

SUMMARY

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S.1 Introduction

This Draft Environmental Impact Statement (EIS) discloses the temporary, short and long term, direct, indirect, irretrievable, irreversible, and cumulative environmental impacts of a proposed action and alternative actions for timber harvest, temporary road construction, road maintenance, thinning of sub-merchantable trees, and enhancement of aspen and whitebark pine on the Cascade Ranger District of the Boise National Forest in Valley County, Idaho.

This document has been prepared pursuant to the requirements of the National Environmental Policy Act (NEPA, 40 CFR 1500-1508), the National Forest Management Act (NFMA implementing regulations of 2005, including transition language at 36 CFR 219.14), and the 2003 Boise National Forest Land and Resource Management Plan (Forest Plan). Planning for this project was initiated in the fall/winter of 2006.

The Spruce Creek Project Area is located in the Gold Fork River drainage on the Boise National Forest, 10 miles northeast of Cascade, Idaho (Figure S-1). The project area includes 9,997 acres of National Forest System lands (Figure S-2). The entire project area is located in watersheds that drain into the Gold Fork River, which in turn drains into Cascade Reservoir.

Roughly 3,653 acres of the Needles Inventoried Roadless Area (IRA) lie within the Spruce Creek Project Area. With the exception of 356 acres of whitebark pine enhancement treatments, none of the activities associated with the Proposed Action would occur within the IRA.

S.2 Proposed Action

The Proposed Action would implement silvicultural activities, including thinning of sub-merchantable trees, aspen enhancement, and whitebark pine enhancement, on 2,687 acres. An estimated 9.3 MMbf would be removed using tractor, off-road jammer, skyline, and helicopter yarding systems. The Proposed Action would employ a variety of silvicultural prescriptions including clearcut with reserve trees, commercial thin, improvement cut, irregular shelterwood, individual tree selection, sanitation/salvage, thinning of sub-merchantable trees, aspen enhancement, and whitebark pine enhancement.

Thinning of sub-merchantable trees would occur within both plantations and previously managed stands with an overstory component (such as seed cut shelterwoods) where natural and/or artificial regeneration has been established. Aspen clones and immature whitebark pine trees would be released in select locations where competing conifers are currently inhibiting growth and/or vigor.

Road maintenance activities would occur on an estimated 0.3 miles of existing road under this alternative. Specifically, one under-sized culvert along the #402 road would be replaced with a culvert sufficient in size to accommodate a 100-year flow event; a series of drive-through dips would be installed on the #402F1 road to prevent erosion, and; an existing slump on the cutslope along the #498 road would be stabilized.

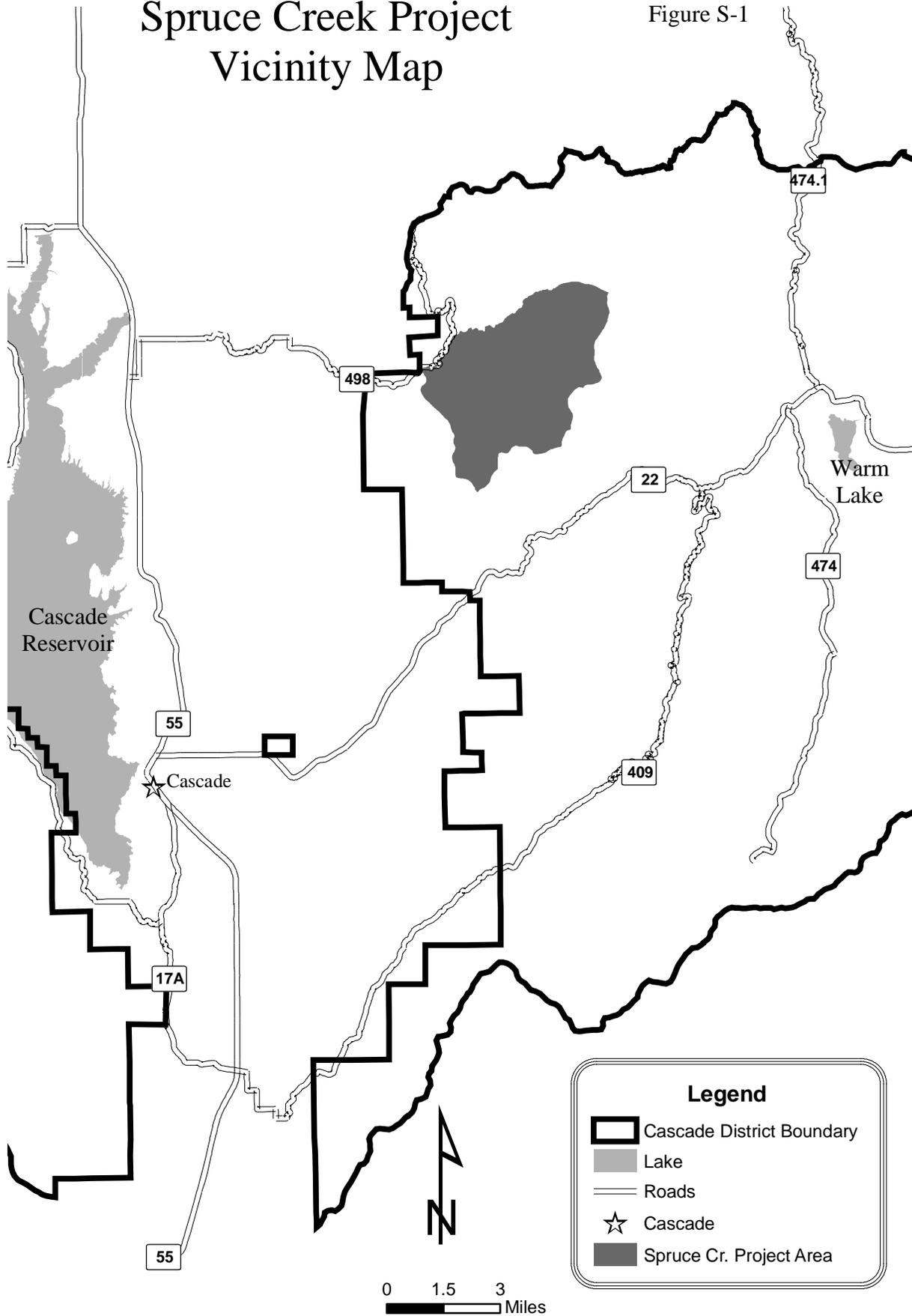
Roughly 1.1 miles of temporary road would be constructed to facilitate harvest activities and six helicopter landings constructed.

Post-implementation management of the existing transportation system within the project area would not change under this alternative. All existing road restrictions would be reinstated upon completion of harvest activities.

The Proposed Action also includes two Forest Plan corrections for Management Area 18. These two corrections consist of clarifications of the existing management direction and therefore do not require an amendment of the Forest Plan.

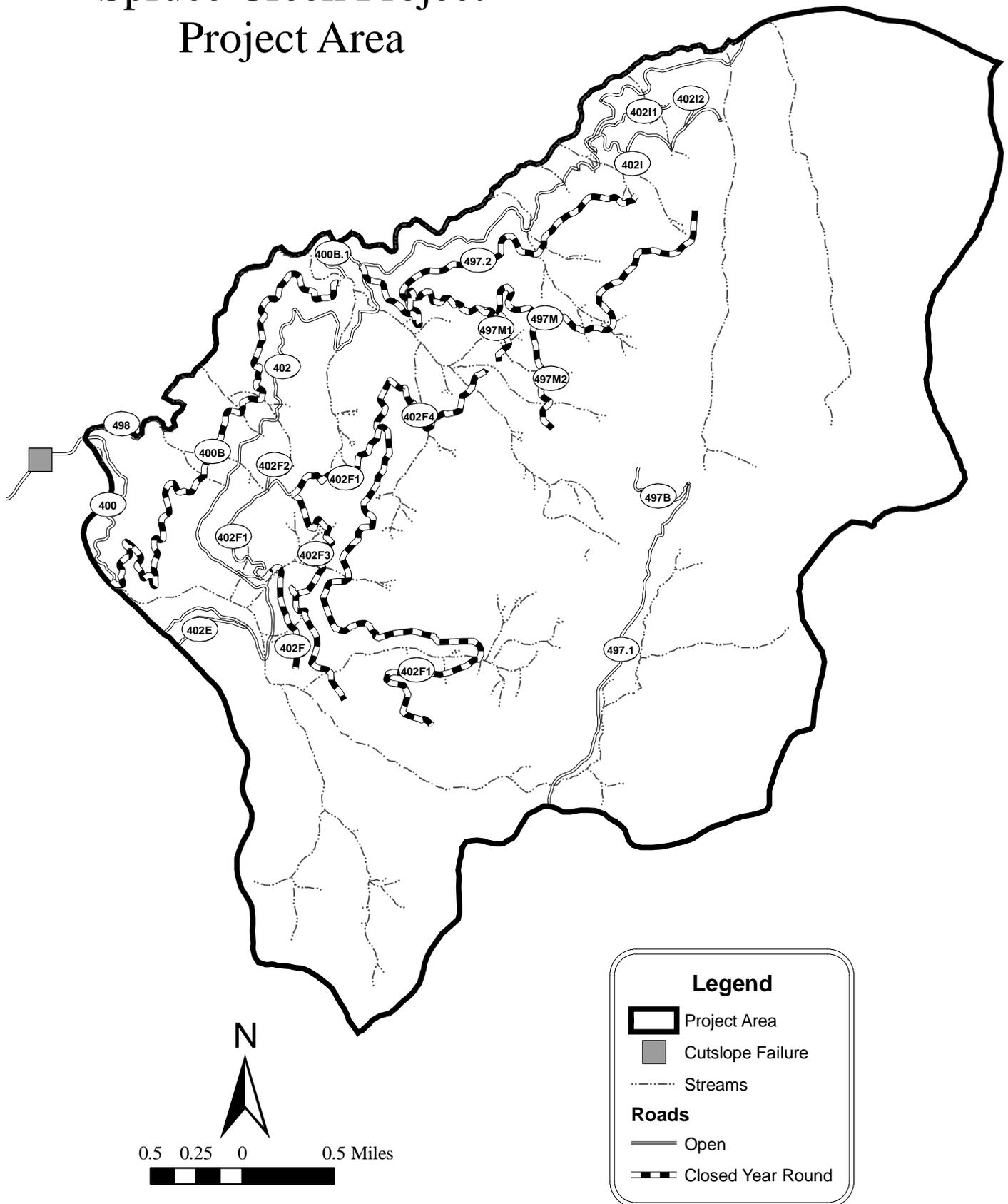
Spruce Creek Project Vicinity Map

Figure S-1



Spruce Creek Project Project Area

Figure S-2



S.3 Need for the Proposed Action

Harvest activities associated with the Proposed Action would occur only within MPC 5.2 which, in part, places emphasis on achieving sustainable resource conditions that support commodity outputs, and management activities designed to maintain and restore forest ecosystem health to reduce potential for long-term impacts from uncharacteristic disturbance events (Forest Plan, pg. III-89).

Relative to the desired conditions identified in the Forest Plan, the large tree size class is currently under-represented in most potential vegetation groups in many of the watersheds across the Boise National Forest, while the small and/or medium tree size classes are typically over-represented. The 5th field watershed in which this project occurs exhibits similar relationships between the various tree size classes.

Canopy closures (stand densities) for the majority of forested stands are generally denser than desired conditions portrayed in Appendix A of the Forest Plan and are a contributing factor to increased susceptibility to forest insects and diseases. In addition, species compositions are quickly becoming dominated by tree species such as subalpine fir and grand fir at the expense of desired species that are more resilient to wildfire and insect disturbances like ponderosa pine, Douglas-fir, and western larch.

The majority of the forested stands within the project area are rapidly declining in vigor and resiliency to forest insects and disease. Examined stands were rated using the *Stand Susceptibility Rating System Central Idaho Forests* (Roberts 2006). These susceptibility ratings do not predict outbreaks or quantify occurrence but rather provide a relative measure of predisposing conditions for damage from the agents. Based on the modeling approximately 6,589 acres, 66 percent of the project area, are considered to have a high or moderate susceptibility to damage from Douglas-fir beetle, mountain pine beetle, western pine beetle, western spruce budworm, and/or dwarf mistletoe.

Densities of trees less than 8 inches in diameter within many of the plantations, as well as stands that previously received regeneration prescriptions, are not currently impacting growth substantially. However, within 5 to 10 years densities within many of these plantations and the understory component in other previously managed stands will approach levels where inter-tree competition will adversely impact growth. Tree mortality resulting from mountain pine beetles is also expected to increase as these stand densities increase over the next decade. In addition, artificial regeneration associated with past harvest activities within riparian habitats has resulted in conifer understories atypical of what would be expected following a natural disturbance event within riparian areas. Specifically, in most cases ponderosa pine seedlings were planted on these sites where natural regeneration of Douglas-fir and/or Engelmann spruce would have been expected.

The encroachment of shade tolerant species, such as subalpine fir, and the resultant competition for limited nutrients, moisture, and sunlight is inhibiting the growth and vigor of immature whitebark pine in the higher elevations of the project area, and aspen in several stands in the southwest portion of the project area.

For the most part, annual growth within the project area is well below the potential for these sites. Examination of the stands conducted in 2002, 2003, and 2004 revealed that the area experienced high levels of tree mortality within the previous decade. The sum of the average growth minus mortality for the decade preceding 2004 was roughly 33 cubic feet/acre/year. This existing condition, relative to the area's average weighted site potential of 70 cubic feet/acre/year, is reflective of the poor general forest health and questionable sustainability.

Regional sawmills process the majority of timber harvested from the Cascade District. Timber sales, such as this proposal, and their associated activities have an effect on local communities through their impact on employment. Indirect impacts occur as these sectors transact additional business with other sectors.

S.4 Purpose of the Proposed Action

Eight primary objectives have been identified for the project:

- 1) Retain the existing size class of stands currently identified as large tree and manipulate the structure of small and medium tree size class stands to accelerate their movement towards the large tree size class, thereby retaining and potentially contributing to habitat for some terrestrial wildlife species associated with large tree size class.
- 2) Reduce the densities of stands currently identified as large tree size class in order to maintain or restore canopy closures within desired conditions, and to potentially contribute to habitat for those terrestrial wildlife species associated with large tree size class stands with low to moderate canopy closures.
- 3) Consistent with the particular habitat type, discriminate against shade tolerant species such as grand fir and subalpine fir and encourage retention and recruitment of seral species.
- 4) Relative to Douglas-fir beetle, mountain pine beetle, western pine beetle, western spruce budworm, and/or dwarf mistletoe, manipulate the structures, densities, and compositions of stands in order to maintain a low or moderate susceptibility level, or to decrease susceptibility to a low or moderate level.
- 5) Maintain or restore aspen and immature whitebark pine by eliminating competition with other conifer species.
- 6) Improve long term stand growth to or near levels indicative of sustainable forests.
- 7) Provide wood products to support local and regional economies.
- 8) Stabilize the cutslope failure on the #498 road.

Improving the long-term growth within the project area would increase the likelihood of sustaining a continuous supply of wood products as identified in the Forest Plan. Reducing stand densities, modifying stand structures, removing insect and disease infested trees, and increasing the seral species composition and diversity, would reduce susceptibility to insect infestations and disease infections. Thinning of sub-merchantable trees would have similar results in those portions of plantations and other previously managed stands located outside of riparian habitats. Thinning of sub-merchantable trees within riparian areas would result in stand conditions more representative of sustainable riparian habitat. Eliminating competing conifers would maintain or restore the aspen and whitebark pine components in select stands, thereby enhancing the sustainability of these unique forest types.

Activities associated with the Proposed Action would promote conditions on treated acres that would contribute towards Forest Plan goals and objectives that emphasize movement towards desired conditions for vegetation. Specifically, the Proposed Action would help accomplish all or portions of the following Forest Plan goals and objectives:

TRGO02 - Manage suited timberlands to achieve:

- a) Growth rates and yields that are compatible with other resources,
- b) Annual harvest of expected timber volume,
- c) Maintenance or improvement, where possible, of genetic diversity within tree species,
- d) Successful reforestation through the application of appropriate and available silvicultural techniques,
- e) Vegetative conditions (structure, density, etc.) in plantations and surrounding stands that result in reduced hazard for loss from uncharacteristic disturbance events, and
- f) Sustained yield, even flow of high-quality forest products, including timber and non-timber forest products (Forest Plan, pg. III-41).

TROB 1747 - Reduce risk from insect damage, particularly from western spruce budworm, by managing stands in a manner that will begin approaching desired conditions for vegetative components (Forest Plan, pg. III-299).

VEGO01 – Maintain or restore desired plant community components, including species composition, size classes, canopy closures, structure, snags, and coarse woody debris as described in Appendix A (Forest Plan, pg. III-30).

VEGO03 – Maintain or restore vegetation conditions as described in Appendix A to reduce frequency, extent, severity, and intensity of uncharacteristic or undesirable disturbances such as fire, insects, and pathogens (Forest Plan, pg. III-30).

TRGO01 – Manage forested vegetation to achieve:

- a) Conditions that are resilient and resistant to uncharacteristic fire, insect, and disease damage, and
- b) Conditions that contribute to desired vegetative conditions, including, distribution of tree sizes, species composition, and canopy closure (Forest Plan, pg. III-41).

TROB02 - Make available an estimated 450 million board feet of timber for the decade, which will contribute to Allowable Sale Quantity (ASQ) (Forest Plan, pg. III-42).

S.5 Decisions to be Made

Based on the analysis documented in the Final EIS the Forest Supervisor will make decisions on this project. The decisions to be made include:

- ◆ Should vegetation be managed within the project area at this time, and if so, which stands should be treated and what silvicultural systems applied?
- ◆ Should temporary roads be built at this time, and if so, how many miles should be built and where should they occur within the project area?
- ◆ Should aspen and immature whitebark pine be enhanced by eliminating competing conifer species, and if so, where within the project area?
- ◆ Should identified road maintenance activities occur on portions of roads #402, #402F1, and #498 at this time?
- ◆ Based on the completed Spruce Creek Roads Analysis, which roads should be adopted as the minimum transportation system?
- ◆ What design features, mitigation measures, and/or monitoring should be applied to the project?

S.6 Identification of Issues

Through the scoping process the public and other agencies raised numerous concerns in response to the Proposed Action. Identification of issues included review of written and verbal comments, input from Forest Service resource specialists, review of the Forest Plan, and comments from state and other federal agencies. Comments identified during scoping were evaluated against the following criteria to determine whether or not the concern would be a major factor in the analysis process.

- ◆ Has the concern been addressed in a previous site-specific analysis, such as in a previous Environmental Impact Statement or through legislative action?
- ◆ Is the concern relevant to and within the scope of the decision being made and does it pertain directly to the Proposed Action?
- ◆ Can the concern be resolved through mitigation (avoiding, minimizing, rectifying, reducing or eliminating, or compensating for the proposed impact) in all alternatives?
- ◆ Can the issue be resolved through project design in all alternatives?

S.6.1 Significant Issues and/or Concerns

Significant issues are listed below. These issues are points of unresolved conflict with the Proposed Action (Alternative B) identified during internal and external scoping efforts. Following each issue, indicators are listed for use in comparing how the different alternatives affect that issue.

S.6.1.1 Flammulated Owl – Harvest activities associated with the Proposed Action could result in the loss of modeled flammulated owl home ranges.

- ◆ *Indicator* – Number of modeled flammulated owl home ranges.

S.6.1.2 Pileated Woodpecker – Harvest activities associated with the Proposed Action could result in the loss of modeled pileated woodpecker home ranges.

- ◆ *Indicator* – Number of modeled pileated woodpecker home ranges.

S.7 Alternative Development

An Environmental Impact Statement must contain a no action alternative and alternatives to the proposed action that respond to the significant issues related to the proposed action and project objectives.

S.7.1 Alternative A - No Action

This is a required "no action" alternative that provides a baseline against which impacts of the various action alternatives can be measured and compared. Under this alternative, no new management activities would occur. Obstructions on trails within the project area would continue to be removed annually or as funding and priorities allow. Roads currently open in the project area would continue to be maintained for motorized traffic during the snow-free season. General maintenance on these roads would occur as needed and/or as funding allows. Suppression of wildfires would continue to occur within the project area. All other currently authorized activities (e.g. dispersed recreation, current travel management restrictions, etc.) would continue in the area.

S.7.2 Alternative B - Proposed Action

This alternative was developed to meet the project's purpose and need stated above. It represents the Forest Service's best recommendation prior to detailed analysis of the environmental effects. In addition to the custodial maintenance activities described in Alternative A, the Proposed Action would implement silvicultural activities, including thinning of sub-merchantable trees, aspen enhancement, and whitebark pine enhancement, on 2,687 acres. An estimated 9.3 MMbf would be removed using tractor, off-road jammer, skyline, and helicopter yarding systems. The Proposed Action would employ a variety of silvicultural prescriptions including clearcut with reserve trees, commercial thin, improvement cut, irregular shelterwood, individual tree selection, sanitation/salvage, thinning of sub-merchantable trees, aspen enhancement, and whitebark pine enhancement. Reference Table S-1 and Figure S-3.

Thinning of sub-merchantable trees would occur within both plantations and previously managed stands with an overstory component (such as seed cut shelterwoods) where natural and/or artificial regeneration has been established. Aspen clones and immature whitebark pine trees would be released in select locations where competing conifers are currently inhibiting growth and/or vigor.

Spruce Creek Draft EIS

Road maintenance activities would occur on an estimated 0.3 miles of existing road under this alternative. Specifically, one under-sized culvert along the #402 road would be replaced with a culvert sufficient in size to accommodate a 100-year flow event; a series of drive-through dips would be installed on the #402F1 road to prevent erosion, and; an existing slump on the cutslope along the #498 road would be stabilized.

Roughly 1.1 miles of temporary road would be constructed to facilitate harvest activities and six helicopter landings constructed.

Post-implementation management of the existing transportation system within the project area would not change under this alternative. All existing road restrictions would be reinstated upon completion of harvest activities. Specifically, motorized traffic would be controlled in the following manner:

- ◆ The #400B road would continue to be closed year-round to motorized vehicles exceeding 48 inches in width with the exception of snowmobile and administrative use.
- ◆ The #402F1 and #402F3 road systems would continue to be closed year-round to all motorized traffic with the exception of snowmobile and administrative use.
- ◆ The #497.2 and #497M road systems would continue to be closed year-round to all motorized traffic with the exception of snowmobile and administrative use.
- ◆ The #402F road, which would be opened to facilitate proposed activities, would have all culverts removed and would be closed year-round to all motorized traffic with earthen barriers or boulders.

This alternative also includes two Forest Plan corrections for Management Area 18. These two corrections consist of clarifications of the existing management direction and therefore do not require an amendment of the Forest Plan (FSH 1909.15, Section 18.2). Specifically, the table presented on pages III-314 and III-315 of the Forest Plan discloses visual quality objectives for sensitive travel routes or use areas including “Forest Roads 186, 497” and “Forest Road 402 (to trailhead)”. The corrected table would apply the identified visual quality objectives to “Forest Roads 186, 497.1” and “Forest Road 402 (from road 400 to trailhead 162)”. Reference Appendix C of this document for additional information.

Table S-1 Alternative B - Proposed Action

Total Acres Treated – 2,687 ac.		Road Maintenance – 0.3 mi.	
Temporary Road Construction – 1.1 mi.			
Harvest Methods (acres)			
Helicopter – 74		Skyline - 549	
Off-Road Jammer – 478		Tractor - 329	
Silvicultural Prescriptions (acres)			
Clear Cut with Reserve Tree – 219		Individual Tree Selection – 187	
Commercial Thin – 51		Sanitation/Salvage – 99	
Improvement Cut – 417		Irregular Shelterwood - 457	
Aspen Enhancement - 89		Whitebark Pine Enhancement - 553	
Thinning of Sub-merchantable Trees - 615			
Post-harvest Activities (acres)			
Lop Activity Fuels – 1,353		Whole Tree Yard – 1,334	
Broadcast Burn Activity Fuels – 23		Tree Planting - 241	
Temporary Road Construction (miles)			
400B Tmp – 0.5		400B Tmp2 – 0.2	
400B Tmp3 – 0.2		497M Tmp – 0.2	
Road Maintenance (miles)			
402 – 0.1		402F1 – 0.1	
		498 – 0.1	

S.7.3 Alternative C - Response to Flammulated Owl Issue

This alternative was developed in response to internal concerns that Alternative B could result in the loss of the seven modeled flammulated owl home ranges within the project area. In addition to the custodial maintenance activities described in Alternative A, this alternative would implement silvicultural activities, including thinning of sub-merchantable trees, aspen enhancement, and whitebark pine enhancement, on 2,489 acres. An estimated 8.5 MMbf would be removed using tractor, off-road jammer, skyline, and helicopter yarding systems. This alternative would employ a variety of silvicultural prescriptions including clearcut with reserve trees, commercial thin, improvement cut, irregular shelterwood, individual tree selection, sanitation/salvage, thinning of sub-merchantable trees, aspen enhancement, and whitebark pine enhancement. Reference Table S-2 and Figure S-4.

Thinning of sub-merchantable trees would occur within both plantations and previously managed stands with an overstory component (such as seed cut shelterwoods) where natural and/or artificial regeneration has been established. Aspen clones and immature whitebark pine trees would be released in select locations where competing conifers are currently inhibiting growth and/or vigor.

Road maintenance activities would occur on an estimated 0.3 miles of existing road under this alternative. Specifically, one under-sized culvert along the #402 road would be replaced with a culvert sufficient in size to accommodate a 100-year flow event; a series of drive-through dips would be installed on the #402F1 road to prevent erosion, and; an existing slump on the cutslope along the #498 road would be stabilized.

Roughly 1.1 miles of temporary road would be constructed to facilitate harvest activities and six helicopter landings constructed.

Post-implementation management of the existing transportation system within the project area would not change under this alternative. All existing road restrictions would be reinstated upon completion of harvest activities. Specifically, motorized traffic would be controlled in the following manner:

- ◆ The #400B road would continue to be closed year-round to motorized vehicles exceeding 48 inches in width with the exception of snowmobile and administrative use.
- ◆ The #402F1 and #402F3 road systems would continue to be closed year-round to all motorized traffic with the exception of snowmobile and administrative use.
- ◆ The #497.2 and #497M road systems would continue to be closed year-round to all motorized traffic with the exception of snowmobile and administrative use.
- ◆ The #402F road, which would be opened to facilitate proposed activities, would have all culverts removed and would be closed year-round to all motorized traffic with earthen barriers or boulders.

This alternative also includes two Forest Plan corrections for Management Area 18. These two corrections consist of clarifications of the existing management direction and therefore do not require an amendment of the Forest Plan (FSH 1909.15, Section 18.2). Specifically, the table presented on pages III-314 and III-315 of the Forest Plan discloses visual quality objectives for sensitive travel routes or use areas including “Forest Roads 186, 497” and “Forest Road 402 (to trailhead)”. The corrected table would apply the identified visual quality objectives to “Forest Roads 186, 497.1” and “Forest Road 402 (from road 400 to trailhead 162)”. Reference Appendix C of this document for additional information.

Table S-2 Alternative C – Response to Flammulated Owl Issue

Total Acres Treated – 2,489 ac.		Road Maintenance – 0.3 mi.	
Temporary Road Construction – 1.1 mi.			
Harvest Methods (acres)			
Helicopter – 74		Skyline - 470	
Off-Road Jammer – 388		Tractor - 300	
Silvicultural Prescriptions (acres)			
Clear Cut with Reserve Tree – 207		Individual Tree Selection – 187	
Commercial Thin – 51		Sanitation/Salvage – 74	
Improvement Cut – 270		Irregular Shelterwood – 443	
Aspen Enhancement - 89		Whitebark Pine Enhancement - 553	
Thinning of Sub-merchantable Trees - 615			
Post-harvest Activities (acres)			
Lop Activity Fuels – 1,353		Whole Tree Yard – 1,135	
Broadcast Burn Activity Fuels – 23		Tree Planting - 230	
Temporary Road Construction (miles)			
400B Tmp – 0.5		400B Tmp2 – 0.2	
400B Tmp3 – 0.2		497M Tmp – 0.2	
Road Maintenance (miles)			
402 – 0.1	402F1 – 0.1	498 – 0.1	

S.7.4 Alternative D - Response to Flammulated Owl and Pileated Woodpecker Issues

This alternative was developed in response to internal concerns that Alternative B could result in the loss of the seven modeled flammulated owl home ranges within the project area, and the loss of one or both of the modeled pileated woodpecker home ranges in the project area. In addition to the custodial maintenance activities described in Alternative A, this alternative would implement silvicultural activities, including thinning of sub-merchantable trees, aspen enhancement, and whitebark pine enhancement, on 2,170 acres. An estimated 3.7 MMbf would be removed using tractor, off-road jammer, skyline, and helicopter yarding systems. This alternative would employ a variety of silvicultural prescriptions including clearcut with reserve trees, commercial thin, improvement cut, irregular shelterwood, individual tree selection, sanitation/salvage, thinning of sub-merchantable trees, aspen enhancement, and whitebark pine enhancement. Reference Table S-3 and Figure S-5.

Thinning of sub-merchantable trees would occur within both plantations and previously managed stands with an overstory component (such as seed cut shelterwoods) where natural and/or artificial regeneration has been established. Aspen clones and immature whitebark pine trees would be released in select locations where competing conifers are currently inhibiting growth and/or vigor.

Road maintenance activities would occur on an estimated 0.3 miles of existing road under this alternative. Specifically, one under-sized culvert along the #402 road would be replaced with a culvert sufficient in size to accommodate a 100-year flow event; a series of drive-through dips would be installed on the #402F1 road to prevent erosion, and; an existing slump on the cutslope along the #498 road would be stabilized.

Roughly 0.4 miles of temporary road would be constructed to facilitate harvest activities and six helicopter landings constructed.

Post-implementation management of the existing transportation system within the project area would not change under this alternative. All existing road restrictions would be reinstated upon completion of harvest activities. Specifically, motorized traffic would be controlled in the following manner:

- ◆ The #400B road would continue to be closed year-round to motorized vehicles exceeding 48 inches in width with the exception of snowmobile and administrative use.
- ◆ The #402F1 and #402F3 road systems would continue to be closed year-round to all motorized traffic with the exception of snowmobile and administrative use.
- ◆ The #497.2 and #497M road systems would continue to be closed year-round to all motorized traffic with the exception of snowmobile and administrative use.
- ◆ The #402F road, which would be opened to facilitate proposed activities, would have all culverts removed and would be closed year-round to all motorized traffic with earthen barriers or boulders.

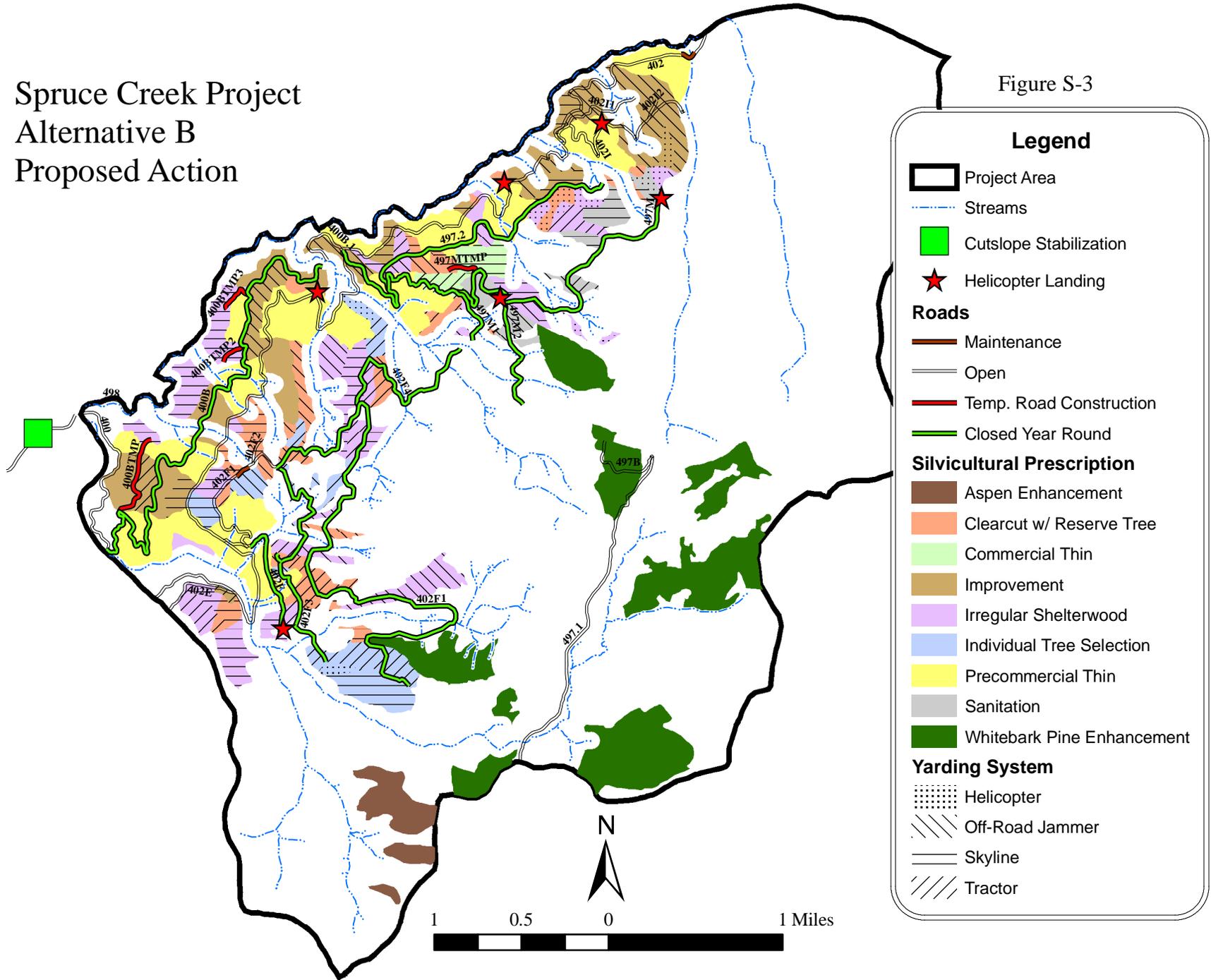
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Table S-3 Alternative D – Response to Flammulated Owl and Pileated Woodpecker Issues

Total Acres Treated – 2,170 ac.		Road Maintenance – 0.3 mi.	
Temporary Road Construction – 0.4 mi.			
Harvest Methods (acres)			
Helicopter – 46		Skyline - 311	
Off-Road Jammer – 304		Tractor - 252	
Silvicultural Prescriptions (acres)			
Clear Cut with Reserve Tree – 27		Individual Tree Selection – 406	
Commercial Thin – 30		Sanitation/Salvage – 74	
Improvement Cut – 246		Irregular Shelterwood – 130	
Aspen Enhancement - 89		Whitebark Pine Enhancement - 553	
Thinning of Sub-merchantable Trees - 615			
Post-harvest Activities (acres)			
Lop Activity Fuels – 1,325		Whole Tree Yard – 846	
Broadcast Burn Activity Fuels – 23		Tree Planting - 50	
Temporary Road Construction (miles)			
400B Tmp3 – 0.2		497M Tmp – 0.2	
Road Maintenance (miles)			
402 – 0.1	402F1 – 0.1	498 – 0.1	

Spruce Creek Project Alternative B Proposed Action

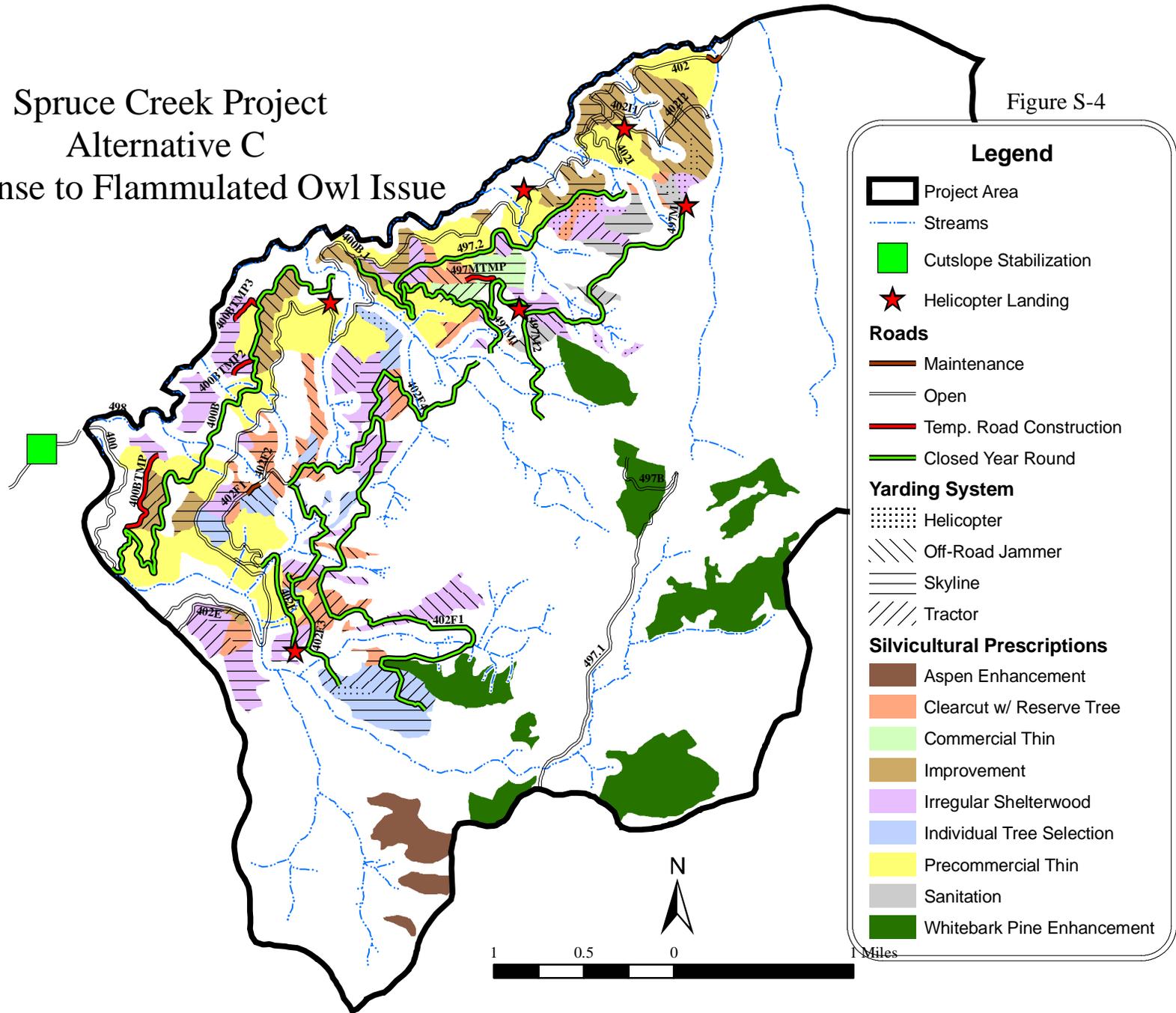
Figure S-3



1 0.5 0 1 Miles

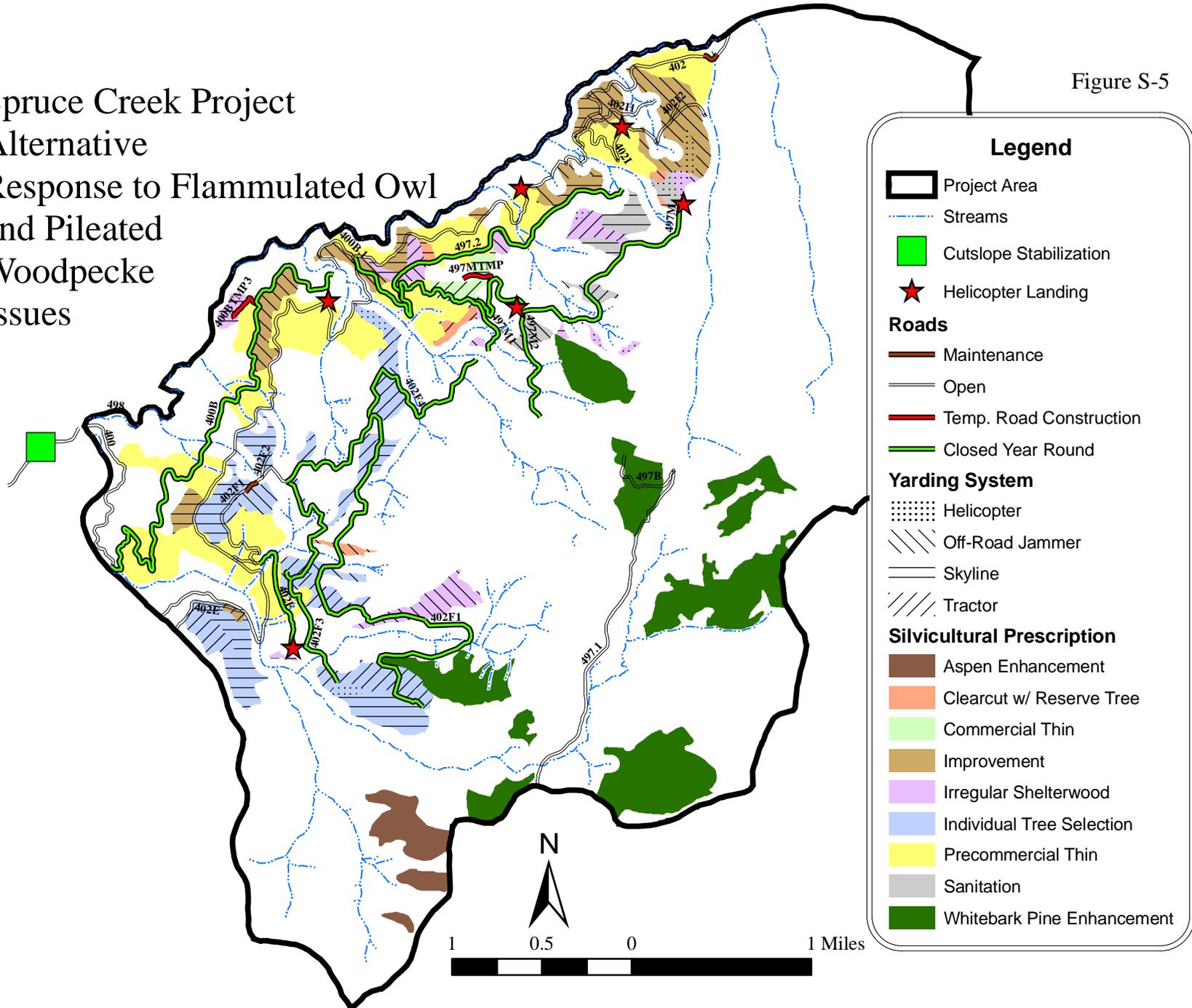
Spruce Creek Project Alternative C Response to Flammulated Owl Issue

Figure S-4



Spruce Creek Project Alternative Response to Flammulated Owl and Pileated Woodpecker Issues

Figure S-5



S.8 Summary Comparison of Alternatives

Table S-4 presents a comparative summary of principle activities and the environmental effects for the alternatives being considered in detail. The summary is limited to the effects on project objectives, significant issues or concerns, Forest Plan standards, and other resources the Interdisciplinary Team deemed important for an informed decision. A brief discussion of the similarities and differences between the alternatives follows the table.

Table S-4 Comparison of Activities and Effects

Project Objective Indicators	Alt. A	Alt. B	Alt. C	Alt. D
Acres Converted to Large Tree Size Class	0	531	471	349
Acres of Existing Large Tree Size Class with High Canopy Closure Converted to Moderate or Low	0	106	106	44
Retention and Recruitment of Seral Species Encouraged?	No	Yes	Yes	Yes
Acres of High or Moderate Susceptibility to Insects & Diseases Converted to a Low Susceptibility	0	1,202	1,020	559
Acres of Aspen and Whitebark Pine Enhanced	0	642	642	642
Weighted Average Annual Growth (cu.ft./ac./yr)	33	34	34	35
Wood Products Made Available (MMbf)	0	9.3	8.5	3.7
Cutslope Stabilized on the #498 Road?	No	Yes	Yes	Yes
Project Issue Indicators	Alt. A	Alt. B	Alt. C	Alt. D
Number of Flammulated Owl Home Ranges	7	0	7	10
Number of Pileated Woodpecker Home Ranges	2	1	1	2
Forest Plan Consistency/Other Key Items	Alt. A	Alt. B	Alt. C	Alt. D
Results in the Development of any IRA?	No	No	No	No
Activities Comply with Detrimental Disturbance Standard?	Yes	Yes	Yes	Yes
Activities Comply with Total Soil Resource Commitment Standard?	Yes	Yes	Yes	Yes
Activities Comply with Road Standards 1820, 1821, and 1822?	Yes	Yes	Yes	Yes
Activities Comply with Visual Quality Objectives Standards?	Yes	Yes	Yes	Yes
Activities Comply with TMDL?	Yes	Yes	Yes	Yes
Threatened, Endangered, and Proposed Species	Alt. A	Alt. B	Alt. C	Alt. D
Wildlife Species	NE	NE/MA/NJ	NE/MA/NJ	NE/MA/NJ
Plant Species	NE	NE	NE	NE
Fish Species	NE	MA	MA	MA
Sensitive Species	Alt. A	Alt. B	Alt. C	Alt. D
Wildlife Species	NI	NI/MI	NI/MI	NI/MI
Plant Species	NI	NI/MI	NI/MI	NI/MI
Fish Species	NI	MI	MI	MI
Management Indicator Species	Alt. A	Alt. B	Alt. C	Alt. D
Pileated Woodpecker Population Trend	Maintained	Maintained	Maintained	Maintained
Bull Trout Population Trend	Maintained	Maintained	Maintained	Maintained

NE = No Effect; MA = May affect, but not likely to adversely affect; NJ = Not likely to jeopardize.

NI = No Impact; MI = May impact individuals or habitat but would not likely contribute to a trend towards Federal listing.

Reference discussions below and in Chapter 3 for detailed information.

S.8.1 Project Objective Indicators

S.8.1.1 Retain the existing size class of stands currently identified as large tree and manipulate the structure of small and medium tree size class stands to accelerate their movement towards the large tree size class, thereby retaining and potentially contributing to habitat for some terrestrial wildlife species associated with large tree size class.

Implementation of Alternative A would have no effect on the existing quantities or distribution of tree size classes within the analysis area (Section 3.2.2.1).

Silvicultural activities associated with Alternative B would shift 26 acres from the small tree size class to the medium tree size class; 71 acres from the small tree size class to the large tree size class,

and; 460 acres from the medium tree size class to the large tree size class (Section 3.2.2.2). Under Alternative C, silvicultural activities would shift 26 acres from the small tree size class to the medium tree size class; 71 acres from the small tree size class to the large tree size class, and; 400 acres from the medium tree size class to the large tree size class (Section 3.2.2.3). Silvicultural activities associated with Alternative D would shift 26 acres from the small tree size class to the medium tree size class; six acres from the small tree size class to the large tree size class, and; 343 acres from the medium tree size class to the large tree size class (Section 3.2.2.4).

None of the action alternatives would convert any stand from the large tree size class to a smaller size class. The lack of any major shift of tree size classes for the analysis area as-a-whole under the action alternatives is largely explained by the fact that these alternatives would only treat a range of 22 to 27 percent of the 9,997 acre analysis area because of inventoried roadless areas, streamside RCAs, and/or other resource concerns (Sections 3.2.2.2, 3.2.2.3, and 3.2.2.4).

S.8.1.2 Reduce the densities of stands currently identified as large tree size class in order to maintain or restore canopy closures within desired conditions, and to potentially contribute to habitat for those terrestrial wildlife species associated with large tree size class stands with low to moderate canopy closures.

Alternative A would have no effect on the existing quantities or distribution of canopy closure within the analysis area (Section 3.2.3.1).

Specific to stands **currently** in the large tree size class, Alternative B would convert large tree size class stands with an existing high canopy closure to a low canopy closure on 106 acres, and shift the canopy closure from moderate down to low on another 58 acres (Section 3.2.3.2); Alternative C would convert large tree size class stands with an existing high canopy closure to a low canopy closure on 106 acres, and shift the canopy closure from moderate down to low on another 51 acres (Section 3.2.3.3), and; Alternative D would convert large tree size class stands with an existing high canopy closure to a low canopy closure on 44 acres, and shift the canopy closure from moderate down to low on another 49 acres (Section 3.2.3.4).

S.8.1.3 Consistent with the particular habitat type, discriminate against shade tolerant species such as grand fir and subalpine fir and encourage retention and recruitment of seral species.

Implementation of Alternative A would have no effect on the existing quantities or distribution of forest types within the analysis area (Section 3.2.4.1).

As disclosed in Section 3.2.4.2, with the exception of thinning of sub-merchantable trees in riparian habitats, all silvicultural prescriptions applied under these alternatives would favor shade intolerant species and discriminate against shade tolerant tree species such as subalpine fir and grand fir. Although unquantifiable, these alternatives would result in a slight shift of species compositions towards those species associated with more open stand conditions (i.e. shade intolerant species).

S.8.1.4 Relative to Douglas-fir beetle, mountain pine beetle, western pine beetle, western spruce budworm, and/or dwarf mistletoe, manipulate the structures, densities, and compositions of stands in order to maintain a low or moderate susceptibility level, or to decrease susceptibility to a low or moderate level.

Alternative A would have no effect on stand susceptibility to forest insects and diseases. Approximately 6,589 acres, 66 percent of the analysis area, would continue to have a high or moderate susceptibility to damage from western spruce budworm, Douglas-fir beetle, mountain pine beetle, western pine beetle, and/or dwarf mistletoe (Section 3.2.6.1).

Based on projections of post-implementation stand conditions, Alternative B would reduce the susceptibility rating to forest pathogens of concern from high or moderate down to low on roughly 1,202 acres. Following implementation of this alternative approximately 5,387 acres, 54 percent of

the 9,997 acre analysis area, would have a high or moderate susceptibility to damage from western spruce budworm, Douglas-fir beetle, mountain pine beetle, western pine beetle, and/or dwarf mistletoe (Section 3.2.6.2).

Alternative C would reduce the susceptibility rating to forest pathogens of concern from high or moderate down to low on roughly 1,020 acres. Following implementation of this alternative approximately 5,569 acres, 56 percent of the 9,997 acre analysis area, would have a high or moderate susceptibility to damage from western spruce budworm, Douglas-fir beetle, mountain pine beetle, western pine beetle, and/or dwarf mistletoe (Section 3.2.6.3).

Under Alternative D the susceptibility rating to forest pathogens of concern would be reduced from high or moderate down to low on roughly 559 acres. Following implementation of this alternative approximately 6,030 acres, 60 percent of the 9,997 acre analysis area, would have a high or moderate susceptibility to damage from western spruce budworm, Douglas-fir beetle, mountain pine beetle, western pine beetle, and/or dwarf mistletoe (Section 3.2.6.4).

S.8.1.5 Maintain or restore aspen and immature whitebark pine by eliminating competition with other conifer species.

Alternative A would have no effect on the existing quantities or distribution of aspen or whitebark pine within the analysis area (Section 3.2.4.1).

Activities associated with Alternatives B, C, and D would eliminate the encroachment of shade tolerant species like subalpine fir, and the resultant competition for limited nutrients, moisture, and sunlight which is currently inhibiting the growth and vigor of immature whitebark pine in the higher elevations of the project area, and aspen in several stands in the southwest portion of the project area. These alternatives would increase the probability of immature whitebark pine trees reaching maturity on 553 acres and aspen on another 89 acres (Section 3.2.4.2).

S.8.1.6 Improve long term stand growth to or near levels indicative of sustainable forests.

Under Alternative A, average annual growth minus mortality would be expected to remain around 33 cubic feet/acre/year for the 9,997 acre analysis area (Section 3.2.5.1).

Given that 73 to 78 percent of the 9,997 acre analysis area would remain untreated under the action alternatives, average annual growth for the analysis area as-a-whole would improve only slightly to around 34 cubic feet/acre/year in 2027 under Alternative B or C (Section 3.2.5.2 and 3.2.5.3) and 35 cubic feet/acre/year in 2027 under Alternative D (Section 3.2.5.4).

In comparison to an average annual growth of 47 cubic feet/acre/year under Alternative A for the same acres, the average annual growth on the 2,687 acres treated under Alternative B would improve to around 53 cubic feet/acre/year in year 2027 (Section 3.2.5.2).

In comparison to an average annual growth of 46 cubic feet/acre/year under Alternative A for the same acres, the average annual growth on the 2,489 acres treated under Alternative C would improve to around 52 cubic feet/acre/year in year 2027 (Section 3.2.5.3).

In comparison to an average annual growth of 45 cubic feet/acre/year under Alternative A for the same acres, the average annual growth on the 2,170 acres treated under Alternative D would improve to around 55 cubic feet/acre/year in year 2027 (Section 3.2.5.4).

While Alternative D may reflect more of an improvement in growth than Alternatives B and C, this is explained in part by the time period of the modeling and the indicator used in this analysis. Alternatives B and C would result in the establishment and growth of more seedlings and saplings than Alternative D. In contrast Alternative D would retain, on average, more merchantable trees/acre than the other action alternatives. Since seedlings and saplings contribute very little to the

indicator of cubic feet/acre, and since Alternative D would retain more merchantable trees/acre, it is not surprising that Alternative D reflects a better growth/acre in 20 years after implementation (year 2027). However, if the stands were modeled 40 to 50 years into the future when seedlings and saplings have reached a merchantable size, the average annual growth under Alternative B or C would be expected to surpass that of Alternative D.

S.8.1.7 Provide wood products to support local and regional economies.

Alternative A would not result in the harvest of any wood products (Section 3.8.1).

Alternative B would harvest an estimated 9.3 MMbf of timber and generate an estimated appraised value of \$459,000 (Section 3.8.2). Alternative C would harvest an estimated 8.5 MMbf of timber and generate an estimated appraised value of \$408,000 (Section 3.8.3). Alternative D would harvest an estimated 3.7 MMbf of timber and generate an estimated appraised value of \$180,000 (Section 3.8.4).

Sawlogs and other wood products, as well as employment opportunities associated with these alternatives, would help sustain sawmills and economies in Valley County and adjacent counties. Jobs supported by these alternatives would directly and indirectly benefit local economies and the economies of other counties (Sections 3.8.2, 3.8.3, and 3.8.4).

S.8.1.8 Stabilize the cutslope failure on the #498 road.

Alternative A does not propose any new management activities in the analysis area and therefore would have no direct or indirect effects on erosion or sedimentation. The cutslope failure on the #498 road would continue to slump into the ditchline and contribute sediment directly into Gold Fork River (Section 3.10.1.1).

Given its juxtaposition to the Gold Fork River, activities associated with stabilization of the existing cutslope slump on the #498 road under Alternative B, C, or D have the potential to contribute sediment. However, the use of erosion barriers such as straw bales, silt fences, or SEDIMAT™ should mitigate any unacceptable effects. Establishment of vegetation on the site and providing a means for water to drain from this area would reduce, but probably not eliminate, this chronic source of sedimentation (Section 3.10.1.2). In addition, replacing one under-sized culvert on the #402 road and removing another on the #402F road would immediately reduce the risk of these culverts becoming clogged with debris and precipitating road prism failures and the associated sediment delivery to streams. Although replacement/removal of these under-sized culverts would result in a temporary and near short term increase in sedimentation in non-fishing bearing streams, these activities would improve the overall hydrologic conditions in the area (Section 3.10.1.2). Similarly, installation of a series of drive-through dips on the #402F1 road would increase erosion for a few years. However, given that field reconnaissance concluded that this site is not currently contributing sediment to area streams, this activity would not be expected to result in any sediment delivery. Installation of these drive-through dips would reduce the chronic erosion and rutting that has been occurring on this segment of road and the potential of a future road prism failure (Section 3.10.1.2).

S.8.2 Project Issue Indicators

S.8.2.1 Flammulated Owl – Harvest activities associated with the Proposed Action could result in the loss of modeled flammulated owl home ranges.

Alternative A does not include any new management activities and would therefore have no direct or indirect effects on this species or its habitat (Section 3.9.2.1)

Alternative B would modify suitable habitat within the seven existing modeled home ranges within the analysis area. The reduction in canopy closure and tree density would result in the direct loss of

all seven home ranges. Individuals within affected home ranges, if occupied, would likely be forced to leave the project area in search of suitable habitat. This alternative would also convert 82 acres of unsuitable habitat to a suitable condition. However, the juxtaposition of this habitat is such that no additional home ranges would be formed (Section 3.9.2.3).

Alternative C would not modify habitat within any of the seven modeled home ranges. All seven existing modeled home ranges would remain viable following this alternative. This alternative would also convert 82 acres of unsuitable habitat to a suitable condition. However, the juxtaposition of this habitat is such that no additional home ranges would be formed (Section 3.9.2.4).

Alternative D would not modify habitat within any of the seven modeled home ranges. All seven existing modeled home ranges would remain viable following this alternative. Alternative D would convert 223 acres of unsuitable habitat to a suitable condition. Given the juxtaposition of this habitat, an additional three home ranges could be formed (Section 3.9.2.5).

Following implementation of Alternatives B, C, and D, sufficient habitat would remain within that portion of the 5th field HUC administered by the Forest Service to support an estimated 21 to 31 home ranges for this species. The presence of 21 to 31 modeled home ranges, presumably containing reproducing individuals, would serve to maintain a viable population of flammulated owls within the cumulative effects area. Therefore none of the action alternatives would be expected to contribute to a trend towards federal listing or cause a loss of viability to the population or species (Section 3.9.2.6).

S.8.2.2 Pileated Woodpecker – Harvest activities associated with the Proposed Action could result in the loss of modeled pileated woodpecker home ranges.

Alternative A does not include any new management activities and would therefore have no direct or indirect effects on this species or its habitat (Section 3.9.3.1).

Alternatives B and C would modify suitable habitat within both of the two existing modeled home ranges within the analysis area. Neither home range would provide sufficient habitat to be considered a viable home range following implementation of these alternatives. Enough suitable habitat would however remain within the project area to form one home range that would still be expected to support a nesting pair (Section 3.9.3.2).

Alternative D would modify approximately 86 acres of suitable nesting habitat and 254 acres of forage habitat. However, silvicultural prescriptions would retain sufficient canopy closures and tree densities such that these affected acres would not be converted to an unsuitable condition. As a result, both of the two existing modeled home ranges would remain viable following implementation of this alternative (Section 3.9.3.3).

Following implementation of Alternatives B, C, and D, sufficient habitat would be present within that portion of the 5th field HUC administered by the Forest Service to support an estimated 4 or 5 home ranges for this species. The presence of 4 or 5 modeled home ranges, presumably containing reproducing individuals, would serve to maintain a viable population of pileated woodpeckers within the cumulative effects area and maintain the current population trend of this species at the Forest and Ecogroup scale. The Final EIS prepared in concert with the Forest Plan suggests that there is currently a sufficient amount of pileated woodpecker habitat distributed across the Boise National Forest to prevent a loss of viability to the population or species. The conclusions in the Forest Plan are further supported by Wisdom et al (2000) which reports an estimated 21 percent increase in source habitat in the Central Idaho Mountains ERU (Section 3.9.3.4).

S.8.3 Forest Plan Consistency/Other Key Items

The Forest Plan Consistency Checklist, contained in the project's planning record, lists all applicable standards and guidelines in the 2003 Forest Plan and discloses how the various alternatives comply or fail to comply with those standards and guidelines. In addition, the Interdisciplinary Team identified other items considered important in making an informed decision. The following discussions summarize the effects of the alternatives relative to those standards and/or guidelines and other items identified by the Interdisciplinary Team as key in this assessment.

S.8.3.1 Inventoried Roadless Areas

Alternative A does not propose any activities within the Needles IRA and therefore would have no direct or indirect effects on the wilderness attributes (Section 3.3.1.1).

With the exception of 356 acres of whitebark pine enhancement treatments, Alternatives B, C, and D do not propose any activities within the boundaries of the Needles IRA. All action alternatives would have a temporary effect (9 to 10 weeks) on solitude and primitive recreation in portions of the Needles IRA. These alternatives would also result in subtle effects to the natural appearance for a period of three to five years. These alternatives would not have any other direct or indirect effects on the IRA, nor would they result in the development of any portion of the IRA. This IRA in its entirety would remain suitable for wilderness designation by Congress (Section 3.3.1.2).

S.8.3.2 Detrimental Soil Disturbance

Alternative A would have no effect on detrimental soil disturbance (Section 3.10.4.1).

With the exception of one 4 acre unit (Unit #99) harvested with a tractor yarding system in 1991 and common to all action alternatives, none of the activity areas of concern have existing levels of detrimental disturbance. Based on monitoring of units with a similar yarding system, it was determined that eight percent of Unit #99 is currently considered detrimentally disturbed. Following implementation of Alternative B, C or D, roughly 13 percent of Unit #99 would be detrimentally disturbed, with detrimental disturbance ranging from 0 to 14 percent in the other activity areas depending upon the yarding system. All action alternatives would be consistent with Forest Plan direction to maintain detrimental disturbance below 15 percent within the activity areas (Section 3.10.4.2).

S.8.3.3 Total Soil Resource Commitment (TSRC)

Alternative A would maintain the existing TSRC of 1.9 percent for the 9,997 acre activity area (Section 3.10.4.1). Following implementation of Alternative B, C, or D, TSRC for the 9,997 acre activity area would increase from the existing 1.9 percent to 2.2 percent. The Forest Plan standard for TSRC would be met (Section 3.10.4.2).

S.8.3.4 Forest Plan Road Standards 1820, 1821, and 1822

Alternatives B, C, and D would all comply with Road Standards 1820, 1821, and 1822 (P.R., Vol. 13, Forest Plan Consistency Checklist). None of the alternatives include construction of any new classified roads. Temporary roads constructed under Alternative B, C, or D would not involve any stream crossings nor would they occur within any known streamside RCA. Proposed activities addressed in these standards would not degrade nor retard attainment of desired resource conditions (Sections 3.10 and 3.11).

During implementation of Alternative B or C (i.e. after temporary roads are built but prior to decommissioning), total road density within the NFGF 6th field would increase from the existing 2.44 mi/mi² to 2.46 mi/mi². During implementation of Alternative D total road density within the

NFGF 6th field would increase from the existing 2.44 mi/mi² to 2.45 mi/mi². Within an estimated four years, temporary roads would be decommissioned and the road density in this 6th field would return to the existing 2.44 mi/mi² after Alternative B, C, or D (Section 3.10.1.2).

Implementation of Alternative B, C, or D would necessitate construction of five new helicopter landings within the NFGF 6th field. However none of these helicopter landings would affect RCAs because they would all be located outside of any streamside RCA. The closest stream to any of the proposed helicopter landings would be approximately 350 feet. The sediment delivery distance using the Megahan/Ketcheson model for these helicopter landings was 151 feet, therefore no direct or indirect effects on sedimentation would be expected. The majority, if not all, of the landings associated with other yarding systems would also be located outside of RCAs. Design features require that new landing construction within streamside RCAs be minimized to the extent practicable (Section 2.4.2.2). There may however be situations where it would be preferable, and result in less overall resource damage, to construct a landing near the outer edge of an RCA rather than create a skid trail down a high cutslope to access the road. Design features (Section 2.4.2.2) stipulate that this would be allowed only after field review of the specific characteristics of the site and only if the conclusion is that there would be no measurable impacts to RCAs and sedimentation. Under no circumstances would landings be constructed within riparian vegetation or within 151 feet of any waterbody without a constructed filter windrow or within 50 feet of any waterbody with a constructed filter windrow (modeled sediment delivery distances). Upon completion of use, all newly constructed landings would be reshaped to provide adequate drainage, ripped to an approximate depth of 18 inches to increase infiltration and reduce water runoff, slash distributed to cover approximately 30 percent of the reshaped surface, and planted with a Forest Service approved seed mixture (Section 3.10.1.2).

Implementation of Alternative B, C, or D would include opening a number of existing roads in Maintenance Level 1 status. Access onto all roads to be reopened within the NFGF 6th field is currently prevented by closed gates. With the exception of the #400B road, all gated roads to be reopened are currently passable in their current condition and are used on a frequent basis for administrative purposes. Opening the #400B road, which is currently accessible to ATVs, would consist of opening the locked gate and removing some brush from the road prism. Removal of this brush, given incorporated design features, would not retard attainment of desired resource conditions nor would it result in measurable adverse effects on TEPC species or their habitats. Opening the remaining roads would consist of simply opening the existing gates. All existing road restrictions would be reinstated upon completion of harvest activities (Section 3.10.1.2).

Given the locations of these proposed activities relative to RCAs and incorporated design features, the activities described in the preceding paragraphs would not be expected to measurably slow the recovery rate of existing conditions moving toward the range of desired resource conditions, nor would these activities be expected to have a measurable effect on any TEPC species or its habitat (Sections 3.10 and 3.11).

S.8.3.5 Visual Quality Objectives

Alternative A would have no direct or indirect effects on the vegetation or the visual quality of the analysis area (Section 3.5.1).

Although the appearance of stands would be noticeably changed in some locations, given incorporated design features none of the action alternatives would result in a high degree of visual contrast nor would these management activities dominate the viewshed from any sensitive route or area. Forest Plan Visual Quality Objectives (VQOs) would be met after a period of approximately three to five years (Sections 3.5.2, 3.5.3, and 3.5.4).

S.8.3.6 Total Maximum Daily Load (TMDL)

Alternatives B, C, and D would not contribute additional sediment in amounts that would prevent the attainment or maintenance of instream objectives, nor would these alternatives have a measurable effect on the identified beneficial uses. All action alternatives would comply with existing management direction including Forest Plan Standards and Guidelines, and the Clean Water Act. All action alternatives would be consistent with the intent of the TMDL of reducing sediment, the pollutant of concern. A number of activities (i.e. restorative BMPs) have already been implemented in the watershed to reduce management-related sediment. Even though these alternatives would reflect only a slight improving trend, they all include additional restorative BMPs to further reduce sediment and the potential for road prism failures in the drainage (Section 3.10.1.2).

S.8.4 Threatened, Endangered, Proposed, and Candidate Species

Determinations disclosed in Chapter 3 and documented in completed biological assessments for threatened, endangered, proposed, and candidate species concluded that:

Alternative A would have no effect on any threatened, endangered, proposed, or candidate species.

Alternatives B, C, and D would have no effect on any listed plant species (Section 3.2.11.3).

Alternatives B, C, and D may affect but are not likely to adversely affect lynx and northern Idaho ground squirrel, would not likely jeopardize gray wolves, and would have no effect on bald eagles (Section 3.9.1.3).

Alternatives B, C, and D may affect but are not likely to adversely affect bull trout (Section 3.11.3).

S.8.5 Sensitive Species

Determinations disclosed in Chapter 3 and documented in completed biological evaluations for sensitive species have concluded that:

Alternative A would have no impacts on any sensitive species or any Forest watch plants.

Alternatives B, C, and D would have no impact on *Botrychium lineare*, *Botrychium simplex*, *Botrychium crenulatum*, *Botrychium multifidum*, *Botrychium virginianum*, and *Allium validum*, and; may impact individuals but would not likely contribute to a trend towards Federal Listing or cause a loss of viability to the population or species of *Douglasia idahoensis* or *Lewisia sacajaweanana* (Section 3.2.11.3).

Alternatives B, C, and D would have no impact on peregrine falcon, white-headed woodpecker, mountain quail, greater sage grouse, western big-eared bat, spotted bat, and spotted frog, and; may impact individuals but would not likely contribute to a trend towards federal listing or loss of viability to the population or species of great gray owl, boreal owl, northern goshawk, northern three-toed woodpecker, fisher, wolverine, and flammulated owl (Section 3.9.2.6).

Alternatives B, C, and D may impact individuals but would not likely contribute to a trend towards federal listing or loss of viability to the population or species of westslope cutthroat trout (Section 3.11.3).

S.8.6 Management Indicator Species

Following implementation of Alternatives B, C, and D, sufficient habitat would be present within that portion of the 5th field HUC administered by the Forest Service to support an estimated 4 or 5 home ranges for this species. The presence of 4 or 5 modeled home ranges, presumably containing reproducing individuals, would serve to maintain a viable population of pileated woodpeckers within the cumulative effects area and maintain the current population trend of this species at the Forest and Ecogroup scale. The Final EIS prepared in concert with the Forest Plan suggests that there is currently a sufficient amount of pileated woodpecker habitat distributed across the Boise National Forest to prevent a loss of viability to the population or species. The conclusions in the Forest Plan are further supported by Wisdom et al (2000) which reports an estimated 21 percent increase in source habitat in the Central Idaho Mountains ERU (Section 3.9.3.4).

Alternatives B, C, and D would maintain the current population trend of bull trout at the Forest and Ecogroup scale (P.R., Vol. 11, Fisheries).

S.9 Identification of the Preferred Alternative

Alternative C, Response to Flammulated Owl Habitat, is the Responsible Official's preferred alternative.