an effective program of fire suppression to protect forest resources. Although timber harvest was never extensive in the Salmon River Canyon because of the rugged and remote terrain, the Forest Service has aggressively suppressed fires in order 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,

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 Salmon River Canyon. An area that shows substantial change from historical vegetation patterns is said to be "outside" of the Historical Range of Variability (HRV). This condition puts entire subwatersheds at risk to uncharacteristic stand-replacing fire. While the number of fire starts has remained constant over time, these altered conditions have caused an increase in fire intensity in areas which historically experienced nonlethal fires, which in turn results in significantly higher tree mortality. 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.

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.

Scoping And Public Involvement

The NEPA scoping process was used to identify the issues and opportunities specified by NFMA, the National Forest Management Act. 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 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

The Salmon River Canyon Project Interdisciplinary Team identified preliminary issues 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 categories:

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 in the DEIS. Issue categories numbered 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 was 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.

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 was 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 the DEIS.

Issues Used To Drive The Analysis (Category 4)

Air Quality

Summary

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 was 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 non-infested areas. This issue was 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 was 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 was 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 was 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 was 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 was 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 was 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 was 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 was 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 was addressed by disclosing the effects on habitat for these species.

Alternatives

Alternative A is the "no action" alternative required by the National Environmental Policy Act (NEPA). The "proposed action" is the initial formulation of the project that was subjected to internal review and public comment. The other action alternatives were developed to address the major issues raised during the review and public comment portion of the scoping process.

In addition to the five alternatives considered in detail, the project Interdisciplinary Team examined eight other alternatives during the project analysis. These were eliminated from further study for a number of reasons. For further discussion of issues and the alternatives refer the DEIS.

Descriptions Of Alternatives Considered In Detail

Alternative A - No Action Alternative

This alternative would continue current activities within the planning area, as identified in the Forest Plans and BLM direction. The no action alternative serves as an environmental baseline for the comparison of the action alternative effects.

Alternative B - Proposed Action

Under this alternative the Forest Service would ignite approximately 214,000 acres within the Salmon River Canyon. This activity would reduce potential effects of high intensity wildland fire in non-lethal fire regimes. The majority of this acreage (approximately 80-90 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 would likely occur on small portions (10 to 20 percent) of the proposed action area, due to variations of natural fuels and forest structure. Private land will not be burned without written agreements between the Forest Service, BLM and property owners prior to ignition.

Burning would occur primarily between February and November. Ignition would be accomplished using hand-held torches and helicopter-transported lighting devices. Pre- and post-burn monitoring would evaluate the effectiveness of prescribed burning in reducing vegetation density and fuel accumulation, and restoring historical forest conditions.

Alternatives B, C, D, and E would require the following site-specific amendments to the Payette National Forest Plan:

- Specific acreage limitations under the current Forest Plan will be dropped to allow prescribed burning in the French Creek, Partridge Creek, Carey Creek, and west side of California Creek watersheds.

Alternative C

This alternative would ignite approximately 168,000 acres, in all areas identified in the proposed action that are outside designated wilderness areas. Portions of units 5, 13, 14, 21, and 37 outside the wilderness would be the only parts of those units allowed to burn. In-holdings within the wilderness areas or the Wild and Scenic River corridor would be treated only with specific Memorandum Of Understandings with property owners.

Alternative D

This alternative would ignite the same areas as those identified in the proposed action (Alternative B). Ignition would occur only during the vegetative dormant season. Generally, burning would occur in the early spring prior to the onset of the growing season ("green-up"), and in the summer and fall after the normal growing season ends and dormancy has begun.

Alternative E

This alternative would ignite approximately 121,000 acres within the planning area. Ignition would occur in all areas identified in the proposed action that are within designated wilderness areas and designated roadless areas (RARE II).

Comparison Of Alternatives

The following table presents a summary of the effects analyzed in chapter 4 of the DEIS for each alternative. These effects are presented first for the issues used to formulate

alternatives, and then for all other significant issues. Proposed mitigation has been included in the effects analysis, and is mentioned where appropriate.

Comparison of alternatives by issues

Resource/ Issue	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E
Acres ignited	0	214,507	167,801	214,507	121,329
Timber Management acres ignited	0	169,507	169,507	169,507	76,329 (Designated roadless)
Wilderness acres ignited	0	45,000	0	45,000	45,000
Season of burning	Potential loss of native vegetation from increased fire intensity and severity	Less natural effect to native vegetation in non-dormant season	Same as B	Most benefit to native vegeta-tion	Same as B
Fuels	Increased buildup of fu-els	Most fuel reduction, fewer large wildland fires	No reduction in risk adjacent to wilderness, less chance for wildland fire for resource benefits	Similar to B	No fuel reduc-tion in non-wilderness and roaded
Air Quality; PM 10 Emis-sions Tons/yr 5 yr and 10 yr implementation	Probable increased risk of degradation from future large wildland fires	3,477 tons/yr (5 yr impl.) 1,739 tons/yr (10 yr impl.)	2,773 tons/yr (5 yr impl.) 1,387 tons/yr (10 yr impl.)	3,477 tons/yr (5 yr impl.) 1,739 tons/yr (10 yr impl.)	2,106 tons/yr (5 yr impl.) 1,053 tons/yr (10 yr impl.)
Noxious weeds	Increased risk of weed spread from future large wildland fires	Less risk of weed spread with mitigation	Same as B, ex-cept increased risk of spread in wilderness from future large wildland fires	Least risk of weed spread with mitiga-tion, native vegetation most resistant	Less risk of weed spread in wilderness, more in non-wilderness
TES plants	Increased threat to habi-tats from weed spread, threats to certain habi-tats from future large intense wildland fires	Beneficial effect to early seral species, less threat to late seral and riparian habi-tats. Most ben-eficial effects during dormant season	Same as B, ex-cept fewer ben-eficial effects in wilderness and during non-dormant burning	Most beneficial effects	Beneficial effects in wilderness/ roadless only
Fisheries and Aquatic Habi-tats	Increased risks from future large intense wildland fires	Decreased risks to habitats and TES species with mitigation	Increased risks in wilderness	Same as B	Decreased risks with mitigation in wilderness/ roadless only

Resource/ Issue	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E
Recreation and Social economics	Possible impacts from future large wildland fires	Fewer future impacts than A, possibly more short-term impacts during burning	More future impacts but less short-term than B in wilderness	Fewer impacts than B	More future impacts, but fewer short-term than B in wilderness/roadless
Heritage Resources	Possible impacts from future large wildland fires	Fewer impacts than A with mitigation	Same as B	Same as B	Same as B
Range -- Grazing	No change	Some impacts, with mitigation	Not applicable	Same as B	Fewer impacts than B.
Wildlife, including TES	Decreased diversity, increased risk from future large wildland fires	Increased diversity with mitigation, depending on seral stage	Less than B in wilderness	More indirect benefits than B	Fewer benefits in wilderness/ roadless
Forest Plan amendment required	No	Yes	Yes	Yes	Yes
Implementation costs (approx. $20/acre)	0	$4,290,140	$3,356,020	$4,290,140	$2,426,580

Comparison of alternatives identifying how well they respond to the purpose and need

Purpose & Need	Alt. A	Alt B	Alt. C	Alt. D	Alt. E
1. Initiate the restoration and maintenance of fire-adapted vegetation types using prescribed fire	LOW. Current prescribed fire in planning area is very minimal (refer to fire regime maps)	HIGH. Greatest potential to increase acres of prescribed fire	MODERATE. Does not address effects of prescribed fire in wilderness	HIGH. Same as B.	MODERATE. Considers prescribed fire in wilderness and roadless only
2. Protect values at risk, such as private property and cultural resources, from unwanted wildland fire.	LOW. No opportunity to reduce fuel loading around values at risk.	HIGH. Greatest potential to reduce fuel loadings, thereby reducing risk.	MODERATE. Does not address risk to private property and other values within wilderness.	HIGH. Same as B.	MODERATE. Does not consider values at risk within non-wilderness and roaded areas.
3. Reduce risk to wildland firefighters	LOW. Risk to suppression activities remains high, increased risk of catastrophic fire.	HIGH. Greatest potential to reduce fuel loadings, thereby reducing risk.	MODERATE. Does not address fuel reduction and risk in wilderness/inholding interface.	HIGH. Same as B	MODERATE. Does not address fuel reduction and risk outside wilderness and urban interface.
4. Increase wildland fire use for resource objectives in wilderness.	LOW. Least potential for wildland fire use in wilderness.	HIGH. Increased potential for wildland fire use in wilderness.	LOW. Same as A.	HIGH. Same as B.	HIGH. Same as B.

Mitigation

Mitigation is defined as actions designed to reduce or prevent undesirable effects from proposed alternatives. Mitigation measures have been incorporated into all action alternatives considered in detail, and analysis of the environmental consequences of the alternatives incorporates the effectiveness of these measures. If the selected alternative is not completed within five years of implementation, the remaining portions of the project that have not been implemented would be evaluated by the individual forests to determine if there have been any changed conditions. A decision would be made by the individual Forest Supervisors as to whether a supplemental EIS would be required in accordance with 40 CFR 1502.9.

A more complete description of mitigation measures for the different alternatives appears in Chapter 2 of the DEIS.

Threatened, Endangered, and Sensitive (TES) Plant Species

Prior to ignition, potential habitat for any Federally listed species would be re-surveyed as deemed necessary the Forest Botanist/BLM Ecologist. If any populations are found, the U.S. Fish and Wildlife Service would be notified, and the burn plan would be modified as necessary to comply with Section 7 Guidelines of the Endangered Species Act (ESA) for this species. Any populations of TES species will be excluded from ignition, especially during fall burning. Prior to and following ignition, known populations and areas of potential habitat for Sensitive species would be monitored to determine any changes in number or species composition.

Noxious Weeds

In those areas identified as having an extreme risk for spread of noxious weeds integrated weed management would be implemented following ignition, if post fire monitoring reveals an increase in noxious or exotic weed infestations.

Research Natural Areas (RNAs)

One Research Natural Area, Colson Creek, is within the Project Area. As required by the Management Prescription for the Colson Creek RNA, a plan detailing the objectives of prescribed fire use, proposed fire prescriptions, operation precautions, and criteria for evaluation of the attainment of prescribed fire objectives would be submitted for approval by the Station Director of the Intermountain Research Station and concurrence of the Forest Supervisor, Salmon-Challis National Forest, and District Ranger, North Fork Ranger District. Special precautions would be used in prescribing fire to this RNA to prevent further spread of spotted knapweed, including the mitigation for noxious weeds described above.

Threatened and Endangered Wildlife Species

Prescribed burning would be deferred within a ten mile radius of known, occupied peregrine falcon nests until after fledging of young (late August - early September) has occurred, or until nest failure for the season is confirmed. Wherever possible burning would take place from September through November, outside peregrine nesting seasons and primary peregrine prey occupation periods. Ground crew actions would be deferred within 300 meters of

occupied bald eagle winter perches and roosts. Helicopter overflights within 1.6 kilometers of occupied winter perches or roosts would be deferred during winter occupancy seasons.

Ground crews, helicopter overflights and ignitions would be deferred within one mile of areas containing occupied gray wolf whelping dens from March through mid May. Where wolf pack rendezvous use is suspected, ground crews will walk through all meadows which are likely to burn to displace potentially bedded wolves that may be present immediately prior to ignitions. Ignitions around known, occupied lynx den sites would be deferred until after mid July of each year.

Access and Recreation

Signs would be posted at major trail access points at least one week prior to ignition identifying areas to be treated. Hunting outfitters would be notified three months in advance of planned burns within their permitted areas. No ignition would occur within 100 feet of river campsites.

Fisheries and Aquatic Habitats, including TES Fish Species and Riparian Habitat Conservation Areas (RHCAs)

Firelines would not be constructed within RHCAs. Any firelines built during implementation of this project would be rehabilitated by waterbars, seeding, planting, and/or mulching to reduce erosion. Burn plans would be designed to minimize fire intensity in riparian areas which have been heavily grazed by wildlife and livestock. Burn prescriptions for previously logged and treated areas would be low intensity.

Soils

When possible, high intensity fire in areas of high fuel concentrations would be avoided, in order to maintain adequate amounts of soil cover and minimize risk of creating water-repellent soil.

Livestock Grazing (Range)

Following ignition in those units which are in currently active allotments, adjustments in turn-out dates and grazing duration would be evaluated by Forest/District rangeland management specialists and permittees. Where possible, burning and post-burn vegetation recovery in burn units would coincide with pasture rest rotations. All allotment fences, gates, and developed water sources would be listed as sensitive features for protection in the burn plans.

Wilderness

A Minimum Tool Analysis will be completed for each burn unit in wilderness, to compare the effects of helicopter versus hand ignition.

Within the Gospel Hump and Frank Church-River of No Return Wilderness areas, except for structure protection or protection of private property, ground disturbing activities will be very limited. No mechanical fire line will be constructed and no chainsaws will be used.

Cultural Resources

If additional sites or artifacts are discovered during layout and design of any action alternatives, other on-going survey activities, or post ignition surveys/field reviews, the Forest or BLM Archaeologist would consult with the State Historic Preservation Officer, as required by law (36 CFR 800.11), to document and determine the significance of the discovery, the effects of the project on the site/artifact, and to determine if any additional mitigation measures are needed to insure the preservation/protection of the site in question. The appropriate Indian Tribe would be consulted regarding any newly discovered Native American site.

Where sites (especially historic structures) are located within dense fuel accumulations, protection measures would be incorporated into the burn plan.

Additional mitigation For Alternatives B, D, and E only. (Alternative C does not ignite these units)

Prior to ignition in Unit 38, the Crooked Creek drainage would be reviewed by the district watershed specialist to determine stream channel recovery.

In certain watersheds, there either would be a minimum of one year between burns, or the prescription would be to burn through riparian zones at very low intensity to reduce the chance of sediment delivery and reduce the chance of dry ravel failures or debris torrents in the ephemeral draws.

Monitoring

The following monitoring activities apply to all action alternatives. This monitoring would assess the effectiveness of the proposed action and its predicted effects on certain resources. Specific monitoring plans and methods for this project are included in the DEIS, Appendix D.

Fire and Fuels

The proposed ignition would be monitored to evaluate fire effects and determine if project objectives are being met. Monitoring would be used to evaluate effectiveness of meeting the Nez Perce, Payette, and Salmon-Challis Forest Plans and BLM Plan goals and objectives for prescribed fires.

TES Plant Species

Prior to and following ignition, known populations and potential habitats of the Threatened, Endangered, and Sensitive plant species identified in Chapter 3 of the DEIS would be monitored to determine any changes in number or species composition. If populations decline, or

if noxious weeds or cheatgrass increase in these habitats, the Forest Botanist and /or BLM Botanist would implement further monitoring and adjust future burn plans as necessary.

Noxious Weeds

Baseline and post-fire monitoring would be completed in areas identified in Chapter 3 of the DEIS as having an extreme risk of noxious weed spread. An increase in noxious weed infestations would trigger Integrated Weed Management, and future burn plans would be adjusted as necessary following coordination with the District/Forest or BLM weed coordinators.

RNAs

Baseline and post-fire monitoring would be implemented in the Colson Creek RNA, especially in non-forest vegetation, to determine any changes in species composition. If noxious weed/exotic species increase, and integrated weed management is begun, further monitoring should be implemented and future burn plans adjusted as necessary. Any weed management plans would be approved by the Forest and Regional RNA Coordinators.

Soils

A minimum of ten percent of the area burned in units on the Salmon-Challis National Forest would be monitored for post burn effects on soil.

Air Quality

Smoke emissions would be monitored by the Missoula Monitoring Unit, in Missoula, Montana. The Missoula Monitoring Unit issues daily decisions which can restrict burning when atmospheric conditions are not favorable to good smoke dispersal.

TES Wildlife Species

Proposed burn areas would be surveyed prior to ignition for new bald eagle nests, and would be surveyed in the spring prior to ignition to determine if peregrine falcon nests are active.

Public Review and Comment

The Forest Service has filed the Draft EIS with the Environmental Protection Agency and made it available to the public. The Draft EIS is open to public review and comment for 45 days following publication of the notice of availability in the Federal Register. The Forest Service will review all comments received during the comment period and consider them in preparing the final EIS.

To send comments or for further information please contact:

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