Middle and South Fork Mill
Creek A to Z Project
Decision Notice and Finding of
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Middle and South Fork Mill Creek A to Z Project Decision Notice and FONSI
Colville National Forest, Three Rivers Ranger District

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Introduction

This decision notice documents my decision regarding actions proposed in the Middle and South Fork Mill Creek A to Z Project Environmental Assessment (EA). The EA, which is incorporated by reference, documents the site-specific analysis conducted by an interdisciplinary team to determine the potential environmental effects connected to the decision.

The Middle and South Fork Mill Creek A to Z Project has been supported by the community, local elected officials, the U.S. Department of Agriculture, and Congresswoman Cathy McMorris Rodgers. Throughout the analysis, the interdisciplinary team and the Colville National Forest worked closely with local stakeholders, special interest groups, and community leaders to bring this stewardship project to fruition. This effort has created an opportunity to implement a stewardship project that will not only benefit the community, but will enhance opportunities for restoration and benefit the natural resources in the project area. In addition, this decision will contribute renewable raw materials to local and regional manufacturing infrastructure.

This decision notice documents my decision and rationale for the selection of alternative B. Alternative B is described in the EA between pages 16 and 25. My decision includes the associated transportation system, the design elements, mitigation measures, and monitoring described in chapter 2 of the EA. My conclusion is based on a thorough review of the EA, public comments, and the project record. I considered relevant scientific information, public concerns and opposing viewpoints, incomplete information, scientific uncertainty, and risk.

Project Location

Table 1 displays the legal description of National Forest System lands included in the project area. National Forest System roads that will be used to access the project area from the nearest county road will also be included in the project.

<table>
<thead>
<tr>
<th>Township</th>
<th>Range</th>
<th>All or Part of Sections</th>
</tr>
</thead>
<tbody>
<tr>
<td>T. 35 N.</td>
<td>R. 41 E.</td>
<td>4</td>
</tr>
<tr>
<td>T. 36 N.</td>
<td>R. 41 E.</td>
<td>3–11, 14–23, 26–33</td>
</tr>
<tr>
<td>T. 37 N.</td>
<td>R. 40 E.</td>
<td>25–26, 34–36</td>
</tr>
<tr>
<td>T. 37 N.</td>
<td>R. 41 E.</td>
<td>28–33</td>
</tr>
</tbody>
</table>
Figure 1. Middle and South Fork Mill Creek A to Z Project location and vicinity
**Purpose and Need**

The purpose and need for the Middle and South Fork Mill Creek A to Z Project is to address vegetation that is outside of its natural disturbance regime, and change the current trajectory of the forest in the Middle and South Fork Planning Area from its unhealthy path to one that moves it toward health and resilience. This will be accomplished while providing a viable supply of wood fiber to the community and help sustain the infrastructure needed for conducting similar projects elsewhere in the region. This project will also (1) improve passage of aquatic organisms and accommodate 100-year flow levels, (2) improve habitat diversity through the project area, (3) promote the development of high quality lynx foraging habitat, and (4) improve habitat quality within designated pileated woodpecker core areas.

There is a need to (1) modify forest stand composition and structure so they are less susceptible to insects, disease, wildfire and drought; (2) increase stand diversity, improve stand productivity, and reduce the severity of insect and disease activity; and (3) reduce the threat of severe, stand-replacing wildfire. There is also a need for managing the road system to provide access for forest management, safe and efficient travel, dispersed recreation, and grazing management. The need to protect habitat for inland native fish species and improve wildlife habitat quality and security is included in this project, while at the same time ensuring maintenance, reconstruction, or decommissioning of poorly drained and poorly surfaced and rutted roads occurs throughout the project area in order to provide access for safe and efficient travel and decrease sediment delivery to streams.

**Issues**

The following issue was identified during scoping (including collaboration, public involvement, and interdisciplinary team investigations) for consideration and analysis within one or more alternatives that meet the need for the project.

**Issue 1: Forest Road Management and Water Quality**

Type and scale of new road construction could impact water quality through increased sediment delivery.

**Other Alternatives Considered**

In addition to my decision, I considered two other alternatives in detail; alternative A (no action) and alternative C (commercial harvest without new road construction). The no-action alternative is described as not implementing action proposed under this EA. Actions to manage timber, reconstruct roads, decommission roads, and reduce hazardous fuels will not be implemented under the no-action alternative.

**Alternative A (No Action)**

The no-action alternative will not implement vegetation treatments that will move stands closer to historic range of variability, improve tree vigor, reduce susceptibility to insect and disease, and reduce threat of uncharacteristic, high-severity wildfire. The running surface of National Forest System roads will not be restored, road access will not be improved, blocked culverts will not be repaired, live water crossings will not be brought up to Forest Service standards, and road-related sediment will not be reduced. Treatments will not be implemented to improve the...
diversity of upland wildlife habitat, fish passage will not be restored, and fish habitat will not be restored along the Middle and South Forks of Mill Creek. Previously approved management activities would continue within the project area. This alternative, without the potential occurrence of wildfire, represents the baseline condition to which the action alternatives are compared in the effects analysis.

Forest conditions in much of the project area are currently susceptible to uncharacteristically severe disturbances. Left untreated, the combination of fuel buildup from dying trees, ladder fuels, and dense closed canopies are increasing the rate of fire spread, fire intensity, and fire severity in the project area. Effects of wildfire events are therefore evaluated in considering the environmental consequences of the no-action alternative.

**Alternative C (Commercial Harvest without New Road Construction)**

This alternative was developed in response to comments received during public scoping and which expressed an interest in an alternative that involved no new road construction. This was interpreted to mean the exclusion of (1) new National Forest System road construction (except proposed road realignments described below), and (2) construction of new temporary roads. Commercial harvest will occur only where haul traffic can be accommodated using existing National Forest System roads or where temporary roads could be constructed on existing roadbed using the practices described in alternative B. Commercial harvest will require maintenance of about 44.5 miles of existing National Forest System roads, reconstruction of about 0.3 miles of National Forest System road, and construction of about 5.5 miles of temporary roads on existing unauthorized roadbed. Approximately 10.3 miles of maintenance level 1 roads will be reopened to access harvest units and closed after completion of harvest activities. Fourteen live water crossings will be upgraded to modern standards, which means these crossings will accommodate 100-year flow levels. Seventy-seven dry culverts that are buried or have inlet/outlet damage impeding passage of water will be repaired. Road maintenance and construction, including culvert replacement, will occur before timber haul. Approximately 1.3 miles of road easement will be required across private land.

Commercial harvest units will cover about 3,591 acres of the project area. Combined, treatments and retention areas will create a mosaic of stand conditions across the landscape. The specific mix of treatment and retention within each unit will vary, depending on stand conditions and Forest Plan standards and guidelines. Over the entire project area, about 1,760 acres of the commercial harvest units will be thinned (49 percent), about 762 acres will be shelterwood harvests (21 percent), and about 1,070 acres will be left untreated (30 percent).

**Alternatives Considered but Eliminated from Detailed Study**

There were no alternatives considered and eliminated from detailed study for this project.
The Decision and Rationale for the Decision

My Decision

Based upon my review of the alternatives and environmental consequences, I have decided to implement alternative B (modified proposed action, modified commercial harvest with new road construction). Alternative B and the associated environmental effects are described in detail in the Middle and South Fork Mill Creek A to Z Project EA.

Alternative B was modified after the scoping letter went out and it is based on consideration of comments received, collaboration with stakeholders, field surveys, and additional analysis conducted subsequent to issuing the scoping letter. Compared to the proposed action in the scoping letter, modifications and clarifications to the proposed action are summarized as follows:

- Remove 3,644 acres from commercial harvest treatment because field surveys found that these areas were not in need of vegetation treatments in order to meet the purpose and need;
- Rename “commercial thinning” and “shelterwood harvest” prescriptions, using “variable density thinning/variable retention harvest” designations in project descriptions;
- Incorporate proposed “aspen stand restoration” treatments into variable density thinning/variable retention harvest prescriptions;
- Replace prescriptions for shaded fuel breaks along National Forest System roads 9411000 and 9411175 with commercial timber harvest prescriptions in order to treat stand and fuel conditions;
- Within commercial harvest treatment units, locate 245 acres of new seed tree prescriptions in Lynx Analysis Units 215 and 216 in order to promote the development of high quality lynx foraging habitat;
- Within commercial harvest treatment units, locate 3,095 acres of new untreated (retention) areas to provide resource protection and/or to create structural diversity within the units;
- Avoid harvest activity in late and old structural stands in accordance with the Eastside screens;
- Maintain connectivity among late and old structural stands and Forest Plan old-growth management areas and pine marten and pileated woodpecker core areas in accordance with the Eastside screens;
- More clearly define maintenance activities along approximately 51 miles of maintenance level 1 National Forest System roads that are proposed for timber haul use;
- Decrease construction of temporary roads from 20.5 miles to approximately 19 miles in order to provide access to proposed harvest units and proposed borrow pits, locating and designing temporary roads in order to avoid or minimize resource impacts;
- Clarify that fuels reduction will include broadcast burning, jackpot burning, piling and burning, and lopping and scattering within strategically important areas for fire suppression;
• More clearly define reconstruction and maintenance along approximately 17 miles of County Roads 4668 and 4954 and along approximately 65 miles of maintenance level 2 National Forest System roads in order to restore their running surface and minimize impacts to aquatic habitat;

• Include reconstruction and maintenance activities along approximately 1 mile of County Road 4920 in order to restore its running surface and minimize impacts to aquatic habitat;

• Clarify that development of borrow pits will occur at 10 sites, 5 existing and 5 new sites within the project area in order to provide rock aggregate for road reconstruction and maintenance;

• Include decommissioning of approximately 3.0 miles of National Forest System road identified in the Colville National Forest Transportation Analysis Plan (2013), and another 4.7 miles of National Forest System roads identified through the roads analysis report conducted for this project that are not needed for safe and efficient travel and the administration, utilization, and protection of National Forest System lands;

• Remove proposed shaded fuel breaks at Little Twin Lakes Campground. The hazard trees at this campground will be included with other hazard tree removal activities to be completed outside of this project;

• Decrease precommercial thinning levels from 900 acres to approximately 862 acres;

• Clarify that approximately 190 acres of unsuitable habitat for pileated woodpecker within core area 1PW0-4P will be exchanged for 190 acres of more suitable habitat adjacent to the designated core area in order to improve habitat quality in the designated core area;

• Clarify that fish passage structures will be replaced or removed at 17 sites in order to improve passage of aquatic organisms and accommodate 100-year flows;

• Clarify that slope stabilization and revegetation activities will occur in a 3-acre area along County Road 4668 in order to rehabilitate resource damage from off-road vehicle use;

• Improve the quality of off-highway vehicle use in the project area by proposing designation of National Forest System road 9411130, which goes to the summit of Old Dominion Mountain, open to all vehicles;

• Remove the proposed activities for noxious weed control because it already occurs on the Colville National Forest under the Pacific Northwest Region Invasive Plant Program (USDA Forest Service 2005).

Detailed management recommendations addressing these changes are provided in the specialist reports accompanying the final EA. The remainder of this section describes commercial harvest treatments and activities associated with the proposed commercial harvest.

My Decision to Implement Alternative B Includes the Following Management Activities

Commercial Harvest Treatments
Commercial harvest will occur where haul traffic can be accommodated by maintaining and reconstructing existing National Forest System roads and constructing temporary roads. Harvested timber will be forwarded to landings using ground-based or cable logging systems in
most instances. In unroaded, difficult terrain where National Forest System roads do not exist and where temporary roads cannot be constructed, helicopters will be used to forward timber to landings. Commercial harvest treatments will move forest stands to more closely reflect historical stand structure and species composition, and to improve tree vigor, reduce the threat of severe wildfire, reduce susceptibility to insect and disease, respond to the potential effects of climate change, and reduce threats to life, property, and public safety. Commercial harvests will also promote the development of high-quality lynx foraging habitat. Two commercial harvest treatment types will be employed:

- **Variable Density Thinning/Variable Retention Harvest** – thinning stands to a variety of densities; creating canopy openings to differentiate the stand; and retaining snags, down wood, leave trees, and other structural features (biological legacies).
- **Seed Tree Harvests** – regeneration harvests conducted in order to promote development of dense horizontal structure preferred by snowshoe hare for foraging.

Maps of commercial harvest treatments and logging systems can be found in Figure 2 and Figure 3, respectively. Commercial harvest units will cover about 14,116 acres of the project area. About 10,776 acres will be treated using variable density thinning/variable retention harvest (76.3 percent) and about 245 acres will be harvested using the seed tree method (1.7 percent). About 3,095 acres of untreated (retention) areas will be left within treatment units to provide resource protection and/or to create structural diversity (21.9 percent).

**Variable Density Thinning/Variable Retention Harvest**

This treatment is designed to move forest stands to more closely reflect historical stand structure and species composition; improve tree vigor; reduce the threat of uncharacteristically severe wildfire and reduce susceptibility to insect and disease; and improve the resilience and resistance of the units to fire, insects, and disease and the potential effects of climate change. This prescription combines elements of thinning from below (thinning smaller trees) to address overstocking and species composition, creation of small openings (gaps) to address forest health concerns and create structural diversity, and retention of areas (skips) with sensitive and unique features in order to protect resources and further create structural diversity. Detailed unit-by-unit prescriptions are in the Silviculture/Fire specialist report.

Thinning treatments result in stands with approximately 40 to 120 square feet of basal area per acre of residual trees larger than 7 inches dbh (diameter at breast height). The average number of leave trees within a unit will depend on species composition, desirable trees present, plant association, management area direction, and the unit treatment objectives. This treatment will usually change stand structure in the short term and will increase the growing space for individual trees and accelerate the diameter growth in moving the stands towards late and old structural stage. General leave tree criteria for thinning include:

- Leave trees greater than 21 inches dbh, and retain all hardwoods of any size;
- Retain mostly high-vigor trees, but leave some moderate and low-vigor trees for clumps;
- Retain mostly the larger trees in the unit, spaced adequately to improve tree growth; and
- Favor early successional tree species (predominately western larch, Douglas-fir, and ponderosa pine) to move forest stands to more closely reflect historical tree species.
Figure 2. Commercial harvest treatments, alternative B, Middle and South Fork Mill Creek A to Z Project
Figure 3. Harvest systems, alternative B, Middle and South Fork Mill Creek A to Z Project
Within thinned areas, small clumps of trees (about 0.1 acre) will be included every 2 acres. Conditions desirable for clumps include trees with large, healthy looking crowns which are greater than 35 to 40 percent of the total tree height, early seral tree species, and trees that are not being attacked by insects or pathogens. Some moderate and low-vigor trees may be retained in clumps to create structural diversity. Any live tree over 21 inches dbh will be retained, except as needed for safety or road construction. All hardwoods will be retained.

Slashing—cutting or felling of standing, live nonmerchantable trees—may be employed in thinned areas in order to remove undesirable species and to reduce ladder fuels. Slashing will be used in portions of units that have an abundance of small diameter grand fir, western redcedar, and/or western hemlock, or excessive ladder fuels that will not be removed commercially. Slashing will occur by hand, where conditions exist to support post-harvest burning (see below). Trees will be felled and limbed and left on the ground for post-harvest fuel treatment.

Within thinned areas, aspen clumps will be treated in order to reduce conifer competition with aspen and to create aspen clumps that are more vigorous and self-perpetuating. An aspen clump will include three or more live aspen trees greater than 5 inches dbh that are within approximately 15 feet of one another. Several harvest units contain clumps covering large areas. Restoration will involve removal of all conifers less than 21 inches dbh and within 30 feet of an aspen stand. Aspen will be retained. Where aspen regeneration is limited, post-harvest treatment may include prescribed fire, mechanical disturbance of soil, or partial cutting of the aspen overstory to stimulate suckering.

Canopy openings of less than 3 acres may be located where thinning of undesirable trees will result in a less-than-fully-stocked stand, to address the most critical forest health needs within the unit (e.g., insect or disease outbreaks), and/or to create structural diversity. Canopy openings will be spaced at least two dominant or codominant tree heights apart, distributed variably throughout the unit and using irregularly-shaped boundaries. Residual stocking will be less than 40 square feet of basal area per acre of residual trees larger than 7 inches dbh. Existing long-lived, larger-diameter trees will be left for seed production, wildlife, structure, snag replacement, shelter, and visual quality. Preferred leave trees will include western larch, Douglas-fir, and ponderosa pine. Any tree over 21 inches dbh will be retained.

Some untreated (retention) areas will be left within many variable density thinning/variable retention harvest units to provide resource protection and/or to create structural diversity. Priority areas for retention include: late and old structural stands, select trees, riparian habitat conservation areas, open water, wetlands, seeps, wet soils, unstable slopes, rare plant populations, big game cover, goshawk nesting areas, other unique habitats and features, range improvements, cultural resource sites, and inoperable areas otherwise needing treatment within the units. Old-growth areas will not be harvested.

**Seed Tree Harvests**

This prescription will only be employed in Lynx Analysis Units 215 and 216 where there is a high likelihood of promoting high-quality lynx foraging habitat through harvest. High-quality lynx foraging habitat (i.e., high-quality snowshoe hare habitat) is described as areas with young trees providing dense horizontal vegetation cover (ILBT 2013), minimal edge to reduce non-lynx predation, height to live crown less than 2 to 3 feet above snow level in winter, and small islands of mature trees, snags, shrubs, or slash (Washington Department of Natural Resources 2006). Lodgepole pine is the preferred species, but dense multi-species conifer stands are also
appropriate. A variety of patch sizes is desirable, with most ranging from 15 to 40 acres (Washington Department of Natural Resources 2006).

Twenty seed tree patches will be created within Lynx Analysis Units 215 and 216. Fourteen of the 20 proposed seed tree patches will be less than 15 acres; 17 will be less than 20 acres. One proposed patch will be about 34 acres, and two will be adjacent subunits with a combined area of nearly 36 acres. In these seed tree patches, most of the current overstory and understory will be removed and about six to ten healthy, dominant trees per acre will be retained for seed sources and for “island” structure. Activity fuels will be treated; however, small slash piles will be left throughout the patch to provide for snowshoe hare cover and island structure. If, in implementation, the entire proposed patch area is not harvested using this method, the remaining area will be harvested using the variable density thinning/variable retention harvest method. Some retention areas will be left within seed tree units to provide resource protection and/or to create structural diversity. Old-growth areas will not be harvested.

System Road Maintenance
Approximately 51 miles of maintenance level 1 National Forest System roads will be reopened to access harvest units and closed after completion of harvest and post-harvest fuel treatment activities. Maintenance level 1 National Forest System roads are not open to public travel. Not all maintenance level 1 National Forest System roads will be reopened and used at the same time. Access to maintenance level 1 National Forest System roads will be managed with gates during harvest activities. Gates will remain closed except during harvest and post-harvest fuel treatment activities. Maintenance activities will include removal of barriers, scarifying and reshaping the roadbed or grading the surface to remove ruts and reestablish proper surface drainage; cleaning or reestablishing ditches, catch basins, culvert inlets and outlets; replacing select cross-drain culverts that are undersized and/or currently failing; installing new cross-drain culverts along selected roads; removing minor slumps or slides; placement of aggregate, riprap, or other erosion control features; applying and compacting base rock in some sections; applying and compacting surfacing rock; brushing or limbing existing vegetation in order to improve sight distances; and/or application of best management practices as appropriate. Closure will involve placement of barriers, removal of stream culverts, and any other measures necessary to hydrologically disconnect the road from streams. No maintenance activities are proposed on maintenance level 1 National Forest System roads that will not be used for timber haul.

Temporary Road Construction
Commercial harvest under this alternative will require an estimated 19 miles of temporary road in order to provide access to proposed commercial harvest units. Most temporary roads cross National Forest System lands, some of the proposed temporary roads will cross on private and Washington Department of Natural Resources lands. Temporary road construction is proposed in order to enable restoration while avoiding or minimizing adverse impacts to aquatic habitat and hydrologic function. Activities will include:

- Construction on existing roadbeds: Approximately 5.7 miles of temporary roads will be constructed on existing roadbeds or skid trails. Road work may include: removing barriers; brushing or limbing existing vegetation; reestablishing proper surface drainage by shaping the road bed or grading the surface to remove ruts; cleaning ditches, catch basins, and culverts; and/or placement of aggregate if required. Along some roadbeds, it may also involve localized disturbance to the existing cut or fill slopes and additional
clearing and grubbing and widening and/or realignment along some segments. Drainage structures including live water crossings may be replaced or upgraded.

- **Construction of new roadbed:** About 13.3 miles of temporary road will be constructed where no roadbed exists, requiring: new excavation and embankment, installation of drainage structures, and possible aggregate surfacing.

Temporary roads are intended for short-term access to commercial harvest units and will be decommissioned after use. Temporary roads are not open to public travel. Not all temporary roads will be opened and used at the same time. Access to temporary roads will be managed with gates during harvest activities. Gates will remain closed except during harvest activities. Temporary roads will be closed and placed back into resource production within 5 years of project use. All temporary roads will be decommissioned by closing them to motor vehicle traffic through use of barrier, removing all stream culverts, ripping and seeding roadbeds, and addressing specific sediment delivery point locations by constructing slash-filter window, hay bale, or other forms of sediment barriers, or through excavation of sediment trap basins where beneficial and necessary. Topsoil may be removed from segments of road where possible, stockpiled, and redistributed during road decommissioning in order to support revegetation. Segments of road that require obliteration through recontouring of the road prism may also be identified during project implementation. This will be done by pulling fill material onto the roadbed and against the road cutslope where deemed to be beneficial for reducing potential for road fill failures or surface erosion and/or to accelerate reforestation.

**Fuel Treatments**

Post-harvest fuel treatments will include: broadcast burning where stand and fuel conditions permit, “jackpot burning” where fuels are distributed in patches or where broadcast burning is not a viable option, pile and burning where needed to dispose of fuels in a controlled and safe manner, and lop and scatter methods where burning is not an option and/or activity fuels will be minimal. The primary objective of fuel treatments is to reduce activity fuels (slash created by the timber harvest) and natural fuels (built-up prior to harvest). Post-harvest fuel treatments are displayed in Figure 4.

**Broadcast Burning**

The goals of broadcast burning are to reduce surface fuel loading created from tree removal activities and to reduce natural fuel loadings and continuity. Broadcast burning will also be used to prepare seed beds for natural and planted regeneration and/or improve wildlife habitat and browse conditions. Broadcast burning generally occurs in the summer/fall season but could be conducted in the spring. A prescribed burn plan will be developed for each treatment area using broadcast burning. Firelines, or a physical break in the fuel bed, will be constructed around the prescribed broadcast burn areas in order to prevent the spread of prescribed fire from the burn area. Two methods of constructing firelines will be used: hand-built firelines and machine-built firelines. The prescribed burn plan will identify the method of fireline construction for each burn unit in consideration of slope, access, adjacency to other prescribed burn areas, and estimated fire behavior.

**Jackpot Burning**

The main objectives of jackpot burning are to reduce concentrated areas of surface fuels created from thinning activities and to reduce concentrated areas of naturally created fuels. Fire intensity can be higher than will occur with broadcast burning, and mortality within the overstory
could occur. To reduce the amount of mortality and to keep it below 10 percent within each unit, a low-intensity fire will be prescribed. These prescriptions will favor fire-tolerant and early seral species (such as ponderosa pine and western larch) over fire-intolerant species (such as grand fir and western redcedar). A prescribed burn plan will be developed for each treatment area using jackpot burning. Two methods of constructing firelines will be used: hand-built firelines and machine-built firelines. The use of firelines around jackpot burn areas will be on a case-by-case basis and will depend upon the slope, access, adjacency to other prescribed burn areas, and estimated fire behavior.

**Piling and Burning**

Piling and burning of treatment fuels is a method for disposing activity fuels by piling limbs, tops, and slash, and then burning the piles under prescribed and safe conditions. Natural fuels can be treated with pile and burning, too. The purpose is to reduce fuel loads within the unit. The piles are generally burned in the fall following a change from dry summer-like weather to the damp pre-winter weather pattern. Spring burning could also occur. Piling and burning will occur on selected units where broadcast burning and jackpot burning are not feasible due to site conditions and/or residual stand density. The need for piling and burning will be determined by post-harvest exams of fuel loadings conducted by a fuels specialist.

Piling will be accomplished by either machine piling or hand piling. Machine or grapple piling will be completed by a tracked excavator (to protect the soils) which will pick up the material and place it in piles. Hand piling will be used in areas where machine piling is not feasible due to steep slopes, soil conditions, or other resource concerns. All of the landings and materials located near the roads will be treated with mechanical piling. The size of the piles will be limited to 10 feet in diameter within treatment units, but could be larger on landings or roadsides. A prescribed burn plan will be developed for each treatment area. As with jackpot burning, the use of hand-built and machine-built firelines around pile and burn areas will be on a case-by-case basis in consideration of slope, access, adjacency to other prescribed burn areas, and estimated fire behavior.

**Lop and Scatter**

Where minimal activity fuels will be created and/or where burn operations are not feasible, slash will be lopped into smaller pieces and then spread out by hand to decompose. Lopped and scattered material will break down over time, providing soil nutrients, retaining soil moisture, and moderating fire behavior after it breaks down.

**Mechanical Fuel Reduction**

During implementation, mechanical methods of fuel reduction may be employed in consideration of prescribed fire risks, other resource considerations, and project costs. Such determinations will occur on a case-by-case basis and include such measures as slashing, chipping, crushing, mowing, and/or mulching of natural and activity fuels, collectively and generally referred to as mastication.
Figure 4. Post-harvest fuel treatments, alternative B, Middle and South Fork Mill Creek A to Z Project
**Planting**

Within 5 years after variable density thinning/variable retention harvests, planting is proposed in created openings to achieve, along with natural regeneration, desired stocking levels and species composition (Forest Service Manual 1921.12g). Planting helps to rapidly reestablish the next stand, and will occur where desired stocking levels and/or species composition are not being achieved naturally. Planting will include a mix of species such as rust-resistant western white pine, ponderosa pine, western larch, and Douglas-fir. Preferred species are generally shade intolerant, and fire tolerant. Engelmann spruce may also be planted in frost pockets located during implementation.

Seedlings will be planted in a position to be "free-to-grow" without competing vegetation or slash to hinder growth. This may be accomplished via broadcast burning (see above) to clear interfering activity slash and debris. In some created openings, there may be undesirable small conifers remaining after harvest treatments. These will be removed through slashing or whip felling. The need for site preparation will be analyzed on a case-by-case basis.

**Shaded Fuel Breaks**

Approximately 462 acres of shaded fuel breaks will be created along main travel routes (County Roads 4954, 4668, and 4920, and National Forest System roads 7012 and 7018), around significant dispersed campsites, and around rural residential properties within the project area (Figure 5). These roads are within management area 3A where there is a recreation emphasis and where there is the greatest recreation use within the project area. Most of the dispersed campsites in the project area occur along these roads. These roads also provide primary and alternate access to private residential inholdings. Shaded fuel breaks will create conditions where fire drops to the ground and reduces intensity and/or does not easily move from the surface into the overhead tree canopy. Shaded fuel breaks will improve safer access to and from areas with heavy recreation use and/or private residential properties in the event of a wildfire emergency and will improve success during fire suppression activities.

Creation of shaded fuel breaks consists of thinning overstory trees, removing snags, and removing understory and mid-story fuels. All trees up to 6 inches dbh will be removed, and trees greater than 6 inches dbh will be removed to create horizontal distances up to 8 to 15 feet between crowns. Residual basal area stocking will average about 60 to 80 square feet per acre. Preferred leave tree species are western larch, Douglas-fir, and ponderosa pine. Branches of residual trees will be pruned from 8 to 15 feet off the forest floor, depending on slope. Snags capable of reaching a roadway, dispersed campsite, private property, or are greater than 30 feet in height will be removed. Understory fuels over 2 to 3 feet in height will be removed with remaining vegetation spaced about 5 feet apart, and not within the dripline of an overstory tree. Design elements will be implemented within shaded fuel breaks in order to retain standing and dead wood to achieve habitat objectives.

Preferred width of shaded fuel breaks will be up to 300 feet horizontal distance along roads and around dispersed campsites and rural residential properties. Some retention areas will be left within shaded fuel breaks to provide resource protection. Shaded fuel breaks will not be created in old-growth stands or in late- and old-structural stands. In addition, screening will be maintained between dispersed campsites and roads and other dispersed campsites in order to achieve visual quality objectives and to minimize dust associated with nearby roads. Partial retention foreground areas along County Road 4954 (South Fork Mill Creek Road) will be managed for at least 30 percent of the stand to be 16 inches dbh or greater in size for visual
quality. All work will be accomplished with hand tools or mechanical equipment, supported by chippers and/or pile burning as determined appropriate on a case-by-case basis.

Areas otherwise within 300 feet horizontal distance along roads and around dispersed campsites and rural residential properties will be left untreated in order to provide resource protection and/or to create structural diversity. This includes: late and old structural stands, select trees, riparian habitat conservation areas, open water, wetlands, seeps, wet soils, unstable slopes, rare plant populations, big game cover, goshawk nesting areas, other unique habitats and features, range improvements, cultural resource sites, and inoperable areas otherwise needing treatment within the units. Old-growth areas will not be treated.

**Precommercial Thinning**

Precommercial thinning will occur by hand on up to 836 acres to improve tree growth, increase resistance to insects and disease, decrease fuel loads, and encourage desired species composition while providing structural diversity (Figure 5). Precommercial thinning will include the removal of small trees (generally less than 6 inches dbh for lodgepole pine and less than 7 inches dbh for all other conifers) within past commercial harvest units. Treatments will result in tree spacing ranging from about 12 feet to a maximum of 18 feet, depending upon tree size and site conditions. Variable spacing may be applied in order to favor desirable species.

Residual trees will be a mix of hardwoods and fire-resistant (early seral) conifers. Priority will be given to retaining the healthiest western larch, ponderosa pine, western white pine, and Douglas-fir trees, followed by other conifer species. Hardwoods will be retained to the greatest extent possible wherever they occur. Some units are infected with dwarf mistletoe that is spreading the parasite to the regenerated cohort. To decrease the rate of dwarf mistletoe spread, the infected overstory Douglas-fir and western larch trees less than 21 inches dbh within 30 feet of desirable leave trees will be girdled or felled.

Trees cut during precommercial thinning will be lopped and scattered by hand to decompose over time. Mastication or other mechanical methods of fuel treatment will not be used. In most units, created fuels will likely be light enough that additional treatment using jackpot burning or piling and burning will not be necessary. Post-thinning fuel treatment will be determined as appropriate on a case-by-case basis.
Figure 5. Non-commercial vegetation treatments, Middle and South Fork Mill Creek A to Z Project
Project Activities Not Associated with Harvest Treatments
Included in My Decision

Road Reconstruction and Maintenance
County Roads

Approximately 18 miles of existing county roads will be maintained in order to restore the running surface and to minimize adverse impacts to aquatic habitat caused by county roads while serving the needs of the public and providing for management of the National Forest (Figure 6). Road maintenance activities will occur before, during, and after timber hauling. Recurring maintenance will occur throughout the life of the project. The following summarizes activities that will occur along county roads:

County Road 4668

- Specific maintenance activities along this approximately 4.8 miles of roadway will include: grading, shaping, and compacting the existing surface to reestablish a crowned road section; cleaning the existing ditch and culvert inlets; spot brushing and excavation to improve sight distances; construction of turnouts; replacing select cross-drain culverts that are undersized and/or currently failing; adding additional cross-drain culverts where necessary to control sediment delivery; and applying and compacting surfacing rock. The road will be returned to as good as or better than pre-project conditions.

There are five segments along County Road 4668 that currently have native surfacing, heavy rutting, and/or close proximity to streams. These segments will require grading, additional cross-drain culverts in some cases, and increased rock-depth application. Other areas will only need a minor grading to prepare for surface rock application.

County Road 4954

- Specific maintenance activities along this approximately 12.8 miles of roadway will include grading, shaping, and compacting the existing surface to reestablish a crowned or insloped road section, as applicable, to convey, collect, and discharge road runoff at desired locations; cleaning the existing ditch and culvert inlets; spot brushing and excavation to improve sight distances; construction of turnouts; replacing select cross-drain culverts that are undersized and/or currently failing; installing new cross-drain culverts; applying and compacting base rock in some sections; and applying and compacting surfacing rock. The road will be returned to as good as or better than pre-project conditions.

The greatest improvements will occur along National Forest System road 9413000 and National Forest System road 9413370, totaling approximately 1.05 miles. This road section is adjacent to and parallels South Fork Mill Creek and delivers large quantities of sediment to it. Maintenance will include substantial ditch work, grading, shaping, and compacting. Addition cross-drains will be installed along with approximately 6 inches of surface rock across the full width and length of this section of road. The existing live stream culvert will be replaced to improve passage of aquatic organisms and accommodate 100-year flood events. Road width will be increased at the crossing and riprap placed along the fill slope adjacent to the crossing for approximately 150 feet.
County Road 4920

- Specific maintenance activities along this approximately 0.6 miles of roadway will include grading, shaping, and compacting the existing surface to reestablish a crowned or insloped road section, as applicable, to convey, collect, and discharge road runoff at desired locations; cleaning the existing ditch and culvert inlets; spot brushing and excavation to improve sight distances; construction of turnouts; replacing select cross-drain culverts that are undersized and/or currently failing; installing new cross-drain culverts; applying and compacting base rock in some sections; and applying and compacting surfacing rock. The road will be returned to as good as or better than pre-project conditions.

System Roads

Approximately 70 miles of maintenance level 2 and 3 National Forest System roads will be reconstructed or maintained in order to restore their running surface and to minimize adverse impacts to aquatic habitat caused by National Forest System roads while serving the needs of the public and providing for management of the National Forest (Figure 6). Where roads will coincidentally be used to access timber harvest units, road reconstruction and maintenance will occur before, during, and after timber hauling. Recurring maintenance will occur throughout the life of the project. The following summarizes activities that will occur on these National Forest System roads:

Reconstruction

- This will occur to improve or realign existing National Forest System roads. Detailed design criteria for road improvements and realignment are in the Roads Analysis Report. They are summarized here as follows:

  **National Forest System Road 9411175**

  A section of National Forest System road 9411175 will be realigned to eliminate the redundant segment that is adjacent to and parallels Hanson Creek and currently delivers large quantities of sediment to the creek. This section of road will be replaced by approximately 6,475 feet of road, including reconstruction of 2,900 feet of existing National Forest System road 9411194 and construction of 3,575 feet of National Forest System road. Reconstruction activities will include those general activities listed above, along with construction of two new switchbacks to meet timber hauling standards. These switchbacks will expand the existing roadbed in order to increase the curve radius. The width of remaining road bed will be increased to a minimum 14-foot-wide-running-surface single lane with turnouts. Additional timber and vegetation clearing will also occur to achieve adequate sight distances. The operational maintenance level of this section of National Forest System road 9411194 will change from 1 (closed) to 2 (open) and alternate snowmobile use will be designated.

  The remaining 3,575 feet of the realignment will involve constructing National Forest System road. Approximately 2,600 feet of the realignment will be along existing unclassified road subgrade. Approximately 975 feet will involve clearing and construction of new subgrade. Constructed road surfaces will have a 14-foot-wide rocked running surface that has a crowned typical section with ditches and cross-drain culverts. Approximately 800 feet of the new road subgrade will require additional construction efforts (e.g., geofabric, increased rock depth, additional cross-drain culverts, etc.) to
address wet soil conditions. All streams crossed by the new road bed construction will be either ephemeral or intermittent. The operational maintenance level of this new section of National Forest System road 9411175 will be 2 (open) and alternate snowmobile use will be designated. The entire realignment will remain open to all vehicles as currently designated and will remain part of the Old Dominion Sno-Park Groomed Trail System.

**National Forest System Road 9411130**

Approximately 250 feet of the road will be moved into the existing cutslope to reestablish the road prism lost to a prior road fill failure. The new road section will maintain the same general location as the failed road, but will be shifted up to 14 feet into the existing cutslope to ensure full bench construction is achieved. This will move the full width of the road onto natural ground and produce a stable road prism. The excavated material will be end-hauled to a stable location lower on National Forest System road 9411130.

**National Forest System Road 9411000**

Approximately 2.5 miles of this road is severely rutted (depths well into the subgrade), effectively reducing the traffic service level. Proposed road improvements will reestablish the traffic service level. Activities will include completely rebuilding the subgrade in some sections, heavy grading some sections, reestablishing a crowned typical road section, ditch cleaning, applying and compacting base rock and surfacing rock, replacing drainage culverts, and adding riprap energy dissipaters to culvert outlets.

**Maintenance**

This will occur for upkeep of the road surface and shoulders, parking and side areas, structures, and any traffic-control devices as necessary for safe and efficient utilization of maintenance level 2 and higher National Forest System roads. Maintenance activities will include removal of barriers, scarifying and reshaping the roadbed or grading the surface to remove ruts and reestablish proper surface drainage; cleaning or reestablishing ditches, catch basins, culvert inlets and outlets; replacing select cross-drain culverts that are undersized and/or currently failing; installing new cross-drain culverts along selected roads; removing minor slumps or slides; placement of aggregate, riprap, or other erosion control features; applying and compacting base rock in some sections; applying and compacting surfacing rock; brushing or limbing existing vegetation to improve sight distances; and/or application of best management practices as appropriate.

**Borrow Pits**

Instead of the proposed 15 rock sources described in the EA, only the 10 sources described along existing county or National Forest System roads and none of the sources along temporary roads will be included in this decision. Five of these rock sources are existing sources along county roads or open National Forest System roads. The other five will be the newly developed borrow pits within the project area in order to support road reconstruction and maintenance activities (Figure 6). The five existing borrow pits are not able to produce the full quantity and quality of rock product sufficient for road base rock and surfacing rock required for the project. Therefore, five new rock sources will be developed including overburden removal, drilling, shooting, and crushing to reduce the rock to different desired gradations. The size of these borrow pits will vary depending upon location of the source, type of rock, type of gradations that can be produced at the source, demand for each particular source, and available quantities at each source.
Each borrow pit will be limited to a 1 acre maximum area of active mining, manufacturing, and storage. Areas that are no longer active, or have no future plans for additional rock extraction will be reclaimed so the pits will remain below the 1-acre threshold. Reclamation activities will include, but are not limited to, replacement of overburden materials, recontouring disturbed areas, ripping compacted areas, and revegetation with tree planting and grass seed. Reclamation will occur either upon project completion or after a particular rock source is exhausted.

**National Forest System Road Decommissioning**

Approximately 8 miles of existing National Forest System roads will be decommissioned and placed back into resource production through barrier placement, removal of drainage structures, drainage modifications to disconnect the road from the stream, and/or seeding the road bed (see Figure 6 and Table 2). Segments of road that require obliteration through recontouring of the road prism may also be identified during project implementation. A transportation analysis process conducted by the Colville National Forest (USDA Forest Service 2013) identified approximately 3.8 miles of National Forest System road having adverse resource impacts and/or are not required for resource management. Through collaboration with stakeholders and field surveys conducted for this project, it was determined that some of the roads recommended for decommissioning by the transportation analysis process were used for dispersed recreation, administration of permitted grazing, and long-term forest management. Therefore, approximately 3 miles of the transportation analysis process recommendations are proposed for decommissioning under this project. Based on field surveys conducted for this project, an additional 4.7 miles of National Forest System road decommissioning is proposed to address long-term sediment delivery problems or roads that have become reforested and are effectively not needed for management. See the Roads Analysis Report prepared in conjunction with this final EA for a detailed assessment of proposed road decommissioning on this project.

**Table 2. National Forest System road decommissioning, Middle and South Fork Mill Creek A to Z Project**

<table>
<thead>
<tr>
<th>Road Number</th>
<th>Length (miles)</th>
<th>Colville National Forest Transportation Analysis Process Recommendation</th>
<th>Proposed Decommissioning</th>
</tr>
</thead>
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<tr>
<td>7018080</td>
<td>1.09</td>
<td>Decommission</td>
<td>Decommission 0.51 miles; retain 0.58 mile for long-term forest management</td>
</tr>
<tr>
<td>9411235</td>
<td>0.51</td>
<td>Decommission</td>
<td>Decommission 0.41 miles; retain 0.1 mile for access to dispersed recreation sites</td>
</tr>
<tr>
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<td>0.14</td>
<td>Decommission</td>
<td>Decommission</td>
</tr>
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Figure 6. Road activities, Middle and South Fork Mill Creek A to Z Project
Fish Passage Structure Replacement and Removal
Field investigations identified 17 fish passage structures along county roads and National Forest System roads that do not meet design standards under Washington Department of Fish & Wildlife guidelines (2013) and are potentially fully or partially blocking passage of aquatic organisms along the stream (Figure 6). All of these structures will be replaced or removed in order to improve passage of aquatic organisms and accommodate 100-year flow levels. Passage structure replacement will occur at 14 sites along county roads, maintenance level 2 National Forest System roads and higher, and along maintenance level 1 National Forest System roads designated as groomed snowmobile trails.

Generally, replacement will involve installation of sediment control measures, excavation of the roadway and removal of the existing structure, installation of the replacement structure with necessary abutments, bank stabilization, instream flow controls, replacement of the road subgrade, and surfacing over the passage structure. In most instances, bottomless arch-style culverts will be used; however, bridges will be considered on a case-by-case basis during implementation. In all instances, the resulting road grade will accommodate the road’s designated traffic design. Passage structure removal will occur at three sites along maintenance level 1 National Forest System roads that are not designated as groomed snowmobile trails. Generally, removal will entail installation of sediment control measures, excavation of the roadway and removal of the existing structure, and bank stabilization where needed. Design elements are outlined below to mitigate potential short-term impacts of passage structure replacement and removal on aquatic resources.

Redefinition of Pileated Woodpecker Core Area
Approximately 190 acres of designated pileated woodpecker core area 1PW0-4P will be exchanged with areas adjacent to the existing core area that have more mature conifer habitat with larger trees and more appropriate dead wood. This would improve habitat quality in the designated pileated woodpecker core area. The portion that will be removed from the core area was determined through field investigation to lack many mature trees and large, hard snags. The portion that will be added to the core area was determined through field investigations to have more late and old-structural stand characteristics with pockets of large, hard snags, habitat conditions that are suitable for pileated woodpecker. Detailed descriptions of habitat characteristics in the existing and proposed core areas are provided in the Wildlife specialist report.

Rehabilitation of Areas Impacted by User-created Trails
Slope stabilization and revegetation will be conducted on approximately 3 acres of hillslope along County Road 4668 in order to restore disturbed soil conditions in an area that has been subject to unauthorized off-road vehicle use (Figure 6). The area is near highly used dispersed campsites along Smith Creek and is located between upper and lower road segments of a switchback on the road. Tire tracks indicate the area has been used as a switchback cutoff and for access to a dispersed campsite between the road segments. Approximately 20,000 square feet within the area shows signs of de-vegetation and associated soil erosion. The impacted area is within a riparian habitat conservation area near the confluence of Smith Creek with Middle Fork Mill Creek.

Rehabilitation measures will include mechanical ripping to alleviate soil compaction; raking to erase tire tracks; revegetation with native grasses, shrubs, and trees to stabilize the slope, restore cover, and create vegetation barriers to discourage future use; planting of trees and
shrubs and placement of large woody debris and large rocks throughout the area in order to
discourage future use; removal of one significant dispersed campsite in order to discourage
vehicle access into the area; and installation of signage along the road that discourages
unauthorized use of the area.

**Designation of National Forest System Roads Open to All Vehicles**

Travel use designations are proposed for two National Forest System roads within the project
area in order to improve the quality of dispersed recreation opportunities (Figure 6):

- Designate approximately 4.6 miles of National Forest System road 7018000 open to all
  vehicles to create—in combination with authorized off-highway vehicle use along County
  Roads 4668 and 4954 (authorized under Stevens County Ordinance 2012-14) and
  National Forest System road 7012000 (authorized under the April 1, 2015, Motor Vehicle
  Use Map)—an off-highway vehicle travel loop within management area 3A which has a
  recreation emphasis; and

- Designate National Forest System road 9411130 (approximately 5.8 miles) open to all
  vehicles in order to permit off-highway vehicle access to the summit of Old Dominion
  Mountain, a popular recreation destination.

With these road designations, authorized off-highway vehicle access will then exist to nearly all
of the significant dispersed campsites that were located in the project area during field surveys.

**Decision Rationale**

My decision to select alternative B (commercial harvest with new road construction, proposed
action, modified) is based on its responsiveness to the project’s purpose and need and its ability
to mitigate issues that arose through the public involvement process. My decision facilitates the
purpose and need for the Middle and South Fork Mill Creek A to Z Project to change the current
trajectory of the forest in the Middle and South Fork Planning Area from its current unhealthy
path to one that moves it toward a healthy and resilient forest while also providing a sustainable
supply of wood fiber to the community.

My decision also modifies stand composition and structure across the Middle and South Fork
Planning Area to increase diversity, improve stand productivity, reduce the severity of insect and
disease activity, and reduce the threat of severe stand-replacing wildfire. The decision includes
managing the road system to provide access for forest management, protect habitat for inland
native fish species, and improve habitat quality and provide security for wildlife species, while
providing public access which is vital to the local communities.

**Responsiveness of Alternative B to the Purpose and Need**

Based on my review of the effects analysis in the EA, I believe alternative B best meets the
stated purpose and need of the project to protect the Middle and South Fork Planning Area
while complying with applicable laws and regulations and addressing the public’s concerns.
Furthermore, the selected action provides practicable environmental safeguards, including
design elements to avoid or reduce environmental impacts, as well as monitoring to ensure
resulting impacts comply with applicable laws and regulations and are within the range
predicted in the EA impacts analysis. Chapter 2 of the EA includes a description of the
components of alternative B. Chapter 3 of the EA has a complete description of the
environmental impacts expected for alternative B.
On a landscape scale, the project works toward the goals of reducing the risk of and increasing the resistance to wide-scale disturbance events in the form of high intensity, stand-replacing wildfire; improving forest health; and protecting the watershed. These activities will be accomplished over the life of the contract.

The forests are not as resilient to disturbances as they were historically. The natural disturbance regimes have been altered over the past century primarily due to fire exclusion and past timber harvest that focused on the removal of large trees. These changes to the natural disturbance regimes have set many forest stands on a trajectory that will likely not self-correct. Reestablishing resilient forests similar to those that occurred historically is needed for long-term sustainability of the area. Forest conditions in much of the project area are extremely susceptible to uncharacteristically severe disturbances.

Roads are also a concern to the natural resources in the project area. Some roads are contributing sediment into streams including streams that have fish. Inadequately sized culverts are also downcutting streams, are entry points for sediment, and limit passage of aquatic organisms.

In making this decision, I thoroughly considered the site-specific comments and resource issues identified during the planning process. My decision balances public concerns and the need to restore and promote a resilient landscape.

Vegetation Treatments

This decision will facilitate implementing various types of vegetation and surface fuels treatments to meet restoration objectives. The treatments aim to restore resilience by maintaining or enhancing complexity at multiple scales within the project landscape. Enhancing aspen stands, promoting large trees (greater than 21 inches dbh), and reforestation are all included in this decision.

The Middle and South Fork Planning Area is an ecosystem that has been modified due to fire exclusion and certain types of past timber harvest. For example, lodgepole pine stands are older and in a more contiguous arrangement across the landscape due to fire suppression. Much of the project area fuel loadings are higher than what will have been found historically. If a large wildfire occurs, all of the subsequent lodgepole regeneration will be susceptible to catastrophic events.

Compared to the historic range of variability existing condition of stand structural stages indicates that the percent of the landscape in early stand structural stages exceeds historic range of variability, middle structural stages are within historic range of variability, and late structural stages are lower than historic range of variability (EA, page 71). About 90 percent of the landscape is in early- and middle-structural stages leaving only 10 percent in late and old-stand structure, which is below the lower historic range of variability of about 30 percent.

Alternative B will have the short-term and long-term effect of moving forest stand structures towards the historic range of variability. And because vegetation conditions will move towards those occurring under the natural fire regime, these areas can be maintained within the natural regime by treatments such as fire use, where appropriate. And, since alternative B has more vegetation treatment, movement toward historic range of variability will occur to a greater extent compared to either alternatives A or C.
Commercial harvest, precommercial thinning, and burning activities included in this decision will improve forest health conditions and reduce risk of uncharacteristically severe wildfire, insects, and disease within the treated areas over the short term and long term. Alternative B will lower the susceptibility of stands in the project area to insects and disease on National Forest System lands within the project area to meet the purpose and need for the project (EA, page 90). This will occur to a greater extent compared to either alternatives A or C. Project benefits will diminish as stands fill in over the long term. No adverse effects to forest health will occur and alternative B will effectively meet the need for restoration of forest health within the project area.

Alternative B, along with ongoing and reasonably foreseeable timber harvest activities on state and private lands in the cumulative effects analysis area, will improve tree vigor on a total of 12,348 acres in the cumulative effects analysis area. The susceptibility of forest stands to insects and disease will be reduced, and cumulatively, forest health will be improved in the short term as a result of implementing alternative B.

Hydrology

Implementation of alternative B will lead to an overall decrease in sediment delivery within the project area. Short term, there will be a small reduction in sediment delivery due to an offset of activities associated with road maintenance and reconstruction that will decrease sediment delivery, and new road construction and increased haul traffic that will increase average annual sediment delivery for the duration of harvest activities. Similarly, sediment increases associated with culvert replacement and stream habitat restoration will be offset by continued maintenance and other sediment reduction activities. Upon completion of harvest treatments, and into the future, long-term sediment delivery to streams will be reduced from the short-term amounts analyzed.

In the Middle Fork Mill Creek Subwatershed, average annual sediment delivery will decrease by 9.6 tons per year compared to the existing condition. Road improvement activities, and decreased sediment delivery, will occur prior to vegetation treatments and associated log truck traffic. As vegetation treatment occurs, 3.2 tons per year additional sediment delivery increases attributable to commercial harvest and shaded fuel breaks is predicted, and 5.6 tons per year attributable to fuel treatment is predicted. Therefore, short-term net sediment delivery from project activities under alternative B will be approximately 15.3 tons a year which is 0.7 tons less than existing (EA, page 105).

The 12 culverts and 4 fish passages that will be replaced or removed in the Middle Fork Mill Creek Subwatershed will have short-term impacts on sediment delivery of approximately 0.1 tons per structure below the crossing sites during replacement or removal. The long-term benefits, after replacement or removal, will reduce the risk of erosion and sediment production and delivery associated with culvert failure (EA, page 106).

In the South Fork Mill Creek Subwatershed, average annual sediment delivery will decrease by 26 tons per year compared to the existing condition. Road improvement activities, and decreased sediment delivery, will occur prior to vegetation treatments and associated log truck traffic. As vegetation treatment occurs, there would be 8.9 tons per year additional sediment delivery increases attributable to commercial harvest and shaded fuel breaks, and 5.2 tons per year attributable to fuel treatment. The short-term net sediment delivery from project activities will be approximately 49.9 tons a year which is 12 tons less than existing (EA, page 107).
The 55 culverts and 12 fish passage structures that will be replaced or removed in the South Fork Mill Creek Subwatershed will result in approximately 0.1 tons per structure below the crossing sites during replacement or removal. The long-term benefits, after replacement or removal, will reduce the risk of erosion and sediment production and delivery associated with culvert failure (EA, page 107).

In the Camp Creek Subwatershed, average annual sediment delivery will increase by 0.5 tons per year above the existing condition. Road improvement activities, and decreased sediment delivery, will occur prior to vegetation treatments and associated log truck traffic. As vegetation treatment occurs, there would be 0.7 tons per year of sediment delivery increases attributable to commercial harvest and shaded fuel breaks, and 0.2 tons/year attributable to fuel treatment. The short-term net sediment delivery from project activities included in this decision will be approximately 1.4 tons per year which is 1.1 tons/year greater than existing road-related sediment delivery (EA, page 108). Short-term increases in sediment delivery in the Camp Creek subwatershed would be less than 2 percent above natural background levels; given that this increase is less than 50 percent, the effect of this sediment delivery would be expected to be undetectable within stream channels, as interpreted through the WFPB guidelines\(^1\).

One fish passage structure replacement within the Camp Creek Subwatershed is included in this decision and replacement will have short-term impacts on sediment delivery of approximately 0.1 tons below the crossing site during replacement. The long-term benefits, after replacement, will reduce the risk of erosion and sediment production and delivery associated with culvert failure.

Overall, the amount of sediment delivery under alternative B will be less than under alternative A, and more than under alternative C. Cumulatively, alternative B will result in a short-term and long-term decrease in sediment delivery downstream from the North and South Forks of Mill Creek within the mainstem of Mill Creek.

Harvest treatments will not occur within riparian habitat conservation areas, leading to limited or no changes in stream shade protection of stream temperatures. No additional 303(d) listed stream segments will occur with implementation of my decision.

**Soils**

As a result of alternative B, all treatment units will remain below the Forest Plan standard of no more than 20 percent detrimental soil condition. Additional effects on soil disturbance will occur through road reconstruction/maintenance, development of borrow pits, National Forest System road decommissioning, fish passage structure replacement or removal, and rehabilitation of areas impacted by user-created trails. Some activities I am authorizing in alternative B will cause additional soil disturbance and others will promote soil recovery. Implementation of alternative B will cumulatively result in as many as 37 acres of detrimentally disturbed soils being returned to forest productivity (EA, page 146).

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My selection of alternative B does not include activities within areas with high mass wasting hazard. Therefore, landslide rates are not expected to increase above existing rates and will slowly decrease over time. This is consistent with INFISH standards and guidelines to avoid increases in mass wasting.

**Fish**

My selection of alternative B will improve fish habitat by rehabilitating National Forest System roads and treating specific sections of road that have high erosion prior to harvest activities, thus reducing sediment delivery. Alternative B includes replacement of up to 17 fish passage barriers that will improve passage to approximately 25.5 acres of instream fish habitat.

Across the project area, the resource benefits of implementing alternative B include enhanced fish passage potential, increased stream habitat connectivity, improved habitat about the structure, and improved wood and sediment transport. These benefits will yield more natural stream geomorphology and flow regimes, increased fish movement, and increased potential fish spawning and rearing capacity (EA, page 158).

Alternative B will also improve fish passage on up to three crossings in the North Fork Mill Creek Subwatershed, improving access to 3.7 acres of fish habitat (EA, page 162). And, alternative B includes installation, replacement, or removal as many as 77 culverts, reducing sediment at crossing sites (EA, page 167).

My decision to implement alternative B will reduce instream sediment loads which should lead to greater stream depths, especially in pools, and improve width-to-depth ratios, moving streams towards INFISH riparian management objectives and reference conditions. Reductions in sediment delivery through my decision will improve fish habitat and potentially fish use along affected streams by decreasing the deposition of sediment in pool habitat, as well as decreasing sediment deposition in interstitial gravel habitat vital to reproduction (EA, page 171).

Road activities authorized under alternative B will cumulatively decrease sediment delivery in the short term and long term within the Middle and South Forks of Mill Creek Subwatersheds. Road improvement activities implemented in the North Fork Mill Creek Subwatershed will also reduce sediment delivery short term and long term (EA, page 173). These reductions in sediment delivery will improve fish habitat and fish use along affected streams by decreasing the deposition of sediment in pool habitat, as well as decreasing sediment deposition in interstitial gravel habitat vital to reproduction.

Alternative B will result in a net decrease in sediment delivery from roads which is consistent with the purpose and need for the project to minimize adverse impacts to aquatic habitat caused by county and National Forest System roads while serving the needs of the public and providing for management of the National Forest (EA, page 167).

Because activity levels will be greater in alternative B, reductions in sediment delivery will not be as great as will occur under alternative C. However, under alternative B, sediment delivery will decrease from existing levels in the Middle and South Fork Mill Creek Subwatersheds in the short term to long term, meeting the purpose and need for the project. Slight increases in sediment delivery (1.1 tons per year during implementation of the project) will occur in the Camp Creek Subwatershed. Overall, sediment delivery under alternative B will be less than under alternative A, but more than under alternative C (EA, page 108).
Alternative B will benefit fish habitat both in the short term and long term by increasing large wood recruitment and frequency, maintaining canopy cover to help moderate stream temperatures, fixing and limiting sediment inputs, increasing pool formation, and lowering width-to-depth ratios. Stream habitat conditions will trend towards, and not retard, attainment of INFISH riparian management objectives and reference conditions, consistent with the purpose and need for the project (EA, page 168).

Short-term increases will occur in the Camp Creek Subwatershed during project activities; however, sediment delivery will decrease long term after project implementation. Short-term increases in sediment delivery in the Camp Creek Subwatershed will be less than 2 percent above natural background levels; therefore, impacts on fish habitat will likely be undetectable, with minimal impacts to fish. Overall, alternative B will result in a net decrease in sediment delivery from roads. This will be consistent with the purpose and need for the project to minimize adverse impacts to aquatic habitat caused by county and National Forest System roads while serving the needs of the public and providing for management of the National Forest (EA, page 167).

In total, habitat conditions for native fish species, including westslope cutthroat trout, will improve. Due to greater reductions in sediment delivery through road improvement activities, stream habitat improvements will occur to a greater extent than under alternative A. However, because of higher activity levels, the net effect of these improvements will be less than will occur under alternative C.

Alternative B will not result in changes in fish habitat that will lead to any special status fish becoming threatened or endangered within the foreseeable future, and will not reduce species’ viability within their affected geographic range. Habitat for native westslope cutthroat trout will be improved under alternative B (EA, page 168).

Special Status Wildlife

Alternative B will create a mosaic of forest communities and structural stages; resulting in more early structural stage stands, primarily of Douglas-fir or subalpine fir, which will benefit species. Habitat improvement will positively affect special status wildlife, and fire mitigation will reduce the probability of large, stand-replacing fires and provide for long-term habitat for wildlife.

Alternative B includes seed tree harvests that will recruit dense conifer regeneration (particularly lodgepole pine) that will become forage for snowshoe hare within 10 to 20 years and improve prey for Canada lynx in Lynx Analysis Units 215 and 216 (EA, page 180).

My selection of Alternative B also includes an exchange of approximately 190 acres of designated pileated woodpecker core area 1PW0-4P with areas adjacent to the existing core area that have more mature conifer habitat with larger trees and more appropriate dead wood in order to improve habitat quality in the designated pileated woodpecker core area. This relocated core area will also have benefits to other species including pine marten with travel corridors greater than 400 feet wide, with continuous canopy cover along ridges or streams that are connected to other pine marten core areas. And, relocating this habitat will have a positive effect for primary cavity excavators and other old-growth associated wildlife (EA, pages 36 and 200).
Pine Marten and Fisher

Implementing alternative B will increase the acreage of mature forests over time as trees have more light, space, water, and nutrients and grow more quickly than under current conditions. Log jackpots and large woody debris will be maintained in the project area and will prevent the loss of denning habitat, and connectivity will be maintained among core areas.

The design elements included in alternative B (chapter 2 of the EA) will minimize incremental adverse effects to pine marten and fisher from commercial harvest treatments, road realignments, maintenance, construction and reconstruction, burning, and precommercial thinning, and will not reduce the species’ viability throughout their geographic range or lead to a trend towards Federal listing.

My selection of alternative B does not include treatments in pine marten “A” rotation core areas and no treatments will occur in multi-story large tree structural stage stands or within management area 1, which is managed for old-growth habitat and species. No core area will be completely surrounded by harvest treatments, and core areas will not be isolated from unaffected habitat. Connectivity between and among core areas will be maintained through retention within treatment units and areas that are not within a treatment unit, thereby minimizing habitat fragmentation. Per the Eastside screens, untreated forested corridors between pine marten core areas will be at least 400-feet wide and located along ridges, streams, and drainages (EA, page 194).

The vegetation treatments included in alternative B that reduce stocking and retain larger trees (variable density thinning/variable retention harvest, shaded fuel breaks, and precommercial thinning) will accelerate individual tree growth and promote development of large diameter trees. Therefore, more large diameter snags and down logs will be recruited from these trees over several decades.

Alternative B does not treat 73 acres of multi-story large tree stand structure within low elevation, which are moist forest types considered suitable habitat for fisher. Alternative B will also avoid, conserve, or enhance most suitable pine marten and fisher habitat and will be connected to other suitable habitat within the project area and in adjoining watersheds. Temporary and reopened maintenance level 1 National Forest System roads will be managed to minimize or prevent unauthorized use during and after the project, and few, if any, individual pine marten or fisher will be affected.

Big Game Winter Range

Implementing alternative B is expected to create additional big game winter forage, will move the landscape towards the desired cover-to-forage ratio of 50:50, and will not result in an adverse cumulative effect to big game winter range. In addition, where appropriate recovery of native species is not occurring, big game winter range will be underburned and revegetated with native grasses.

Implementing alternative B will not change open National Forest System road density from existing conditions. All temporary roads and reopened maintenance level 1 National Forest System roads will be gated during project implementation to prevent unauthorized access, and temporary roads will be decommissioned after use (EA, page 241).
The vegetation treatments included in alternative B will have mixed effects on cover quality with smaller trees and understory being treated. Hiding cover will be negatively affected until shrub or sapling growth regenerated approximately 5 years post-harvest. However, the cover forage ratio in the project area is much higher than desired (90:10 versus 50:50) and treatments will move this ratio to 46:54 in the short term and increase forage production on 790 acres by up to 500 pounds per acre. Further, these treatments will retain substantial overhead forest canopy and will promote the rapid development of larger, full crowned trees developing high quality thermal cover or snow intercept over time. Existing snow intercept thermal cover will be avoided, and other treatments that promote development of additional snow intercept thermal cover will be implemented.

Roads

Through opportunities for public comment, I heard concerns regarding decommissioning existing roads and constructing temporary roads. I have decided to include decommissioning of roads only as needed for realignment of poorly located system roads. This will decrease sedimentation in the watershed, and maintain the needed transportation system.

I also took a hard look at the temporary roads included in alternative B, including location, units these roads access, and overall miles of roads in the project area. I have decided to include the temporary road construction because it is necessary for implementation of alternative B which is to promote resilience and improve forest health in the project area.

Roads are an important component of implementing my decision. Forest Service System road realignment will improve access to commercial harvest units. And, road maintenance included in my decision will ensure the reduction of sediment delivery to fish-bearing streams in the project area.

My decision includes road improvement activities at 13 locations within the project area (EA, page 100) on road segments that currently deliver large quantities of sediment to streams and represent substantial portions of current road-related sediment delivery within each subwatershed. Alternative B will improve these road segments.

Based on resource concerns attributable to the construction and use of temporary roads, I have decided that the five rock pits, located along temporary roads, will not be included in this decision. In order to reduce the impact of temporary roads, the amount of construction needed, and the amount of project-related time and traffic using these temporary roads, additional material may need to come from sources outside the project area.

Recreation

I am including the designation of National Forest System road 7108000 as open to all vehicles to add an off-highway vehicle travel loop within the project area as part of my decision, thus improving dispersed recreation opportunities within the project area. This route is already part of the primary vehicle traffic loop in the project area. Designation will create an off-highway vehicle travel loop in the project area and increase off-highway vehicle access to significant dispersed campsites along Bestrom Creek. Planning will occur during project implementation to ensure off-highway vehicle use meets Forest Service safety standards, including any potential conflicts with existing highway vehicle use and use as a groomed snowmobile trail (EA, page 276).
I am also including the designation of National Forest System road 9411130 as open to all vehicles to improve dispersed recreation opportunities on Old Dominion Mountain. Designation will create an off-highway vehicle driving opportunity and increase off-highway vehicle access to significant dispersed campsites on Old Dominion Mountain (EA, page 276).

**Reasons for Not Selecting Alternatives A or C**

I selected alternative B rather than alternative A because alternative A does not meet the purpose and need of the project. Multi-storied stand structures would be more susceptible to crown fires due to the vertical continuity of fuels, and overstocked stands would continue to have closed canopy structure enabling the spread of fire from crown to crown. Cumulatively, these attributes remaining under alternative A would combine over time to increase the likelihood of a high-severity, stand-replacing fire event (EA, page 73). And, the cumulative forest health improvement will be less under either alternatives A or C than under alternative B (EA, page 96).

Without vegetation treatment, the chance for high-severity, stand-replacing wildfire and uncharacteristic disturbance increases under alternative A (EA, pages 101, 135, 233, and 239). Sediment delivery in alternative A would further increase from existing conditions above natural background, and road-related sediment could be more than 50 percent over natural background levels (EA, page 104). Because there will be fewer acres treated under alternative C, there will be less accelerated development of the large tree component than under alternative B.

Alternative A would not reduce the sediment delivery that is 50 percent to 100 percent above natural background levels, and would be counter to the purpose and need for the project to minimize adverse impacts to aquatic habitat caused by county and National Forest System roads while serving the needs of the public and providing for management of the National Forest. And, under alternative A, the processes affecting water quality may be adversely affected and could lead to additional 303(d) listings (EA, page 140).

Under alternative A the existing forest health trajectory would remain relatively unchanged. Lack of large-scale disturbance since the 1920s is trending the forest toward more densely stocked stands dominated by shade-tolerant tree species. Without silvicultural treatments or fire, stands will become increasingly overstocked, causing additional stress and inter-tree competition, and ultimately result in an increased susceptibility to future disturbances (e.g., insects, disease, and/or wildfire). As these changes occur, the vulnerability of these stands to uncharacteristic disturbances can be expected to increase. Fire severity would become increasingly uncharacteristic compared to historic fire regimes due to the combination of continued fuel buildup from dying trees, ladder fuels, and dense closed canopies. Smoke emissions would likely exceed state standards and could impact non-attainment areas and class I airsheds (EA, page 290).

Similar to alternative B, alternative C would have the short-term and long-term effect of moving forest stand structures towards the historic range of variability per the purpose and need for the project. However, fewer acres would be treated under alternative C and movement toward historic range of variability would occur to a lesser extent compared to alternative B. The cumulative movement of stands towards historic range of variability would be less than in alternative B (EA, pages 78 and 83). Alternative B will also have the short-term effect of improving tree vigor on National Forest System lands within the project area, which would occur to a lesser extent under alternative C (EA, page 88).
Currently, 15,290 acres in the project area are considered at “high risk” for mortality from insect and/or disease agents, and alternative B includes commercial harvest and shaded fuel break treatments that will reduce susceptibility to insects and disease on approximately 11,493 acres (75 percent of the high risk acres as compared to 61 percent or 9,358 acres in alternative C) in the short term (EA, page 92).

Also similar to alternative B, alternative C would have the short-term effect of lowering wildland fire risk on National Forest System lands within the project area per the purpose and need for the project. However, alternative B will reduce susceptibility to uncharacteristically severe wildfire for more acres (11,021) where alternative C will reduce susceptibility on fewer acres (8,896 acres) (EA, pages 90 and 94).

Overall, the effects of the action alternatives, combined with the effects of other past, present, or reasonably foreseeable future actions, will improve access to fish habitat at 20 locations in the cumulative effects analysis area, improving access to 29.2 acres of fish habitat in the short term and long term. This cumulative improvement in fish passage in alternative B will be greater than under alternative A.

### Public Involvement and Collaboration

Local involvement was critical in planning this project. The Middle and South Fork Mill Creek A to Z Project was first listed in the October 2015 through December 2015 edition of the Colville National Forest Schedule of Proposed Actions and has appeared in the schedule of proposed actions since that date. A scoping packet containing a letter and maps was mailed July 31, 2015, to members of the public, local Tribes, and government agencies. At the same time, the scoping letter and maps were posted on the Colville National Forest website and continue to be available there. A legal notice requesting scoping comments was also published on August 5, 2015, in the Statesman-Examiner (Colville), the newspaper of record for the Colville National Forest.

The initial mailing list was assembled using information provided by the Forest Service, stakeholder groups, and other interested parties including the Stevens County Commissioners, the Stevens County Cattleman’s Association, Tri-County Motorized Recreation Association, and the Northeast Washington Forestry Coalition. Additional information was obtained from a search of the Stevens County properties database for properties which were within or adjacent to the project or which are anticipated to be affected by project activities.

One public meeting was held on August 26, 2015, at the Agricultural Trade Center in Colville, Washington. This was announced via the scoping letter and legal notice and via a press release sent August 12, 2015, to the following media outlets: Statesman-Examiner (Colville), Spokesman Review (Spokane), Ferry County View, Republic News Miner, Omak News, KXLY, KREM, KPBX, and KCVL.

All comments received were placed in the project file and were reviewed by the project interdisciplinary team members for topics of concern. A draft summary of the concerns was made available to the interdisciplinary team in September 2015 and comments were distributed to interdisciplinary team members. These comments and identified issues became one of the bases on which the proposed action was modified and the alternatives were developed.
Critical input on the project was gathered from several stakeholders during the planning process. Input was also gathered by the interdisciplinary team leader through email, face-to-face meetings, teleconferences, and field trips. All input is documented in the project record available at Three Rivers District Office.

Stakeholders collaborated with during the planning process include the Stevens County Board of Commissioners, the Northeast Washington Trailblazers, Northeast Washington Forest Coalition, Tri-County Motorized Recreation Association, grazing permittees, Stevens County Cattleman’s Association, inholding residential landowners, and U.S. representative Cathy McMorris Rodgers. One-on-one meetings were held with stakeholders to review the purpose and need for the project, anticipated project activities, and to discuss specific stakeholder concerns. Follow-up meetings were conducted after the scoping period on two occasions in order to address issue area concerns with the interested parties.

A legal notice was published on September 7, 2016, notifying the public the EA was available for comment. Members of the public, local Tribes, and government agencies were notified via a letter on September 6, 2016, that the EA was available for comment including instructions on how to comment. The comment EA was posted on the Colville National Forest website at this time as well.

**Unavoidable Adverse Impacts**

Logging, post-harvest fuel treatments, road construction, culvert replacement, fish passage structure replacement and removal, and increased traffic under alternative B will lead to unavoidable increases in sediment delivery to streams that, in most subwatersheds, will be more than offset by road maintenance activities and will result in a net sediment delivery decrease. Net sediment delivery during the life of the project is expected to increase in the Camp Creek Subwatershed by 1.4 tons per year, less than 2 percent above natural background levels in this subwatershed. Short-term sediment increases associated with culvert replacement and fish passage structure replacement and removal under both action alternatives will be minor, as will the associated short-term displacement of fish. For more discussion about effects of the project on sediment delivery, see the Hydrology specialist report. For more discussion about effects of the project on fish distribution, see the Fisheries specialist report.

The incremental effects of peak flow increases under alternative B are unavoidable, but will be less than 10 percent compared to those produced by either the existing or expected historic range of variability conditions and are unlikely to produce measurable effects. Peak flow increases will be unlikely to result in adverse cumulative impacts to stream channels or fish habitat, or to cause flood damage. For more discussion about effects to streamflow, see the Hydrology specialist report.

Soil disturbance associated with commercial harvest activities and road construction outside treatment units is unavoidable. These unavoidable effects will be substantially mitigated through design elements and best management practices. Unavoidable disturbance associated with logging, road construction, and post-harvest fuel treatments with implementation of action alternatives will not exceed the Forest Plan standard of 20 percent detrimental soil conditions within treatment units.

Temporary road construction outside treatment units will lead to approximately 2.2 acres of soil disturbance that will persist for several decades. Realignment of National Forest System roads,
development of borrow pits, and fish passage structure replacement and removal will result in unavoidable soil disturbance on about 14 acres. For more information on the effects of project activities on soil productivity, see the Soils specialist report.

Realignment of National Forest System road 9411175 will result in the long-term loss of vehicle access to a popular dispersed campsite along Hanson Creek. Development of the existing borrow pit on County Road 4954 near Hanson Creek will result in the short-term loss of one dispersed campsite in the borrow pit. Rehabilitation of an area impacted by user-created trails along County Road 4668 will eliminate long-term vehicle access to one significant dispersed recreation site.

Disruption of dispersed recreation use, some extent of noise, smoke, and dust and evidence of project activities are unavoidable short-term effects of this Project. Impacts will be minimized by design elements discussed in chapter 2. Overall, the Forest Plan identifies specific visual and recreational objectives across the Forest, and these values will be maintained in the proposed project. For more discussion about impacts to recreation and visual quality, see the Recreation/Visual specialist report.

Smoke from prescribed burning of forest fuels is unavoidable. By burning within prescription parameters documented in project burn plans, potential adverse effects will be substantially reduced and within predetermined regulatory limits. Adverse air quality effects from prescribed burning will be substantially less than will result from the same forest fuels burning under wildfire conditions. For more discussion about smoke and air quality effects, see the Air Quality section in the final EA.

Irreversible and Irretrievable Commitments of Resources

The term “irreversible commitment of resources” refers to actions that disturb a nonrenewable resource or a renewable resource to the point that renewal can occur only over a long period of time and/or at great expense. “Irretrievable commitment of resources” is the loss of production or use of renewable resources because of an allocation decision.

Roads represent an irretrievable commitment of resources. Alternative B will construct up to 13.3 miles of temporary road on new roadbed and 3,575 feet of the new classified National Forest System road as part of realignment of National Forest System road 9411175. Alternative C will construct 3,575 feet of the new classified National Forest System road as part of realignment of National Forest System road 9411175, but no temporary roads. Temporary road will be decommissioned after use. New permanent roads will become part of the forest transportation system and will be considered an irretrievable commitment of resources. However, as part of the realignment of National Forest System road 9411175, approximately 7,656 feet of existing National Forest System road will be decommissioned and returned to forest production, representing a net reduction of 4,081 feet of National Forest System road.

Soil compaction and displacement as a result of ground-based logging under alternative B is unavoidable. Many of these unavoidable effects will be short term and will be substantially mitigated by design elements (EA, chapter 2). Regardless of soil type and site conditions, detrimental soil compaction and displacement always occurs on roads and landings. Roads and landings can be obliterated and some productivity restored; however, full productivity will not be restored until organic matter is restored, soil structure has redeveloped, topsoil has
redeveloped, and soil processes are restored. When roads are built in volcanic ash-capped soil, the loss of the volcanic ash topsoil means that full pre-road or landing soil productivity may never be restored.

Consultation with Government Agencies and Tribes

Government Agencies
The scoping letter was sent to U.S. Department of Agriculture Colville Service Center, U.S. Environmental Protection Agency, U.S. Department of Interior Fish and Wildlife Service, Department of Homeland Security Border Patrol, and Washington State Departments of Ecology, Fish and Wildlife, Natural Resources, Transportation, and Parks and Recreation. Comments were received from the Washington Department of Natural Resources were reviewed, and are included in the project record.

Consultation with the U.S. Department of the Interior Fish and Wildlife Service (U.S. Fish and Wildlife Service) will occur simultaneously with the objection period, and will be completed prior to a decision being signed. Consultation will include information regarding guidelines for the management of the Canada lynx within the project area. The U.S. Fish and Wildlife Service provided guidance regarding the Canada Lynx Conservation Assessment Strategy (ILBT 2013). This consultation will also include effects to grizzly bear according to the Grizzly Bear Recovery Plan (U.S. Fish and Wildlife Service 1993) and the Forest Plan; as well as wolverine.

Additional consultation was conducted with:

- Washington Department of Fish & Wildlife Habitat Program regarding priority habitats and species information for analysis of the proposed action on sensitive wildlife and fish species that could be impacted or benefited by the proposed action.

- Washington State Department of Archaeology & Historic Preservation regarding records for previously surveyed cultural resources in the Washington Information System for Architectural and Archaeological Records Data.

- Washington State Department of Natural Resources regarding future management activities that could occur on state trust lands in the project area.

Tribal Consultation
Scoping letters were sent to the Confederated Tribes of the Colville Reservation, the Spokane Tribe, and the Kalispel Tribe of Indians. No scoping comments were received from any of these tribes. Formal consultation letters were also sent to the Confederated Tribes of the Colville Reservation, the Spokane Tribe, and the Kalispel Tribe of Indians in August 2015. No response was received from any of these tribes.

Consistency with the Forest Plan, Management Direction, and Other Laws, Regulation, and Policies

After consideration of the discussion of environmental consequences (EA, chapter 3), I have determined that alternative B is consistent with other laws and regulations as outlined in the EA. Detailed discussions of laws and regulations are provided in the EA, chapter 3, pages 70 to 303.
As described throughout the environmental assessment and in the project record, alternative B fully complies with the requirements of the National Forest Management Act, National Historic Preservation Act, National Environmental Policy Act, Endangered Species Act, Clean Air Act, and Clean Water Act. It is consistent with the Colville National Forest Land and Resource Management Plan and complies with Executive Order 12898 (Environmental Justice).

**The National Forest Management Act**

*Consistency with the Land and Resource Management Plan for the Colville National Forest and Other National Forest Management Act Requirements*

This decision is consistent with the Colville National Forest Land and Resource Management Plan (USDA Forest Service 1988) as amended. The Colville National Forest Land and Resource Management Plan (Forest Plan) is the guiding management direction for the Middle and South Fork Mill Creek A to Z Project Area. The Middle and South Fork Mill Creek A to Z Environmental Assessment incorporates the Forest Plan by reference, and is tiered to the Forest Plan's final environmental impact statement (USDA Forest Service 1988). The Forest Plan contains standards and guidelines and management area designations and prescriptions that apply to the entire Colville National Forest, including the project area. Impacts of programmatic decisions contained in the Forest Plan are disclosed in the Forest Plan final environmental impact statement. The Forest Plan amendments are also management direction for this project (EA, pages 10 through 12 and individual resource effects determinations in chapter 3).

**The National Historic Preservation Act**

The Middle and South Fork Mill Creek A to Z Project, with the design criteria, meets the Forest Plan standards and guidelines for cultural resources and Federal regulations concerning heritage properties (National Historic Preservation Act Section 106 Compliance in the project file). Monitoring and maintenance of these sites will continue through the Heritage Program's standard program of work.

All cultural resources within the project will be avoided during project activities, resulting in no adverse effect to historic properties. This finding was based on the knowledge that although cultural resource sites may be impacted by the proposed undertaking, site avoidance and project design criteria will provide protection of eligible site characteristics. The Colville National Forest has a programmatic agreement (# National Forest System 97-06-59-10, April 15, 1997) with the Washington State Historic Preservation Office for projects that result in a no adverse effect.

**National Environmental Policy Act (NEPA)**

NEPA establishes the format and content requirements of an environmental analysis and documentation as well as requirements for public involvement and disclosure. The entire process of preparing this environmental analysis was undertaken to comply with NEPA.

**Endangered Species Act, Sensitive Species and Regional Forester’s Special Status Species**

Details regarding actual species found within the Middle and South Fork Mill Creek A to Z Project Area and potential effects of proposed activities on those species and their habitat are discussed in the Fish and Wildlife sections in chapter 3 of the EA (pages 154 to 175 and 175 to 46).
The Endangered Species Act requires protection of all species listed as threatened or endangered by Federal regulating agencies. A biological evaluation was prepared to document the effects of the proposed action on threatened, endangered, and sensitive wildlife and plant species. Appropriate coordination, conferencing, and consultation with the U.S. Fish and Wildlife Service will be occur simultaneously with the objection period as directed under section 7 of the Act (see previous section of this document titled “Consultation with Government Agencies and Tribes”).

Vegetation management implemented through this decision will increase the distribution and abundance of many small mammals, which in turn may benefit many forest carnivores within several growing seasons. Implementing my decision will increase herbaceous foraging habitat, maintain denning habitat, decrease hiding cover over the short term, but increase hiding cover over the long term, and maintain or increase seclusion habitat. Table 3 displays a summary of effects determinations for threatened, endangered, and sensitive wildlife species for this project included in consultation with the U.S. Fish and Wildlife Service.
### Table 3. Project summary of effects determinations for threatened, endangered, and sensitive wildlife species

<table>
<thead>
<tr>
<th>TES Species</th>
<th>Project Alternative</th>
<th>Determination</th>
<th>Rationale for Determination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bull trout (threatened)</td>
<td>A</td>
<td>No effect</td>
<td>Since bull trout are not present in or near the project area, and potential habitat is of very marginal quality, none of the project alternatives would affect bull trout.</td>
</tr>
<tr>
<td></td>
<td>B and C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Canada lynx (threatened)</td>
<td>A</td>
<td>No effect</td>
<td>No change in Lynx Analysis Unit 215. No immediate impacts to any existing food or cover resources.</td>
</tr>
<tr>
<td></td>
<td>B and C</td>
<td>May affect, not likely to adversely affect</td>
<td>Project activities would not occur within the vicinity of any known lynx den site, Project would create some foraging habitat and retain habitat connectivity. Project is consistent with the Canada Lynx Conservation Assessment and Strategy.</td>
</tr>
<tr>
<td>Grizzly bear (threatened)</td>
<td>A</td>
<td>No effect</td>
<td>No change in available seclusion habitat. No immediate impacts to any existing food or cover resources.</td>
</tr>
<tr>
<td></td>
<td>B and C</td>
<td>May affect, not likely to adversely affect</td>
<td>Project would occur outside of recovery habitat. Project activities could disturb and displace a bear from a resting or foraging site. Project would create some foraging habitat and retain habitat connectivity. Project is consistent with the Canada Lynx Conservation Assessment and Strategy.</td>
</tr>
<tr>
<td>Bald eagle (sensitive)</td>
<td>A</td>
<td>May impact individuals but not likely to cause a trend to Federal listing</td>
<td>No immediate impacts to any potential habitats. Increasing fuel loads would continue to elevate the risk of large tree loss to future, high-intensity crown fires.</td>
</tr>
<tr>
<td></td>
<td>B and C</td>
<td></td>
<td>No known nest sites in the project area. Foraging habitat at Little Twin Lakes would not be affected. No large trees marked for harvest except within new equipment and road corridors, landings. Large tree habitat promoted with thinning. Project would reduce stand stocking levels and forest fuel loads; decreasing the risk of stand-replacement fires.</td>
</tr>
<tr>
<td>Common loon and Harlequin duck</td>
<td>A</td>
<td>May impact individuals but not likely to cause a trend to Federal listing</td>
<td>No immediate impacts to any potential habitats. Increasing fuel loads would continue to elevate the risk of sedimentation and habitat loss at Little Twin Lakes.</td>
</tr>
<tr>
<td></td>
<td>B and C</td>
<td></td>
<td>Neither alternative would affect Little Twin Lakes; all treatments would be at least 150 feet from the lake.</td>
</tr>
<tr>
<td>Gray wolf (sensitive)</td>
<td>A</td>
<td>May impact individuals but not likely to cause a trend to Federal listing</td>
<td>Increasing fuel loads would continue to elevate the risk of forest cover loss to future, high-severity, stand-replacing wildfires. Such fires could promote big game forage but would reduce or eliminate hiding cover.</td>
</tr>
<tr>
<td></td>
<td>B and C</td>
<td></td>
<td>Temporary reduction in seclusion from project activities. Hiding cover maintained where feasible. Reduced risk of fires removing cover for big game. Potential for local improvements in green forage/upland shrub growth from timber harvest and under-burning with improved forage for prey species. Alternative B would create more forage for big game on their winter ranges.</td>
</tr>
<tr>
<td>TES Species</td>
<td>Project Alternative</td>
<td>Determination</td>
<td>Rationale for Determination</td>
</tr>
<tr>
<td>----------------------------------------------------</td>
<td>--------------------</td>
<td>---------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Great gray owl (sensitive)</td>
<td>A</td>
<td>May impact individuals but not likely to cause a trend to Federal listing</td>
<td>No immediate impacts to potential habitats. Increasing fuel loads would continue to elevate the risk of habitat loss to future, hot wildfires.</td>
</tr>
<tr>
<td></td>
<td>B and C</td>
<td></td>
<td>Reduction in canopy closure and horizontal cover for several years in harvested areas. Large trees retained in harvested areas. Additional large tree habitat promoted through thinning, selection harvest, and prescribed burning. Decreased risk of large live and dead trees and down logs being consumed by wildfire over the long term.</td>
</tr>
<tr>
<td>North American wolverine (sensitive)</td>
<td>A</td>
<td>May impact individuals but not likely to cause a trend to Federal listing</td>
<td>No immediate impacts to potential habitat. Foraging habitats for big game would slowly decline with declining prey or carrion for wolverine. Increasing fuel loads would continue to elevate the risk of forest cover loss to future, hot fires.</td>
</tr>
<tr>
<td></td>
<td>B and C</td>
<td></td>
<td>No project activities would occur within potential denning habitat. Treatments would improve forage for big game with improved opportunities for prey and carrion. Habitat connectivity would be maintained. Increased temporary access during treatments could lead to negative human impacts on wolverine.</td>
</tr>
<tr>
<td>Pygmy shrew (sensitive)</td>
<td>A</td>
<td>May impact individuals but not likely to cause a trend to Federal listing</td>
<td>No impacts to wetlands or other essential habitats. Over the long term, increasing fuel loads would continue to elevate the risk of high-severity, stand-replacing wildfires burning over large tracts of forest.</td>
</tr>
<tr>
<td></td>
<td>B and C</td>
<td></td>
<td>No timber harvest or mechanical fuels reduction activities around wetlands or riparian areas. Heavy equipment operation or burning could kill individual shrews. Ground vegetation reduced in harvested/burned areas but should quickly re-grow. Project would create some seral, disturbed habitats.</td>
</tr>
<tr>
<td>Red-tailed chipmunk (sensitive)</td>
<td>A</td>
<td>May impact individuals but not likely to cause a trend to Federal listing</td>
<td>No immediate impacts to essential habitats. Over the long term, increasing fuel loads would continue to elevate the risk of high-severity, stand-replacing wildfires burning over large tracts of forest.</td>
</tr>
<tr>
<td></td>
<td>B and C</td>
<td></td>
<td>Project activities in potential habitat would remove cover and forage in the short term. However, new small openings would be created as well as new edge habitat, both of which would benefit the species. Large trees would be retained in harvested areas. Forest fuel loads would be reduced, decreasing the risk of fire spread into overstory tree crowns.</td>
</tr>
<tr>
<td>Townsend’s big-eared bat and little brown bat (sensitive)</td>
<td>A</td>
<td>May impact individuals but not likely to cause a trend to Federal listing</td>
<td>No immediate impact to potential habitat. Abandoned mine adits would remain in their current condition. Increasing fuel loads would increase the risk of future, hot fires that would remove large roosting trees and snags.</td>
</tr>
<tr>
<td></td>
<td>B and C</td>
<td></td>
<td>No impact to abandoned mine adits. Large trees and snags would be retained in harvested areas. Forest fuel loads would be reduced, decreasing the risk of fire spread into overstory tree crowns and removing roost trees.</td>
</tr>
<tr>
<td></td>
<td>A</td>
<td></td>
<td>No impact, but fish passage barriers would persist.</td>
</tr>
<tr>
<td>TES Species</td>
<td>Project Alternative</td>
<td>Determination</td>
<td>Rationale for Determination</td>
</tr>
<tr>
<td>-------------------------------------</td>
<td>---------------------</td>
<td>--------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Westslope cutthroat trout (sensitive)</td>
<td>B and C</td>
<td>May impact individuals but not likely to cause a trend to Federal listing</td>
<td>Fish passage barriers would be removed and roads that contribute sediment would be rerouted and stabilized. Some potential short-term effects from in-stream work, but minimal impacts to any local populations within streams that would be offset by habitat improvements.</td>
</tr>
<tr>
<td>White-headed woodpecker (sensitive)</td>
<td>A</td>
<td>May impact individuals but not likely to cause a trend to Federal listing</td>
<td>Limited habitat suitability in the project area. Forest fuel loads would increase. The risk of hot crown fires removing potential habitat would increase incrementally over time.</td>
</tr>
<tr>
<td></td>
<td>B and C</td>
<td></td>
<td>Large trees would be retained in harvested areas. Some additional acres of dry site, park-like stands with mature trees would be promoted through tree thinning and prescribed burning, although most treatments would result in more mature multi-story rather than single-story stands. Forest fuel loads would be reduced, decreasing the risk of fire spread into the crowns of large ponderosa pine, larch, and Douglas-fir trees.</td>
</tr>
<tr>
<td>Sensitive invertebrates</td>
<td>A</td>
<td>May impact individuals but not likely to cause a trend to Federal listing</td>
<td>No immediate impacts to essential habitats. Over time, forest openings and edge habitats would decline in area with natural forest succession.</td>
</tr>
<tr>
<td></td>
<td>B and C</td>
<td></td>
<td>Less mobile individuals could be killed in areas of logging/fuel reduction operations. Forest management activities would avoid special habitats such as meadows, wetlands, and riparian areas. Small forest openings and edge habitats created through timber harvest. Most large logs retained.</td>
</tr>
</tbody>
</table>
Regional Forester’s Special Status Species

Sensitive Species, Management Indicator Species and Other Special Status Species and Landbirds

Both bull trout and redband trout are listed as sensitive species by the Forest Plan. Umatilla dace and pygmy whitefish are also listed as sensitive species. The pygmy whitefish occupies deep, cold-water lakes and their associated tributaries. This habitat is absent within the project area. Umatilla dace has no documented occurrence within the project area. Umatilla dace are benthic fish found in relatively productive, low-elevation streams. Riverine habitat is absent within the project area.

Most known special status plant populations are found within the project area are associated with wetlands, seeps, and springs. There are four special status population locations of kidney-leaved violet, crested woodfern, and purple avens within proposed vegetation treatment units or along roads that will be used during project implementation. All populations will be protected through avoidance and a 150 foot no-harvest zone. This buffer will avoid direct impacts from project activities and would reduce access to these populations by livestock, thereby minimizing grazing or trampling impacts. Changes in hydrology may increase the distribution of special status plant species. Effects could occur at specific sites due to road decommissioning, fish passage structure replacement and removal, and shaded fuel breaks. Table 4 displays a summary of effects determinations for sensitive plant species included in consultation with the U.S. Fish and Wildlife Service.

Other special status species (tables 18 and 19 in the EA) occur in the project area or adjacent watersheds. Habitats of many of these species will be conserved or enhanced by the measures to conserve or enhance habitat for these species. Table 19 of the EA summarizes the habitat needs, and direct, indirect, and cumulative effects of the no action and action alternatives to these special status species. None of the direct, indirect, or cumulative effects from alternative B described in the EA will contribute to a trend towards Federal listing for any of these species, nor will they reduce any of these species’ viability throughout their geographic ranges.
## Middle and South Fork Mill Creek A to Z Project summary of effects determinations for sensitive plant species

<table>
<thead>
<tr>
<th>TES Species</th>
<th>Project alternative</th>
<th>Determination</th>
<th>Rationale for Determination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upswept moonwort (sensitive)</td>
<td>A</td>
<td>May impact individuals but not likely to cause a trend to Federal listing</td>
<td>No immediate impacts to wetlands or other essential habitats. Over the long term, increasing fuel loads would continue to elevate the risk of high-severity, stand-replacing wildfires burning over large tracts of forest, which could remove individuals and their habitat.</td>
</tr>
<tr>
<td></td>
<td>B and C</td>
<td>No direct impact to known populations. Potential habitat within wetlands and riparian areas would be protected. As the species is not visible in all years, some individuals could be affected should they be present outside wetlands and riparian areas during project activities.</td>
<td></td>
</tr>
<tr>
<td>Crenulate moonwort (sensitive)</td>
<td>A</td>
<td>May impact individuals but not likely to cause a trend to Federal listing</td>
<td>See upswept moonwort.</td>
</tr>
<tr>
<td></td>
<td>B and C</td>
<td>See upswept moonwort.</td>
<td></td>
</tr>
<tr>
<td>Western moonwort (sensitive)</td>
<td>A</td>
<td>Will impact individuals but not likely to cause a trend to Federal listing</td>
<td>A portion of one population would be affected by the project. However, this small effect would not reduce the viability of other populations within the project area, nor the species as a whole, and would not cause a trend to Federal listing of the species.</td>
</tr>
<tr>
<td></td>
<td>B and C</td>
<td>See upswept moonwort.</td>
<td></td>
</tr>
<tr>
<td>Two-spiked moonwort (sensitive)</td>
<td>A</td>
<td>May impact individuals but not likely to cause a trend to Federal listing</td>
<td>See upswept moonwort.</td>
</tr>
<tr>
<td></td>
<td>B and C</td>
<td>See upswept moonwort.</td>
<td></td>
</tr>
<tr>
<td>Stalked moonwort (sensitive)</td>
<td>A</td>
<td>May impact individuals but not likely to cause a trend to Federal listing</td>
<td>See upswept moonwort.</td>
</tr>
<tr>
<td></td>
<td>B and C</td>
<td>See upswept moonwort.</td>
<td></td>
</tr>
<tr>
<td>Bulb-bearing water hemlock (sensitive)</td>
<td>A</td>
<td>May impact individuals but not likely to cause a trend to Federal listing</td>
<td>No immediate impacts to wetlands or waterbodies. Over the long term, increasing fuel loads would continue to elevate the risk of high-severity, stand-replacing wildfires burning over large tracts of forest which could severely degrade habitat for the species.</td>
</tr>
<tr>
<td></td>
<td>B and C</td>
<td>No direct impact to known populations. Potential habitats within wetlands and riparian areas would be protected. Sedimentation from stream restoration activities could have some negative effects on the species should it be present within a sediment plume.</td>
<td></td>
</tr>
<tr>
<td>Water avens (sensitive)</td>
<td>A</td>
<td>May impact individuals but not likely to cause a trend to Federal listing</td>
<td>See bulb-bearing hemlock.</td>
</tr>
<tr>
<td></td>
<td>B and C</td>
<td>See bulb-bearing hemlock.</td>
<td></td>
</tr>
</tbody>
</table>
The Clean Air Act, as Amended in 1990
The potential for the project to impact air quality was analyzed (EA, pages 290–291). This decision will not affect the visibility protection guidelines of any class I airshed because the nearest class I air sheds are the Spokane Indian Reservation about 40 miles to the south and the Cabinet Mountain Wilderness about 90 miles to the east. Visibility protection guidelines for class I areas place restrictions on prescribed burning during weekends from June 15 through October 1 and on Independence Day and Labor Day as described in the Washington Smoke Management Plan. No prescribed burns will take place during the restricted time periods; therefore, prevention of significant deterioration was not analyzed for the Middle and South Fork Project.

Clean Water Act 1982 and 303(d)
The potential for the proposal to impact water was analyzed (EA, pages 133–143). Stream segments listed as water quality impaired were given special consideration so as to improve conditions (Hydrology report [project file] and EA page 133). Implementing this project meets the Clean Water Act.

Civil Rights and Environmental Justice
Executive Order 12898 requires Federal agencies to identify and address any disproportionately high and adverse human health or environmental effects on minority and low-income populations. I have determined that there will be no discernable impacts from the selected alternative in the effects on Native Americans, women, minority populations, or the Civil Rights of any American citizen (EA, pages 295–296).

Finding of No Significant Impacts (FONSI)
The following is a summary of the project analysis to determine significance, as defined by Forest Service Handbook 1909.15_05. “Significant” as used in NEPA requires consideration of both context and intensity of the expected project effects.

Context means that the significance of an action must be analyzed in several contexts (such as local, regional, worldwide), and over short and long timeframes. For site-specific actions, significance usually depends upon the effects in the local rather than in the world as a whole. This project is limited in scope and duration. The analysis in chapter 3 of the EA indicates project design and application of Forest Plan standards and guidelines, combined with best management practices, and project design elements will minimize adverse impacts to all resources. Given the short term and localized nature of impacts described in the environmental assessment, the project will have no measurable effects at the regional or national levels and, therefore, consideration of significance will focus on the local setting.

Intensity refers to the severity of the expected project impacts and is defined by the 10 points below.
1. Impacts that may be both beneficial and adverse. A significant effect may exist even if the Federal agency believes that on balance the effect will be beneficial. [40 CFR§1508.27(b(1))]

As described in the environmental assessment and project record, there are likely to be both beneficial and adverse effects to certain resources from taking the actions proposed in the proposed action, and they are considered in both context and intensity. Having weighed these concerns against benefits to resource management and forest health, I have determined that alternative B is the most feasible way to continue to provide for sustainable use of National Forest System lands while providing for wood products for local industry and communities. I am satisfied that the project design elements and monitoring will minimize or eliminate potential for any long-term adverse effects on other Colville National Forest resources. In balance, the beneficial outweigh the adverse impacts, and in reaching my finding of no significant impact, I did not ignore or trivialize negative effects by offsetting them with beneficial effects.

I have a particular interest in maintaining sustainable forest resource conditions, as well as concern for potential adverse effects on wildlife, federally listed species, and Forest Service sensitive species, archaeological resources, and soil and watershed conditions. The environmental assessment demonstrates that, due to its careful project design incorporating protective measures (Forest Plan standards and guidelines, water conservation practices, and site-specific design elements), the possible adverse effects are relatively minor and of short duration, and are not directly, indirectly, or cumulatively significant.

2. The degree to which the decision affects public health or safety. [40 CFR §1508.27(b)(2)]

No widespread impact to public health and safety was identified. The effect to air quality from prescribed fire smoke is discussed in the EA on pages 290–291. The effect to water quality from the project is discussed throughout the environmental assessment (see “Hydrology,” pages 98–115, “Water Quality,” pages 133–143, and “Listed Stream Segment,” page 133).

3. Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas. [40 CFR §1508.27(b)(3)]

The Middle and South Fork Mill Creek A to Z Project Area contains no unique characteristics or features. There are no parklands, prime farmlands, wild and scenic rivers, ecologically critical areas, congressionally designated areas (such as wilderness, wilderness study areas, inventoried roadless areas, or national recreation areas), research natural areas, or municipal watersheds. The area does contain threatened species or their habitat, floodplains and wetlands, and cultural sites; however, the effects to these resources have been examined in the environmental assessment, and there is nothing noted about these features that will suggest that they are unique, or that associated effects will be significant (EA, page 302).

Executive Order 11988 and Executive Order 11990 require protection of floodplains and wetlands, respectively. There are approximately 479 acres of wetlands in the project area. Wetlands can play an important role in moderating peak flows and sustaining base flows, especially during periods of drought. They also provide specialized aquatic habitats for wildlife as well as water for wildlife and livestock. Through implementation of design elements and best management practices, these wetlands will be protected under my decision.
4. The degree to which the effects on the quality of the human environment are likely to be highly controversial. [40 CFR §1508.27(b)(4)]

Although effects of timber harvest and road construction on National Forest System lands and resources throughout the Western United States has been the subject of considerable litigation and debate among advocacy groups. Alternative B was developed to incorporate management practices that have been shown over recent years to be successful in maintaining or improving resource conditions.

For this analysis, the interdisciplinary team considered and reviewed numerous publications and research in support of and in opposition to conclusions about effects to forest health, soils, water quality, wetlands, vegetation, and wildlife (project record and EA ["Literature Cited" section and chapter 3]). The interdisciplinary team also considered and integrated studies, monitoring results, and published research findings into the analyses. No significant issues were raised by the public. Controversy in the context of this finding of no significant impact applies to determining whether the EA or an environmental impact statement is the appropriate level of analysis, rather than the mere existence of opposition to an activity. I have considered the science and find that the effects of the proposed project are not scientifically controversial.

5. The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks. [40 CFR §1508.27(b)(5)]

The Colville National Forest has considerable and ample experience with implementing activities such as those proposed within the Middle and South Fork Mill Creek Planning Area (examples are commercial and precommercial harvest, prescribed burning, road reconstruction and decommissioning and resource monitoring). The environmental effects analysis conducted and documented in the EA demonstrates that effects are not uncertain and that they do not involve unique or unknown risk. The effects of the proposed action can be estimated with relative certainty because the project activities are similar to stewardship projects previously implemented on the Colville National Forest.

6. The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration. [40 CFR §1508.27(b)(6)]

None of the activities included in the Middle and South Fork Mill Creek A to Z Project set precedents. The Three Rivers Ranger District has been planning and implementing vegetation treatments and prescribed burns for years as well as reconstructing and decommissioning roads. Many of these past activities are similar in scope and nature to those included in the Middle and South Fork Mill Creek A to Z Project (EA, page 303). This decision applies only to National Forest System lands and is well within the laws, regulations, Forest Service direction and the Forest Plan as they relate to these activities on National Forest System lands.

7. Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts. [40 CFR §1508.27(b)(7)]

Resource specialists reviewed past, present, and foreseeable future activities that have or are likely to occur in and around the Middle and South Fork Mill Creek A to Z Project Area and each
provided an analysis of potential cumulative impacts associated with those other activities, as documented in chapter 3 of the EA and the project record. No significant cumulative effects were identified by resource specialists and no significant cumulative effects surfaced during scoping or the 30-day public comment period. No significant effects were found that will require preparation of an environmental impact statement.

8. The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources. [40 CFR §1508.27(b)(8)]

Consultation with the Washington State Historic Preservation Office and area Native American Tribes is covered under a programmatic agreement with the Washington State Historic Preservation Office for this project (# National Forest System 97-06-59-10, April 15, 1997). Surveys and a review for known archaeological sites within the project area have been conducted. No priority heritage assets or grazing-sensitive sites are present. Consultation will fulfill obligations of the National Historic Preservation Act of 1966 and 36 CFR part 800. Alternative B activities have been designed to avoid inventoried cultural resources and the design elements identified in chapter 2 of the EA will be implemented to minimize unintended impacts. If un-inventoried sites are encountered during project implementation, design elements stipulate that these sites will be treated as National Register of Historic Places-eligible and be avoided. No significant scientific, cultural, or historical resources will be affected by activities in alternative B (EA, pages 291–295).

9. The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973. [40 CFR §1508.27(b)(9)]

Potential effects of alternative B on threatened species have been analyzed and documented in the wildlife and fish reports. No significant effects have been found for any of these species or their habitat that require the preparation of an environmental impact statement.

Section 7(d) of the Endangered Species Act of 1973, as amended, requires that Federal agencies “shall not make any irreversible or irretrievable commitment of resources with respect to the agency action which has the effect of foreclosing the formulation or implementation of any reasonable and prudent alternative which will not violate subsection (a)(2).”

See pages 36 through 40 of this decision for a discussion of consistency with the Endangered Species Act.

10. Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment. [40 CFR§1508.27(b)(10)]

No Federal, State, or local law or requirement will be threatened with violation because of implementation of alternative B. See the discussion of consistency with laws, regulations, and policies starting on page 34 of this decision.

Conclusion

After carefully considering the environmental effects described in the EA and specialist reports, I have determined that alternative B will not have significant effects on the quality of the human
environment considering the context and intensity of impacts (40 CFR 1508.27). Thus, an environmental impact statement will not be prepared.

Administrative Review, Objection Rights and Expected Implementation

**Objection under 36 CFR 218**

On March 27, 2013, a final rule revising 36 CFR part 18 was published in the *Federal Register* and became effective on that date. The new rule replaces the previous appeal rules defined in 36 CFR 215. The new rule provides the public an opportunity to comment and express concerns on projects before decisions are made rather than after. This draft decision notice is now subject to the objection procedures (36 CFR 218) under the “Project Level Pre-decisional Administrative Review Process.”

Objections, including attachments, must be in writing and filed (regular mail, fax, e-mail, hand-delivery, express delivery, or messenger service) with the Objection Reviewing Officer (36 CFR 218.8) within 45 days following the date of publication of a legal notice announcing the Opportunity to Object in the newspaper of record. The publication date of the legal notice in the newspaper of record is the exclusive means for calculating the time to file an objection (36 CFR 218.5(c)). Those wishing to object should not rely upon dates or timeframe information provided by any other source.

Objections will only be accepted from those who have previously submitted specific written comments during designated opportunities for public comment (36 CFR 218.5(a)). Issues raised in objections must be based on previously submitted specific written comments regarding the proposed project or activity and attributed to the objector, unless the issue is based on new information that arose after the opportunities to comment (36 CFR 218.8(c)).

Objections must meet content requirements of 36 CFR 218.8(d) and include:

1. Objector’s name and address as defined in §218.2, with a telephone number, if available;
2. Signature or other verification of authorship upon request (a scanned signature for electronic mail may be filed with the objection);
3. When multiple names are listed on an objection, identification of the lead objector as defined in §218.2. Verification of the identity of the lead objector must be provided upon request or the reviewing officer will designate a lead objector as provided in §218.5(d);
4. The name of the proposed 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 project will be implemented;
5. A description of those aspects of the proposed project addressed by the objection, including specific issues related to the proposed project; if applicable, how the objector believes the environmental analysis or draft decision specifically violates law, regulation, or policy; suggested remedies that will resolve the objection; supporting reasons for the reviewing officer to consider; and
(6) A statement that demonstrates the connection between prior specific written comments on the particular proposed project or activity and the content of the objection, unless the objection concerns an issue that arose after the designated opportunities for comment (see paragraph (c) of this section).

Objections, including attachments, may be filed by mail, hand-delivery, express delivery, or messenger service (Monday through Friday, 8:00 a.m. to 12:00 p.m., 1:00 p.m. to 4:00 p.m., excluding holidays) to:

Jim Peña, Regional Forester (Reviewing Officer)
Attn: Middle and South Fork Mill Creek A to Z Project EA
Pacific Northwest Regional Office
1220 SW 3rd Avenue, P.O. Box 3623
Portland, Oregon 97204-2825

Via fax: 503-808-2210, or in electronic format via e-mail to: objections-pnw-regional-office@fs.fed.us. Electronically filed objections must be submitted in a format such as an e-mail message, Word (.doc), rich text format (.rtf), plain text (.txt), PDF (.pdf), or hypertext markup language (.html) formats. Please include “Middle and South Fork Mill Creek A to Z Project” as the subject matter in the correspondence heading.

Objections, including names and addresses, will become part of the public record and may be released under the Freedom of Information Act.

Incorporation of documents by reference is permitted only as provided in §218.8(b). It is the objector’s responsibility to ensure timely filing of a written objection with the reviewing officer pursuant to §218.9. All objections are available for public inspection during and after the objection process.

**Implementation**

If no objections are filed within the 45-day time period, the final decision notice and finding of no significant impact will be signed indicating approval of the project, and the project may be implemented 5 business days following the end of the objection filing period.

If an objection is filed, a resolution meeting with the objector(s) may be completed within a 45-day period that follows the end of the objection filing period, which, at the option of the objection reviewing officer, may be extended up to another 30 days, if needed. Once responses to the objections are completed and recorded in writing, the reviewing officer will make recommendations as to the EA, and final decision notice for signature and approval. A project that has undergone the objection review process may be implemented immediately after the signing of the final decision notice.

In either case, according to regulations (36 CFR 218) no legal notice is required once a final decision notice and finding of no significant impact is signed. However, the Forest Service may send out a letter or news release to notify any interested parties of the availability of the final decision document(s).

Implementing treatments will likely begin in the fall of 2017.
I have reviewed the Middle and South Fork Mill Creek A to Z EA and associated documents, and I believe there is adequate information within these documents to provide a reasoned choice of action. I have determined that these risks will be outweighed by the benefits of protecting the Middle and South Fork Planning Area and its associated resources. Implementing alternative B in conjunction with any past, present, or reasonably foreseeable future actions will cause no unacceptable cumulative impact to any resource. Monitoring during project implementation will include the monitoring included in the design elements, mitigation measures, and monitoring section in chapter 2 of the EA.

Procedure for Change during Implementation

Some changes may be needed during implementation to better meet onsite resource management and protection objectives. In determining whether and what kind of further NEPA action is required, I will consider the criteria to supplement an existing environmental analysis in 40 CFR 1502.9(c) and FSH 1909.15, section 18, and in particular, determine whether the proposed change is a substantial change to the intent of the selected alternative as planned and already approved, and whether the change is relevant to environmental concerns. Connected or interrelated proposed changes regarding particular areas or specific activities will be considered together in making this determination. The cumulative impacts of these changes will also be considered.

Copies of the Environmental Assessment and Contact for Further Information

Copies of the EA are available from the Three Rivers Ranger District at 255 West 11th, Kettle Falls, WA 99141. The Colville National Forest website can also be accessed for copies of the environmental documents at: http://www.fs.usda.gov/projects/colville/landmanagement/projects

For additional information concerning this decision or the USDA Forest Service administrative review process contact:

Rodney Smoldon, Forest Supervisor
Colville National Forest
765 South Main Street
Colville, WA 99114
[Phone (509) 684-7000]

Responsible Official Signature

(DN/FONSI Signature Pending)  (Date Pending Completion of Objection Review Process)

RODNEY SMOLDON
Colville National Forest Supervisor

Date