

SUMMARY

LOCATION and AREA

South George project planning area is located on Umatilla National Forest, Pomeroy Ranger District. It is approximately 21,000 acres in size and is primarily situated in Asotin County, Washington with a small portion in Garfield County, Washington. The project planning area is within portions of T.7N., R.43E., sections 1-2; T.7N., R.44E., sections 1-6 and 10-11; T.8N., R.43E., sections 1-2, 10-15, 21-28, 33-36; T.8N., R.44E., sections 5-8, 17-23, 25-36; and T. 9N., R.43E., section 35; and T9N., R.44E., section 31. It is located in South Fork Asotin Creek and Upper George Creek Subwatersheds of the Asotin Watershed (see maps in Appendix A). Elevations range from 3,200 to 6,000 feet.

South George project planning area is bounded by Umatilla National Forest boundary to the north and east, Smoothing Iron Ridge to the west, and breaks of the Grande Ronde River to the south. Asotin Creek and Wenatchee Creek inventoried roadless areas (IRAs) are near the west and south sides of the project planning area. Existing main access forest system roads (FR) 4400, 4300, and 4304 separate both IRAs from the project planning area boundary. Ecosystems in and around the project planning area are diverse, ranging from dry sage grasslands to cold sub-alpine forests. There are numerous camping areas, hiking trails, scenic vistas, along with big game hunting opportunities (elk, white-tailed deer, mule deer, and black bear) and huckleberry sites. Most of the area is accessible by vehicle. A small portion of the Asotin County Rural Wildlife Urban Interface is located within the project planning area (eastern side) and Anatone Wildland Urban Interface¹ (WUI) area is located approximately three miles away from the eastern boundary of the project planning area, and is identified in the Asotin County Community Wildfire Protection Plan (CWPP).

Washington State Department of Fish and Wildlife owns approximately 550 acres (designated elk winter range) within the project planning area

BACKGROUND - CURRENT CONDITIONS

An analysis of existing and historical vegetation (Appendix J) has indicated that active management is warranted for upland forests of the South George project planning area. High levels of insect and disease susceptibility, caused largely by overly dense forests containing low vigor trees, are symptoms of impaired forest health and deteriorating ecosystem integrity. These symptoms relate to changes in three vegetation components: species composition, forest structure (including canopy layering), and tree density (including canopy biomass).

The historical range of variability (HRV) recognizes that ecosystems are complex and they experience a range of conditions across which processes are resilient and self-sustaining. When allowed to move beyond the limits of the range of variability, ecosystems inevitably move into a state of disequilibrium or disorganization (Egan and Howell 2001, Holling and Meffe 1996, Kaufmann et al. 1994). HRV uses a

¹ **Wildland urban interface (WUI)** – A WUI refers to areas where wildland vegetation meets urban developments, or where forest fuels meet urban fuels in the case of wildfires (such as houses). These areas encompass not only the interface (areas immediately adjacent to urban development), but also the continuous slopes that lead directly to a risk to urban developments be it from wildfire, landslides, or floods.

Summary

range of reference conditions pertaining to the pre-settlement era – a timeframe defined as the mid 1800s for the northern Blue Mountains.

Forest stand composition, density, and structure in the project planning area have been altered from historical conditions due to fire suppression and other past forest management practices. A majority of current forest stands originated as a result of fire disturbances occurring up to the 1930s, and have not experienced fire since then. Late seral tree species have become Dominant after long periods without disturbance and are more susceptible to disturbance-caused mortality than early seral species. Overall forest health has generally declined due to overstocking and an increase in the amount of shade tolerant species.

Findings from the NFMA analysis (Appendix J of this document and Silviculture Specialist's Report pages 74 to 95) for upland forests in South George project are listed below.

Dry forests sites currently have the following issues, concerns, or opportunities with respect to forest vegetation conditions:

- Dry forest sites currently support too much of the grand fir and Douglas-fir cover types, and too little of the ponderosa pine cover type.
- Dry forest sites currently support too much of the understory reinitiation structural stage, and too little of the stand initiation and young forest multi strata structural stages.
- Dry forest sites currently support too much high-density forest condition, and too little of the low-density condition.
- For the dry upland forest biophysical environment, both late-old structural stages are within HRV, so scenario B from the wildlife standard in the Eastside Screens (an amendment to the Forest Plan) is to be followed for this biophysical environment (see Appendix C for Consistency with Eastside Screens).

Moist-forest sites currently have the following issues, concerns, or opportunities with respect to forest vegetation conditions.

- Moist-forest sites currently support too much of the grand fir and spruce-fir cover types, and too little of the lodgepole pine, western larch, broadleaved trees, and Douglas-fir cover types.
- Moist-forest sites currently support too much of the stem exclusion open canopy and old forest single stratum structural stages, and too little of the young forest multi strata and old forest multi strata structural stages.
- For the moist upland forest biophysical environment, one of the late-old structural stages is above HRV and the other is below HRV, so scenario A from the wildlife standard in the Eastside Screens (an amendment to the Forest Plan) is to be followed for this biophysical environment.

Findings also show that existing insect and disease susceptibility² based upon historical range of variability is well above normal levels for defoliators (western spruce budworm and Douglas-fir tussock moth), fir engraver beetles, and root diseases (Armillaria and laminated root disease).

² **Susceptibility** – A set of conditions that make a forest stand vulnerable to substantial injury by insects or diseases.

Fire regime Condition Classes³, which describe departure from historical fire regimes in terms of fire return intervals and vegetative change from historical composition and density, have been modified in the project planning area due mainly to past harvest history and fire suppression (Fuels Specialist's Report pages 6-13). In many areas fuels that would have historically been consumed during periodic wildfires have increased above historical levels. Today, fires in dry and moist forests would exhibit moderate to severe effects characterized by high fire severity and intensity on landscapes that historically had low to mixed severity. Without treatment, the project planning area would continue to transition from a low or moderately altered fire regime (Condition Classes 1 and 2), to a significantly altered fire regime (Class 3), where the risk of losing ecosystem components would be substantially higher. Surface fuel loads would continue to build and tree density and canopy layering would also increase. Abundant small trees would serve as ladder fuels that can carry fire from the forest floor to the tree canopy, increasing the likelihood of high severity, stand-replacement fires. Fire ignitions today would not function as a natural disturbance process within their historical range pertaining to fire size, frequency, intensity, severity, or landscape patterns.

PURPOSE OF AND NEED FOR ACTION

The Pomeroy District Ranger has determined that based upon current vegetative and fuel trends in the project planning area, and contrasting them with desired future conditions identified in Umatilla National Forest Land and Resource Management Plan (Forest Plan, pp. 4-3 to 4-14), and recommendations made in the Asotin Watershed Assessment (pages VI-1 to VI-3). The Asotin Watershed Assessment recommended the use of timber harvest to thin dense stands, reduce fir, retain pine and larch to convert to early-seral species stands, and allow fire prescriptions to reduce fuels. Based on these recommendations and the difference between the current conditions of the area and the Forest Plan's desired future conditions, the purpose of and need for action for this project is to improve forest health, vigor, and resilience to fire, insects, and disease in upland forests that are outside their historical pre-fire suppression conditions for species composition, structural diversity, stocking densities, and fuel loadings. Providing sawlogs and wood fiber products for utilization by regional and local industries is also considered a need for this project, and because the majority of acres (about 18,700 acres) in the project planning area are Forest Plan management area allocations with big game and wildlife habitat goals (C3, C3A, and C4) the District Ranger determined that there is a need to continue to provide and manage wildlife habitat and its components (cover and forage) in South George project planning area.

The response to the purpose and need for this project is identified as follows:

Vegetation – There is a need to move forest structure, species composition, and stand density toward their historical ranges of variability (HRV). By moving these forest attributes toward HRV, ecosystem processes, such as response to wildfire, insects and disease, are more resilient and self-sustaining (Egan and Howell 2001, Holling and Meffe 1996, Kaufmann et al. 1994). This would be accomplished by favoring fire tolerant species, increasing old forest structure, and reducing stocking density to levels that resist insects, diseases, and stand-replacing wildfire(s).

³ **Condition Class** – Describes the departure from historical fire regimes in terms of fire return interval and vegetative changes from historical composition and density (Hann and Bunnell, 2001). Class 1 – within historical range; Class 2 – moderately altered from historical range; and Class 3 – significantly altered from historical range.

Fuels – There is a need to manage forest stands in Condition Classes 2 and 3 to begin to restore vegetation characteristics and fire return intervals characteristic of historical fire regimes. This would decrease the probability of uncharacteristic high intensity wildfires by reducing fuel loads to levels expected under natural fire disturbance regimes. This would be achieved by lowering stand densities, increasing the relative abundance of fire tolerant species, reducing existing ladder, surface, and canopy fuels, while improving suppression capabilities on forest land and adjacent private land, and reintroducing landscape prescribed fire into the ecosystem.

Timber Production – There is a need to provide sawlogs and wood fiber for utilization by regional and local economies. This would be accomplished by the commercial harvest of wood fiber.

Wildlife Habitat – There is a need to continue to provide and manage, over time, for wildlife habitat and its components (cover and forage). This would be achieved by meeting Forest Plan goals and management area standards and guidelines allocated to the project planning area for wildlife habitat.

ISSUE IDENTIFICATION

Following are the resource issues raised by the public and by the interdisciplinary team that were analyzed for environmental effects with implementation of each alternative analyzed in detail:

- ◆ Old Forest Habitat (Key Issue)
- ◆ Access Management (Key Issue)
- ◆ Soil Resources
- ◆ Hydrology/Water Quality
- ◆ Threatened, Endangered and Sensitive (TES)/Management Indicator Species (MIS) Fish Habitat
- ◆ Vegetation
- ◆ Fuels - Fire Return Intervals and Crown Fire Potential
- ◆ Air Quality
- ◆ Invasive Plant Species and Threatened, Endangered and Sensitive (TES) Plant Species
- ◆ Wildlife Habitat - Threatened, Endangered and Sensitive (TES) Terrestrial Species, Management Indicator Species (MIS), Landbirds, and Dead Wood
- ◆ Range
- ◆ Visuals/Scenery
- ◆ Wild and Scenic River Area – Grande Ronde
- ◆ Recreation
- ◆ Potential Wilderness Areas (PWAs)
- ◆ Roadless and Inventoried Roadless Areas (IRAs)
- ◆ Undeveloped Lands
- ◆ Economics

ALTERNATIVES CONSIDERED IN DETAIL

Alternative A – No Action

PURPOSE AND DESIGN:

- No new management activities as proposed would occur.
- Current biological and physical processes would be allowed to continue along their present path along with associated risks and benefits and serve as a baseline for comparison with other alternatives.
- Responds to the requirement to consider a no action alternative (40 CFR §1502.14 (d)).

DESCRIPTION:

All activities identified in the proposed action would not occur in South George project planning area with implementation of this alternative. Commercial timber harvest, fuels treatments for activity and natural fuels, and landscape prescribed fire treatments, would not be authorized. There would be no temporary road construction, or treatment of fuels in RHCAs to reduce the chance of a crown fire.

Previously approved ongoing activities such as domestic cattle grazing, fire protection, firewood cutting, recreation, and road maintenance (including danger tree removal) would continue to occur.

This alternative would allow timber stands, identified at this time as needing treatment, to progress through natural successional processes at their own rate. Natural fuels would not be treated to reduce the risk of uncharacteristic wildfire intensity or allow for a safer environment for fire-fighting personnel during fire suppression.

Alternative B – Proposed Action (Preferred Alternative)

PURPOSE AND DESIGN:

Alternative B is the proposed action and preferred alternative. This is the same alternative used for scoping, except that acreages have been adjusted to reflect additional field reviews and updated GIS information. Treatments in Alternative B respond to elements identified in the Purpose and Need (Chapter 1, pages 1-4 to 1-5) and are designed to accomplish the following objectives:

- Modify dry and moist upland forests to a species composition and structure compatible with the historical range of variability. Thinning treatments are used to reduce forest density, modify species composition, and reduce insect and disease susceptibility by improving tree and stand vigor. Regeneration treatments are used to improve upland forest sites where early-seral species are no longer present in ecologically viable amounts.
- Reduce fuel loading (surface, ladder, and canopy fuels) to a level that facilitates future reintroduction of low-intensity surface fire, reduce ladder and ground fuels in natural fuel areas to lower the risk of fire spread into the upper canopy, and reduce fuels that would contribute to uncharacteristic wildfire intensity and resource damage.
- Provide sawlogs and wood fiber products for utilization by local and regional industry.
- Continue to provide and manage wildlife habitat and its components (cover and forage).
- Reduce risk of personal injury by removing danger trees along haul routes used for timber sale activities.

DESCRIPTION:

The following table is a summary of activities proposed in Alternative B.

Table S-1 Summary of Activities Proposed in Alternative B

Proposed Activity	Alternative B
Fuels Treatments – Activity	
Mechanical Grapple Piling/Pile Burning	870 acres
Prescribed burning of activity fuels (Jackpot and Broadcast)	2,030 acres
Fuels Treatments – Natural	
Non-commercial mechanical thinning and ladder fuel removal	800 acres
Non-commercial manual thinning and ladder fuel removal	350 acres
Landscape prescribed fire	3,000 acres
RHCA non-commercial mechanical fuels treatment	25 acres
Vegetation Removal	
Intermediate Harvest: Improvement Cut	3,020 acres
Intermediate Harvest: Low Thinning	80 acres
Regeneration Harvest: Seedtree w/reserves	550 acres
Regeneration Harvest: Clearcut w/reserves	250 acres
Volume of timber removed	47,250 ccf
Logging Methods	
Helicopter	300 acres
Skyline	850 acres
Conventional ground based (tractor or skidder)	2,750 acres
Roads Used – Haul Routes	
Seasonal Open System – Maintenance level 3	33 miles
Seasonal Open System – Maintenance level 2	13.5 miles
Closed System – Maintenance level 1	32.5 miles
Other Road Activity	
New temporary road construction – decommissioned post project activities	3 miles
Danger tree removal	As needed
Economics	
Total Timber Value at Predicted High Bid Rate (Revenue)	\$2,315,250

Alternative C

PURPOSE AND DESIGN:

Treatments in Alternative C respond to the purpose and need for the project, and comments made by some of the responders regarding concerns about any new road construction, temporary or otherwise and any road reconstruction and to look at roads that can be decommissioned. Roads and trails to be decommissioned are not connected actions to the commercial timber harvest activity and would require separate funding. Treatments are designed to accomplish the following objectives:

- Modify dry and moist upland forests to a species composition and structure compatible with the historical range of variability. Thinning treatments are used to reduce forest density, modify species composition, and reduce insect and disease susceptibility by improving tree and stand vigor. Regeneration treatments are used to improve upland forest sites where early-seral species are no longer present in ecologically viable amounts.

Summary

- Reduce fuel loading (surface, ladder and canopy fuels) to a level that facilitates future reintroduction of low-intensity surface fire, reduce ladder and ground fuels in natural fuel areas to lower the risk of fire spread into the upper canopy, and reduce fuels that would contribute to uncharacteristic wildfire intensity and resource damage.
- Reduce risk of personal injury by removing danger trees along haul routes used for timber sale activities.
- Provide sawlogs and wood fiber products for utilization by local and regional industry.
- Decommission system roads and unauthorized roads and trails not needed for any future activity.
- Continue to provide and manage wildlife habitat and its components (cover, forage, and roads).
- Extend seasonal closure on Forest Road 4302 (Hogback road).

DESCRIPTION:

See the table below for a summary of activities proposed in Alternative C.

Table S-2 Summary of Activities Proposed in Alternative C

Proposed Activity	Alternative C
Fuels Treatments – Activity	
Mechanical Grapple Piling/Pile Burning	870 acres
RX burning of activity fuels (Jackpot and Broadcast)	2,030 acres
Fuels Treatments – Natural	
Non-commercial mechanical thinning and ladder fuel removal	800 acres
Non-commercial manual thinning and ladder fuel removal	350 acres
Landscape prescribed fire	3,000 acres
RHCA non-commercial mechanical fuels treatment	25 acres
Vegetation Removal	
Intermediate Harvest: Improvement Cut	3,020 acres
Intermediate Harvest: Low Thinning	80 acres
Regeneration Harvest: Seedtree w/reserves	550 acres
Regeneration Harvest: Clearcut w/reserves	250 acres
Volume of timber removed	47,250 ccf
Logging Methods	
Helicopter	550 acres
Skyline	625 acres
Conventional ground based (tractor or skidder)	2,725 acres
Roads Used – Haul Routes	
Seasonal Open System – Maintenance level 3	33 miles
Seasonal Open System – Maintenance level 2	13.5 miles
Closed System – Maintenance level 1	32.5 miles
Other Road Activity	
New temporary road construction (All temporary roads will be decommissioned post project)	0 miles
System roads decommissioned (4.3 miles of open roads Maintenance level 2, and 26.6 miles of closed system roads Maintenance level 3)	31 miles
Unauthorized roads and ATV trails decommissioned	15 miles
Danger Tree Removal	As Needed
Economics	
Total Timber Value at Predicted High Bid Rate (Revenue)	\$1,701,000

Alternative D

PURPOSE AND DESIGN:

Treatments in Alternative D respond to the purpose and need for the project and respond to the issue of maintaining existing old forest structure and composition in the project planning area. Treatments are designed to accomplish the following objectives:

- Modify dry and moist upland forests to a species composition and structure compatible with the historical range of variability. Conserve current conditions in late-old structure on moist- forest sites. No clearcutting would be implemented, and only 100 acres of seed-tree cutting would occur. Silvicultural activities described for Alternatives B and C are also proposed for Alternative D, but at lesser amounts.
- Thinning treatments are used to reduce forest density, modify species composition, and reduce insect and disease susceptibility by improving tree and stand vigor.
- Maintain existing cover and structure in old forest stands and maintain existing structure in other declining stands that are still providing essential habitat for many wildlife species.
- Reduce fuel loading (surface, ladder and canopy fuels) to a level that facilitates future reintroduction of low-intensity surface fire, reduce ladder and ground fuels in natural fuel areas to lower the risk of fire spread into the upper canopy, and reduce fuels that would contribute to uncharacteristic wildfire intensity and resource damage.
- Reduce risk of personal injury by removing danger trees along haul routes used for timber sale activities.
- Provide sawlogs and wood fiber products for utilization by local and regional industry.
- Continue to provide and manage wildlife habitat and its components (cover, forage, and roads).

DESCRIPTION:

See the table below for a summary of activities proposed in Alternative D.

Table S-3 Summary of Activities Proposed in Alternative D

Proposed Activity	Alternative D
Fuels Treatments – Activity	
Mechanical Grapple Piling/Pile Burning	540 acres
RX burning of activity fuels (Jackpot and Broadcast)	1,370 acres
Fuels Treatments – Natural	
Non-commercial mechanical thinning and ladder fuel removal	800 acres
Non-commercial manual thinning and ladder fuel removal	350 acres
Landscape prescribed fire	3,000 acres
RHCA non-commercial mechanical fuels treatment	25 acres
Vegetation Removal	
Intermediate Harvest: Improvement Cut	2,420 acres
Intermediate Harvest: Low Thinning	80 acres
Regeneration Harvest: Seedtree w/reserves	100 acres
Regeneration Harvest: Clearcut w/reserves	0 acres
Volume of timber removed	25,350 ccf
Logging Methods	
Helicopter	300 acres
Skyline	500 acres
Conventional ground based (tractor or skidder)	1,800 acres

Summary

Proposed Activity	Alternative D
Roads Used – Haul Routes	
Seasonal Open System – Maintenance level 3	33 miles
Seasonal Open System – Maintenance level 2	13 miles
Closed System – Maintenance level 1	24.5 miles
Other Road Activity	
New temporary road construction (All temporary roads will be decommissioned post project)	2.25 miles
System roads decommissioned (5.5 miles of open roads Maintenance level 2, and 34.5 miles of closed system roads Maintenance level 3)	0 miles
Unauthorized non-system roads and ATV trails decommissioned	0 miles
Danger tree removal	As Needed
Economics	
Total Timber Value at Predicted High Bid Rate (Revenue)	\$1,039,350

Design Features and Management Requirements

Design features and management requirements for all action alternatives (where applicable) address the following:

- Hydrology/Water Quality – Clean Water Act
- Fish/Aquatic Habitat (TES)
- Air Quality
- Soils
- Invasive Plant Species (Noxious Weeds)
- Cultural Resources
- Range Resources
- Wildlife (MIS and TES)
- Recreation
- Public Safety
- TES Plants

Monitoring

Monitoring for both implementation (whether the project was implemented as planned) and effectiveness monitoring (whether overall management objectives were met) will occur.

ALTERNATIVES CONSIDERED, BUT ELIMINATED FROM DETAILED STUDY

The following alternatives were considered and eliminated from detailed study by the Responsible Official for reasons identified below:

Alternative E - Prescribed burning only

Restore forest health through prescribed burning treatments only. This alternative would not meet the purpose and need due to high existing fuel loading conditions and risk potential for escape. With large landscape areas covered with high risk vegetation composition, such as South George project planning area, the potential for escape or resource damaging landscape fire would be high. This fire risk can be

reduced by removing some vegetation first before adding prescribed fire. After timber harvest, landscape burns are easier to accomplish because the landscape has been divided into manageable burn blocks (polygons). This alternative would not meet the purpose and need of decreasing the probability of uncharacteristic high intensity wildfires by reducing fuel loads to levels expected under natural fire disturbance regimes. The majority of acres (15,200 acres of the 21,000 acres) in the South George project planning area are in Forest Plan management area C4- Wildlife Habitat and this allocation requires certain management to protect wildlife habitat (see Chapter 1, page 1-7). Just using prescribed fire would not meet the desired future condition for this land allocation and the purpose and need to continue to provide and manage, over time, for wildlife habitat and its components of cover and forage. In addition it would not meet the immediate need to reduce ongoing impacts of insect and disease or provide resources to the local economy. Based on the information above this alternative was considered but not analyzed in detail.

Alternative F - Bring project area streams into fully functioning condition

We received a suggestion to consider bringing project area streams into fully functioning condition, including riparian and stream habitat conditions that support viable populations of native fish species and meet Riparian Management Objectives (RMOs). Currently aquatic conditions within the project area are currently functioning to support healthy native fish populations. Most streams in the project planning area are intermittent and overland flow is non-existent to the boundary edges. Fish bearing streams are located predominantly outside the project area and most riparian buffers are inaccessible due to steep canyons and incised drainages (maps Appendix A). Asotin watershed has been selected as an intensely monitored watershed (IMW) by the Snake River Salmon Recovery Board in 2008 to evaluate recovery processes and restoration projects implemented (Fisheries Report, page 17). Because current aquatic conditions are improving and meeting PACFISH RMOs (Chapter 3, Table 3-14), this alternative was considered but not analyzed in detail.

Alternative G - Focus on wildlife habitat enhancement , watershed restoration activities, old growth protection (minimum fragmentation), and fewer impacts to non-motorized recreation

In reviewing the elements of this suggested alternative it was determined that it does not address the project's purpose and need to improve health, vigor, and resilience to fire, insects, and disease in upland forests that are outside their historical pre-fire suppression conditions for species composition (including hardwood species), structural diversity, stocking densities, and fuel loads, nor would it provide sawlogs and wood fiber products for utilization by regional and local industry. The purpose and need for this project includes the need to continue to provide and manage over time for wildlife habitat and its components (Chapter 1, page 1-5). Alternative D for this project is designed to maintain existing cover and structure in moist old forest stands and maintain existing structure in other declining stands that are still providing essential habitat for many wildlife species (Chapter 2, page 2-29). Implementation of proposed activities in Alternatives B, C, and D would continue to meet Forest Plan goals to provide and maintain wildlife habitat (Chapter 2, pages 2-43 to 2-46). Based on the information above, this alternative, as stated, was considered but not analyzed in detail.

COMPARISON OF ALTERNATIVES

The following tables compare Alternatives A, B, C, and D by activity, purpose and need, and issues:

Table S-4 Summary Comparison of Alternatives by Activity

	Alternative A	Alternative B	Alternative C	Alternative D
Fuels Treatments – Activity				
Mechanical Grapple Piling/Pile Burning	0 acres	870 acres	870 acres	540 acres
RX burning of activity fuels (Jackpot and Broadcast)	0 acres	2,030 acres	2,030 acres	1,370 acres
Fuels Treatments – Natural				
Non-commercial mechanical thinning and ladder fuel removal	0 acres	800 acres	800 acres	800 acres
Non-commercial manual thinning and ladder fuel removal	0 acres	350 acres	350 acres	350 acres
Landscape prescribed fire	0 acres	3,000 acres	3,000 acres	3,000 acres
RHCA non-commercial mechanical fuels treatment	0 acres	25 acres	25 acres	25 acres
Vegetation Removal				
Intermediate Harvest: Improvement Cut	0 acres	3,020 acres	3,020 acres	2,420 acres
Intermediate Harvest: Low Thinning	0 acres	80 acres	80 acres	80 acres
Regeneration Harvest: Seedtree w/reserves	0 acres	550 acres	550 acres	100 acres
Regeneration Harvest: Clearcut w/reserves	0 acres	250 acres	250 acres	0 acres
Volume of timber removed	0 ccf	47,250 ccf	47,250 ccf	25,350 ccf
Logging Methods				
Helicopter	0 acres	300 acres	550 acres	300 acres
Skyline	0 acres	850 acres	625 acres	500 acres
Conventional ground based (tractor or skidder)	0 acres	2,750 acres	2,725 acres	1,800 acres
Roads Used – Haul Routes				
Seasonal Open System – Maintenance level 3	0 miles	33 miles	33 miles	33 miles
Seasonal Open System – Maintenance level 2	0 miles	13.5 miles	13.5 miles	13 miles
Closed System – Maintenance level 1	0 miles	32.5 miles	32.5 miles	24.5 miles
Other Road Activity				
New temporary road construction (will be decommissioned post project)	0 miles	3 miles	0 miles	2.25 miles
System roads decommissioned (Appendix G, Table G-3)	0 miles	0 miles	31 miles	0 miles
Unauthorized non-system roads and ATV trails decommissioned	0 miles	0 miles	15 miles	0 miles
Danger Tree Removal	Ongoing	As Needed	As Needed	As Needed
Economics				
Total Timber Value at Predicted High Bid Rate (Revenue)	\$0	\$2,315,250	\$1,701,000	\$1,039,350

Summary

The following table shows a comparative synopsis by alternative to purpose and need statements made in Chapter 1. In this table the numbers of acres in some categories overlap and are not to be considered additive. This is the result of more than one action occurring on the same acre.

Table S-5 Comparison Response to Purpose and Need by Alternative

Purpose and Need	Alternative A	Alternative B	Alternative C	Alternative D																																																																								
<p>Forest Species Composition Existing tree species composition is not within its historical range of variability.</p> <p>Before implementation dry upland forest potential vegetation groups (PVG) had 3 cover types outside of HRV and moist upland forest PVG had 6 cover types that were outside of HRV (Chapter 3, Table 3-18).</p>	<p>No silvicultural activities would occur to change existing species composition on the total forest vegetation affected environment (about 14,060 acres) see Chapter 3, Table 3-16.</p> <table border="1" data-bbox="470 651 825 1089"> <thead> <tr> <th>Species</th> <th>Pre acres</th> <th>Percent</th> </tr> </thead> <tbody> <tr> <td>Herb-shrub</td> <td>210</td> <td>1</td> </tr> <tr> <td>Ponderosa Pine</td> <td>1,910</td> <td>14</td> </tr> <tr> <td>Douglas-fir</td> <td>2,100</td> <td>15</td> </tr> <tr> <td>Western Larch</td> <td>310</td> <td>2</td> </tr> <tr> <td>Lodgepole Pine</td> <td>300</td> <td>2</td> </tr> <tr> <td>Grand fir</td> <td>6,840</td> <td>49</td> </tr> <tr> <td>Spruce-fir</td> <td>2,390</td> <td>17</td> </tr> </tbody> </table>	Species	Pre acres	Percent	Herb-shrub	210	1	Ponderosa Pine	1,910	14	Douglas-fir	2,100	15	Western Larch	310	2	Lodgepole Pine	300	2	Grand fir	6,840	49	Spruce-fir	2,390	17	<p>Post implementation acres on the total forest vegetation affected environment (about 14,060 acres) see Chapter 3, Table 3-25.</p> <table border="1" data-bbox="850 651 1226 1089"> <thead> <tr> <th>Species</th> <th>Post acres</th> <th>Percent</th> </tr> </thead> <tbody> <tr> <td>Herb-shrub</td> <td>210</td> <td>1</td> </tr> <tr> <td>Ponderosa Pine</td> <td>2,060</td> <td>15</td> </tr> <tr> <td>Douglas-fir</td> <td>2,770</td> <td>20</td> </tr> <tr> <td>Western Larch</td> <td>1,750</td> <td>12</td> </tr> <tr> <td>Lodgepole Pine</td> <td>200</td> <td>1</td> </tr> <tr> <td>Grand fir</td> <td>4,910</td> <td>35</td> </tr> <tr> <td>Spruce-fir</td> <td>2,160</td> <td>15</td> </tr> </tbody> </table> <p>After implementation dry upland forest PVG has 2 cover types outside of HRV and moist upland forest PVG has 5 cover types that are outside of HRV (Chapter 3, Table 3-26).</p>	Species	Post acres	Percent	Herb-shrub	210	1	Ponderosa Pine	2,060	15	Douglas-fir	2,770	20	Western Larch	1,750	12	Lodgepole Pine	200	1	Grand fir	4,910	35	Spruce-fir	2,160	15	<p>Same as Alternative B</p>	<p>Post-implementation on the total forest vegetation affected environment (about 14,060 acres) see Chapter 3, Table 3-34.</p> <table border="1" data-bbox="1533 651 1908 1089"> <thead> <tr> <th>Species</th> <th>Post acres</th> <th>Percent</th> </tr> </thead> <tbody> <tr> <td>Herb-shrub</td> <td>210</td> <td>1</td> </tr> <tr> <td>Ponderosa Pine</td> <td>2,060</td> <td>15</td> </tr> <tr> <td>Douglas-fir</td> <td>2,620</td> <td>19</td> </tr> <tr> <td>Western Larch</td> <td>1,090</td> <td>8</td> </tr> <tr> <td>Lodgepole Pine</td> <td>200</td> <td>1</td> </tr> <tr> <td>Grand fir</td> <td>5,840</td> <td>42</td> </tr> <tr> <td>Spruce-fir</td> <td>2,040</td> <td>15</td> </tr> </tbody> </table> <p>After implementation dry upland forest PVG has 2 cover types outside of HRV and moist upland forest PVG has 5 cover types that are outside of HRV (Chapter 3, Table 3-35).</p>	Species	Post acres	Percent	Herb-shrub	210	1	Ponderosa Pine	2,060	15	Douglas-fir	2,620	19	Western Larch	1,090	8	Lodgepole Pine	200	1	Grand fir	5,840	42	Spruce-fir	2,040	15
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<p>Forest Structural Stages Existing forest structural stages are not within the historical range of variability.</p> <p>Before implementation dry upland forest PVG had 4 structural stages that were outside of HRV and moist upland forest PVG had 5 structural stages that were outside of HRV (Chapter 3, Table 3-20).</p>	<p>No silvicultural activities would occur to change forest structural stages on total forest vegetation affected environment (about 14,060 acres) see Chapter 3, Table 3-19.</p> <table border="1" data-bbox="470 444 823 1187"> <thead> <tr> <th>Structural Stage</th> <th>Pre Acres</th> <th>Percent</th> </tr> </thead> <tbody> <tr> <td>Stand Initiation</td> <td>570</td> <td>4</td> </tr> <tr> <td>Stem Exclusion Open Canopy</td> <td>2,710</td> <td>19</td> </tr> <tr> <td>Stem Exclusion Closed Canopy</td> <td>3,000</td> <td>21</td> </tr> <tr> <td>Understory Reinitiation</td> <td>4,200</td> <td>30</td> </tr> <tr> <td>Young Forest Multi Strata</td> <td>310</td> <td>2</td> </tr> <tr> <td>Old Forest Multi Strata</td> <td>1,120</td> <td>8</td> </tr> <tr> <td>Old Forest Single Stratum</td> <td>2,140</td> <td>15</td> </tr> </tbody> </table>	Structural Stage	Pre Acres	Percent	Stand Initiation	570	4	Stem Exclusion Open Canopy	2,710	19	Stem Exclusion Closed Canopy	3,000	21	Understory Reinitiation	4,200	30	Young Forest Multi Strata	310	2	Old Forest Multi Strata	1,120	8	Old Forest Single Stratum	2,140	15	<p>Post implementation acres on the portion of total forest vegetation affected environment (about 14,060 acres) see Chapter 3, Table 3-28.</p> <table border="1" data-bbox="848 444 1228 1187"> <thead> <tr> <th>Structural Stage</th> <th>Post Acres</th> <th>Percent</th> </tr> </thead> <tbody> <tr> <td>Stand Initiation</td> <td>1,370</td> <td>10</td> </tr> <tr> <td>Stem Exclusion Open Canopy</td> <td>3,400</td> <td>24</td> </tr> <tr> <td>Stem Exclusion Closed Canopy</td> <td>1,940</td> <td>14</td> </tr> <tr> <td>Understory Reinitiation</td> <td>3,140</td> <td>22</td> </tr> <tr> <td>Young Forest Multi Strata</td> <td>310</td> <td>2</td> </tr> <tr> <td>Old Forest Multi Strata</td> <td>1,040</td> <td>7</td> </tr> <tr> <td>Old Forest Single Stratum</td> <td>2,860</td> <td>20</td> </tr> </tbody> </table> <p>After implementation dry upland forest PVG has 2 structural stages that are outside of HRV and moist upland forest PVG has 4 structural</p>	Structural Stage	Post Acres	Percent	Stand Initiation	1,370	10	Stem Exclusion Open Canopy	3,400	24	Stem Exclusion Closed Canopy	1,940	14	Understory Reinitiation	3,140	22	Young Forest Multi Strata	310	2	Old Forest Multi Strata	1,040	7	Old Forest Single Stratum	2,860	20	<p>Same as Alternative B</p>	<p>Post implementation acres on the portion of total forest vegetation affected environment (about 14,060 acres) see Chapter 3, Table 3-37.</p> <table border="1" data-bbox="1535 444 1915 1187"> <thead> <tr> <th>Structural Stage</th> <th>Post Acres</th> <th>Percent</th> </tr> </thead> <tbody> <tr> <td>Stand Initiation</td> <td>670</td> <td>5</td> </tr> <tr> <td>Stem Exclusion Open Canopy</td> <td>3,460</td> <td>25</td> </tr> <tr> <td>Stem Exclusion Closed Canopy</td> <td>2,160</td> <td>15</td> </tr> <tr> <td>Understory Reinitiation</td> <td>3,560</td> <td>25</td> </tr> <tr> <td>Young Forest Multi Strata</td> <td>310</td> <td>2</td> </tr> <tr> <td>Old Forest Multi Strata</td> <td>1,040</td> <td>7</td> </tr> <tr> <td>Old Forest Single Stratum</td> <td>2,860</td> <td>20</td> </tr> </tbody> </table> <p>After implementation dry upland forest PVG has 2 structural stages that are outside of HRV and moist upland forest PVG has 5 structural</p>	Structural Stage	Post Acres	Percent	Stand Initiation	670	5	Stem Exclusion Open Canopy	3,460	25	Stem Exclusion Closed Canopy	2,160	15	Understory Reinitiation	3,560	25	Young Forest Multi Strata	310	2	Old Forest Multi Strata	1,040	7	Old Forest Single Stratum	2,860	20
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Summary

Purpose and Need	Alternative A	Alternative B	Alternative C	Alternative D																																				
<p>Forest Tree Density Existing tree density classes are not within the historical range of variability.</p> <p>Acres moved from high density to low or moderate density in order to resist insects, diseases, and stand replacing wildfire(s).</p> <p>Before implementation dry upland forest PVG had 2 tree density classes that were outside of HRV and moist upland forest PVG had no classes that were outside of HRV (Chapter 3, Table 3-22).</p>	<p>No silvicultural activities would occur to change tree (stand) density levels on the total forest vegetation affected environment (about 14,060 acres) see Chapter 3, Table 3-21.</p> <table border="1" data-bbox="470 565 825 727"> <thead> <tr> <th>Density class</th> <th>Acres</th> <th>Percent</th> </tr> </thead> <tbody> <tr> <td>Low</td> <td>5,060</td> <td>36</td> </tr> <tr> <td>Moderate</td> <td>5,200</td> <td>37</td> </tr> <tr> <td>High</td> <td>3,800</td> <td>27</td> </tr> </tbody> </table>	Density class	Acres	Percent	Low	5,060	36	Moderate	5,200	37	High	3,800	27	<p>stages that are outside of HRV (Chapter 3, Table 3-29).</p> <p>Implementation of this alternative on the total forest vegetation affected environment of about 14,060 acres would result in the following change in acres in tree density classes (Chapter 3, Table 3-31).</p> <table border="1" data-bbox="850 565 1205 727"> <thead> <tr> <th>Density class</th> <th>Acres</th> <th>Percent</th> </tr> </thead> <tbody> <tr> <td>Low</td> <td>7,050</td> <td>50</td> </tr> <tr> <td>Moderate</td> <td>4,830</td> <td>34</td> </tr> <tr> <td>High</td> <td>2,180</td> <td>16</td> </tr> </tbody> </table> <p>After implementation dry upland forest PVG has 1 tree density class that is outside of HRV and moist upland forest PVG has 2 tree density classes that are outside of HRV (Chapter 3, Table 3-32).</p>	Density class	Acres	Percent	Low	7,050	50	Moderate	4,830	34	High	2,180	16	<p>Same as Alternative B</p>	<p>stages that are outside of HRV (Chapter 3, Table 3-38).</p> <p>Implementation of this alternative on the total forest vegetation affected environment of about 14,060 acres) would result in the following change in acres in tree density classes (Chapter 3, Table 3-40).</p> <table border="1" data-bbox="1533 565 1887 727"> <thead> <tr> <th>Density class</th> <th>Acres</th> <th>Percent</th> </tr> </thead> <tbody> <tr> <td>Low</td> <td>6,140</td> <td>44</td> </tr> <tr> <td>Moderate</td> <td>5,420</td> <td>39</td> </tr> <tr> <td>High</td> <td>2,500</td> <td>18</td> </tr> </tbody> </table> <p>After implementation dry upland forest PVG has 1 tree density class that is outside of HRV and moist upland forest PVG has 1 tree density classes that is outside of HRV (Chapter 3, Table 3-41).</p>	Density class	Acres	Percent	Low	6,140	44	Moderate	5,420	39	High	2,500	18
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<p>Fuels: Treat forest stands in Condition Classes 2 and 3 to begin to restore vegetation characteristics and fire return intervals characteristic of historical fire regimes.</p>	<p>Existing Condition Classes would remain the same in the project planning area.</p> <ul style="list-style-type: none"> • Class 1 Acres - 65 Percent -<1% 	<p>Condition Classes post treatment of project activities for Fire Regimes I, III, and IV</p> <ul style="list-style-type: none"> • Class 1 Acres – 7,950 Percent – 39% 	<p>Same as Alternative B</p>	<p>Condition Classes post treatment of project activities for Fire Regimes I, II, III, and IV</p> <ul style="list-style-type: none"> • Class 1 Acres – 5,170 Percent – 24% 																																				

Summary

Purpose and Need	Alternative A	Alternative B	Alternative C	Alternative D
	<ul style="list-style-type: none"> • Class 2 Acres 17,940 Percent 87% • Class 3 Acres - 2,550 Percent 13% 	<ul style="list-style-type: none"> • Class 2 Acres – 10,480 Percent – 52% • Class 3 Acres – 2,065 Percent – 10% 		<ul style="list-style-type: none"> • Class 2 Acres – 13,295 Percent – 65% • Class 3 Acres – 2,100 Percent – 10%
<p>Fuels: Crown fire potential – decrease the probability of uncharacteristic high intensity wildfires by lowering stand densities, and reducing existing ladder, surface, and canopy fuels</p>	<p>Existing Crown Fire Potential:</p> <p>Dry Forests</p> <ul style="list-style-type: none"> • High – 2,760 acres • Medium – 840 acres • Low – 35 acres <p>Moist Forests</p> <p>High – 10,035 acres Medium – 1,470 acres Low – 0 acres</p>	<p>Crown Fire Potential post treatment:</p> <p>Dry Forests</p> <ul style="list-style-type: none"> • High – 955 acres • Medium – 670 acres • Low – 1,975 acres <p>Moist Forests</p> <ul style="list-style-type: none"> • High – 6,415 acres • Medium – 935 acres • Low – 4,155 acres 	<p>Same as Alternative B</p>	<p>Crown Fire Potential post treatment:</p> <p>Dry Forests</p> <ul style="list-style-type: none"> • High – 1,855 acres • Medium – 730 acres • Low – 1,045 acres <p>Moist Forests</p> <ul style="list-style-type: none"> • High – 7,375 acres • Medium – 1,050 acres • Low – 2,083 acres
<p>Timber Production There is a need to provide sawlogs and wood fiber for utilization by regional and local economies</p>	<p>N/A</p>	<p>See Economics in Table below</p>	<p>See Economics in Table below</p>	<p>See Economics in Table below</p>
<p>Wildlife Habitat There is a need to continue to provide and manage over time, for wildlife habitat and its components (cover and forage).</p>	<p>See Wildlife Habitat in Table below</p>	<p>See Wildlife Habitat in Table below</p>	<p>See Wildlife Habitat in Table below</p>	<p>See Wildlife Habitat in Table below</p>

Summary

Table S-6– Comparison by Alternative of Key Issues and Other Resource Issues

Resource	Alternative A	Alternative B	Alternative C	Alternative D
OLD FOREST HABITAT– Key Issue				
Acres of old forest affected by proposed activities	0 acres	1,010 acres	1,010 acres	430 acres
Acres of old forest connective corridors affected by proposed activities	0 acres	180 acres	180 acres	180 acres
Acres where trees \geq 21 inches DBH may be removed	0 acres	620 acres	620 acres	620 acres
Acres converted to old forest stand structure	0 acres	640 acres	640 acres	640 acres
ACCESS MANAGEMENT – Key Issue				
Miles of temporary road construction (decommissioned after use)	0 miles	3.0 miles	0 miles	2.25 miles
Miles of system road decommissioning	0 miles	0 miles	31 miles	0 miles
Miles of non-system unauthorized roads and trails	0 miles	0 miles	15.5 miles	0 miles
Extension of seasonal road closure	No	No	Yes	No
SOILS				
Detrimental soil disturbance (DSC) in the following:				
• harvest units (acres)	57 acres	248 acres	244 acres	183 acres
• Non-commercial thinning units (acres)	23 acres	40 acres	40 acres	40 acres
• Temporary road construction (acres)	0 acres	7.2 acres	0 acres	5.5 acres

Summary

Resource	Alternative A	Alternative B	Alternative C	Alternative D
<ul style="list-style-type: none"> Roads and trails rehabilitated (acres) 	0 acres	0 acres	94 acres	0 acres
Effective Ground Cover	Within acceptable condition, and meets Forest Plan standards	Within acceptable condition, and meets Forest Plan standards	Within acceptable condition, and meets Forest Plan standards	Within acceptable condition, and meets Forest Plan standards
HYDROLOGY				
Road density – opened and closed by subwatershed (miles per square mile)	S. Fork Asotin Creek – 2.5 Upper George Creek – 3.5	Remain the same as existing condition	S. Fork Asotin Cr. – 2.1 Upper George Cr. – 1.8	Remain the same as existing condition
Number of stream crossings	S. Fork Asotin Creek – 42 Upper George Creek – 40	Remain the same as existing condition	S. Fork Asotin Creek – 30 Upper George Creek – 12	Remain the same as existing condition
Water Temperature	Would improve slowly over time as near channel vegetation grew and provided more shade	Change to water temperature would not be measurable. Effects would be negligible.	Same as Alternative B	Same as Alternative B
Sediment	Sediment is not detectable as streams leave National Forest Service lands	No measurable effect No detectable increase	Same as Alternative B	Same as Alternative B
Equivalent Treatment Acre Model – Percentages by subwatershed	S. Fork Asotin Cr. - 3.1% Upper George Cr. – 3.1%	S. Fork Asotin Cr. – 13.4% Upper George Cr. – 8.9%	S. Fork Asotin Cr. – 13.2% Upper George Cr. – 8.2%	S. Fork Asotin Cr. – 8.9% Upper George Cr. – 5.5%
TES AQUATIC SPECIES				
Snake River Steelhead and Critical Habitat (MIS and ESA – Threatened) - Biological determination	No action	Biological determination of <i>May Effect – Not Likely To Adversely Affect (ME-NLAA)</i> Short-term potential for sediment introduction during seasonal high flows. No measurable offsite effects to hydrologic function, water temperature, or sediment load. Roadwork would reduce erosion.	Same as Alternative B	Same as Alternative B

Summary

Resource	Alternative A	Alternative B	Alternative C	Alternative D
Bull Trout and Critical Habitat (ESA – Threatened) –	No action	<p>Biological determination of <i>May Effect – Not Likely To Adversely Affect (ME-NLAA)</i></p> <p>Short-term potential for sediment introduction during seasonal high flows. No measurable offsite effects to hydrologic function, water temperature, or sediment load. Roadwork would reduce erosion.</p>	Same as Alternative B	Same as Alternative B
Redband Trout (MIS and Sensitive) and Margined Sculpin (Sensitive)	No action	<p>Biological determination of <i>May Impact Individuals Or Habitat But Will Not Likely Contribute To A Trend Towards Federal Listing.</i></p> <p>Short-term time potential for the introduction of sediment and or other materials to the creek during seasonal high flows; however, this is not expected to be measureable above background levels.</p>	Same as Alternative B	Same as Alternative B
All other TE&S Species (Chapter 3, Table 3-15)	No action	<p>Biological determination <i>T&E – No Effect Sensitive – No Impact</i></p>	Same as Alternative B	Same as Alternative B

Summary

Resource	Alternative A	Alternative B	Alternative C	Alternative D
AIR QUALITY				
Tons of Particulate Emission PM _{2.5} - (over a 5-10 yr period)				
Activity Fuels	0	1,035 tons	Same as Alternative B	699 tons
Landscape Burn	0	364 tons		364 tons
Pile Burning	0	478 tons		297 tons
WILDLIFE SPECIES and HABITAT				
Management Indicator Species (MIS)				
Rocky Mountain Elk	Rocky Mountain Elk –	Rocky Mountain Elk	Rocky Mountain Elk	Rocky Mountain Elk
Forest Plan Standards by MA C4 Satisfactory Cover – 15% C3 Satisfactory Cover – 10% MA C4 - HEI - 60 MA C3 - HEI - 70	C4 Satisfactory Cover – 34% C3 Satisfactory Cover – 16% MA C4 - HEI - 71 MA C3 -HEI - 80	C4 Satisfactory Cover – 19% C3 Satisfactory Cover – 12% MA C4 - HEI - 68 MA C3 - HEI - 77	C4 Satisfactory Cover – 19% C3 Satisfactory Cover – 12% MA C4 – HEI – 69 MA C3 – HEI – 77	C4 Satisfactory Cover – 24% C3 Satisfactory – 12% MA C4 - HEI - 68 MA C3 - HEI - 77
Primary Cavity Excavators	Primary Cavity Excavators	Primary Cavity Excavators	Primary Cavity Excavators	Primary Cavity Excavators
Acres of Habitat	Additional snags and large down wood would be created as overstory mortality occurs.	Overall direct, indirect, and cumulative effects would result in a small negative habitat trend for primary cavity excavators. The project would affect less than 1 percent (.006) of the forested land on Umatilla National Forest. The amount of effect is too small to cause changes to cavity excavator populations.	Same as Alternative B	Will affect one third fewer acres in the project planning area.

Summary

Resource	Alternative A	Alternative B	Alternative C	Alternative D
<p>Pileated Woodpecker</p> <p>Acres of Habitat</p>	<p>Pileated Woodpecker</p> <p>There are 7,800 acres of habitat distributed throughout the project planning area of which about 4,000 acres is potential nesting habitat.</p> <p>Existing habitat would remain in its current state in the short-term. In the mid and long-term additional habitat would become available.</p>	<p>Pileated Woodpecker</p> <p>Harvest and fuel treatments would affect about 2,800 acres of existing habitat in the project planning area, (approximately 36%) of which 1,000 acres is potential nesting habitat (25%).</p>	<p>Pileated Woodpecker</p> <p>Same as Alternative B</p>	<p>Pileated Woodpecker</p> <p>Harvest and fuel treatments would affect about 1,300 acres of existing habitat in the project planning area, (approximately 17%), of which 300 acres is potential nesting habitat (7%).</p>
<p>Three-toed Woodpecker</p> <p>Acres of Habitat</p>	<p>Three-toed Woodpecker</p> <p>The project planning area provides approximately 7,000 acres of potential foraging habitat of which 2,800 acres is potential nesting habitat. There may be increases in insect outbreaks, which would benefit three-toed woodpecker.</p>	<p>Three-toed Woodpecker</p> <p>Harvest and fuel treatments would affect about 2,530 acres foraging habitat (36%) of which 540 acres is potential nesting habitat (19%).</p>	<p>Three-toed Woodpecker</p> <p>Same as Alternative B</p>	<p>Three-toed Woodpecker</p> <p>About 1,250 acres foraging habitat (18 %) would be affected by timber harvest and fuels treatments. No nesting habitat would be affected.</p> <p>The remaining 5,750 acres of potential three-toed woodpecker habitat would not be affected by timber harvest and fuels reduction, and would continue to provide foraging and nesting opportunities.</p>
<p>American Marten (Pine Marten)</p> <p>Acres of Habitat</p>	<p>American Marten (Pine Marten)</p> <p>The approximately 2,800 acres of existing marten habitat would remain in its current state in the short-term. In the</p>	<p>American Marten (Pine Marten)</p> <p>Harvest and fuel treatments would affect about 735 acres of marten habitat. Overall direct, indirect, and</p>	<p>American Marten (Pine Marten)</p> <p>Same as Alternative B</p>	<p>American Marten (Pine Marten)</p> <p>Marten habitat would not be affected by harvest because no harvest would occur in moist old forest</p>

Summary

Resource	Alternative A	Alternative B	Alternative C	Alternative D
	long-term additional habitat would be available.	cumulative effects would result in a small negative habitat trend for marten. Because the project impacts less than 1% (.007) of marten habitat on the forest (about 100,000 acres on Umatilla Forest) the amount of effect from this project is too small to cause changes to the population.		
<p>Northern goshawk Acres of habitat.</p> <p>Acres of Habitat</p>	No nests identified within the project planning area. Approximately 4,700 acres of potential habitat was identified.	Harvest and fuel treatments would affect about 1,700 acres (36%) of potential nesting habitat.	Same as Alternative B	Harvest and fuel treatments would affect about 230 acres (5%) of potential nesting habitat.
<p>Neotropical Migratory Birds</p> <p>Acres of Habitat</p>	The current condition of habitats for birds in the planning area would not change in the short-term. Snags would likely increase in number, benefiting many snag associated species.	About 240 acres of single story, open forest ponderosa pine created. Snag reductions would occur as described in cavity excavator section of Chapter 3. Shrub habitat would increase on about 400 acres and closed canopy forest would decrease on about 580 acres.	Same as Alternative B	Same as Alternative B, except that there would not be a decrease in 580 acres of closed canopy forest.
<p>Endangered and Sensitive Terrestrial Species (TES)</p> <p>Biological determination</p>	The current condition for TES species would not likely change in the short-term.	A biological determination has been made that proposed activities would have no effect to Canada lynx and no impact to the following sensitive species: gray wolf, wolverine, Townsend's big-	Same as Alternative B	Same as Alternative B

Summary

Resource	Alternative A	Alternative B	Alternative C	Alternative D
		<p>eared bat, Preble’s shrew, bald eagle, peregrine falcon, mountain quail, green-tailed towhee, striped whipsnake, and northern leopard frog.</p> <p>A biological determination has been made that project activities may impact great gray owl and white-headed woodpecker but would not likely contribute to a trend towards federal listing or cause a loss of viability to the population or species.</p>		
INVASIVE PLANTS(NOXIOUS WEEDS)				
<p>Potential for introducing new infestations: Harvest units - acres Haul Routes - miles</p>	<p>0 acres 0 miles</p>	<p>3,900 acres 79 miles</p>	<p>3,900 acres 79 miles</p>	<p>2,600 acres 71 miles</p>
TES PLANT SPECIES				
<p>Biological Determinations Threatened</p>	No action	No Effect	Same as Alternative B	Same as Alternative B
<p>Sensitive</p>	No action	No Impact		
RANGE				
<p>Livestock distribution (increase or decrease)</p>	No change	<p>Due to increase in forage and accessibility - in the long-term (approximately 5 years) livestock distribution could increase in uplands and decrease in riparian areas.</p>	Same as Alternative B	Same as Alternative B

Summary

Resource	Alternative A	Alternative B	Alternative C	Alternative D
RECREATION				
Developed and Dispersed Recreation	No change	During activities effects of dust, noise, and smoke to developed and dispersed recreation.	During activities effects of dust, noise, and smoke. After road decommissioning a reduction in dispersed campsites off of decommissioned roads. Numerous alternative dispersed sites would be available.	Same as Alternative B
Travel Access	No change	During activities some roads will be temporary closed. No changes to existing travel system after project implementation.	After 4.3 miles of system road decommissioning a 10% reduction in miles of road open to all motorized travel. Seasonal closure on Hogback road would be 10 weeks longer than existing time frame.	Same as Alternative B
VISUALS (SCENERY)				
Visual Quality Objectives	No change	Would meet Forest Plan standards for Visual Quality Objectives	Same as Alternative B	Same as Alternative B
ECONOMICS				
Sale Viability – value of wood fiber per one hundred cubic feet (ccf) above base rates	N/A	\$49.00	\$36.00	\$41.00
Benefit to local and regional economy –number of jobs	N/A	140	140	75

Summary

Resource	Alternative A	Alternative B	Alternative C	Alternative D
POTENTIAL WILDERNESS AREAS (PWAs)				
Using Forest Service Inventory criteria (FSH 1909.12, Chapter 71) to identify PWAs in the project planning area	No change	No PWAs added to inventory	No PWAs added to inventory	No PWAs added to inventory
OTHER UNDEVELOPED LANDS				
Physical and biological resources and social values	No change	Environmental effects to physical and biological resources meet Forest Plan standards and guidelines and other applicable laws.	Same as Alternative B	Same as Alternative B
Change or no change in acres of other undeveloped lands – 8,785 acres	No change in acres	Change in acres (-1,405)	Change in acres (-1,405)	Change in acres (-955)