Chapter 2

Alternatives Including The Proposed Action

INTRODUCTION

This Chapter describes the five management alternatives considered for this project, and compares the probable effects of those alternatives. A more detailed study of the effects on the environment follows in Chapter Four.

One of the alternatives is the "no action" alternative required by the National Environmental Policy Act (NEPA). This would continue the current management activities. 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. The preferred alternative is the alternative the deciding officials think best meets the purpose and need of the proposal, while addressing the issues developed through scoping.

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 the reasons stated below.

ALTERNATIVES ELIMINATED FROM DETAILED STUDY

Alternative 1

This alternative would allow natural ignitions within the non-lethal, low-intensity fire regimes in the Salmon River Canyon planning area to burn without suppression efforts.

- Forest Service Policy directs that specific fire management plans must be in place before a decision is made to allow a natural ignition to occur. Where fire plans do exist, the decision to allow any ignition to burn must be made on an case-by-case basis when an ignition occurs.

- Forest Plan Standards for the Salmon-Challis National Forest include "Control will be the suppression strategy during the fire season on all fires that occur below 8000 feet [sic] outside the FC-RONR Wilderness." *(Long Range Management Plan for the Salmon National Forest, pg 4-69)*

- Forest Plan standards for the Payette National Forest limit natural ignitions that are allowed to burn outside the wilderness and vary between management areas.

- The Nez Perce National Forest Plan does not allow for natural ignitions to burn in a majority of the management areas. (NPNF Forest Plan Appendix C)

Decisions related to changes in these directions were beyond the scope of this decision and would be best addressed during the revision of the individual Forest Plans. Therefore, this alternative was eliminated from detailed study.

Alternative 2

This alternative would use a combination of prescribed fire, thinning, and high intensity grazing to reduce fuels. Wilderness areas would not be treated.

This alternative was eliminated from detailed study because this alternative would:

- Result in extensive soil disturbance;
- Result in higher potential for the spread of noxious weeds;

In addition, high intensity grazing would:

- Reduce native plant vigor;
- Reduce the fine fuels which normally allow a low intensity fire to burn. Removal of these fuels would impede the fire spread needed to consume ladder fuels and dead and down material, but would not reduce brushy fuels that are of concern.

Alternative 3

This alternative would use only thinning and high intensity grazing to reduce fuels in non-wilderness areas. Mechanical reduction of fuels by thinning and timber sales is already being addressed in several non-wilderness portions of the planning area outside the proposed action units under separate analyses and decisions. In addition, the proposed prescribed burning will be mostly non-lethal to commercial grade timber. Many of the areas proposed for prescribed fire are on steep breakland slopes with few roads, making access difficult for removal of wood fiber. Grazing typically does not occur on slopes greater than 40 percent. Much of the rationale identified in alternative 2 (above) would also apply to this alternative.

Therefore, this alternative was eliminated from detailed study.

Alternative 4

This alternative would use prescribed fire on approximately 870,000 acres identified as being most at risk from stand replacing fire, due to vegetative conditions and historic fire occurrence. The areas were identified by focusing on all watersheds within the planning area that had a high or moderate frequency of fire starts and a high or moderate percentage of vegetation within the frequent fire regimes that was outside the Historic Range of Variability. The method of identification of these areas is documented in the project file in a document titled *Plan-to-Project Proposal; Salmon River Canyon Project; Mid-Scale Fire Analysis; April 9, 1998.* Areas were dropped from this analysis during the development of the proposed action for numerous reasons. The primary reasons for the reduction in acres were: (1) Some areas

already had decisions in place that moved the area towards the desired condition; (2) Some areas had burned in recent fires and were not reflected in the satellite imagery used to identify vegetative conditions; and (3) Areas within wilderness that did not meet the criteria identified in FSM 2324.22 (6). This Forest Service Manual identifies specific criteria for using management ignited fires within designated wilderness areas.

Therefore, this alternative was eliminated from detailed study.

Alternative 5

This alternative would use thinning in non-wilderness areas to reduce ladder fuels prior to ignition. This would be done in areas of high fuel concentrations where the potential for hotter, uncontrollable fires may exist. Removal of these fuels would be by tractor, cable, and/or helicopter. No service or temporary roads would be constructed or reconstructed.

Alternative 5 was developed to address the issue of burning commercial timber in areas identified in the forest plans as suitable for timber management.

- A majority of the fuels to be removed would be smaller than commercially viable. The purpose of this fuel removal would be to reduce the ladder fuels in the understory which allow fire to reach the overstory. Most of the trees that are commercially viable (greater than 6" DBH) have crowns above the anticipated normal flame length expected from a prescribed burn.

- The proposed action and alternatives considered in detail are designed to eliminate or at least minimize the burning of commercially viable timber. In the event commercial trees are killed as a result of these activities, the individual units have the ability to analyze each area to determine the economic and technological feasibility of salvage logging each burn area.

- Removal of the biomass expected to burn would do nothing to recycle nutrients which are locked into the existing live trees growing within the proposed treatment areas.

- Alternative E is designed to address the issue of the burning of commercial timber in a manner which meets the purpose and need for this proposal.

- The IDT lacks the resources needed to plan thinning activities within approximately 182,000 acres or to analyze the effects of harvest activities over such a large area within a reasonable time period.

Therefore, this alternative was eliminated from detailed study.

Alternative 6

This alternative would implement the proposed action but would not ignite those areas that are identified as extremely susceptible. This alternative was developed to address the issue of the spread of noxious weeds as a result of the proposed activities.

Analysis of the no action alternative has shown that avoidance of the noxious weed areas would have no effect on the spread of noxious weeds. While burning within these susceptible areas may increase the potential seed beds for noxious weeds, mitigation measures required for all alternatives would greatly reduce the potential for spread and are designed to reduce the existing level.

Therefore, this alternative was eliminated from detailed study.

Alternative 7

This alternative would burn those areas identified in the proposed action. The analysis would assume that approximately 10 to 20 percent of the overstory in the burned area would be killed. Alternative 6 would allow salvage in those areas above the 20 percent mortality outside riparian habitat conservation areas or old growth areas. This alternative was developed as a response to concerns raised during scoping about the killing of commercial trees

Alternative 6 was eliminated from detailed study primarily for two reasons. First, salvage harvest after burning is not precluded by any of the action alternatives in non-wilderness commercial timber land. All alternatives considered in detail allow for individual districts or forests to analyze the environmental, economic and technological feasibility for salvage of each unit after burning. Second, because many of the proposed burn units are in remote areas, timber receipts would probably not cover both road construction costs and the cost of wood fiber removal.

Alternative 8

This alternative would be the same as the proposed action except no ignition would occur in watersheds that contain wilderness areas. This alternative was developed in response to the concern over management ignited fires within wilderness boundaries. Inholdings within the wilderness areas or the Wild and Scenic River corridor would be treated only with specific Memorandum Of Understandings with the property owners. This alternative is recommended for elimination from detailed study because of its similarity to Alternative C.

DESCRIPTIONS OF ALTERNATIVES CONSIDERED IN DETAIL

The interdisciplinary team considered the proposed action and four other alternatives including the "no action" alternative. The proposed action (Alternative B) would require some modifications to the corresponding Forest Plans, as described below.

Alternative A - No Action Alternative

This alternative would continue current activities within the planning area, as identified in the Forest Plans and BLM direction. These activities include but are not limited to;

- Fire suppression
- Integrated Weed Management

- Vegetation management such as timber sales and pre-commercial thinning on the Nez Perce, Payette, Salmon-Challis National Forests, and BLM Cottonwood Resource Area.

- Grazing allotments on the Nez Perce, Salmon-Challis, Payette National Forests, and BLM Cottonwood Resource Area.

- Additional prescribed fires within the planning area. Management ignited fires are scheduled to occur in the Race Creek, Indian Creek, Elkhorn/Jersey, and Panther Creek areas.

- Allowing natural ignitions to continue unsuppressed on the Payette National Forest based on current and predicted conditions at the time of ignition.

An alternative specifying "no action" is required by the National Environmental Policy Act (NEPA) and serves as the environmental baseline for the comparison of the action alternative effects.

Alternative B - Proposed Action

The Proposed Action (Map 1 - 2) would ignite approximately 214,000 acres (12 percent of the planning area) within the Salmon River Canyon, in areas where fire suppression has altered historic vegetative composition and structure, to reduce vegetation densities and fuel accumulations. 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. However, 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.

The proposed action would also include 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 within the planning area. Ignition would occur in all areas identified in the proposed action that are outside designated wilderness areas (Map 2 - 1). Prescribed burns in units 5, 13, 14, 21, and 37 would not be

allowed to burn into in the wilderness. Inholdings within the wilderness areas or the Wild and Scenic River corridor would be treated only with specific Memorandum Of Understandings with property owners, and would not be allowed to burn within wilderness.

This alternative would also include 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 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 (Map 2 - 2). 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.

This alternative would also include the following site-specific amendments to the Payette National Forest Plan:

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

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).

This alternative would also include the following site-specific amendments to the Payette National Forest Plan:

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

COMPARISON OF ALTERNATIVES

The following table presents a summary of the effects analyzed in chapter 4 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.

Table 2-1. 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

The following table rates each alternative according to its potential for meeting each element of the purpose and need.

Table 2-2. Comparison of alternatives 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 AND DESIGN FEATURES COMMON TO ALL ACTION ALTERNATIVES

The following mitigation measures would be incorporated into all action alternatives considered in detail. Analysis of the environmental consequences of the alternatives incorporate 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.

Threatened, Endangered, and Sensitive (TES) Plant Species

Prior to ignition, potential habitat for the Federally listed species Macfarlane's four o'clock and Ute ladies-tresses 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 for this species. New populations of Macfarlane's four o'clock could be excluded from burning, depending on recommendations from Forest Botanists/BLM Ecologist. Any populations of Ute ladies-tresses 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 (see Monitoring section).

Noxious Weeds

In those areas having an extreme risk for spread of noxious weeds, as identified in Chapter Three, 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)

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

Defer prescription burn actions 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, implement ignitions from September through November, outside peregrine nesting seasons and primary peregrine prey occupation periods. Defer ground crew actions within 300 meters of occupied bald eagle winter perches and roosts. Avoid helicopter overflights within 1.6 kilometers of occupied winter perches or roosts during winter occupancy seasons.

Defer ground crew, helicopter overflight and ignitions 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. When conducting burn or pre-burn work in potentially occupied grizzly bear habitat, maintain food and garbage sanitation in applicable crew camps. Store food/garbage in bear-proof containers. Train ground fire crews to identify grizzly bears and their sign, and provide instruction on bear avoidance behaviors. Defer ignition of known, occupied lynx den sites (old growth timber with large woody debris such as fallen trees or upturned stumps) until after mid July of each year.

Additional mitigation for Federally listed wildlife species is presented in the Livestock -- Grazing section below.

Access and Recreation

Signs would be posted at major trail access points at least one week prior to ignition identifying areas to be treated. This mitigation measure is designed to increase awareness and increase hiker and hunter safety during ignition.

Hunting outfitters would be notified three months in advance of planned burns within their permitted areas. This mitigation is designed to allow for scheduling of guide trips during hunting season.

No ignition would occur within 100 feet of river campsites. This mitigation is designed to protect these campsites for use by boaters.

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. Fall burning would not occur within RHCAs in the Sawmill and Virginia

Gulch watersheds. In John Day, Boulder, French, Shingle, and Indian Creeks, the burn prescription would be designed to burn through riparian zones at very low intensity and with five percent or less crown removal in the streamside RHCAs to reduce chance of sediment delivery and reduce chance of dry ravel failures or debris torrents in the ephemeral draws. Within the landslide prone recovery area of the East Fork of John Day Creek portion of Unit 4C, the burn prescription would be designed to burn through riparian zones at very low intensity. 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. Burn units on the Payette National Forest would use the Forest's coarse woody debris guides to maintain appropriate amounts of coarse woody debris.

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. This would help reduce soil erosion, mass movement, and subsequent loss of soil productivity and hydrologic function.

Livestock Grazing (Range)

Following ignition in those units which are in currently active allotments in the proposed action, 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.

Federally listed wildlife species: After burning, livestock grazing in certain pastures and allotments would be deferred in these areas: Canada lynx habitat as identified in the final Canada Lynx Conservation Assessment and Strategy; identified grizzly bear habitat; gray wolf habitat; within 300 meters of occupied bald eagle perches and roosts; and within 10 miles of known occupied peregrine falcon eyries. The length of grazing deferment would depend on requirements by the US Fish and Wildlife Service and inspection by Forest/District or BLM rangeland management specialists and wildlife biologists.

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, the possibility exists that some or all of the structure(s) or surface artifacts (at either prehistoric or historic sites) could be threatened without proper mitigation measures being taken to document and preserve/protect the cultural resource property in question prior to ignition. These measures would be incorporated into the burn plan, and may include stationing fire personnel and equipment on site for the duration of the burn, encasing the structure in protective material, or brushing and/or back burning around each of these structures where appropriate on a case by case basis, as determined by the Forest Archaeologist through consultation with the State Historic Preservation Office. These activities would decrease the likelihood of the specific structure being lost (i.e., serving to preserve and protect the site) due to an uncontrolled wild fire in the site's vicinity.

Additional mitigation For Alternatives B, D, and E only.

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. These watersheds are: Kelly and Little Van Buren Creeks (Unit 4C); Robbins Creek (Unit 4D); Partridge Creek (portion of unit 11); Carey Creek (Unit 12); Rabbit, Rugged, and Indian Creeks (Unit 14); Lemhi Creek (Unit 16); Trout Creek (Unit 17); Little Trout Creek (Portion of Unit 5); Corn Creek (Portion of Unit 21B); Indian Creek (Unit 38); Sherwin, China, Cow, Clark, Kessler, and Elfers Creeks (Unit 2C); Fall Creek (Unit 9); Pine Creek (Unit 36); Spring Creek (Unit 24); Colson Creek (Unit 21A); Fountain Creek (Unit 21C); Lower Clear and Garden Creeks (Unit 37B); and Lockwood Creek (Unit 1).

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 for this project are included in 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 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 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 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.