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Department of  
Agriculture**

**Forest  
Service**

**March 2007**



## **Myrtle Creek HFRA Project**

### **Summary for the Final EIS**



Myrtle Creek Fire, 2003

Kootenai River Valley and Bonners Ferry, Idaho

### **A Healthy Forests Restoration Act Project**

**Bonners Ferry Ranger District  
Idaho Panhandle National Forests  
Boundary County, Idaho**

Myrtle Creek HFRA Project  
FEIS Summary

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Lead Agency:	USDA Forest Service
Responsible Official:	Ranotta McNair, Forest Supervisor Idaho Panhandle National Forests
For Further Information, Contact:	Doug Nishek, project leader Bonners Ferry Ranger District Bonners Ferry, ID 83805 (208) 267-5561

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## Summary

This summary focuses on the needs and goals for a fuels reduction project to reduce risks to the municipal watershed for the community of Bonners Ferry, Idaho. It outlines the background of the project, including the most recent wildfire in the area (Myrtle Creek Fire in 2003, burned approximately 3,450 acres) and the public collaboration that went into development of the Proposed Action and alternatives. The key issues, alternative development, current conditions and desired future conditions, and probable environmental effects are discussed. The Final EIS contains the full documentation for the Myrtle Creek HFRA project.

### **S.1 - Project Background**

Myrtle Creek has been the municipal water supply for the City of Bonners Ferry, Idaho since 1928 and currently serves roughly 3,500 people. As required for a supplier of municipal water, the City regularly monitors water quality<sup>1</sup> to assure compliance with state and federal water quality standards. This monitoring indicates that Myrtle Creek's designated beneficial use for municipal water quality is being fully supported (see the hydrology project files for more information).

However, although Myrtle Creek is stable and resilient, the municipal water supply is at an undesirable risk of degraded water quality. The risk in this particular watershed is elevated by the fact that approximately 13 percent of the watershed is within the perimeter of the Myrtle Creek Fire of 2003. The watershed's sensitivity from the affects of the recent fire is one factor putting the water at risk. Other factors include the current conditions of hazardous fuels and roads, and their potential impacts on sediment production and delivery. Impacts in the event of fire would include loss of vegetative cover and effects to soils. Impacts from roads include landslide potential and surface erosion risks.

The Myrtle Creek Fire not only burned forest lands in the watershed, it also burned across the intake diversion structure for the City's water system, affecting the water quality and requiring the City to switch over to their more expensive (and somewhat limited) emergency backup water supply.

Due to their concern about the potential risk of another catastrophic fire and the consequences to the municipal watershed, the City of Bonners Ferry, Kootenai Tribe of Idaho, and Commissioners of Boundary County approached the Bonners Ferry District Ranger and members of his staff about the

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<sup>1</sup> The City's monitoring program includes inorganic, organic, microbial, and radioactive contaminants; and pesticides and herbicides, as well as turbidity levels.

possibility of a project that would reduce risks to the continued use of Myrtle Creek as the source of municipal water. The Boundary County Community Wildfire Protection Plan<sup>2</sup> identified Myrtle Creek as part of the at-risk community infrastructure for Bonners Ferry, Idaho. Also, the areas proposed for treatment are strategically placed across a landscape that is classified as fire condition class 2, fire regimes I and III. Thus, this project meets the criteria for Authorized Hazardous Fuels Reduction Projects under Section 102 of the *Healthy Forests Restoration Act*.

Forest Service officials are concerned that the Myrtle Creek watershed may not be able to withstand another catastrophic wildfire without sustaining major damage to its water quality. This project responds to the community's request to develop a project to protect their watershed after the 2003 wildfire.

Community goals for the municipal watershed were developed over the course of several collaborative public meetings and two field trips conducted under the auspices of the Kootenai Valley Resource Initiative's Myrtle Creek Working Group subcommittee. Always open to all members of the public, the meetings and tours were well attended.

## **S.2 - Project Need**

The need for the project was generated by the differences between the current conditions and the desired conditions of the forest stand structures, forest composition, fuel conditions, and conditions on portions of the road system in the project area – factors that have potential to affect the municipal water supply.

The 2003 Myrtle Creek Fire clearly and undisputedly showed the community that existing conditions in the vegetation can support catastrophic wildfire in the watershed and that such fire has short-term and long-term negative effects on the municipal water supply. The existing conditions also include the topography of the Selkirk Mountains and the documented climate in the area – two physical factors which land managers can not influence, but which they must understand when designing fuels reduction projects. The third side of the “fire triangle” – the only one which land managers can influence – is the fuels and vegetation. The existing road system also includes risks related to sediment production and delivery.

## **S.3 - Project Goals**

The objectives of the project are to:

- Maintain Myrtle Creek watershed as a source of high quality drinking water for the City of Bonners Ferry, Idaho;
- Reduce hazardous fuels in the Myrtle Creek watershed and adjacent forests in Snow Creek watershed; and
- Trend vegetation in Myrtle Creek watershed and adjacent forests in Snow Creek watershed towards conditions that would be less susceptible to catastrophic fire; while maintaining and restoring habitat for fish and wildlife species.

To meet the overarching community goals for the Myrtle Creek watershed (a continuous supply of drinking water and reduced risk of catastrophic wildfire) certain conditions would be beneficial. These

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<sup>2</sup> Boundary County Idaho Wildland/Urban Interface Fire Mitigation Plan, August, 2003 as amended February 24, 2004.

*desired future conditions* describe the ecosystem characteristics that would help reach the objectives of the project.

In summary, the Desired Future Conditions are:

- Decreased intensity and severity of potential wildfire(s) – reduced crown fire hazard.
- Increased potential for successful fire suppression and increased relative safety of suppression crews.
- Decreased risk to the municipal water quality and supply.
- Decreased risk to the water intake facility and infrastructures owned by the City of Bonners Ferry.
- Increase in the vegetation’s resilience to fire, insect and disease outbreaks.

The proposed fuel reduction treatments, in addition to complying with applicable Federal and state laws, are designed to meet the following goals:

- Reduce forest fuels.
- Reduce the risk and after effects of uncharacteristic and undesirable fires, especially crown fires.
- Trend toward restored stand composition and stand resilience to disturbances such as drought, insect and disease, and fire.
- Reduce risk to life, property, natural resources, and wildfire suppression resources.

#### **S.4 - The Proposed Action / Preferred Alternative**

The Forest Service’s proposed action, described as Alternative 2, is also the Preferred Alternative. This alternative would create landscape fuel treatments in strategic locations in the Myrtle and Snow Creek drainages to decrease the intensity of future wildfires and lessen the risk to firefighters. The dense, overcrowded stands of trees in the Myrtle and Snow Creeks drainages are the result of many years of fire suppression, and are declining in health, which makes them more susceptible to insect and disease outbreaks. Heavy surface fuels combined with “ladder fuels” (such as branches, shrubs or an under-story layer of trees) allow fires to spread from the ground to the canopy. These conditions increase the risk of extreme fire behavior during high danger, pose unsafe hazards to fire fighters, and make ground and aerial resources ineffective in mounting a direct attack on wildfires.

Some of the proposed strategic fuel treatments would fall within the Selkirk and Kootenai Peak inventoried roadless areas which are adjacent to the Myrtle Creek Road (the road separates a portion of the two areas). Helicopter logging is the recommended method of removal for the cutting units in the roadless areas, consistent with the Roadless Area Conservation Rule. No new roads would be constructed in the project area. Timber removal would be limited seasonally in order to provide protection for federally protected grizzly bears.

The purpose and need are consistent with the National Fire Plan (National Fire Plan, 2000), the Land and Resource Management Plan for the Idaho Panhandle National Forests (USDA Forest Service, 1987) and are also in accordance with the Healthy Forest Restoration Act (HFRA), P.L.108-148 (USDA-FS, USDI-BLM, 2004) and the Roadless Area Conservation Rule (RACR, 2001).

Alternative 2 is consistent with the 2001 Roadless Area Conservation Rule (RACR) that generally prohibits road construction and timber removal in inventoried roadless areas on National Forest System lands, with certain exceptions (incorporated at 36 CFR § 294.13(b)(1)). The Rule states that timber (generally small diameter timber) may be cut, sold, or removed in inventoried roadless areas if the Responsible Official determines that one of a set of specified circumstances exists (§ 294.13(b)(1) through 13(b)(4)). Alternative 2 is consistent with exception 294.13(b)(1)(ii), as follows: To maintain or

restore the characteristics of ecosystem composition and structure, such as to reduce the risk of uncharacteristic wildfire effects, within the range of variability that would be expected to occur under natural disturbance regimes of the current climatic period.

The Responsible Official has made the following determinations:

- The trees to be removed in this project consist of generally small-diameter timber.

The irregular shelterwood prescriptions are in stands generally dominated by trees smaller than 10 inches DBH. The large diameter western larch, white pine, and Douglas-fir (in addition to large-diameter trees of other species) would be retained in the overstory and no future overstory removals would be scheduled.

The commercial thinning prescriptions would focus on retention of the biggest and best trees available in the stand. The average size of the trees removed would typically be less than 9 inches DBH.

- The treatments are needed to maintain or restore desirable characteristics of ecosystem composition and structure to reduce the risk of uncharacteristic wildfire effects.

The fuels reduction treatments will trend the treated areas toward stand conditions that more closely resemble their natural or historic conditions, which in turn trends the treated areas toward their historic fire regimes and toward a lower, more desirable and sustainable Fire Regime Condition Class. The treated stands will trend toward their historic conditions of less fuel buildup (particularly ladder fuels), stands that are less dense (resulting in more open tree canopies), and stand composition and structure that is more sustainable, adaptable and resilient to fire. After the slash is burned in the treated areas, the predicted fire behavior (such as lower flame lengths, slower rates of spread) and crown fire hazard will be reduced. Where treated, there will be a reduced chance of fire causing uncharacteristic and undesired mortality in the stands, and an increased likelihood that firefighters will be able to safely suppress the fire.

There will be no construction of roads or other facilities, such as trails or day use areas, in the Inventoried Roadless Areas.

**Alternative 1 (No Action) and Alternative 5** do not include activities in Inventoried Roadless Areas, therefore the Roadless Rule would not apply to either of these alternatives.

## **S.5 - Issues Identified During Project Development**

During collaboration with the Myrtle Creek Working Group, the following resource issues were among the many topics of discussion: old growth forests, road construction (in particular in the Selkirk and Kootenai Peak Roadless Areas), and wildlife habitat (in particular grizzly bear core habitat). Please keep in mind that the role of Kootenai Valley Resource Initiative\* and the Myrtle Creek Working Group was to outline the goals for the watershed, and it was the task of the Forest Service Interdisciplinary Team to analyze the project and determine the management activities that would achieve those goals.

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\* The Kootenai Valley Resource Initiative (KVRI) was formed in 2001 under a Joint Powers Agreement by the Kootenai Tribe of Idaho, Commissioners of Boundary County, and the City of Bonners Ferry, Idaho. KVRI establishes sub-committee “working groups” as necessary to provide a forum for public collaboration on resource issues important to KVRI and the community. The sub-committees forward recommendations to the 11-member KVRI Board, who then takes the appropriate action with the affected or interested agencies or members of the public.

Presentations by Forest Service employees and discussions during the Working Group meetings included the following<sup>□</sup> topics:

- Silvicultural objectives and various silvicultural prescriptions (thinning, group selection, shelterwood, seed tree, etc.), including photos of stands in need of treatment and the same stands following treatment.
- Identification of areas more likely to burn and pose a risk to the water supply, and the proposed treatments to reduce risks.
- Possible activities in Inventoried Roadless Areas, including the construction of temporary roads to access proposed treatment areas.
- Possible fuels reduction treatments in old growth stands.
- Watershed hydrology concerns, including the current conditions of roads in the area, as well as the potential effects of wildfire burning in the locations identified for treatment (effects if there were no treatment, compared to lesser effects after treatment).
- Wildlife concerns and the ways that the biologist and silviculturist work together to develop silvicultural prescriptions that meet both silviculture and wildlife objectives.
- Potential effects to fisheries, including bull trout and westslope cutthroat trout.

Key issues (including characteristics by which they would be measured) were used to develop the Proposed Action and alternatives, and in analysis of the potential effects to the resources.

**Key Issues:**

*Aquatics (Watershed/Hydrology):*

Watershed Condition, Water Yield, Sediment Yield, Channel Morphology, and Water Quality.

*Fire and Fuels:*

Condition Class, Crown Fire Hazard, Fuel Model, Risk to Life and Resources

*Old Growth:*

Trend Toward Restoration, Risk of Stand-Replacing Fire

*Inventoried Roadless Areas:*

Miles of Road Construction, Potential Changes in Roadless Area Characteristics

*Soil Resources:*

Soil Disturbance, Soil Productivity, and Potential Effects From Wildfire

**Analysis Issues:**

Analysis issues, while not key to alternative development, were important for their value in defining specific protective measures, and to measure the effects of each alternative on different forest resources. Such issues included potential effects to wildlife, in particular species such as the grizzly bear and Canada lynx, as well as Management Indicator species and Sensitive species. The potential effects to the fisheries resource were also analyzed, including bull trout and westslope cutthroat trout. Rare plants and noxious weeds, and recreation were also included as analysis issues.

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<sup>□</sup> not an all inclusive list, see the complete Final EIS and project file for more information

This map displays the general vicinity of the project within Boundary County in North Idaho. It also displays the areas proposed for fuels reduction treatments under Alternative 2, as well as the perimeter of the 2003 Myrtle Creek Fire.

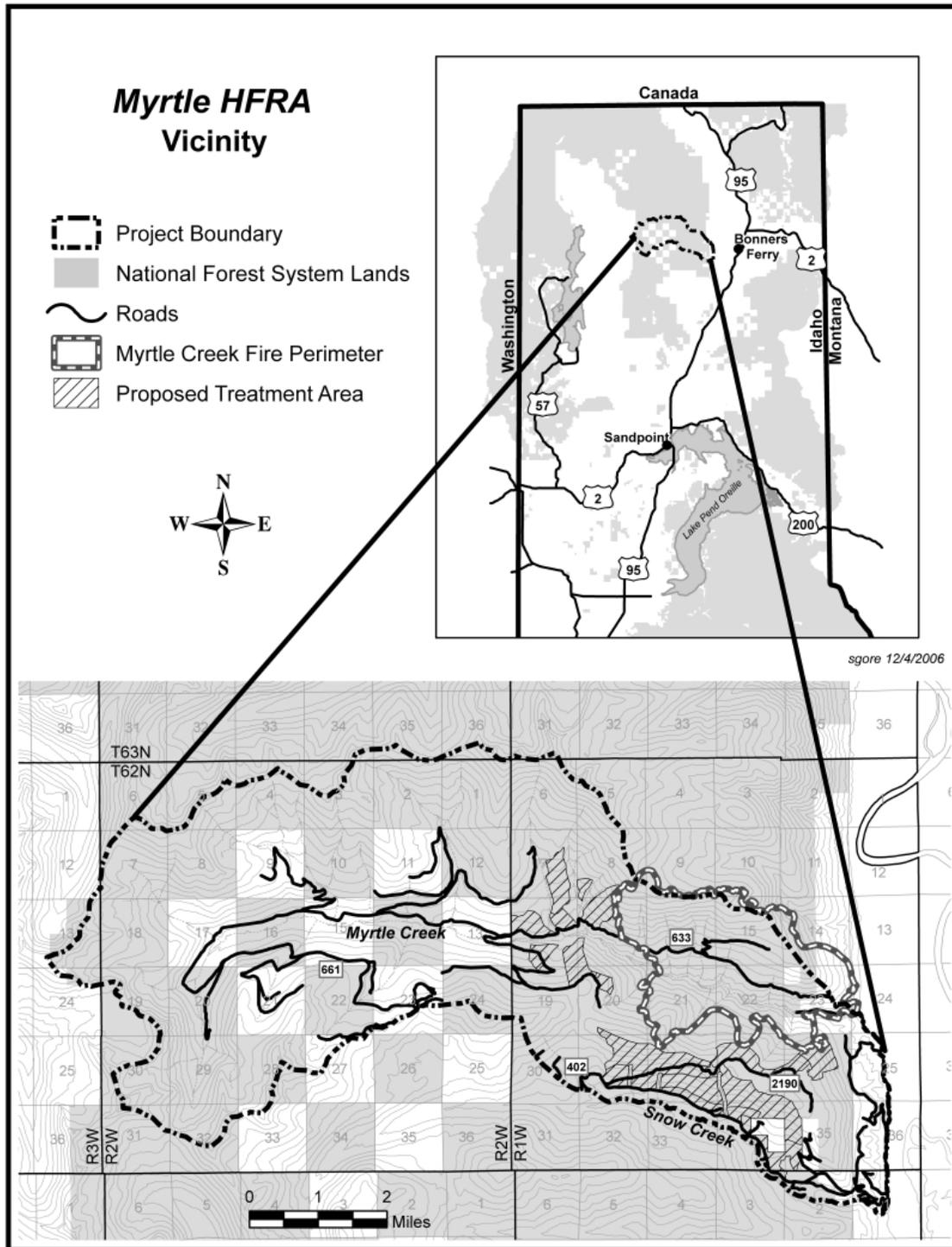


Figure S.1 Vicinity Map of the Myrtle Creek Project Area

## **S.6 - Alternatives Analyzed in Detail**

Three alternatives were analyzed in detail, including No Action (Alternative 1), the Proposed Action (Alternative 2), and Alternative 5, which was analyzed in response to public feedback following release of the Draft EIS. This section includes a summary of each alternative, followed by maps and detailed features tables for Alternatives 2 and 5.

### Alternative 1 - No Action

The No Action alternative provides resource specialists a means to evaluate the current ecosystem conditions as a baseline. It can also be used to compare the projected effects of each management alternative. The decision-maker and members of the public can use No Action to look at the differences that would take place under other alternatives, as well as the consequences of not conducting treatments at this time if this alternative is selected. Selection of this alternative would defer all proposed treatment activities.

It is important to keep in mind that “No Action” does not mean there would be no further management within the project area. The current level of management would continue. Activities such as fire suppression, projects analyzed in earlier environmental analysis and decisions, and routine road and trail maintenance would continue. The reasonably foreseeable activities, which would not be affected by this EIS and subsequent Record of Decision, are included, as appropriate, in the resource analyses (such as Hydrology, Fire/Fuels, Old Growth).

Under the No Action alternative, none of the proposed silvicultural and hazardous fuel treatments, prescribed burning, road improvement or watershed improvement activities would be implemented with this project. Stand health would decline as the competition for water and soil nutrients continues, and fuels would continue to build up with continued fire suppression, leading to increased risk of undesirable stand-replacing fires and their associated negative effects over time. The 2003 Myrtle Creek Fire burned approximately 13 percent of the watershed. Thus, there is greater concern over the potential effects of more unwanted wildfire in the drainage, given the potential additive impacts a subsequent fire would have.

### Alternative 2 - Proposed Action - Summary

The Proposed Action was developed through consideration of public comments and collaboration with and feedback from the KVRI Myrtle Creek Working Group following numerous specialist presentations and group discussions concerning proposed silvicultural treatments (including a detailed explanation of various silvicultural prescriptions) and probable effects of treatments on various resources in the project area.

The Proposed Action is designed to meet the purpose and need for this project (described earlier).

The main topics that were discussed in detail during the KVRI Myrtle Creek Working Group collaboration meetings and integrated into the proposed action are as follows:

- Watershed health - effects of roads, sedimentation, turbidity, risk of culvert failures and 100-year storms.
- The role of fire, historical events and the resulting effects to resources in the project area.
- Fuels management options and fire suppression tactics.

- Vegetation management and silvicultural treatments – Forest types in the watershed, specifically dry forest old growth stands and their dependence on understory fires every 10 to 20 years; various silvicultural prescriptions with photos showing “before and after” examples.
- Soils – Landforms, hydrophobic soils, nutrient cycling, soil compaction.
- Wildlife species such as grizzly bear and flammulated owl, their respective habitat requirements, and any mitigation requirements.
- Inventoried Roadless Area requirements.

#### Alternative 2 Features:

The Proposed Action would treat approximately 2,086 acres of National Forest System Lands (involving 24 fuels reduction treatment locations), to achieve the following:

- Reduce the amount of ladder fuels and other types of hazardous fuels in overcrowded stands to help create sustainable stand compositions and structures that are adapted/resilient to fire, using a variety of silvicultural and slash disposal tools. Fuels would be treated by methods that use a mixture of ground-based, skyline and helicopter logging systems, dependant on terrain, access and soil conditions.
- Reduce the risk of fire by treating slash through the use of prescribed burning, or with piling and burning.

This alternative also includes road improvements on approximately 29 miles of Forest System roads that would be used as haul routes.

#### Alternative 5 - Summary

This alternative was developed through consideration of public comments received on the Draft EIS and during discussions with the collaboration group.

The main differences in the design for this alternative compared to Alternative 2 (Proposed Action) is that it does not treat the following areas that raised concerns with regional environmental groups.

- Inventoried Roadless Areas
- Dry forest old growth stands
- Grizzly bear core habitat

#### Alternative 5 Features:

The Proposed Action would treat approximately 865 acres of National Forest System Lands (involving 13 treatment locations). It includes road improvements on approximately 22 miles of Forest System roads that would be used as haul routes.

#### Alternatives 2 and 5 – Road Management Features

Road management features are similar for both action alternatives, so they are summarized together (differences are noted).

- Improvements and maintenance of the transportation system (roadside and surface maintenance, etc.) would be made on roads that would be used as haul routes. A map of the haul routes is included in the Map Appendix.
  - Under Alternative 2 this would include approximately 29 miles of haul route roads.
  - Under Alternative 5 this would include approximately 22 miles of haul route roads.

- Under both alternatives, about 0.6 mile of Road 402 C (spur road) would be reopened for access to conduct fuels reduction treatments in Units G2, G3 and G4. This spur road (total length of approximately one mile) would be decommissioned (by full obliteration) after treatments and follow-up activities are complete. (This activity is described as reconstruction and decommission in various tables and sections of this FEIS.)
- Under both alternatives, approximately one mile of Road 1309 UA (spur road) would be decommissioned. The road is non-drivable due to brush and tree encroachment. The culverts are starting to fail and there is a risk of sediment delivery to Myrtle Creek (see map of priorities for road decommissioning in the Map Appendix; and Watershed Report, in the project files).

Alternatives 2 and 5 also include numerous design criteria or features developed by the resource specialists to address the issues that did not warrant analysis of separate alternatives. A complete listing of the Features and Design Criteria for the Action Alternatives, is included in Section 2.9 of the FEIS.

### **S.7 - Silvicultural Prescriptions / Fuels Reduction Treatments**

Several fuels reduction methods, by means of selected silvicultural prescriptions, would be used to meet the Purpose and Need for this project. In general, each silvicultural prescription would remove trees that typically average about 10 inches DBH or smaller (project file tree data and summaries). The following descriptions apply to Alternatives 2 and 5.

**Commercial thinning** would improve the health and vigor of the residual stands by favoring the development of the biggest and best quality trees. Ponderosa pine, western larch and white pine would be the favored species. Generally, the larger-diameter trees with full live crowns would be retained. Poor quality smaller trees (mostly suppressed trees with very little live crown) would be targeted for removal.

**Group selection** prescriptions (uneven-aged management) would create a mosaic of forested openings and thinned areas. The openings would treat the areas in the stand with the highest risk of insect, disease and ladder fuels. Ponderosa pine and larch would regenerate in these openings; the thinned areas would favor the retention of the largest existing ponderosa pine, Douglas-fir, and larch. This prescription would also be used to increase the overall quality and integrity of the dry forest old growth stands by giving the larger trees access to more nutrients and water to meet their large metabolic needs and fuel their defense mechanisms against insect and disease attacks. Removing ladder fuels from below and around the large old relic trees would lower the risk of stand-replacing crown fires in the future. Periodic treatments such as thinning and underburning would be used every 15 to 20 years to develop and maintain historical values relating to stand composition, structure, fuel loadings and wildlife snags.

**Regeneration harvesting** would use the **irregular shelterwood** with reserve tree method in stands that are currently overcrowded and the overstories are dominated by lodgepole, larch and Douglas-fir, and the understories are nearly impenetrable thickets of grand fir, cedar, and hemlock. The objective of both methods is to improve health and vigor and favor development of larch and white pine. Generally, the larger-diameter trees with full live crowns would be retained for seed, shelter and future snags for the regenerated stand. To help meet fuel reduction objectives, dead and dying trees not needed to meet snag management requirements would be removed, and logging slash and undesirable understory trees would be burned using grapple piling and underburning where appropriate. Units would be reforested with ponderosa pine, larch and white pine where appropriate.

**Underburning** would have multiple roles in the restoration of historic attributes in the treatment units. Fire would be used as tool to burn slash, recycle nutrients, resprout decadent shrubs (browse for wildlife), reduce heavy duff layers around relic trees, harden the bases of ponderosa pine (creating long-standing, rot-resistant snags for wildlife), and prepare the units for natural or artificial regeneration (planting) into seral species.

### Openings

As required by the Forest Service Manual (FSM 2471.1), openings created through the use of regeneration harvest that are greater than 40 acres in size need approval from the Regional Forester.

The proposed openings that would exceed 40 acres (Units B1, B4, B5, B6, D6, E3, and G1) have been incorporated into the watershed, wildlife, fire, vegetation, visual and other analyses. These openings are strategically placed fuel breaks that are an integral part of the fuels reduction strategy in the project area. The district received approval from the Regional Forester to exceed the 40-acre limit (see project file).

## S.8 - Summary of the Alternatives

The tables in this section present summaries and comparisons of all alternatives. Acreages and lengths of road segments are estimates based on field visits, aerial photo interpretation, TSMRS database information, and GIS/GPS data.

**Table S.1 Silvicultural, Fuels Treatment and Transportation Management Features, by Alternative**

<b>Feature</b>	<b>Alt 1</b>	<b>Alt 2</b>	<b>Alt 5</b>
<b>Regeneration Prescriptions (acres)</b>			
Irregular Shelterwood (ISW)	0	867	206
Group Selection (GS)	0	1030	522
<b>Total Regeneration Treatments</b>	0	1897	728
<b>Partial Cut Prescriptions (acres)</b>			
Commercial Thin (CT)	0	189	139
<b>Total Partial Cut Prescriptions</b>	0	189	139
<b>Total Acres of Vegetation Treatments</b>	0	2086	865
<b>Logging Systems (acres)</b>			
Ground based	0	540	292
Skyline	0	417	203
Helicopter	0	1129	370
<b>Fuels Treatment (acres)</b>			
Grapple Pile	0	1022	346
Underburn	0	1064	519
<b>Total Acres of Fuels Treated</b>	0	2086	865
<b>Transportation System Management (miles)</b>			
Temporary Road Reconstruction – *decommission following use	0	0.6	0.6
Road Improvements	0	29	22
Identified for Road Decommissioning**	0	1	1

\*Approximately 0.6 mile of Road 402-C would be reconstructed. Following post-harvest activities, this road plus an additional 0.4 mile to the junction with main Road 402 would be decommissioned.

\*\* Road 1309-UA which is approximately 1 mile in length.

## Fire and Fuels

For the summary shown in this table, the fire behavior indicator values are for periods of high fire danger – a hot and dry year. Key items to note in this table are the improvements in the areas that would be treated compared to not being treated.

Under the current conditions, a fire in these areas is predicted to produce flame lengths of 29 feet, which would be unsafe for firefighters and direct attack to suppress the fire would not be a viable option. In treated areas, flames lengths would be approximately 1.3 feet, allowing direct attack by hand crews and suppression efforts would have high production rates.

Within the treated areas, the fire is predicted to remain on the ground (surface fire) and not climb into the tree crowns; the rate of spread would also be greatly decreased, from approximately 68.6 chains/hour in untreated areas to approximately 2.5 chains/hour in the treated areas. The predicted surface fire vs. crown fire, and reduced rate of spread are both factors in reducing the risk to the public, firefighters and resources. The change in fire severity from moderate-high for untreated areas, to low for treated areas also indicates less risk and greater suppression capabilities.

Alternative 2 would bring about these desired changes on approximately 2086 acres, compared to approximately 865 acres under Alternative 5 and 0 acres under Alternative 1 (No Action).

**Table S.2 Fire and Fuels Features and Effects, by Alternative**

Indicator	Alternative 1	Alternative 2		Alternative 5	
	(No Action)	(Proposed Action)			
Improvement in Condition Class (Acres)	0	2,086 total		865 total	
		Myrtle Cr 900	Snow Cr 1186	Myrtle Cr 96	Snow Cr 769
<b>Fuels</b>					
Fuel Model	10	8		8	
<b>Crown Fire Hazard</b>					
Potential Flame Length (Feet)	29.0	1.3		1.3	
Canopy Base Height (Approx. Feet)	1.0	6.0		6.0	
Canopy Bulk Density (Approx. kg/m <sup>3</sup> )	0.30	0.15		0.15	
Change in Predicted Fire Type (measured on the treated acres) (This is not a prediction of the size of fire should one occur.)	Crown Fire No change from existing conditions	Change from Crown Fire to Surface Fire on 2086 Acres Total		Change from Crown Fire to Surface Fire on 865 Acres Total	
		Myrtle Cr 900	Snow Cr 1186	Myrtle Cr 96	Snow Cr 769
Potential Rate of Spread (Chains/hour)	68.6	2.5		2.5	
<b>Risk to Life and Resources - Suppression Capabilities</b>					
Direct Attack by Hand Crews	No	Yes		Yes	
Production Rates	Low	High		High	
Fire Severity *	Mod.-High	Low		Low	

\*Fire Severity – A product of fire intensity and residence time (the time, in seconds, required for the flaming front of a fire to pass a stationary point at the surface of the fuel, i.e. the total length of time that the flaming front of the fire occupies one point). Generally greater in a Fuel Model 10 compared to a Fuel Model 8 due to the presence of heavy down woody material that contributes to longer burn periods and smoldering (Brown, Reinhardt, Kramer 2003).

## Old Growth

In the dry forest types, old trees need relatively open conditions to maintain modest growth rates and survive several hundred years. Trees with low vigor are unable to marshal enough resources to maintain adequate defense. Large trees growing in a dense layer of smaller trees (as is occurring in the assessment area where dry forest old growth stands are characterized by dense canopies of small-diameter Douglas-fir in the understory and scattered patches of old growth ponderosa pine in the overstory) are especially vulnerable to attack, underscoring the importance of maintaining reasonable growth rates (Arno and Fiedler, 2005).

Given their current composition and structure, the indirect and cumulative effects of No Action in the dry forest old growth stands in the assessment area would be an increased long-term risk of losing valuable components to insects, disease, stress, and ultimately severe fire, which would not only kill small diameter Douglas-fir, but would likely kill the old growth ponderosa pine, western larch, and Douglas-fir as well.

Alternative 2 proposes treatments in 83 acres of allocated dry forest old growth and 159 acres of potential dry forest old growth (242 acres total). Analysis model results estimated that the risk of stand-replacing fire in *dry forest old growth* stands would be reduced by 62%, while overall reduction in *dry forest* stands would be 54%. The treatments would also help maintain the health and vigor of the dry forest old growth stands.

Alternative 5 does not include treatments in any old growth type forests, thus its direct effects would be similar to Alternative 1 – No Action. Analysis model results estimate there would be a slight (1%) increase in the risk of stand-replacing fire in *dry forest old growth* within the project area. The dry forest old growth forests would continue to decline in health over time. However, Alternative 5 does include treatments in more than 500 acres of dry forest types that do not meet the IPNF’s minimum criteria for old growth allocation; the model estimates a 55% reduction in the risk of stand-replacing fire in treated *dry forest types*.

**Table S.3 Effects to the Dry Forest Old Growth Stands**

Alternative 1 – No Action		Alternative 2		Alternative 5	
Acres trended toward restoration of long-lived seral species such as ponderosa pine and western larch. Restoration and maintenance of these dry forest types is a primary concern for their short and long term resilience to drought, insects and disease.	0 ac.	Acres trended towards restoration of long-lived seral species such as ponderosa pine and western larch. Restoration and maintenance of these dry forest types is a primary concern for their short and long term resilience to drought, insects and disease.	242 ac.	Acres trended towards restoration of long-lived seral species such as ponderosa pine and western larch. Restoration and maintenance of these dry forest types is a primary concern for their short and long term resilience to drought, insects and disease.	0 ac.
Reduction of risk of stand replacement fire in old growth stands.	None	Reduction of risk of stand replacement fire in old growth stands.	62% in treated stands	Reduction of risk of stand replacement fire in old growth stands.	55% in treated stands

**Watershed/Hydrology Summary of Effects**

These tables summarize current conditions and estimated effects. No activities are proposed in the upper portion of Myrtle Creek or the upper portion of Snow Creek. Several issue indicators have common thresholds as shown (additional information is included in the Watershed Hydrology sections of Chapters 3 and 4, and Appendix D). The thresholds for water quality were supplied by the City of Bonners Ferry (the project file contains the Environmental Protection Agency’s listing of national primary drinking water standards, received from the City). See Table 2.2 for descriptions of the indicators and the items used to measure existing conditions and degree of change.

**Effects of No Action - Alternative 1:** This alternative does not include road re-opening (Road 402-C), road decommissioning, silvicultural or fuels reduction treatments; thus there would be no effects to hydrology from such types of activities. However, no restoration or watershed improvement, or fuels reduction treatments would occur either. Not treating stands currently at high risk may increase the risk of the following events: stand loss due to wildfire, severe burning, erosion, and negative impacts to water quality, water yield, and peak flows.

Silvicultural (fuels reduction) treatments would not occur and stand conversion toward more desirable conditions would be delayed compared to Alternatives 2 or 5. The continued accumulation of dead and down fuels would contribute to an increased potential for locally severe fire effects on hydrology, including increased erosion, increased peak flows, increased water yields, and degradation of water quality. In the event of a fire or rain-on-snow event, the risk of roads that are not maintained contributing to sediment production would not be lessened.

**Table S.4 Watershed / Hydrology Summary of Effects**

**Entire Myrtle Creek Watershed**

Issue Indicator	Common Threshold	Existing Condition	Alt 1 Change	Alt 2 Change	Alt 5 Change
Water Yield	10 to 20 percent	6% above baseline	See Effects of No Action, above.	2 % increase●	0% change
Peak Flow	10 to 20 percent	6% above baseline		2 % increase●	0% change
Sediment Erosion	Clean Water Act guidelines for municipal watersheds	33% above baseline		1 % increase●	0% change
Equivalent Clearcut Area	< 15% = Low, 15-30% = Moderate, >30% = High	14 percent		4 % increase○	0% change
Watershed Condition (density in mi/square mi.)	Level of Watershed Disturbance – Road Density ≤1.5 = Low, 1.5 to 3.0 = Moderate, >3.0 = High	Road Density is 2.51 mi/ sq mi		<1% decrease○	0% change
Channel Morphology – Risk of Change	Not Properly Functioning	Currently Functioning-at-Risk		Low ●	Low
Water Quality – Risk of Change	# See Note A			Low	Low

**Note A – Effects to Water Quality:** The City of Bonners Ferry monitors physical characteristics (such as turbidity, temperature, alkalinity) of the municipal water (see project files). Daily measurements of turbidity and pH at the intake of the water treatment plant show that the beneficial use for municipal water quality is fully supported.

The summary of effects for the Entire Snow Creek watershed, and the portion of the Deep Creek watershed that is in the Cumulative Effects Analysis Area are shown on the next page

**Watershed/Hydrology Summary of Effects (Table S.4 continued)**

**Entire Snow Creek Watershed**

Issue Indicator	Common Threshold	Existing Condition	Alt 1 Change	Alt 2 Change	Alt 5 Change
Water Yield	10 to 20 percent	3% above baseline	See Effects of No Action, above.	4 % increase ●	2% increase
Peak Flow	10 to 20 percent	4% above baseline		4 % increase ●	2% increase
Sediment Erosion	Clean Water Act guidelines for municipal watersheds	18% above baseline		2 % increase ●	1% increase
Equivalent Clearcut Area	< 15% = Low, 15-30% = Moderate, >30% = High	6 percent		6 % increase ○	4% increase
Watershed Condition	Level of Watershed Disturbance – Road Density ≤1.5 = Low, 1.5 to 3.0 = Moderate, >3.0 = High	Road Density is 2.96 mi/ sq mi		< 1% decrease ○	< 1% decrease
Channel Morphology – Risk of Change	Not Properly Functioning	Currently Functioning-at-Risk		Low●	Low
Water Quality – Risk of Change				Low	Low

● Short-Term Change    ○ Long-Term Change

**Deep Creek**

Issue Indicator	Common Threshold	Existing Condition	Alt 1 Change	Alt 2 Change	Alt 5 Change
Water Yield	10 to 20 percent	5% above baseline	See Effects of No Action, above.	0 % increase ●	0% change
Peak Flow	10 to 20 percent	5% above baseline		0 % increase ●	0% change
Sediment Erosion	Clean Water Act guidelines for municipal watersheds	23% above baseline		1 % increase ●	0% change
Equivalent Clearcut Area	< 15% = Low, 15-30% = Moderate, >30% = High	8 percent		1 % increase ○	0% change
Watershed Condition	Level of Watershed Disturbance – Road Density ≤1.5 = Low, 1.5 to 3.0 = Moderate, >3.0 = High	Road Density is 3.03 mi/ sq mi		0% change ○	0% change
Channel Morphology - Risk of Change	Not Properly Functioning	Currently Functioning-at-Risk		Low ●	Low
Water Quality - Risk of Change				Low	Low

● Short-Term Change    ○ Long-Term Change

**Soil Resource Effects Summary**

**Note 1 – Effects of Alternative 1:** This alternative does not include road re-opening (Road 402-C), road decommissioning, silvicultural or fuels reduction treatments; thus there would be no effects to soils from such types of activities. However, no soil restoration or watershed improvement, or fuels reduction treatments would occur either. Not treating stands currently at high risk will increase the risk of stand loss due to wildfire, severe burning, erosion concerns, and loss of soil nutrients. The introduction of weeds and unwanted flora following a fire could lead to higher competition between less desirable plants and native vegetation.

Silvicultural treatments would not occur and stand conversion toward more desirable conditions would be delayed compared to Alternatives 2 or 5. The continued accumulation of dead and down fuels would contribute to an increased potential for locally severe fire effects on soil, including physical alteration of soil structure and development of hydrophobic layers. In the event of a fire or rain-on-snow event, the risk of roads contributing to sediment production would not be lessened.

**Table S.5 Summary of Effects to Soil Resources, by Alternative**

Issue and Indicators	Alt 1	Alt 2	Alt 5
<b>Soil Disturbance</b>			
Number of Treatment Units at or below 15%	N/A	23 of 24 units	12 of 13 units
Number of Treatment Units with scheduled net improvements	N/A	2	2
Amount of Predicted Detrimental Disturbance -- Total Acres affected	N/A	Total = Approximately 151 acres (includes 57 acres pre-existing disturbance)	Total = Approximately 87 acres (includes 47 acres pre-existing disturbance)
Number of Treatment Units that would meet soil quality requirements post treatment	N/A	24 of 24 units	13 of 13 units
Nutrients - Potential Effects and Mitigation	No Change	Reduced nutrients on site; mitigated by over-wintering in all units. Slash from the tops, limbs and sub merchantable trees would be over wintered, providing nutrient recycling material.	Reduced nutrients on site; mitigated by over-wintering in all units. Slash from the tops, limbs and sub merchantable trees would be over wintered, providing nutrient recycling material.

The soil resource effects summary tables continue on the next page.

**Soil Resource Effects Summary – Table S.5 continued**

<b>Soil Productivity</b>	<b>Alt 1</b>	<b>Alt 2</b>	<b>Alt 5</b>
Coarse Woody Debris - Retained at appropriate levels	See Note 1	Yes	Yes
Areas of soil sterilization, reduced water infiltration, and lost ground cover below burn piles. – Short term, less than 10 years.	See Note 1	Effects would be localized and duration of effects would be short term (less than 10 years).	Effects would be localized and duration of effects would be short term (less than 10 years).
Reduction in ground cover (due to prescribed burns, skid trails, skyline corridors)	See Note 1	Reduction would be short-term (less than 10 years).	Reduction would be short-term (less than 10 years).
Risk of mass failure – Measured as Change in Risk – Generally, limited to steep slopes with saturated soils. Risk is highest for a few years after a stand replacement fire if the dead trees and their root systems fail to anchor the soil profiles. Risk diminishes as the slopes regenerate with young trees and brush, (short term < 10 years).	See Note 1	May increase below units B1, E3, E8, F1, D1, and D2. Concerns limited to steep slopes and roads below units. Adjacent past harvest treatments from the 1980s have since regenerated and no mass failures have occurred.	May increase below units D1 and D2. Risk is low because slopes are moderate and the past adjacent harvest treatments from the 1980's have since regenerated and no mass failures have occurred.

<b>Issue and Indicators</b>	<b>Alt 1</b>	<b>Alt 2</b>	<b>Alt 5</b>
<b>Risk from Wildfire, Degree of Fire Severity*</b>			
Soil Erosion and Mass Movement Potential	See Note 1	Minor Potential Possibility of limited effects, depending on location.	Minor Potential Possibility of limited effects, depending on location.
Soil Health and Productivity Degree of change and level of effects	See Note 1	Small, and in most cases, acceptable affects would influence soil health and productivity.	Small, and in most cases, acceptable effects would influence soil health and productivity.
Chances for High Severity Fire Effects Change compared to No Action	See Note 1	Likely to be Reduced in Treated Areas (approximately 2086 acres)	Likely to be Reduced in Treated Areas (approximately 865 acres)

\* Fire Severity: A product of fire intensity and residence time, it is the time (in seconds) required for the flaming front of a fire to pass a stationary point at the surface of the fuel (the total length of time that the flaming front of the fire occupies one point). See the Fire and Fuels discussions for more information. The fire severity affects the surface fuels, duff layer, and upper layer of soil to varying degrees.

**Table S.6 Inventoried Roadless Areas Effects Summary**

**Selkirk Inventoried Roadless Area**

<b>Characteristic</b>	<b>Alternative 1 (No Action)</b>	<b>Alternative 2 (Preferred Alternative)</b>	<b>Alternative 5</b>
Road Construction	0 miles	0 miles	0 miles
Changes in Natural Integrity	Fuels treatments would not be implemented in either of the IRAs. Untreated stands would continue to trend away from sustainable conditions and the natural integrity.	Fuels reduction treatments will trend toward improvement of the natural integrity, as well as reducing fire risks in the watershed.	Fuels treatments would not be implemented in either of the IRAs. Untreated stands would continue to trend away from sustainable conditions and natural integrity.
Changes in Natural Appearance	Changes in appearance would continue to occur as vegetation species composition and structure change. Although it would appear “natural” to the casual visitor, the area would continue to trend away from the historic vegetation species composition and structure.	Short-term effects such as stumps will be evident, but lessen over time following burning to treat fuels. Treated areas will have a more open park-like appearance than adjacent untreated stands. However, the more open appearance would be within the historic range of what the stands of vegetation looked like as a result of the natural fire regime.	No fuels treatments would be implemented in either of the IRAs. However, changes in appearance would continue to occur as vegetation species composition and structure change. Although it would appear “natural” to the casual visitor, the area would continue to trend away from the historic vegetation species composition and structure.
Changes in Opportunity for Recreation, Solitude	No Change	No Change	No Change
Amount & location of acres affected within the IRA	No Change	Approximately 424 acres of fuels treatments or 0.5% of the entire Selkirk IRA. Treatment areas B1, B4, B5 are adjacent to Myrtle Creek Road. Unit B5 is adjacent to private land. Units B6 and B3 follow Mack Creek and Adverse Creek toward their headwaters	No Change
Changes to Manageability or Boundaries	No Change	No Change - Treatments meet the management area goals identified in the Forest Plan; therefore, they would not likely influence any changes to the manageability of the roadless area or the boundaries.	No Change

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<b>Characteristic</b>	<b>Alternative 1 (No Action)</b>	<b>Alternative 2 (Preferred Alternative)</b>	<b>Alternative 5</b>
<b>Kootenai Peak Inventoried Roadless Area</b>			
Amount of Road Construction	0 miles	0 miles	0 miles
Changes in Natural Integrity	Fuels treatments would not be implemented in either of the IRAs. Untreated stands would continue to trend away from sustainable conditions and the natural integrity.	Fuels reduction treatments will trend toward improvement of the natural integrity, as well as reducing fire risks in the watershed.	Fuels treatments would not be implemented in either of the IRAs. Untreated stands would continue to trend away from sustainable conditions and natural integrity.
Changes in Natural Appearance	Changes in appearance would continue to occur as vegetation species composition and structure change. Although it would appear “natural” to the casual visitor, the area would continue to trend away from the historic vegetation species composition and structure.	Short-term effects such as stumps, skyline corridors in E3 and skid trail corridors in G8 will be evident, but lessen over time following fuels treatments and revegetation. Treated areas will have a more open park-like appearance than adjacent untreated stands.	No fuels treatments would be implemented in either of the IRAs. However, changes in appearance would continue to occur as vegetation species composition and structure change. Although it would appear “natural” to the casual visitor, the area would continue to trend away from the historic vegetation species composition and structure.
Changes in Opportunity for Recreation, Solitude	No Change	No Change	No Change
Amount & location of acres affected within the IRA	No Change	About 734 acres of fuels treatments (approx. 9% of the IRA) Portions of Units D1, D6, and all of D9 are in the narrow stringer along Myrtle Creek in the northwestern part of the roadless area. All three units are adjacent to Road# 1309 that gated through the summer for bear security.	No Change
Changes to Manageability or Boundaries	No Change	No Change - Fuel reduction treatments meet the management area goals identified in the Forest Plan; therefore, they would not likely influence any changes to the manageability of the roadless area or the boundaries.	No Change

## S.9 - Wildlife

The following species were analyzed in detail – Canada lynx and grizzly bear, black-backed woodpecker, flammulated owl, northern goshawk, fisher and pileated woodpecker. Most of the project area lies within established Lynx Analysis Units and designated grizzly bear Recovery Zone, with a portion of the remainder in a grizzly bear recurring use area. Alternatives 2 and 5 both contain features designed to protect wildlife habitat, including the following types of items:

- Retention of snags/wildlife trees and hardwood trees (aspen and birch), including special features in the dry forest types.
- Fuels treatment options to leave slash piles unburned for habitat for small forest animals, where consistent with fuels reduction objectives.
- Goshawk nest site protection.
- Protection measures for threatened, endangered, and sensitive wildlife species including specific measures to protect grizzly bears and minimize disturbance, particularly during the sensitive spring season.

The wildlife analysis came to the following conclusions for the species listed above:

Canada lynx - Activities covered by this document would be consistent with all standards and guidelines in the Lynx Conservation Assessment Strategy (LCAS). Alternatives 2 and 5 are unlikely to result in adverse impacts to lynx or their habitat.

Grizzly bear - limiting seasons and duration of activities is expected to reduce the potential for disturbance and/or displacement; any effect will be short-term (during implementation), and grizzly bears are expected to reestablish normal use patterns shortly after the source of disturbance is removed. Therefore, the impacts would not result in a core deduction, and no in-kind core replacement would be necessary.

Neither Alternative 2 nor 5 would require permanent road building, and treatment utilizing restricted roads would not elevate Open Motorized Road Density in the Myrtle BMU above Terms and Conditions established in the 2004 Biological Opinion (USDI 2004). Road reconstruction within the Priest River Occupancy Area would temporarily raise linear total road density an insignificant amount, and linear open road density would not change since this road would be unavailable for general public use. Virtually all acres in ground-based harvest units will be winter harvested or are within the influence zone of open roads, so potentially would have only minor impacts to core habitat. However, since the potential short-term effects are not insignificant or discountable, Alternative 2 may cause adverse impacts to grizzly bear during project implementation.

Alternatives 2 and 5 are consistent with the Forest Plan direction to manage the habitat of species listed under the Endangered Species Act (USDA Forest Service 1987 p. II-6), and will maintain at least 70 square miles of security habitat in the Myrtle BMU (Wildlife Standard 4-c, p. II-27) (“myrt\_sec.doc” – project file). Alternatives are also consistent with the Terms and Conditions of the BO for the Forest Plan Amendments for Motorized Access Management within the Selkirk and Cabinet-Yaak Grizzly Bear Recovery Zones for the Kootenai, Idaho Panhandle, and Lolo National Forests (USDI 2004) for management of core habitats and road densities in BMUs and of linear road densities in identified occupied areas outside recovery zones.

Other species – Alternatives 2 and 5 are consistent with the Forest Plan direction for management of wildlife habitat for Threatened, Endangered, Sensitive or Management Indicator Species.

## S.10 - Fisheries

Bull trout and westslope cutthroat trout were analyzed in detail as suitable habitat is present for both species, but limited for bull trout. Alternatives 2 and 5 both contain features designed to protect fish habitat, including the following types of items:

- The activities would follow the standards and guidelines of the Inland Native Fish Strategy, including the designation of Riparian Habitat Conservation Areas (RHCA).
- Special features have been specified for protection of ephemeral draws and RHCAs, fish and aquatic habitat.

**Table S.7 Fisheries – Summary of Effects**

Species	Effect of Alternative 2 – Proposed Action	Effect of Alternative 5
<b>Threatened and Endangered Species</b>		
Kootenai River White Sturgeon	No Effect	No Effect
Bull Trout	May Affect, Not Likely to Adversely Affect	May Affect, Not Likely to Adversely Affect
<b>Sensitive Species</b>		
Burbot	No Impact	No Impact
Interior Redband Trout	No Impact	No Impact
Westslope Cutthroat Trout	May impact individuals or their habitat, but will not likely contribute to a trend towards Federal listing or cause a loss of viability to the population or species.	May impact individuals or their habitat, but will not likely contribute to a trend towards Federal listing or cause a loss of viability to the population or species.

## S.11 - Alternatives Considered, but Eliminated from Further Study

During early meetings of the Myrtle Creek Working Group, several options were discussed and through the consensus process various treatment locations and potential management activities were considered but dropped from further discussion at this time. For example, it was agreed that at this time, no treatments would be considered in the upper portion of the Myrtle Creek watershed.

The following more specific alternatives were considered, but eliminated from further study.

### Alternative 3

Alternative 3 would have treated approximately 2800 acres, reducing fuels on about 600 additional acres in the Myrtle Creek drainage when compared to Alternative 2, (the proposed action). The collaboration group recommended that the Forest Service drop this option during the public meeting on March 30, 2005.

This alternative included the following feature and concerns:

- About two miles of temporary roads, in roadless, would have to be built to access the 600 additional acres.

Concerns included cost of the construction and future maintenance during their lifespan. (The temporary roads would cross multiple ephemeral draws with steep side slopes and would need numerous drainage structures to address concerns that sediment could enter tributaries to Myrtle Creek.)

- The more general concern that there would be road construction within Inventoried Roadless Area
- Landtypes with potential for mass failures would require consideration during layout and construction.
- Potential effects to sediment yield and delivery.
- Risks from temporary roads, compared to risk of wildfire and need for fire suppression access
- Current and future levels of road density in the project area
- Longer-term benefits of this proposal weighed against the risk from the road construction
- Portions of temporary roads would be in inventoried roadless area and grizzly bear core habitat, which have stringent management standards, as follow:

Timing of the project and potential for delays by pursuing road construction in inventoried roadless areas.

The temporary roads could remain in the grizzly bear core habitat for a limited time. This would be a very narrow timeline from an operations perspective for conducting the silvicultural / fuel reduction treatments and associated follow-up activities.

For these reasons, as recommended by the Working Group, this alternative was eliminated from further consideration and study. (Alternative 3 was originally described as Proposal #2 during Working Group meetings.)

#### **Alternative 4**

Old Growth Collaboration – As described earlier, old growth issues were discussed during several Working Group meetings, and a field trip was taken on May 23, 2005 to walk through and talk in greater detail about particular stands in Snow Creek. During a subsequent collaboration meeting, members of the Selkirk Conservation Alliance and The Lands Council opposed commercial logging as tool of choice in these stands and suggested using fire alone to restore the old growth stand composition and structure. The Selkirk Conservation Alliance submitted examples from Sequoia National Park in California to the Forest Service.

A recommendation was made by the collaboration group (KVRI Working Group) to evaluate the potential fuels reduction methods, other than using timber harvest equipment, that could meet the old growth stand attributes described in the Chapter 3 discussion of the desired future conditions, and the hazardous fuel reduction objectives for this project. This evaluation is described below as Alternative 4.

**Alternative 4** differs from Alternative 2 in the method of fuels reductions to be used in the old growth stands. On the hot, dry southern aspect of the Snow Creek drainage, both alternatives would treat the same 83 acres of allocated dry forest old growth and 159 acres of potential dry forest old growth (about three percent of the total old growth in the project area). Instead of removing the ladder fuels in the old growth by using equipment and following up with an underburn, Alternative 4 included the use of “fire only” to reduce the fuels in the old growth stands. Proposed fuel reduction using silvicultural prescriptions (group selection) in these stands would feature the maintenance of large (greater than 21” DBH) old growth (ponderosa pine, larch, and Douglas-fir), culture intermediate size trees, (especially ponderosa pine and larch) and create small openings of two to three acres to promote regeneration of these species, which will not regenerate in shaded conditions (smaller openings). Although it is obviously

critical to retain the larger old trees, it is equally as critical in the long-term maintenance of dry forest old growth, to develop replacement cohorts within these stands.

Alternative 4 includes two methods the collaboration group considered to accomplish these objectives; both of which would reintroduce fire back into these fire dependent stands:

- The first method would involve prescribed burning the stands without any site preparation at temperatures hot enough to kill the majority of the seedling and sapling sized trees (ladder fuels) and about one-fourth of the pole and medium sized trees. For a burn like this to be effective, the weather and fuel conditions would have to be very dry. Consequently, the risk of an escaped fire would be high.
- The second method would include some felling of the unwanted trees, followed up with prescribed burning. This could be done under more moist conditions than the first method; however, with the acres involved and the proximity to private lands, this would still be very risky.

Both of these methods, regardless of success rates would have the following risks and consequences:

- The volume of smoke and particulates that would violate air quality standards. The prescribed fire would burn greater amounts of biomass, and burn at temperatures hot enough to kill most of the ladder fuels. There would be a risk of losing the entire organic (duff) layer and stored nutrients, which would be a violation of Region 1 soil quality guidelines.
- Through heat girdling, this alternative would risk killing the very same old trees that we are trying to save.
- The value of wood fiber that could be utilized as commercial products and to generate funds for watershed improvement projects would be lost.
- Post-treatment effects: Alternative 4 might not meet old growth status after the fuels reduction treatments discussed for this alternative.

At the conclusion of the June 30, 2005 collaboration meeting, all but two members of the Myrtle Creek Working Group agreed by consensus to go ahead with the Proposed Action (Alternative 2) that uses commercial logging followed with underburning to reduce fuels in the two old growth stands described above (June 30, 2005 meeting notes in the project file). Alternative 2 was subsequently adopted by consensus by the KVRI Board.

For the reasons explained above, Alternative 4 was dropped from further consideration and study.

## **S.12 - The Decision to be Made**

The decision to be made involves the selection of an alternative. When an action alternative is chosen, the decision will include:

- When proposed activities could begin and whether there are any timing restrictions.
- What type of fuels treatment would occur and where.
- Which elements of the Transportation Plan, including road improvements, would be implemented, and any timing requirements.
- Associated activities that would take place, such as monitoring and mitigation measures.
- Priorities for other opportunities that have been identified, including watershed restoration activities such as road decommissioning.

### S.13 - Healthy Forest Restoration Act Objection Process

This project is an authorized fuel reduction project as defined by the Healthy Forest Restoration Act of 2003, section 102(a). As such it is subject to the Predecisional Administrative Review Process (referred to as the ‘objection process’) pursuant to 36 CFR 218, subpart A. Thus, this project is not subject to notice, comment, and appeal provisions under 36 CFR 215 (see 36 CFR 218.3).

Objections will be accepted only from those individuals and organizations who previously submitted substantive written comments specific to the proposed project during the 45-day public comment period on the Draft Environmental Impact Statement (Section 105 (a)(3) and 36 CFR 218.6).

A legal notice published in the Coeur d’Alene Press, our designated newspaper of record, announcing availability of the FEIS also describes the objection process. The publication of the legal notice is the *exclusive* means for calculating the time to file an objection (36 CFR 218.19(a)). Those wishing to object should not rely upon dates or timeframes provided by any other source. At a minimum, an objection must include the following items (36 CFR 218.7(d)):

The objector’s name and address, with a telephone number if available;

- A signature or other verification of authorship upon request (a scanned signature for Email may be filed with the objection);
- When multiple names are listed on the objection, identifications of the lead objector (verification of the identity of the lead objector will be provided upon request);
- The name of the proposed authorized hazardous fuel reduction project, the name and title of the Responsible Official, and the name(s) of the National Forest(s) and/or Ranger District(s) on which the proposed authorized hazardous fuel reduction project will be implemented; and
- Provide sufficient narrative description of those aspects of the project that are objected to, to identify specific issues related to the proposed project and to suggest remedies that resolve the objection (36 CFR 218.7(b)).
- Pursuant to 36 CFR 218.7(c), incorporation of documents by reference will not be allowed in an objection.

An objection, including any attachments, must be filed in writing (regular mail, fax, Email, hand-delivery, express delivery, or messenger service) with the Reviewing Officer within 30 days of the date of the legal notice (36 CFR 218.9(a)). The Reviewing Officer for this project is the Northern Regional Forester. Objections may be submitted by mail at: USDA Forest Service, Northern Region, P.O. Box 7669, Missoula, MT 59807; by fax to (406) 329-3411; or by Email to [appeals-northern-regional-office@fs.fed.us](mailto:appeals-northern-regional-office@fs.fed.us). Acceptable formats for submitting an electronic objection are MS Word, Word Perfect or RTF. Please include the name of the project in the Email subject line. Hand-delivered objections will be accepted at the Northern Region office at 200 E. Broadway, Missoula, Montana between the hours of 8:00 a.m. and 4:30 p.m. Monday through Friday, exclusive of Federal holidays. All objections will be open to public inspection during the objection process (36 CFR 218.7(a)).

The Deciding Official for this proposal is Idaho Panhandle Forest Supervisor Ranotta K. McNair at 3815 Schreiber Way, Coeur d’Alene, Idaho 83815; telephone (208) 765-7223. She will make a decision on the project following the objection period. A copy of the decision (Myrtle Creek HFRA Record of Decision) will be mailed to those who request a copy or have otherwise expressed an interest in the project.

Figure S.2 Alternative 2 – The Proposed Action and Preferred Alternative

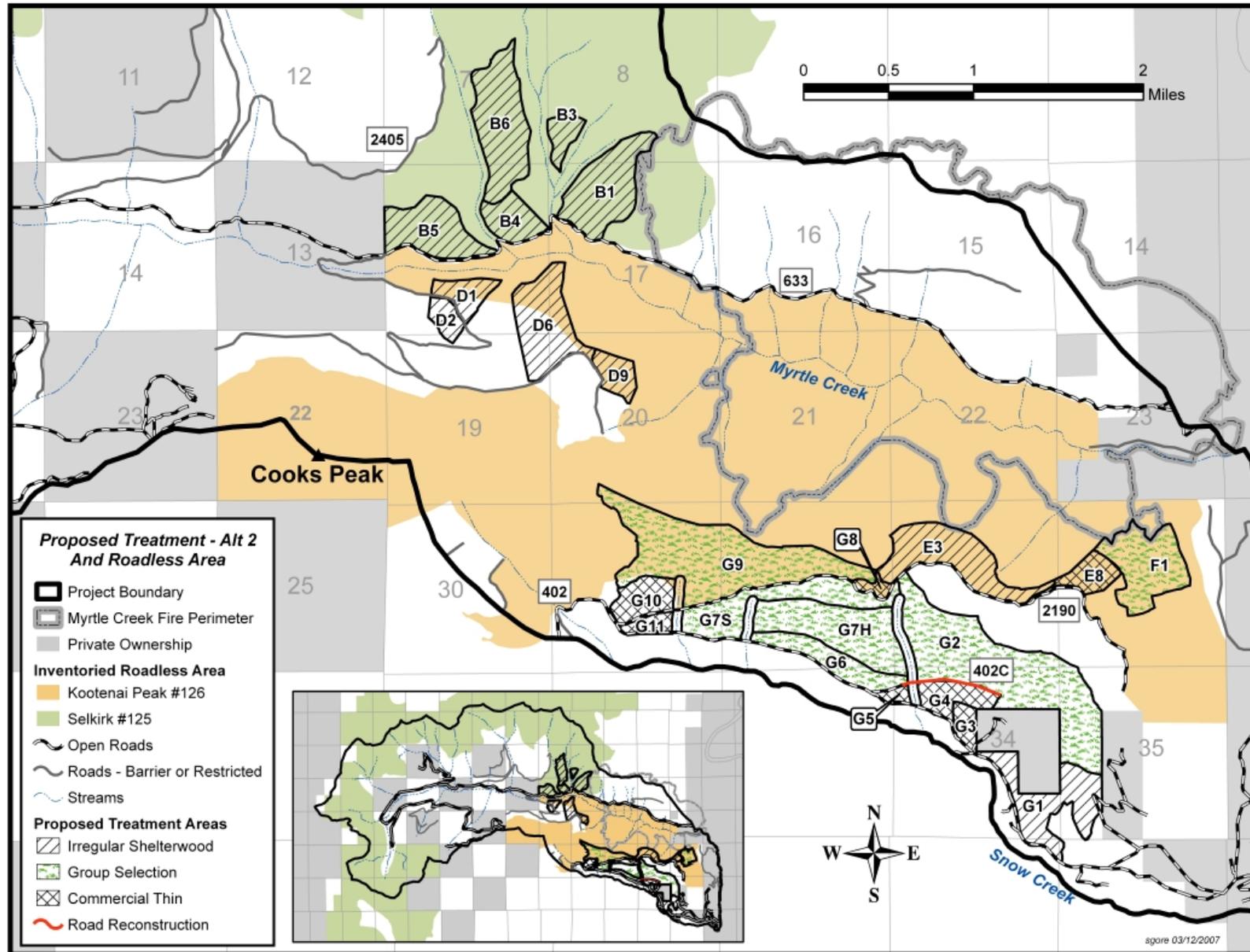


Figure S.3 Alternative 5

