Clear Creek Integrated Restoration Project

Final Record of Decision

Moose Creek Ranger District
Nez Perce-Clearwater National Forests
Idaho County, Idaho
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Final Record of Decision

Clear Creek Integrated Restoration Project

Moose Creek Ranger District
Nez Perce National Forest
Idaho County, Idaho

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Decision Summary

After extensive analysis, I have decided to implement Alternative C as described in the Clear Creek Integrated Restoration Project Final Environmental Impact Statement (FEIS). In making this decision, I have considered the condition of vegetation in the project area, current aquatic habitat conditions in Clear Creek and its tributaries, public comments, the environmental effects of this project, and all applicable laws and regulations. This Record of Decision (ROD) documents my decision and rationale for implementing the selected actions.

The Clear Creek drainage lies within the Middle Fork Clearwater River drainage near Kooskia, Idaho. The Clear Creek drainage totals 65,000 acres, with 33% (21,269 acres) in private or State ownership and the remaining 67% (43,731 acres) under the management of the Moose Creek Ranger District. The Clear Creek Integrated Restoration project area includes all 43,731 acres of National Forest System (NFS) lands within the Clear Creek drainage.

All of the project area lies within the upper two-thirds of the drainage. The project area is located approximately 5 air miles southeast of Kooskia, Idaho, within Townships 30, 31, and 32 N, Ranges 5 and 6 E, Boise Meridian.

Briefly, this Decision will accomplish the following over the next 5 to 10 years:

- 4,156 acres of regeneration harvest, site preparation, and reforestation. Regeneration harvests are used when the trees reach culmination of mean annual increment. Culmination of mean annual increment (CMAI) is a condition in which tree growth has stagnated due to tree age or tree crowding and maximum tree volume has been reached (Helm, 1998). Regeneration harvests are also used when insect and disease mortality has reduced stand growth to the point the stand is declining in live tree volume. Clumps of trees, snags, and legacy trees will be retained in some areas within these units to improve wildlife habitat while meeting the purpose and need to reestablish long-lived early seral tree species to increase landscape resilience against uncharacteristic fire, insect, and disease epidemics and climate change. Post-harvest burning will prepare these stands for planting.

- 331 acres of improvement harvest. An Improvement harvest is an intermediate harvest which removes less desirable trees of any species in a stand to improve the composition and quality of the stand. Improvement harvest will be used in stands that include large, old ponderosa pine and western larch. These stands will be thinned from below, removing ladder fuels and some of the smaller trees. Reducing crowding will maintain or improve the health of the remaining trees and will reduce the effects of wildfires through reducing crown fire potential on the remaining large trees.

- 4,220 acres of commercial thinning. Commercial thinning is an intermediate harvest with the objective of reducing tree crowding primarily to improve growth, enhance forest health and other resource objectives (USDA, 2008). Commercial thinning improves or maintains growth rates of the trees by reducing crowding, and earns more money from the timber sold than the cost of thinning the stand (Helm, 1998). Commercial thinning is used in healthy young stands that are growing well, but would benefit from thinning. The effects of commercial thinning are similar to the effects of improvement harvest. The trees that are removed during commercial thinning are large enough to provide valuable
wood products, improve species composition mix, and reduce the risk of stand-replacing wildfire effects.

- 1,793 acres of precommercial thinning. Precommercial thinning is used in young stands of relatively small trees to reduce crowding, improve forest health, improve species composition, and reduce fuels. The trees that are removed during precommercial thinning are usually too small to have commercial value.

- 1,371 acres of prescribed fire. Prescribed burning in the Clear Creek Roadless Area will restore natural fire regimes, reduce fuels, and improve wildlife habitat. This activity is consistent with the Idaho Roadless Rule. No timber harvest will occur within the Clear Creek Roadless Area.

- 41 acres of grass restoration. Prescribed burning will make it possible to restore native bunchgrass communities and forbs. Revegetating this area with native plants will reduce the spread of noxious weeds.

- 8.7 miles of temporary road construction on existing templates. These temporary roads are needed to implement the selected actions. They will be decommissioned after use. “Existing templates” are old road beds from historic logging that were left in a stable condition after use, but were not obliterated.

- 27.6 miles of new temporary road construction. New temporary roads are needed to implement the selected actions. They will be decommissioned after use. No new permanent roads will be constructed for this project. Temporary roads will be hydrologically disconnected from live water; i.e., located on ridge tops or the upper third of slopes, with no water crossings.

- 119.8 miles of NFS road reconstruction. These road improvements are necessary to implement the selected actions and are watershed improvement actions to reduce sediment delivery to streams. They include adding cross-drain culverts near flowing streams to divert ditch water and its associated sediment onto the forest floor instead of into the stream, and replacing 69 existing culverts at live stream crossings that are sized for a 100-year flow event, and installing cross-drain culverts.

- 48.8 miles of NFS road reconditioning. These road improvements are necessary to implement the selected actions and are watershed improvement actions to reduce sediment delivery to streams. These actions include brushing, blading, and spot-surfacing roads with gravel where needed.

- 13.2 miles of NFS road decommissioning. These roads are no longer needed, will be removed from the system, and are watershed improvement actions to reduce sediment delivery to streams.

- Two site-specific Forest Plan amendments. Both amendments will apply only to the Clear Creek Integrated Restoration project area.
  - Amendment 41 will adopt the Region 1 soil standard of 15% for detrimentally disturbed soils. This amendment will allow vegetation treatments and soil improvement activities to proceed in areas with pre-existing detrimental soil disturbance. This amendment provides the flexibility to achieve multiple resource objectives while showing an upward trend in net soil conditions.
Amendment 42 is a site-specific clarifying amendment for old growth that will replace the definitions of old growth found in Appendix N of the Nez Perce Forest Plan (USDA Forest Service 1987a) with the definitions found in “Old Growth Forest types of the Northern Region” (Green et al., 1992, errata corrected 02/05, 12/07, 10/08, 12/11). The Green et al. definitions are regarded as the best available science for the classification of old growth at the site-specific level and have been adopted as the Region 1 definitions for old growth.

Forest Plan direction for this project is found in the Nez Perce National Forest Plan (USDA Forest Service 1987a) since the project area lies within the administrative boundaries of the Nez Perce National Forest. The Nez Perce and Clearwater National Forests were administratively combined in February 2013, but the existing Forest Plans for each Forest will continue to guide management actions until the Forest Plans are revised. Revision of the 1987 Forest Plans is currently ongoing.

Most of Unit 150 (approximately 135 acres), all of Unit 152 (36 acres), and the north half of Unit 154 (approximately 40 acres) are old growth and will be dropped from the selected actions displayed for Alternative C (see Volume 2, Appendix H of the FEIS).

In late summer 2015, the Baldy Fire burned approximately 753 acres within the Clear Creek Integrated Restoration project area in the headwaters of the South Fork of Clear Creek, which is a tributary to Clear Creek and the Middle Fork Clearwater River. The Baldy Fire was a mixed severity burn, with high severity (54 acres) occurring near Baldy Mountain along the ridge top due to a crown fire, low severity (384 acres) near the bottoms of the drainages and Road 1855, and moderate severity (315 acres) elsewhere in the burned area. No proposed harvest areas were burned, and a post-fire Burned Area Emergency Rehabilitation (BAER) review did not recommend any treatments in the Clear Creek drainage.

I directed project specialists to assess effects of the 2015 wildfires on the project area. My findings regarding this new information and potentially changed circumstances related to this project are documented in a November 4, 2015 memo that is available in the project file. Based on my review, I find that the wildfire effects do not significantly change the environmental effects of the project, nor do they change the basis or nature of considerations and rationale for reaching a decision on this project. Supplementing the Clear Creek Integrated Restoration FEIS is not necessary.

**PURPOSE OF AND NEED FOR ACTION**

The purpose and need for action was developed by comparing existing conditions in the project area to desired conditions. Where desired conditions are different from existing conditions, management actions have been proposed that would move resources closer to desired conditions.

The Clear Creek drainage lies within the Middle Fork Clearwater River drainage near Kooskia, Idaho. The Clear Creek drainage totals 65,000 acres, with 33% (21,269 acres) in private or State ownership and the remaining 67% (43,731 acres) under the management of the Moose Creek Ranger District. The Clear Creek Integrated Restoration project area includes all 43,731 acres of National Forest System (NFS) lands within the Clear Creek drainage.
Desired conditions for the project area were identified after careful consideration of existing conditions; applicable Forest Plan management direction; recommendations in the Selway and Middle Fork Clearwater Rivers Subbasin Assessment (USDA Forest Service 2001); and the needs, opportunities, and issues identified by a site-specific interdisciplinary watershed assessment and pre-National Environmental Policy Act (pre-NEPA) analysis conducted in 2011 for the project area. Completing this project will move the area toward a Desired Future Condition as defined in the Nez Perce National Forest Plan (USDA Forest Service 1987a, pp. II-1 and II-2).

The Clear Creek Integrated Restoration Project is part of the larger Selway-Middle Fork Collaborative Forest Landscape Restoration Project. In 2010, the Clearwater Basin Collaborative (CBC), in partnership with the Nez Perce–Clearwater National Forests, produced a comprehensive restoration strategy that was submitted for funding through the Collaborative Forest Landscape Restoration Program (CFLRP). This science-based proposal was designed to restore and maintain ecological conditions within the 1.4-million-acre Selway–Middle Fork ecosystem in Idaho, with the overall goal of reducing the risk of uncharacteristic wildfire across the landscape by increasing landscape resiliency in regard to uncharacteristic wildfire, insects and diseases, and climate change.

The purpose of the project is to manage forest vegetation to restore natural disturbance patterns; improve long-term forest health at the landscape level; reduce fuels; improve watershed conditions; improve early seral wildlife habitat; and maintain habitat structure, function, and diversity. These actions are needed to move resource conditions in the project area from existing conditions toward desired conditions. Timber outputs from the Clear Creek Integrated Restoration Project will be used to offset treatment costs, support the economic structure of local communities, and provide for regional and national needs.

The following resource management needs were identified for the project area:

**Vegetation and Wildlife**

*Existing Condition:* This landscape was historically dominated by western white pine and other long-lived seral species including ponderosa pine and western larch. Grand fir and Douglas-fir have replaced white pine as the dominant species, primarily due to white pine blister rust. Most stands in the project area are dominated by middle-aged and mature grand fir and Douglas fir. These habitats are generally shorter lived, less fire-resistant, and more susceptible to insects and diseases than those where early seral species, such as ponderosa pine, western larch, and white pine, are present in greater numbers. Because shade-tolerant tree species such as grand fir and Douglas fir are generally shorter-lived, dying trees have caused fuels to increase in forested areas. Grand fir is not a fire-resistant species and is unlikely to survive a wildfire.

Historically, vegetation patterns or “patches” in this area occurred in sizes much larger than 40 acres. Within a large patch, there would have been a mosaic of vegetation that could range from hundreds up to thousands of acres. Historic logging practices and fire suppression have created vegetation patterns across the landscape that are generally smaller and more fragmented and disconnected than would have resulted from natural disturbances.

Patch edges are often artificially straight and even. There is very little young forest in the project area, and there is little diversity in patch sizes among the younger stands. This limits the habitat
available for wildlife species that utilize open, early seral habitat, such as neotropical migratory birds, small mammals, and big game.

*Desired Condition:* The desired condition is a diverse forest with a range of age classes, size classes, habitat diversity, and disturbance patterns like those that would result from natural mixed severity wildfires. The desired condition is to have a range of tree species that more closely resembles those that occurred in this area historically and are more resilient to wildfire, insects and diseases, and climate change. The desired condition is to have fewer middle-aged and mature stands, and more young stands, to provide habitat for a wider variety of wildlife species. The desired condition is to have a variety of patch sizes in all age classes comprised of a desired mix of early seral, long lived, resistant species which may eventually develop into large patches of future large diameter, long-lived trees that promote landscape resiliency against natural disturbance agents.

Desired future conditions for patch sizes, tree sizes, and stand age distributions are discussed in detail in the FEIS in Volume 1, on pages 3-89 through 3-94, and in Volume 2, Appendix G, “Target Stands for Multiple Objectives.”

*Need for Action:* There is a need to produce a more diverse and healthy forest composition and structure that will be able to resist diseases and insects, and to survive when wildfires occur. This could be accomplished by creating a broader range of species composition, age classes, size classes, habitat complexity, and disturbance patterns that more closely resemble those that would result from mixed severity wildfires. Increasing early seral species in managed areas would improve or maintain desired habitat conditions, and would make these habitats more resistant to insects, diseases, wildfire, and climate change.

There is a need to create a variety of patch sizes among the young stands. Most of the project area is mature forest. Historic regeneration harvesting created most of the existing openings in this area, but left mature forested stands between and around the openings. Extensive areas of mature forest in the project area have been affected by root diseases and bark beetles. There is a need to move the landscape toward forest composition, structure and patch sizes that match the scale of widespread and increasing root diseases, insect infestations, and wildfire.

**Goods and Services**

*Existing Condition:* Trees in grand fir and Douglas-fir dominated stands are dying due to insect and disease infestations. These conditions are shortening the life span of existing stands and increasing the risk of stand-replacing wildfire from unnaturally high fuel loads.

*Desired Condition:* The desired condition is to “utilize timber outputs produced through restoration activities to support the economic structure of local communities and provide for regional and national needs” (Forest Plan page II-1).

*Need for Action:* There is a need to provide a sustained yield of resource outputs, as directed by the Forest Plan. This could be accomplished by increasing the life span, health, and resiliency of stands in the project area to provide a long-term, sustainable supply of materials for local industries.
Watershed and Soils Improvement

Existing Condition: Most of the roads in the project area that are not needed for current or future management were selected for decommissioning under the South Fork/West Fork (SF/WF) Clear Creek Road Decommissioning project (Environmental Assessment, 2011). The SF/WF Clear Creek Road Decommissioning EA decommissioned 8.5 miles of system roads and 73 miles of non-system roads. The Clear Ridge Decommissioning project (Decision Memo, 2015) decommissioned 65 miles of non-system roads.

The Clear Creek Integrated Restoration Project will decommission another 13.2 miles of unneeded roads. As a result of these two decisions, most unneeded roads in the project area have already been approved for decommissioning. However, surveys indicate that approximately 69 culverts in the project area are moderate or low priority for replacement, another 8 need to be removed, and another 26 need to be cleaned. Most of the culverts scheduled for replacement are undersized and will be replaced with culverts that are appropriately sized to meet 100-year flood risk flows. Upsizing these culverts will reduce the risk of plugged or failed culverts, thereby reducing the risk of sediment delivery directly into streams. They will also promote a more stable, resilient watershed.

In some areas, roadside ditchline water drains toward stream channels, potentially adding sediment to streams and negatively affecting aquatic habitats downstream. The Clear Creek Integrated Restoration Project will install cross-drain culverts where needed to divert ditchline flow onto the forest floor and away from live streams. This would result in a reduction in road-related sediment in streams and habitat for threatened and sensitive fish species.

Some old units that were harvested in the 1960’s through the 1980’s using ground-based and jammer logging systems have compacted or displaced soils over more than 20% of the harvested area. Up to 105 miles of road will be reconstructed, and will include adding cross drain culverts and reducing the spacing of cross drain culverts along the length of selected sections of roads. Cross drains will be installed where needed near stream crossings in order to divert ditchline sediment away from streams and onto the forest floor. The cross drains that are nearest to streams will be placed from 50 to 100 feet away from the streams to provide adequate space to diffuse water and filter out sediment on the forest floor while minimizing the length of road section that is hydrologically connected to the streams.

Desired Conditions: The desired condition is a transportation system that provides access for needed forest management activities, while reducing road-related sediment transport to streams to a minimum, improving stream habitat conditions that trend toward threatened and endangered fish recovery goals. The desired condition is to meet Forest Plan goals for soil productivity and to minimize soil erosion.

Need for Action: There is a need to reduce road densities and repair existing roads and culverts to reduce sediment transport to streams and improve drainage where needed. There is a need to rehabilitate soils in some previously-harvested areas that do not currently meet Forest Plan goals or objectives.

Decision

As the Forest Supervisor, I am the responsible official for this Decision. I am proposing to implement Alternative C as described below. In making this proposed decision, I considered information in the FEIS and supporting project file; all public comments; and results of
coordination and consultation with the Nez Perce Tribe, National Oceanic and Atmospheric Administration (NOAA) Fisheries, U.S. Fish and Wildlife Service (USFWS), U.S. Environmental Protection Agency (USEPA), and Idaho State Historic Preservation Office (SHPO). Table 1 provides a summary of the actions included in each alternative.

**Vegetation Treatments**

During the pre-NEPA phase of project development, the interdisciplinary team (IDT) identified patches of vegetation within the project area referred to as “Focus Areas.” Within these Focus Areas, there is a need to connect recently regenerated stands (preferably those regenerated within the last 20 years) so that vegetation will be more uniform in age across larger areas, and will more closely resemble the forested landscape that would have evolved naturally. When identifying Focus Areas, the IDT looked for opportunities to create breaks in continuous fuels, favor areas with known or developing forest health issues, and target mid-seral and mature age classes because there is a shortage of younger age classes in this area. The IDT also attempted to identify areas with logical, easily-identified boundaries, such as changes in forest type, slope breaks, and administrative boundaries.

Within the Focus Areas, regeneration harvest will be used to improve patch sizes, increase the amount of early seral forest across the landscape, and replant a mix of species that will improve the long-term resilience of these stands. Healthy grand fir/Douglas-fir, ponderosa pine, and other early seral stands will be commercially thinned. Commercial thinning in stands that are affected by root diseases could cause root diseases to spread. If root diseases are detected in younger Douglas-fir/grand fir stands not comprised of early seral species and proposed for commercial thinning, these stands will be regenerated.

Outside of the Focus Areas, healthy grand fir/Douglas-fir, ponderosa pine, and other early seral stands will be commercially thinned. If advanced root diseases are detected in younger Douglas-fir/grand fir stands not comprised of early seral species and proposed for commercial thinning, treatment of these stands will be deferred.
Regeneration Harvest, Site Preparation, and Reforestation

Alternative C includes 4,156 acres of variable retention regeneration harvest (Figure 1), site preparation, and reforestation. 3,995 acres are within Focus Areas and 161 acres are outside of Focus Areas. Following harvest, units will be burned to prepare for planting, and will be reforested with long-lived early seral species. This will increase stand health and ability to resist insects and diseases. Management activities will favor resistant tree species on sites that are prone to or infected with root disease (Rippy et al. 2005; Hagle 2006). Harvest would follow a variable retention strategy, retaining green leave trees in singles and clumps, as shown in Figure 1. The Forest’s draft Target Stand for Multiple Objectives document (2013) outlines the amount and distribution of leave trees for a particular habitat type (see FEIS, Volume 2, Appendix G). Figure 2 shows green tree retention following regeneration harvest.
Commercial Thinning

Commercial thinning is an intermediate harvest with the objective of reducing stand density, primarily to improve growth and enhance forest health (FACTS, 2008). Commercial thinning improves or maintains growth rates of trees by reducing crowding, and earns more money from the timber sold than the cost of thinning the stand (Helm, 1998).

Alternative C includes 854 acres of commercial thinning inside the Focus Areas. This management activity was designed to mimic an underburn as part of a mixed-severity fire disturbance pattern by reducing crowding, which will improve growing conditions for the remaining trees and will improve early seral species composition. Outside of the Focus Areas, Alternative C proposes 3,366 acres of commercial thinning. All action alternatives were designed to address the issue of stands growing more slowly than desired as they age. The action alternatives take advantage of thinning opportunities, while maintaining stands and improving growing conditions and species composition. Approximately 40%–60% of the overstory will be removed, leaving the largest, healthiest ponderosa pine, western larch, white pine, Douglas-fir, and grand fir.

Figure 2. A target stand example at understory reinitiation phase.
**Precommercial Thinning**

Alternative C will precommercial thin 1,793 acres. Precommercial thinning was dropped in Lynx Analysis Units (94 acres). Precommercial thinning is a cutting of trees not for immediate financial return, but to remove overstocked trees and reduce crowding, which improves or maintains growth (FACTS, 2008). The effects of precommercial thinning will be similar to the effects of commercial thinning. Early seral species will be retained, improving species composition. Tree growth will be improved by reducing competition and improving growing space. Approximately 200–300 standing trees per acre (tpa) will remain following treatment.

**Improvement Harvest**

Alternative C includes 331 acres of improvement harvest. Improvement harvest is used in stands with an existing component of large, old ponderosa pine and western larch trees that survived the last stand-replacing disturbance, and will affect stands in the same ways as commercial thinning. Commercial thinning, however, is used in younger stands to promote better growth rates. Improvement cutting is basically a “thin from below” prescription that will improve conditions so that the remaining large, mature trees are likely to survive longer. Thinning from below will reduce crowding and remove ladder fuels, reducing the risk of stand-replacing wildfires around the large remaining trees.

**Grass Restoration**

Alternative C includes 41 acres of grass restoration. These acres will be prepared for planting with herbicides and prescribed burning, and will be revegetated with native grasses and forbs. Restoring native vegetation will improve vegetative diversity and reduce the spread of noxious weeds. Grass restoration will be done on dry, upland grassland habitats and on moist inclusions (historically dominated by shrubs).

**Prescribed Fire**

Low- and mixed-severity prescribed burning will be done on 1,371 acres within the Clear Creek Roadless Area. This will restore natural fire regimes, reduce fuels, and improve wildlife habitat. This activity is consistent with the Idaho Roadless Rule.

**Road Treatments**

Alternative C includes 36 miles of temporary road construction, 8.7 miles of which will occur on existing templates, and 13.2 miles of system road decommissioning. Existing templates are old road beds from historic logging, generally from the 1960’s and 1970’s, when common practice was to leave the roads in stable condition but not to recontour them after use. Temporary roads used in the Clear Creek Integrated Restoration Project will be decommissioned after use. Alternative C also includes 119.8 miles of road reconstruction and 48.8 miles of road reconditioning, which could include culvert installation or replacement, ditch cleaning, riprap placement for drainage improvement, cross drain installation, gravel placement, road grading, and/or dust abatement.
**Forest Plan Amendments**

Alternative C includes two site-specific, nonsignificant Forest Plan amendments.

Amendment 41 adopts Region 1 soils standards. The current Nez Perce Forest Plan standard specifies that there can be no new activities in areas where detrimental soil disturbance (DSD) is over 20%. Currently, Region 1 soil quality standards (USDA Forest Service 2014) specify that at least 85% of an activity area (defined as a land area affected by a management activity) must have soil that is in satisfactory condition. In other words, detrimental impacts (including compaction, displacement, rutting, severe burning, surface erosion, and mass wasting) shall be less than 15% of an activity area. In areas where more than 15% detrimental soil conditions exist from prior activities, the cumulative detrimental effects from proposed activities, including restoration, shall not exceed the conditions prior to the proposed activity and should move toward a net improvement in soil quality. The proposed amendment will change Forest Plan Soil Standard #2 and allow activities to occur on areas with more than 20% DSD, as long as soil improvement activities are implemented.

Amendment 42 clarifies the Nez Perce-Clearwater National Forests’ (Forests’) interpretation of Appendix N of the Nez Perce Forest Plan (USDA Forest Service 1987a). This amendment replaces the Forest Plan Appendix N definitions of old growth with the definitions found in Old Growth Forest Types of the Northern Region (Green et al. 1992, errata corrected 02/05, 12/07, 10/08, 12/11, hereafter referred to as “Green et al.”). The Nez Perce-Clearwater National Forests have updated Forest direction for old growth and snag management for this project based on Green et al. because the Green et al. definitions are regarded as the best available science for the classification of old growth at the site-specific level. Green et al. has also been adopted as the Region 1 definitions for Old Growth.

Green et al. is based on habitat types to determine old growth conditions. The Green et al. research is based on field data called “stand exams,” with over 20,000 samples. Although Green et al. used criteria for old growth that is more complex, the criteria is also more relevant, more precise, and within the capability of the habitat types specific to the Nez Perce-Clearwater National Forests. Each habitat type is assigned to a habitat type group that corresponds to an old growth type. The old growth description in Green et al. is based on successional processes in which stands develop into late seral single-storied stands, or late seral multi-storied stands, or the stage where climax tree species dominate the stand.

These amendments are nonsignificant, site-specific, and apply only to the Clear Creek Integrated Restoration Project action alternatives. Neither amendment applies to any activities or projects outside of the project area.
### Table 1. Comparison of Alternatives by Activity*

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Regeneration Harvest Acres Within Focus Areas</td>
<td>0</td>
<td>2,609</td>
<td>3,995</td>
<td>2,017</td>
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<td>Regeneration Harvest Acres Outside Of Focus Areas</td>
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<td>161</td>
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<td>4,146</td>
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<td>3,366</td>
<td>3,366</td>
<td>3,144</td>
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<tr>
<td><strong>Total Commercial Thin Acres</strong></td>
<td>0</td>
<td>5,606</td>
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<td>Precommercial Thin Acres Within Focus Areas</td>
<td>0</td>
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<tr>
<td>Precommercial Thin Acres Outside Of Focus Areas</td>
<td>0</td>
<td>889</td>
<td>889</td>
<td>889</td>
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<tr>
<td><strong>Total Precommercial Thin Acres</strong></td>
<td>0</td>
<td>1,793</td>
<td>1,887</td>
<td>1,793</td>
<td>94 acres of precommercial thinning units were dropped in Lynx Analysis Units.</td>
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<tr>
<td>Improvement Harvest Acres</td>
<td>0</td>
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<td>331</td>
<td>211</td>
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<td>Restoration (Grass)</td>
<td>0</td>
<td>41</td>
<td>41</td>
<td>41</td>
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<tr>
<td>Prescribed Fire Acres</td>
<td>0</td>
<td>1,371</td>
<td>1,371</td>
<td>1,371</td>
<td></td>
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<tr>
<td>Site Preparation And Reforestation</td>
<td>0</td>
<td>2,609</td>
<td>3,995</td>
<td>2,017</td>
<td>Mechanical site prep for ground-based harvest, prescribed fire site prep for skyline harvest.</td>
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<tr>
<td>System Road Construction Miles</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<tr>
<td>System Road Reconstruction Miles</td>
<td>0</td>
<td>105</td>
<td>105</td>
<td>105</td>
<td>If reconstruction is proposed for any part of a road, the total mileage of the road is included.</td>
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<tr>
<td>System Road Reconditioning Miles</td>
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<td></td>
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<tr>
<td>Temporary Roads – Existing Template Miles</td>
<td>0</td>
<td>8.7</td>
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<td>Temporary Roads –New Construction Miles</td>
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<td>27.6</td>
<td>27.6</td>
<td>8.8</td>
<td>No new temporary roads over 600 feet.</td>
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<tr>
<td>----------------------------------------------</td>
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<td>------------------------------------------</td>
<td>----------------------------------------</td>
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<tr>
<td>Open Seasonally Or Yearlong To Vehicles &gt;50 Inches Wide Miles</td>
<td>39.9</td>
<td>39.9</td>
<td>39.9</td>
<td>39.9</td>
<td>From DRAMVUa Alt. 5</td>
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<tr>
<td>Open Seasonally Or Yearlong To Vehicles &lt;50 Inches Wide Miles</td>
<td>26.1</td>
<td>26.1</td>
<td>26.1</td>
<td>26.1</td>
<td>From DRAMVUa Alt. 5</td>
</tr>
<tr>
<td>Open Seasonally to Motorcycles Miles</td>
<td>8.2</td>
<td>8.2</td>
<td>8.2</td>
<td>8.2</td>
<td>From DRAMVUa Alt. 5</td>
</tr>
<tr>
<td>Forest Plan Amendment 41</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>Soils</td>
</tr>
<tr>
<td>Forest Plan Amendment 42</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>Old Growth</td>
</tr>
</tbody>
</table>

aDRAMVU = Designated Routes And Areas For Motor Vehicle Use. This is the Nez Perce National Forest travel planning analysis, currently scheduled for completion in 2016.

*These numbers have been updated, compared to the FEIS, to reflect the numbers presented in the Biological Opinion (see this document, Attachment #3).

**Project Design Features**

**Soils**

Effectiveness of design features are moderate to high based on past monitoring and research (Froehlich and McNabb 1983; Graham et al. 1994; Graham et al. 1999; Korb et al. 2004; Neary et al. 2008; Curran et al. 2005a,b). Appendix E of the FEIS provides a detailed discussion of the design criteria for each harvest unit, including landslide prone, temporary road, Regional 15% DSD standard, subsurface erosion hazard, and down wood material.

1. When machine piling, existing duff/litter will be retained (as much as possible and not included in the activity slash piling. No material greater than 4 inches will be added to slash piles.

2. Skid trails, landings, and yarding corridors will be located and designated to minimize the area of increased detrimental soil effects. This will not preclude the use of feller bunchers off skid trails if soil impacts can remain within standards. Winter logging can be utilized in the implementation of this project, as long as frozen ground or depths of snow conditions are met, but will not be required.

3. Landslide prone areas have been mapped and field verified in the harvest units. These landslide prone areas will be further delineated in the field, will be excluded during unit layout, and will receive a PACFISH buffer. Indicators of landslide prone areas include steep (over 60%) concave slopes; hydropytic vegetation (i.e., sedges, moist site ferns); slumps, draws, and basins; past landslide locations; and obvious soil movement areas (typically indicated by curved and/or buttressed tree boles, soil creep, tension cracks, etc.). No harvest activities will occur in these areas.

4. For prescribed fire units, there will be no fire ignition in landslide prone areas (following PACFISH guidelines). Fire will be allowed to back through these areas.
5. For units with high subsurface erosion potential, the amount of excavated skid trails and landings will be limited to the extent possible, and all excavated skid trails and landings on these landtypes will be decommissioned (full recontour) and large woody material will be placed over the slope for soil stabilization. While in use or over-wintering, an increased number of water bars or addition of slash material to road bed will be used as necessary to reduce erosion.

6. For all Units, including those designated in the reuse, trending positive, and Forest Plan amendment design categories (see section 3.8.6 in the FEIS), a logging system layout design will be developed to use as many of the existing skid trails and landings as possible and limit the amount of new detrimental disturbance. All skid trails and landings used will be decommissioned after use. Actions will include scarifying/decompacting soils and placing slash, woody material, and/or duff over exposed soil. Equipment used for machine piling or mastication of activity slash will remain on designated skid trail or will be required to rehabilitate (decompact or recontour) any detrimental disturbance they cause.

7. For Units designated in the special design category (see section 3.8.6 in the FEIS), special attention would be needed for these units to remain at or below 15% DSD following project implementation. Methods to ensure this might include locating main skid trails only on existing disturbed areas, with few “one-pass” trails occurring on undisturbed ground; using a cut-to-length forwarder system; requiring equipment used for machine piling or mastication of activity slash to remain on designated skid trails; and developing a logging system layout design that limits the amount of new detrimental disturbance. Portions of the unit can be dropped if the layout plan cannot reach the entire unit while staying under the 15% standard. The estimated amount of acres of new disturbance has been calculated for each unit and can be found in the project file. In addition, all skid trails and landings and temporary roads (see item 10 for temporary road decommissioning) will be decommissioned.

8. For all harvest units, decompaction will be required on skid trails where excavation or ground disturbance has occurred or where successive passes have taken place over the same trail. Decompaction will be conducted to improve soil productivity and meet Regional soil quality standards. Decompaction will span the width of the compacted areas and extend to a depth of 10–18 inches to effectively loosen the ground to allow water penetration and revegetation and to prevent the rocky subsurface soils from mixing with the topsoil. The depth of decompaction should be adjusted to avoid turning up large rocks, roots, or stumps. Equipment will not be permitted to operate outside the clearing limits of the skid trail. Decompaction should be done from June 15 to October 15, unless otherwise approved. No decompaction work should be done during wet weather or when the ground is frozen or otherwise unsuitable.

9. In all units, to reduce ground disturbance, no ground-based skidding will be allowed on slopes over 35%, unless operating on adequately compacted snow or only over short distances.

10. All temporary roads will be decommissioned (all new construction will be decompacted and recontoured; existing prisms will be decompacted and placed in a stable condition). Cut/fill slopes and crossings will be reshaped to natural contours. Available slash and
large wood material (>3 inches) will be applied to the recontour surface (slash is considered “available” where the equipment can reach it from the working area where the decommissioning is occurring). Temporary road rehabilitation work shall begin as soon as possible after the timber harvest operations have been completed. They are not intended to be left open for post-harvest treatment activities, such as site preparation burning or planting.

11. Activities will be restricted when soils are wet to prevent resource damage (indicators include excessive rutting, soil displacement, and erosion).

12. For all harvest units, coarse woody material appropriate to the site will be retained for maintaining soil moisture, soil stability, and other soil physical and biological properties after all unit activities. Regional guidance for organic matter recommends the following guidelines, such as retaining coarse (>3 inches diameter) woody material to maintain soil productivity (Graham et al. 1994). Drier habitat types have wood retention requirements of 7–15 tons/acre for Douglas-fir, grand fir, and ponderosa pine types. Moister habitat types require 17–33 tons/acre. Approximately 14–28 standing trees will be retained for future down wood recruitment. Retention levels on the higher end of the range will be used for proposed regeneration harvest units 107, 117, 142, and 148, because of low existing woody material. Snags or other designated retention trees felled for safety reasons will be left in the unit.

13. Burning of activity generated slash will be designed in the project burn plan to provide a low-severity mosaic burn that has been shown to cause little-to-no detrimental disturbance of soil resources (Neary et al. 2008).

14. Twenty-five harvest and burn units will be monitored 1 to 3 years after treatment to determine extent of detrimental soil disturbance and effectiveness of skid trail and temporary road decommissioning.

Table 2 displays the Soil and Water Conservation Practices (FSH 2509.22) that will also be incorporated as design criteria. These are also referred to as Best Management Practices (BMPs) throughout the document.

<table>
<thead>
<tr>
<th>Category</th>
<th>Number#</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>11. Watershed Management</td>
<td>W11.05</td>
<td>Wetlands Analysis and Evaluation</td>
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<tr>
<td></td>
<td>W11.07</td>
<td>Oil and Hazardous Substance Spill Contingency Planning</td>
</tr>
<tr>
<td></td>
<td>W11.11</td>
<td>Petroleum Storage and Deliver Facilities and Management</td>
</tr>
<tr>
<td></td>
<td>W11.13</td>
<td>Sanitary Guidelines for Construction of Temporary Logging Camps</td>
</tr>
<tr>
<td>13. Vegetation Manipulation</td>
<td>G13.02</td>
<td>Slope Limitations for Tractor Operation</td>
</tr>
<tr>
<td></td>
<td>G13.03</td>
<td>Tractor Operation Excluded from Wetlands, Bogs, and Wet Meadows</td>
</tr>
<tr>
<td></td>
<td>E13.04</td>
<td>Revegetation of Surface Disturbed Areas</td>
</tr>
<tr>
<td></td>
<td>E13.06</td>
<td>Soil Moisture Limitations for Tractor Operation</td>
</tr>
<tr>
<td>14. Timber</td>
<td>A14.02</td>
<td>Timber Harvest Unit Designation</td>
</tr>
<tr>
<td></td>
<td>A14.03</td>
<td>Use of Sale Area Maps for Designating Soil and Water Protection Needs</td>
</tr>
<tr>
<td></td>
<td>A14.04</td>
<td>Limiting the Operating Period of Timber Sale Activities</td>
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<tr>
<td></td>
<td>A14.05</td>
<td>Protection of Unstable Areas</td>
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<td></td>
<td>A14.06</td>
<td>Riparian Area Designation</td>
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<tr>
<td></td>
<td>E14.07</td>
<td>Determining Tractor Loggable Ground</td>
</tr>
</tbody>
</table>
**Wildlife**

1. All temporary roads will be closed to the public and decommissioned following use.

2. Each post-treated area, on average, will comply with mean snag retention values displayed in Table 12 of Estimates of Snag Densities for Northern Idaho Forests in the Northern Region (Bollenbacher et al. 2009) for low and mid elevation moist habitat types in early seral conditions (at least 6 snags per). Preferred species (ponderosa pine, western larch, Douglas-fir) of large, legacy snags will be selected for retention. Alternate tree species will be retained where preferred species do not exist in quantities to meet Regional guidance. Large snags will be retained with green trees in groups of 7–10 trees or larger retention patches. Preference will be given to the largest available snags or damaged trees, generally greater than 21 inches in diameter and greater than 40 feet tall. A combination of clumps (groups of live and dead trees) and lone snags that have little potential to cause safety issues will be retained. Snag retention within one tree length of open motorized roads will be avoided. Snag or live retention trees felled for safety purposes will be left on site or traded with a comparable tree.

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**Category** | **Number** | **Description**
--- | --- | ---
E14.08 | Tractor Skidding Design
E14.09 | Suspended Log Yarding in Timber Harvesting
A14.10 | Log Landing Location and Design
E14.11 | Log Landing Erosion Prevention and Control
E14.12 | Erosion Prevention and Control Measures During Timber Sale Operations
E14.14 | Revegetation of Areas Disturbed by Harvest Activities
E14.15 | Erosion Control on Skid Trails
E14.16 | Meadow Protection During Timber Harvesting
E14.17 | Stream Channel Protection
E14.18 | Erosion Control Structure Maintenance
A14.19 | Acceptance of Timber Sale Erosion Control Measures Before Sale Closure
A14.22 | Modification of the Timber Sale Contract
E15.03 | Road and Trail Erosion Control Plan
E15.04 | Timing of Construction Activities
E15.05 | Slope Stabilization and Prevention of Mass Failures
E15.06 | Mitigation of Surface Erosion and Stabilization of Slopes
E15.07 | Control of Permanent Road Drainage
E15.10 | Control of Road Construction Excavation and Sidecast Material
S15.11 | Servicing and Refueling of Equipment
S15.12 | Control of Construction in Riparian Areas
S15.19 | Streambank Protection
E15.21 | Maintenance of Roads
E15.22 | Road Surface Treatment to Prevent Loss of Materials
E15.24 | Snow Removal Controls
E15.25 | Obliteration of Temporary Roads
E18.02 | Formulation of Fire Prescriptions
E18.03 | Protection of Soil and Water from Prescribed Burning Effects

*Classes of Soil and Water Conservation Practices (BMP): A = Administrative, G = Ground Disturbance Reduction, S = Stream Channel Protection and Sediment Reduction, E = Erosion Reduction, and W = Water Quality Protection*
3. In treatment areas, legacy trees (large diameter trees that survived the last stand replacing event) will be retained. In Clear Creek, these trees frequently are over 30 inches diameter at breast height (dbh). Legacy trees may be unevenly distributed and retained in clumps as well as individual trees. This design measure allows hazardous fuels reduction while “…maximizing the retention of large trees, as appropriate for the forest type…” per PL 111-11 Title IV (2009).

4. Green tree retention in all regeneration and improvement harvest areas will consist of an average of 14–28 of the largest trees per acre (generally over 21 inches dbh) distributed in clumps (7–10+ trees plus snags) and individuals, with no area greater than 2 acres without retained trees. Tree retention will focus on ponderosa pine, western larch, and healthy Douglas-fir, and large tree retention will be maximized, as appropriate for the forest type per PL 111-11 Title IV (2009).

5. Regeneration Harvest Leave Tree Survival: The Clear Creek Integrated Restoration Project will strive for a variable tree survival objective for the project as a whole, with the objective of having almost all legacy trees (large diameter trees that survived the last stand replacing fire) survive the prescribed burns. See Target Stand discussion in FEIS Chapter 3, Vegetation. Fuel reduction measures (limb/top removal or slash reduction around these trees) will be implemented where needed to ensure tree survival for the legacy larch, ponderosa pine, and Douglas-fir. For the non-legacy trees, the objective will be for a majority (>50%) of the leave trees to survive the prescribed burn. Prescribed fire might be allowed to back into riparian habitat conservation areas (RHCAs) and retained clumps; however, no ignitions will be allowed within them. These measures allow hazardous fuel reduction while “…maximizing the retention of large trees, as appropriate for the forest type…” per PL 111-11 Title IV (2009).

6. Maintain a minimum 40-acre yearlong no-treatment buffer around occupied goshawk nest trees. No ground disturbing activities will be allowed inside occupied post-fledgling goshawk areas (300–600 acres around the nest stand) from April 15 to August 15.

7. Invasive plants displace indigenous plants that provide forage or cover for wildlife. The spread of noxious weeds and invasive plants will be minimized by chemically treating any noxious weed populations along the existing road systems before and after project implementation; monitoring and cleaning any equipment of loose debris prior entering the project area to prevent “new invader” weed establishment; and revegetating project-related exposed soils (e.g., landings, skid trails, road sides) using certified noxious weed free native seed mix and fertilizer (as necessary) upon project completion. All seeding will follow Region 1 guidelines.

8. In moose winter range (Management Area [MA] 21), silvicultural prescriptions that comply with Forest Plan standards will be developed for commercial thin and regeneration harvest areas and incorporated into marking or layout guidelines. The Forest Plan identifies the following guidelines: a) For those lands that are scheduled for harvest, harvest a maximum of 5% of Pacific yew stands per decade on a 210-year rotation, b) Maintain at least 50% of the live Pacific yew components scattered throughout the unit in patches 1/4 to 1/2 acre in size, c) The preferred harvest type includes patch clearcuts, individual tree selection, group selection, or shelterwood. Patch clearcuts should be no larger than 20 acres in size (5–10 acres preferred), d) Maintain leave-strips between yew
stands sufficient to provide travel corridors for moose, and e) Reforest to desired stocking levels either through planting or through natural regeneration to achieve 30% crown closure over 20 years for conifers, and 30% crown closure over 20–30 years for Pacific yew. The following commercial thin units occur in MA 21: 228, 230, 231, 234, 238, 335, 349–351, and 356–358. The following regeneration harvest units occur in MA 21: 136–139, 145, and 146.

9. Retained large down logs will be evenly distributed in regeneration and improvement units to support small animal habitats.

10. Landscape burning prescriptions, especially in MA 16 (winter range), will be developed to maintain the duff layer to reduce potential for invasive species germination. Burn units 701–715 occur in MA 16.

11. Regeneration harvest units that have a large component of yew in the understory will be marked to “clump” green tree retention around yew concentrations, where feasible and while still meeting silvicultural needs.

12. To support the availability, distribution, and sustainability of quality browse species (particularly redstem ceanothus, serviceberry, willow, and mountain maple), prescribed fire prescriptions will be developed for implementation during summer or fall. Spring burns will be appropriate only to prepare fuel breaks for summer/fall burns.

Aquatics

1. PACFISH RHCAs will be used to define timber sale unit boundaries. No timber harvest will occur within 300 feet of fish-bearing streams, 150 feet of perennial non-fish bearing water, 100 feet of intermittent streams, and 150-foot slope distance from the edge of wetlands larger than one acre.

2. Prescribed fire will not be ignited in areas requiring 100% live canopy retention (RHCAs and landslide prone areas). The burn objective will be to prevent fire entry into these areas. Low-intensity fire may be allowed to back into the edges of some of these sensitive areas and will result in no less than 90% live-canopy retention for the area.

3. BMPs, as found in Rules Pertaining to the Idaho Forest Practices Act, will be applied to prevent non-channelized sediment delivery from harvest units to streams in the project area.

4. Contractors will have spill prevention and containment materials available at the Lochsa Ranger District Office for their use in the event of an accidental spill of petroleum products, as well as to protect water courses and aquatic biota from adverse effects in the event of a spill.

5. During road decommissioning or culvert replacements, measures to prevent damaging levels of sediment from entering streams will be undertaken, such as placing removable sediment traps below work areas to trap fines; (b) when working instream, removing all fill around pipes prior to bypass and pipe removal (where this is not possible, use non-eroding diversion); (c) revegetating scarified and disturbed soils with weed-free grasses for short-term erosion protection and with shrubs and trees for long-term soil stability; (d) utilizing erosion control mats on stream channel slopes and slides; (e) mulching with
native materials, where available, or using weed-free straw to ensure coverage of exposed soils; (f) dissipating energy in the newly constructed stream channels using log or rock weirs; and (g) armoring channel banks and dissipating energy with large rock whenever possible.

6. Temporary roads will be constructed on or near ridge tops with no stream crossings. All temporary roads will be constructed and then obliterated within 2 years. Obliteration includes decompaction, recontouring where needed, and the application of woody material onto the decompacted surface to provide for soil productivity and limit erosion potential.

7. Cross drain culverts will be installed near stream crossings in order to divert ditchline sediment away from stream crossings and onto the forest floor, and where needed to achieve spacing to reduce sediment delivery from road surfaces and ditches.

8. Reconstructed road segments will receive an application of surface aggregate to reduce current and future erosion, particularly at road/stream crossings.

9. Dust abatement will be used on major haul routes to minimize sediment input to streams from log hauling activities.

10. Instream work on 6 culvert replacements (3 sites on Upper Clear Creek and 3 on South Fork Clear Creek) will occur after July 15 to protect steelhead designated critical habitat downstream.

**Heritage Resources**

Table 3 describes mitigation measures/design criteria that will be implemented to protect Heritage Resources in the project area.

Table 3. Design Criteria that Would Be Implemented to Protect Heritage Resources in the Clear Creek Project Area

<table>
<thead>
<tr>
<th>Site Number/Type</th>
<th>Unit Number</th>
<th>Harvest Method</th>
<th>Design Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>10IH487 / Lithic Scatter</td>
<td>309</td>
<td>Commercial Thin</td>
<td>Avoid</td>
</tr>
<tr>
<td>10IH883 / Trail</td>
<td>230</td>
<td>Regeneration</td>
<td>50 foot buffer</td>
</tr>
<tr>
<td>230</td>
<td>Commercial Thin</td>
<td>50 foot buffer</td>
<td></td>
</tr>
<tr>
<td>354</td>
<td>Commercial Thin</td>
<td>50 foot buffer</td>
<td></td>
</tr>
<tr>
<td>10IH1746 / Lithic Scatter</td>
<td>309</td>
<td>Commercial Thin</td>
<td>Avoid</td>
</tr>
<tr>
<td>307</td>
<td>Commercial Thin</td>
<td>Avoid</td>
<td></td>
</tr>
<tr>
<td>301</td>
<td>Commercial Thin</td>
<td>50 foot buffer</td>
<td></td>
</tr>
<tr>
<td>306</td>
<td>Commercial Thin</td>
<td>50 foot buffer</td>
<td></td>
</tr>
<tr>
<td>307</td>
<td>Commercial Thin</td>
<td>50 foot buffer</td>
<td></td>
</tr>
<tr>
<td>316</td>
<td>Commercial Thin</td>
<td>50 foot buffer</td>
<td></td>
</tr>
<tr>
<td>318</td>
<td>Commercial Thin</td>
<td>50 foot buffer</td>
<td></td>
</tr>
<tr>
<td>319</td>
<td>Commercial Thin</td>
<td>50 foot buffer</td>
<td></td>
</tr>
<tr>
<td>373</td>
<td>Commercial Thin</td>
<td>50 foot buffer</td>
<td></td>
</tr>
</tbody>
</table>

*Site locations are protected by law (36 CFR 296.18), but will be communicated to project personnel to ensure protection.*
**Recreation**

1. Designated trails will be protected by showing them on the contract map as protected improvements. Following harvest activities, any impacted trail will be restored to a useable condition as it was prior to the activity taking place. One mile of Trail 723 occurs within a commercial thin unit, and the trail will be used as a temporary road. Light thinning will be done adjacent to the trail and the trail will be cleaned up and reestablished after harvest. No access will be allowed during prescribed burning, and hazardous trees within a tree length of the trail will be felled for public safety.

2. No-harvest buffers will be implemented around dispersed camp sites, especially in Unit 123.

**Visuals**

Design features used to reduce the visual impact of the harvest areas include retention of vertical structure within the harvest units and edge treatments that emulate natural openings. Leave trees that provide vertical structure within the harvest area may be both live and dead trees, emulating the same structure that would remain after a natural mixed severity wildfire. These leave areas will range from ¼ to 3 acres in size and may include leave areas adjacent to unit boundaries. Unit boundaries for units visible in the foreground will be shaped and feathered to reduce any unnaturally shaped edges and will reduce the hard edges that appear as a man-made features on the landscape.

**Monitoring Requirements**

PACFISH RHCA monitoring will be conducted annually by the Forest Fisheries Biologist in conjunction with BMP audits. Monitoring will be conducted on randomly selected treatment units throughout the Forest and results will be made publicly available on the Forest’s website. Both implementation and effectiveness of treatments will be monitored. Additional RHCA monitoring will be conducted. The focus will be on whether or not sediment travels from harvested and burned units into RHCAs and how far the sediment travels and whether or not it reaches a stream. This monitoring will be funded and conducted pursuant to PL111-11 Title IV, Sec. 4003(g)(4). This monitoring will be conducted on portions of the following regeneration harvest units: 109, 122, 127,128, 150,155, 160, 214, 218, 235, and 236. See Figure 2-2 in the FEIS for locations.

Turbidity monitoring at 6 culvert replacement sites on or within 600 feet of steelhead designated critical habitat will occur during implementation. There are 2 on Clear Creek and 1 on the South Fork Clear Creek. Three additional sites that could potentially be affected would also be monitored. The site locations are shown on page 7 of the updated Biological Opinion (see this document, Attachment 3), compared to those shown in Figure 2-2 in the FEIS.

Five channel cross sections will be monitored within the project area (see Figure 2-2 in the FEIS). Monitoring will be conducted to determine if harvest and/or road improvement activities are contributing enough sediment to the stream to cause changes to channel morphology and or degradation of habitat quality for steelhead trout. Other monitoring collected at these sites will include Wolman pebble counts (stream bed surface substrates), cobble embeddedness, air and water temperature, and relative fish densities by species. Wolman pebble counts and cobble
embeddedness are used to monitor potential changes in substrate composition, particularly sand-sized or smaller fines that can negatively affect the quality of fish spawning and rearing habitat.

Initial cross section measurements will be taken in 2015 prior to the proposed activities. The sites will be monitored 1, 2, and 5 years after Project activities commence. Adjustments can be made to the activities if monitoring shows statistically significant changes in stream channel aggradation/degradation, widening of the channel, or increases in substrate fines due to the project. If a large natural flow event occurs during the monitoring period, or unacceptable channel changes are observed at the monitoring sites, a survey of the streams, logging units, and roads will be conducted to determine the location of sediment additions. Adjustments may or may not be required to proposed activities depending on this assessment. Project monitoring will help ensure that BMPs are sufficient at minimizing adverse effects to Endangered Species Act (ESA)-listed species.

**Biological Opinion**

The National Marine Fisheries Society has written a Biological Opinion (BO) for the selected actions. See Attachment 3.

**Rationale for Decision**

I based my decision for this project on how well management actions will address the purpose and need for action, while considering issues that were raised during scoping and comments that were received for the Draft Environmental Impact Statement (DEIS). I have weighed the potential negative impacts of management actions with the long-term benefits of creating more resilient forested landscapes. This decision will provide short and long-term economic benefits to the local communities through timber harvest activities, restoration actions, and improvements in soil, water, fisheries and wildlife habitat.

I believe Alternative C best meets the purpose and need for the Project by balancing vegetation and wildlife habitat improvement with watershed function improvement while providing a sustained yield of resource outputs and reducing road densities and repairing existing roads. It accomplishes this through a full range of vegetation treatments aimed at 1) restoring natural disturbance patterns; 2) improving long-term resistance and resilience at the landscape level; 3) reducing fuels; 4) improving watershed conditions; 5) improving early seral wildlife habitat; and 5) maintaining fish and wildlife habitat structure, function, and diversity.

A variety of factors such as insects and diseases, past logging, and wildland fire suppression have created a landscape that is changed from natural conditions. This area was historically dominated by western white pine and other seral species. These have been replaced by grand fir and Douglas fir, which are shorter-lived and more susceptible to diseases and insects. Increasing numbers of dead trees have increased the likelihood that severe wildfires may occur. In order to create more resilient ecosystems, we need to reestablish long-lived early seral tree species as the dominant overstory forest vegetation.

In addition, most of the project area is dominated by middle-aged and mature grand fir and Douglas fir. There is a need to increase the amount of young forest to provide habitat and forage for wildlife species. Historic logging practices and fire suppression have created vegetation patterns that are small and disconnected. This project would restore patch sizes that more closely
resemble those that would have resulted from natural disturbances. Those patch sizes are generally larger than what is on the landscape currently.

I have reviewed the alternatives analyzed in detail (section 2.2 of the FEIS) and find that they are responsive to the issues and concerns as well as the purpose and need for action. The issues (section 1.7 of the FEIS) were developed based on public comments and an IDT review of existing conditions in the Project area. The purpose and need for action (section 1.3 of the FEIS) is consistent with the goals and objectives of the Forest Plan (section 1.8.1 of the FEIS). I have reviewed recommendations in the Selway and Middle Fork Clearwater Rivers Subbasin Assessment and the Project area needs, opportunities, and issues identified by an interdisciplinary watershed assessment and National Forest Management Act (NFMA) analysis conducted in 2011. I find the purpose and need to be supported by the scientific information found in these documents. In addition, I have read and considered actions analyzed in the Forest Plan, the Forest Plan FEIS, and the Forest Plan ROD.

I have reviewed the alternatives that were considered but eliminated from detailed study (section 2.3 of the FEIS) to ensure that an adequate range of alternatives was considered: 11 alternatives were considered, 4 in detail. I find that the range of alternatives considered was thorough and complete and reflects public comments and concerns: the IDT considered all public comments received during public scoping when developing the DEIS.

I have reviewed public comments from the scoping period and those received for the DEIS. The preferred alternative presented in the FEIS was modified to address those concerns. Specifically, Alternative C was developed in response to scoping comments about the following resource concerns:

- Patch size and fragmentation
- Improvement of the distribution of foraging habitat relative to hiding cover
- Increase in the amount of early successional stands and wildlife foraging habitats
- Forest structure
- Economics
- Increase in stand mortality, by spreading root disease by commercially thinning infected stands
- Increase distribution of early seral species across the landscape

Alternative C responds to these concerns by including more acres of regeneration harvest within the Focus Areas and adding 161 acres of regeneration harvest outside of Focus Areas. Alternative C also reduces the number of acres commercially thinned within the Focus Areas and reduces the number of precommercial thinning acres to adjust for precommercial thinning in LAUs.

Some commenters, however, do not agree with the use of timber harvest to address the purpose and need, nor do they agree with the silvicultural methods we propose to use. I have considered those comments, reviewed the analysis and reached the conclusion that the treatments proposed in Alternative C are based on the best available science. The target stand characteristics that treatments are designed to meet, have been developed through an interdisciplinary team process. Treatments are designed to meet those stand characteristics, thus insuring that we provide for all
of the resources while improving the resistance and resilience of the landscape. Timber harvest in regeneration units will not remove all vegetation from the area. Trees will be left to meet wildlife needs; downed woody debris will be left for soil quality and wildlife habitat; treatment areas will be designed to provide edge for wildlife habitat; areas will be replanted with desired species to recreate more historic, resilient conditions.

The forested vegetation restoration activities in Alternative C would result in harvest of 158,000 hundred cubic feet (CCF) and 85,200 thousand board feet (MBF) over the next 7-15 years. Alternative C also sustains 2,133 jobs, generates $60,578,000 of community harvest income, and generates $9,087,000 in federal income tax, the most of any of the action alternatives. In addition, jobs are generated by the road decommissioning, culvert replacement, and road improvement activities and there is a long-term economic benefit from more healthy, resilient landscapes and the ecosystem services they provide.

**MONITORING**

A detailed monitoring plan is included in the Fisheries Biological Assessment (BA) for this project (BA, Pages 11-13). The habitat variables that will be monitored are stream channel physiography, water temperature, stream bed surface substrate, cobble embeddedness, and fish presence and abundance. Monitoring will be conducted both pre- and post-project. PACFISH implementation monitoring will be conducted annually by the Forest Fisheries Biologist, in conjunction with Best Management Practices audits.

See the Tribal Treaty Rights section of this decision document for a discussion of monitoring and adaptive management strategies that will be implemented to specifically address the Tribe’s concerns about the Kooskia National Fish Hatchery.

**MEETING THE PURPOSE AND NEED**

The following pages explain more fully the information that I have used to make this decision and insure that it meets the purpose and need, addresses public concerns, and complies with applicable law, regulation, and policy.

I selected Alternative C over the other alternatives because it best meets the purpose and need for action, while being responsive to public comments and other agency concerns (section 1.6 of the FEIS). Alternative C best meets the purpose and need as described below and as illustrated in Table 4.
Table 4. Comparison of Purpose and Need by Alternative and Activity

<table>
<thead>
<tr>
<th>Resource Indicator</th>
<th>Alternative A</th>
<th>Alternative B</th>
<th>Alternative C</th>
<th>Alternative D</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Purpose and Need 1: Vegetation and Wildlife Habitat Improvement</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Forest structure consists of a range of age and size classes with species diversity that is resistant and resilient to change agents (insects, diseases, and wildfires)?</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Early seral species represent a greater percentage of species mix?</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Purpose and Need 2: Goods and Services</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sustained yield of resource outputs provided?</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Purpose and Need 3: Watershed Improvement</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Road system maintained to provide for timber harvest, recreation, fire suppression, and administrative use, while reducing sediment delivery to streams? | No*           | Yes           | Yes           | Yes           | *The implementation of past watershed improvement projects in the Clear Creek will continue to improve stream conditions and sediment delivery. However, the No Action Alternative for this project would not address all sediment delivery issues because watershed improvement activities selected with this decision would not be implemented.

Vegetation and Wildlife Habitat Improvement

Alternative C will implement regeneration harvest activities that will trend the project area toward the desired future condition for species composition and structure by creating openings large enough to establish long-lived early seral species at a scale that is large enough to measure. Alternative C trends toward the desired condition more than the No Action Alternative and the other action alternatives. Alternative C will also increase the younger age classes more than the other alternatives while reducing more of the mature age classes with advanced root disease and maintaining the oldest age class. Finally, Alternative C moves more acres toward single- and two-storied vertical structure more than the other alternatives.

Goods and Services

Alternative C will generate the most jobs and income because it generates the most timber volume, followed by Alternatives B and D. However, while Alternative C produces the most volume, Alternative B produces the greatest revenue because Alternative B requires less site preparation and involves lower planting costs than Alternative C.

Watershed Improvement

Alternative C will increase Equivalent Clearcut Area (ECA) in the Clear Creek watershed (HUC 10) an estimated 9%, compared to 8% for Alternative B and 7% for Alternative and D. Final ECA estimates are 13% for Alternative C, 12% for Alternative B, and 11% for Alternative D. These ECA estimates include any effects from the Baldy Fire (see Page 3 of this decision document). A lower ECA indicates a better watershed condition. However, ECAs of less than 15% indicate a good condition, so watershed conditions would remain high (good) under all 3 action alternatives. ECA would decrease to its pre-project level after 14 years for Alternative C.

Approximately 36 miles of temporary roads would be constructed under Alternatives B and C, 8.7 miles of which occur on existing templates. Alternative D proposes 17.5 miles of temporary road construction, 8.7 miles of which also occur on existing templates. Temporary roads generate
the most erosion when they are first constructed; erosion would stabilize 2 years after decommissioning. Therefore, erosion potential from temporary roads would be short term (4 years), since the roads would be built, used, and decommissioned within 1–2 years. Additionally, all temporary road construction will occur on ridgetops or on the upper third of slopes and be hydrologically disconnected from any live water, significantly reducing the risk of sediment reaching streams from construction and use of temporary roads.

Although sediment yields are predicted to increase (as estimated by the NEZSED model), the increase will be below that allowable under Appendix A of the Nez Perce Forest Plan (USDA Forest Service 1987a). While the highest increase is under Alternative C for each of the forest Plan prescription watersheds, sediment yields return to current conditions within 10 years and will be approximately 1% less than the No Action Alternative because of road decommissioning and other watershed improvement activities. In addition, road density will be reduced under Alternative C the same as under the other action alternatives.

Road maintenance and improvement activities under Alternative C will benefit water quality by reducing erosion from road surfaces and sediment from drainage culverts. Cross-drain installation at all stream crossings will serve to disconnect roadway ditchlines from stream crossings, significantly reducing sediment entering streams from the road system. “Hot spots” on the road system have been identified through the NETMAP tool and field reconnaissance in order to locate and focus road improvements where they are needed most and will reduce sediment delivery risk the most.

**CONSIDERING ISSUES AND CONCERNS**

Involvement of all interested individuals; businesses; organizations; County, State, and federal agencies; and the Nez Perce Tribe was sought to provide detailed information for defining the issues, concerns, design criteria, and treatment options. The IDT used this information to identify issues and formulate alternatives to the Proposed Action. The Clear Creek Integrated Restoration Project Draft Environmental Impact Statement was released for public comment with Alternative B as the proposed action, modified in response to scoping comments. A summary of the comments that were received for the DEIS and responses to those comments is attached to the FEIS as Appendix L. The rationale for the issues used to develop the alternatives is described in Section 1.7 of the FEIS.

The Draft Record of Decision for this project was advertised in February 2015, followed by a 45-day objection period. Three objections were accepted by the Region 1 Regional Forester. As instructed by the Regional Forester, the Forest updated the analysis in the FEIS for Fisheries, Watershed, and Wildlife resources. The updated FEIS was posted on the Forest website in September 2015. Updated resource reports are available in the project file, and I have considered this information in making my decision.

The Nez Perce Tribe was one of the parties that objected to the Draft Record of Decision. Tribal concerns primarily relate to water temperature and sedimentation. In response to the Tribe’s and others’ concerns I have modified the project in several ways. Tribal representatives are concerned that this project could affect operations at the Kooskia National Fish Hatchery, downstream from the project area. Because the Clear Creek Integrated Restoration project is not expected to have measurable sediment impacts downstream, it is not expected to detrimentally affect production at the Kooskia hatchery. The Kooskia hatchery has had temperature and
sediment challenges since it was constructed, and this project is not expected to contribute to those issues.

Please see the “Tribal Treaty Rights” section following Table 5 for a detailed discussion about my ongoing efforts to address the Tribe’s concerns.

When compared to the other alternatives, Alternative C provides the best balance of addressing public concerns and meeting the purpose and need for action. Alternative C addresses public concerns as detailed below and in Table 5.

Table 5. Comparison of Alternatives (Alt.) by Issue and Resource Indicator

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Aquatics/Fisheries Habitat</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Riparian Habitat Conservation Area (RHCA) Road Density (HUC5)</td>
<td>1.2 mi/mi²</td>
<td>1.0 mi/mi²</td>
<td>1.0 mi/mi²</td>
<td>1.0 mi/mi²</td>
</tr>
<tr>
<td>– Upper Clear Creek HUC6</td>
<td>1.4 mi/mi²</td>
<td>1.2 mi/mi²</td>
<td>1.2 mi/mi²</td>
<td>1.2 mi/mi²</td>
</tr>
<tr>
<td>– South Fork Clear Creek HUC6</td>
<td>1.0 mi/mi²</td>
<td>1.0 mi/mi²</td>
<td>1.0 mi/mi²</td>
<td>1.0 mi/mi²</td>
</tr>
<tr>
<td>– Lower Clear Creek HUC6</td>
<td>9.3 mi/mi²</td>
<td>8.9 mi/mi²</td>
<td>8.9 mi/mi²</td>
<td>8.9 mi/mi²</td>
</tr>
<tr>
<td>Number of undersized culverts replaced and cross drains added</td>
<td>0</td>
<td>69</td>
<td>69</td>
<td>69</td>
</tr>
<tr>
<td>Number of culverts removed</td>
<td>0</td>
<td>8</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>FISHSED results for modeled changes in cobble embeddedness:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>– Hoodoo Creek</td>
<td>33%</td>
<td>35% (+2%)</td>
<td>36% (+3%)</td>
<td>35% (+2%)</td>
</tr>
<tr>
<td>– Solo Creek</td>
<td>31%</td>
<td>33% (+2%)</td>
<td>33% (+1%)</td>
<td>33% (+1%)</td>
</tr>
<tr>
<td>– Pine Knob Creek</td>
<td>44%</td>
<td>46% (+2%)</td>
<td>46% (+2%)</td>
<td>46% (+2%)</td>
</tr>
<tr>
<td>– Clear Creek</td>
<td>38%</td>
<td>40% (+2%)</td>
<td>40% (+2%)</td>
<td>40% (+2%)</td>
</tr>
<tr>
<td>– Middle Fork Clear Creek</td>
<td>55%</td>
<td>56% (+1%)</td>
<td>56% (+1%)</td>
<td>56% (+1%)</td>
</tr>
<tr>
<td>– Brown Springs Creek</td>
<td>30%</td>
<td>33% (+3%)</td>
<td>33% (+3%)</td>
<td>32% (+2%)</td>
</tr>
<tr>
<td>– South Fork Clear Creek</td>
<td>20%</td>
<td>21% (+1%)</td>
<td>21% (+1%)</td>
<td>21% (+1%)</td>
</tr>
<tr>
<td>– Kay Creek</td>
<td>20%</td>
<td>20% (+0%)</td>
<td>20% (+0%)</td>
<td>20% (+0%)</td>
</tr>
<tr>
<td>Economics</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Volume Harvested (CCF)</td>
<td>0</td>
<td>141,500 CCF</td>
<td>158,000 CCF</td>
<td>116,400 CCF</td>
</tr>
<tr>
<td>Volume Harvested (MBF)</td>
<td>0</td>
<td>75,300</td>
<td>85,200</td>
<td>61,800</td>
</tr>
<tr>
<td>Jobs Sustained</td>
<td>0</td>
<td>1,910 jobs</td>
<td>2,133 jobs</td>
<td>1,571 jobs</td>
</tr>
<tr>
<td>Community Harvest Income</td>
<td>0</td>
<td>$54,252,000</td>
<td>$60,578,000</td>
<td>$44,628,000</td>
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<tr>
<td>Federal Income Tax</td>
<td>0</td>
<td>$8,138,000</td>
<td>$9,087,000</td>
<td>$6,694,000</td>
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<tr>
<td>Sale Feasibility (Present Net Value); excess money to the treasury or available for stewardship projects</td>
<td>0</td>
<td>$5,748,000</td>
<td>$5,264,000</td>
<td>$3,886,000</td>
</tr>
<tr>
<td>Fuels</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage of Crown Fire Susceptible Landscape</td>
<td>51%</td>
<td>44%</td>
<td>44%</td>
<td>44%</td>
</tr>
<tr>
<td>Fire Regime Condition Class</td>
<td>FRCC2 (39%)</td>
<td>FRCC2 (38%)</td>
<td>FRCC2 (37%)</td>
<td>FRCC2 (38%)</td>
</tr>
<tr>
<td>Roadless Areas</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effects to Wilderness Values:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Natural Integrity</td>
<td>No effect</td>
<td>Beneficial Effect</td>
<td>Beneficial Effect</td>
<td>Beneficial Effect</td>
</tr>
<tr>
<td>Undeveloped Characteristics</td>
<td>No effect</td>
<td>Minimal Effect</td>
<td>Minimal Effect</td>
<td>Minimal Effect</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>--------</td>
<td>--------</td>
<td>--------</td>
<td>--------</td>
</tr>
<tr>
<td>Opportunities for Solitude or Primitive Unconfined Recreation</td>
<td>No effect</td>
<td>Temporarily Affected</td>
<td>Temporarily Affected</td>
<td>Temporarily Affected</td>
</tr>
<tr>
<td>Special Features and Values</td>
<td>No effect</td>
<td>No Effect</td>
<td>No Effect</td>
<td>No Effect</td>
</tr>
<tr>
<td>Manageability</td>
<td>No effect</td>
<td>No Effect</td>
<td>No Effect</td>
<td>No Effect</td>
</tr>
<tr>
<td><strong>Soils</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acres of potential skid trail/landing excavation on landtypes with high subsurface erosion hazard requiring specialized design measures</td>
<td>0</td>
<td>308</td>
<td>308</td>
<td>295</td>
</tr>
<tr>
<td>Miles of temporary roads on landtypes with high subsurface erosion hazard requiring specialized design measures</td>
<td>0</td>
<td>30 miles</td>
<td>30 miles</td>
<td>15 miles</td>
</tr>
<tr>
<td>Number of commercial harvest units requiring specialized design measures to meet Regional soil standards</td>
<td>0</td>
<td>77</td>
<td>78</td>
<td>75</td>
</tr>
<tr>
<td><strong>Vegetation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percent Increase in Early Seral Species Forest Cover Type by Eco-setting (Ponderosa Pine/White Pine/Larch)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Breakland Eco-Setting</td>
<td>0</td>
<td>6</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>Upland Eco-Setting</td>
<td>0</td>
<td>5</td>
<td>9</td>
<td>6</td>
</tr>
<tr>
<td>Increase in Young (0-40) Age Class by Eco-Setting (Acres based on 2012 existing condition)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Breakland Eco-Setting</td>
<td>0</td>
<td>1,092</td>
<td>1,329</td>
<td>690</td>
</tr>
<tr>
<td>Upland Eco-Setting</td>
<td>0</td>
<td>1,506</td>
<td>2,776</td>
<td>1,471</td>
</tr>
<tr>
<td>Percent of FS Lands in Young Age Class</td>
<td>2</td>
<td>6</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>Dominant Vertical Structure Pattern Across Landscape</td>
<td>1 and 2 storied</td>
<td>1 and 2 storied</td>
<td>1 and 2 storied</td>
<td>1 and 2 storied</td>
</tr>
<tr>
<td>Patch Sizes of the Structural Classes (mean patch size in acres)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>– Seral shrub</td>
<td>179</td>
<td>252</td>
<td>252</td>
<td>252</td>
</tr>
<tr>
<td>– Stand initiation</td>
<td>48</td>
<td>96</td>
<td>104</td>
<td>91</td>
</tr>
<tr>
<td>– Stem exclusion</td>
<td>115</td>
<td>131</td>
<td>119</td>
<td>128</td>
</tr>
<tr>
<td>– Understory reinitiation</td>
<td>62</td>
<td>83</td>
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<td>– Old single-story</td>
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<td>Wildlife Species’ Habitat Effect (acres treated in modeled potential habitat)</td>
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<td>1189</td>
<td>1189</td>
<td>796</td>
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<td>– Black-backed Woodpecker</td>
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<td>509</td>
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<tr>
<td>– Fisher*</td>
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<td>– Fringed Myotis*</td>
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<td>– Long-eared Myotis*</td>
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<td>– Mountain Quail</td>
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<td>– Pygmy Nuthatch</td>
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<tr>
<td>– Northern Goshawk (Nesting)</td>
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<td>– Pileated Woodpecker (Nesting)</td>
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<td>– Ringneck Snake</td>
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## Issue and Resource Indicator

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<td>Elk Summer Range (# of Elk Analysis Areas meeting Forest Plan – Standards)</td>
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<td>Canada Lynx</td>
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<td>Moose Winter Range (acres treated in MA 21)</td>
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### Watershed

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<th>Percent Increase in equivalent clearcut area (ECA) from this project</th>
<th>Alt. A</th>
<th>Alt. B</th>
<th>Alt. C</th>
<th>Alt. D</th>
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<tr>
<td>Lower Clear Creek (HUC 12)</td>
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<td>Clear Creek (HUC 10)</td>
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<td>8%</td>
<td>9%</td>
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<td>Pine Knob Creek (45%)</td>
<td>1%</td>
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<tr>
<td>Browns Spring Creek (45%)</td>
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<td>29%</td>
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<tr>
<td>Clear Creek (30%)</td>
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<tr>
<td>Solo Creek (45%)</td>
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<td>Middle Fork Clear Creek (30%)</td>
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<td>Kay Creek (45%)</td>
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<td>Hoodoo Creek (60%)</td>
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<td>Big Cedar Creek</td>
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<tr>
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*Acreas of commercial thinning and landscape burning are not included in these totals.

### Tribal Treaty Rights

American Indian tribes are afforded special rights under various federal statutes: NHPA; NFMA; Archaeological Resources Protection Act of 1979 (ARPA) (43 CFR Part 7); Native American Graves Protection and Repatriation Act of 1990 (NAGPRA) (43 CFR Part 10); Religious Freedom Restoration Act of 1993 (P.L. 103141); and the American Indian Religious Freedom Act of 1978 (AIRFA). Federal guidelines direct federal agencies to consult with tribal representatives who may have concerns about federal actions that may affect religious practices, other traditional cultural uses, or cultural resource sites and remains associated with tribal...
ancestors. Any tribe whose aboriginal territory occurs within a project area is afforded the opportunity to voice concerns for issues governed by NHPA, NAGPRA, or AIRFA.

Executive Order 13175 “Consultation and Coordination with Indian Tribal Governments;” Executive Memo, April 29, 1994 “Government-to-Government Relationship;” and Executive Memo, September 23, 2004, “Government-to-Government Relationship” recognize the unique legal relationship between the United States and Indian tribal governments and also direct Federal agencies to have a process to ensure meaningful and timely input by tribal officials.

Portions of the Forest, including the entire CCIR project area, are located within ceded lands of the Nez Perce Tribe. Ceded lands are federal lands on which the federal government recognizes that a tribe has certain inherent rights reserved by treaty. In Article 3 of the Nez Perce Treaty of 1855, the United States of America and the Nez Perce Tribe mutually agreed that the Nez Perce retain the following rights:

...taking fish at all usual and accustomed places in common with citizens of the Territory [of Idaho]; and of creating temporary buildings for curing, together with the privilege of hunting, gathering roots and berries, and pasturing horses and cattle...

I am committed to fulfilling the Forest Service’s trust responsibilities to Native Americans, to honoring rights reserved in the Nez Perce Treaty of 1855, and to strengthening our government-to-government relationship with the Nez Perce Tribe. The Forest Service manages and provides access to ecosystems that support Tribal traditional practices. The Clear Creek Integrated Restoration Project will maintain and enhance these opportunities over the long term.

Forest personnel and I have met several times with Tribal staff throughout the development of the project, including formal consultation with the Nez Perce Tribal Executive Committee and informal consultation meetings with Tribal Staff. Tribal staff also accompanied project staff on a site visit to the project area. I and project staff also spent a day in the field with members of Tribal staff and Tribal Executive Committee members touring the Kooskia National Fish Hatchery, and looking at representative timber harvest activities on the Forest.

Tribal representatives have expressed concerns about potential sediment and temperature effects from the project in Clear Creek, which could affect operations at the Kooskia National Fish Hatchery. The hatchery is managed by the Nez Perce Tribe for the Fish and Wildlife Service since 2007 through a settlement agreement from the Snake River Basin Adjudication process. The hatchery, constructed in the mid-sixties, is located approximately 10 miles downstream of the Forest boundary near the confluence of Clear Creek and the Middle Fork Clearwater River. Significant private development, both agricultural and residential, has occurred on private lands between the Forest boundary and the hatchery, with much of that development occurring adjacent to or encroaching within the lower Clear Creek riparian zone, including the County road. These developments, outside of and downstream from National Forest lands but upstream from the hatchery, have resulted in reduced riparian vegetation, unstable stream banks, increased erosion and sedimentation, and reduced streamside cover (NMFS BO, sec. 2.3.2, p. 40). In contrast, upper Clear Creek above the Forest boundary has seen significantly less development and that development has been confined to existing roads, past timber harvest, and minimal grazing.

This project, along with several recent aquatic restoration-focused projects approved for upper Clear Creek, will reduce the existing road density within the upper Clear Creek watershed and
reduce sedimentation from the remaining road system through significant road improvement actions, including gravel resurfacing, upsizing existing culverts at risk for failure, and installing and maintaining cross drains at all stream crossings. Improvements in water quality in the upper Clear Creek watershed on Forest lands will enhance the current role upper Clear Creek plays as a habitat refugia for steelhead and salmon from the more impacted habitat downstream that has resulted from extensive agricultural and residential private development in lower Clear Creek below the Forest boundary. Currently, higher water temperatures and sediment levels in lower Clear Creek, partially a result of extensive agricultural and residential development, have confined lower Clear Creek below the Forest boundary to serve primarily as a migration corridor for steelhead as opposed to providing spawning and rearing habitat (NMFS BO, sec. 2.3.3.2, p45). NMFS, in its BO, indicates that “Loss of riparian vegetation, stream channel and substrate alterations, and loss of connectivity to floodplain due to land uses greatly reduces the functionality of lower Clear Creek as spawning and rearing habitat.” (NMFS BO, sec. 2.3.2, p. 40) In contrast, NMFS’s BO for the Clear Creek Integrated Restoration project on Forest lands concludes, in part, that “Considering the potential effects of the proposed action with the baseline condition, potential effects of climate change, and cumulative effects in the action area, NMFS concludes that the proposed action is not expected to appreciably reduce the conservation value of critical habitat in the short term, and may increase the long-term conservation value of critical habitat in the Clear Creek watershed “ (NMFS BO, sec. 2.6, p. 91).

Additionally, NMFS’s BO concludes that although the proposed action may result in small, localized reductions in streamside vegetation, the effects of these reductions on stream temperatures are expected to be immeasurable and stream shading and stream temperatures are expected to be maintained in the action area (NMFS BO, sec. 2.4.1.9, pp.79-80). Over the long term, this project will reduce sediment and maintain temperature conditions in upper Clear Creek by implementing best management practices, reducing road density, improving road conditions and restoring forest vegetation to a more healthy, sustainable condition, while reducing the risk of uncharacteristic wildfire and increasing future resilience to climate change and insect and disease outbreaks. Short term sediment effects are primarily confined to aquatic restoration activities related to road decommissioning, road improvements, and culvert replacements within 600 feet of steelhead critical habitat. These activities produce limited, short term, localized sediment effects but increase the overall stability of the watershed and reduce sediment delivery at strategic locations where that delivery is at its highest risk. This project will maintain and potentially enhance fishing opportunities for Tribal members in the near and long term. By minimizing short term sedimentation from project activities through implementation of PACFISH buffers, extensive BMP’s and project design criteria, and reducing long term sediment through aquatic restoration and road improvement activities, sediment levels being delivered to and below the Forest boundary are not expected to appreciably or measurably increase over current levels and likely will be reduced. The project will have no measurable sediment impacts downstream from the Forest boundary.

With this decision I have established five long term, strategically located water quality monitoring stations that will be monitored throughout the implementation phase of the project (See BA, D. Monitoring, pp.11-13; BO, sec. 1.3.5, pp. 21-26). One of these stations will be located at the Forest boundary in the mainstem Clear Creek. These monitoring stations will monitor stream channel physiography; temperature; streambed surface substrate; cobble embeddedness; and fish presence and abundance. Pre-project baseline conditions for these monitoring stations have been measured and documented and post-project monitoring timelines
have been established. If the monitoring indicates that a statistically significant change in cobble embeddedness, stream channel physiography and/or streambed surface substrate has occurred, and the change is attributable to the implementation of project activities from this decision, assessments of project activities would be conducted to determine the source. A report would be filed with NMFS and USFWS within a month of completing the assessment and, if deemed necessary, re-initiation of consultation would occur on some or all of the remaining unimplemented activities and adjustments made as necessary. This adaptive management approach is set up to provide accountability to the project goals and commitments to improve and restore both vegetative and aquatic conditions in the upper Clear Creek watershed over the long term and minimizing short term effects from aquatic restoration activities.

In response to Tribe concerns regarding maintaining Yew trees on the landscape within regeneration harvests outside of Moose winter range, I instructed project personnel to include an additional project design criteria that reads; “Regeneration harvests units that have a large component of yew in the understory will be marked to “clump” green tree retention around yew concentrations, where feasible and while still meeting silvicultural needs”.

This project will support Tribal interests in other ways, as well. Tribal representatives have expressed concerns about exercising other traditional practices, such as hunting and plant gathering. Because there is little young forest in this area, forage for big game such as elk and deer is currently lacking. These are both important species for Tribal members who hunt. This project will increase forage habitat, improving Tribal members’ opportunities to harvest big game. This project is not expected to negatively affect Tribal members’ ability to gather important plant species, and may increase gathering opportunities for some species such as huckleberries, mushrooms, and other plant species associated with early seral habitats.

Road decommissioning may limit access to some areas. However, I believe the loss of motorized opportunities in these areas will be offset by improvements in fish and wildlife habitat conditions. Tribal access is not limited by road decommissioning; however, the method of access that tribal members can use would change.

Comments submitted by the Tribe for the Clear Creek Integrated Restoration Draft EIS, and the Forest Service’s responses, are provided in detail in the FEIS, Volume 2, Appendix L.

**Commercial Thinning In Stands Where Root Disease Is Present**

Alternative C was developed in response to concerns that commercially thinning stands with root disease could cause the disease to spread, increasing stand mortality and fuel loads. Under Alternative C, commercial thin aged stands within focus areas that are not comprised of early seral species will be regenerated. Regenerating these stands will reduce root disease potential and help create larger patch sizes, while increasing the amount of high-quality, early seral wildlife habitat and moving the area toward Desired Future Conditions (DFCs) for young and old forest. Stands proposed for commercial thinning outside of focus areas that are not comprised of early seral species and are found to have root disease will be deferred to reduce the potential for increased root disease activity and spread.

Under Alternative B, treatment would be deferred in stands proposed for commercial thinning that are found to have root disease and are not comprised of early seral species, regardless of their location within or outside of focus areas. Thinning would not be an appropriate treatment in these stands because root disease would be likely to spread faster and more extensively. The
spread of root disease would be accelerated because of reduced tree competition and increased nutrient availability. However, without treatment, these stands are unlikely to remain on the landscape as long as desired; the stands available for management could be substantially reduced, and deferring treatment in proposed commercial thin stands with root disease would not move these stands toward DFCs and would increase fuel loads from dead and dying trees.

**Patch Size and Fragmentation**

In response to concerns that past management has reduced patch sizes and increased fragmentation in the Clear Creek watershed, Alternative C proposes 4,156 acres of regeneration harvest, including 3,995 acres of regeneration harvest within Focus Areas, which will increase patch size and reduce fragmentation. Of the action alternatives, Alternative C regenerates the most stands within the Focus Area configurations, increasing the early seral habitat patch size immediately and increasing future patch sizes in all age/size classes.

**Early Successional Stands/Young Forest/Wildlife Habitat**

Alternative C responds to concerns that the amount of young forest in the project area should be increased to improve wildlife foraging habitat because it regenerates the most stands. Regeneration harvest addresses this issue by increasing the amount of young forest across the landscape, while reducing the amount of mid-seral and mature forest. Of the action alternatives, Alternative C does the most to address this issue because it regenerates more acres.

**Forest Structure**

Alternative C responds to concerns that the Forest Service should do more to move vegetation in the Clear Creek watershed toward the desired conditions identified for this area.

Alternative C proposes 4,156 acres of regeneration harvest. The desired condition is a forest structure with a range of age classes, size classes, and species diversity that is resistant and resilient to change agents such as insects, diseases, and wildfire. Early seral species should represent a greater percentage of the existing species mix. The regeneration harvest proposed under Alternative C addresses this issue by increasing the amount of young forest across the landscape while reducing the amount of mid-seral and mature forest. Alternative C will increase the young age class from 2% to 10%, the most of any of the action alternatives.

**Economics**

In response to economic concerns, Alternative C harvests the largest volume of any of the action alternatives at 158,000 hundred cubic feet (CCF) and 85,200 thousand board feet (MBF). Alternative C also sustains 2,133 jobs, generates $60,578,000 of community harvest income, and generates $9,087,000 in federal income tax, the most of any of the action alternatives.

**Road Densities**

In response to concerns about the total road mileages and road densities in the Clear Creek watershed, no permanent road construction is proposed under any alternative. Alternative C includes 27.6 miles of new temporary road construction, the same as Alternative B. While Alternative D was developed to address these concerns by minimizing miles of temporary road construction, some harvest units would have been dropped if they were not accessible by the more limited road system proposed under Alternative D. All action alternatives will
decommission 13.2 miles of system roads, which will reduce road densities in the Clear Creek watershed. All temporary roads will be decommissioned via obliteration following use under all action alternatives.

**Threatened and Endangered Species**

The wildlife Biological Assessment (BA) determined that Alternative C *may affect, but is not likely to adversely affect* Canada lynx (listed as threatened) or its habitat. The aquatic species Biological Assessment determined that Alternative C *may affect, but is not likely to adversely affect* bull trout (listed as threatened) and would not affect bull trout designated critical habitat. Informal consultation with the USFWS on both of these species and their habitat was completed and a Letter of Concurrence (LOC) received from the agency on January 28, 2015.

The BA for aquatic species determination for Alternative C is *may affect, likely to adversely affect* steelhead trout, their designated critical habitat, and essential fish habitat. Formal consultation with NOAA Fisheries concurred with that assessment. A Biological Opinion (BO) has been received from National Oceanic and Atmospheric Administration (NOAA) Fisheries (Attachment 3). Terms and conditions included in that BO will be implemented as part of this Decision.

According to the latest USFWS species list update (dated September 17, 2012), no federally listed plant species or proposed critical habitat occurs on the Moose Creek Ranger District.

**Sensitive and Management Indicator Species**

A Biological Evaluation (BE) for aquatic sensitive species indicates that Alternative C *may impact individuals or habitat but is not likely to lead to their listing under the ESA* for westslope cutthroat trout, interior redband trout, and Snake River spring chinook salmon. Impacts would be due to short-term increases in sediment as modeled by NEZSED and temporary increases in suspended sediment associated with culvert removals and replacements (watershed improvements). The project will have long-term beneficial effects to these species from reduced road-related sediment input to streams affected by the proposed watershed improvement activities contained in this decision and recent watershed restoration decisions. Alternative C will have no impact on Pacific lamprey or pearlshell mussels as they are not known to occur within the watershed or near proposed activities; nor will the project effect preferred habitats.

A wildlife BE indicates that Alternative C *may impact individuals or habitat, but is not likely to result in a trend to federal listing or reduced viability for the population or species* for fringed, long-eared, and long-legged myotis; black-backed woodpecker; fisher; flammulated owl; gray wolf; mountain quail; North American wolverine; pygmy nuthatch; ring-necked snake; and western toad.

A rare plant BE indicates that Alternative C will have *no impact* on deerfern (*Blechnum spicant*), lance-leaf moonwort (*Botrychium lanceolatum* var. *lanc.*), northern moonwort (*Botrychium pinnatum*), green-bug-on-a-stick (*Buxbaumia viridis*), Constance’s bittercress (*Cardamine constancei*), Pacific dogwood (*Comus nuttallii*), clustered ladyslipper (*Cypripedium fasciculatum*), light hookeria (*Hookeria lucens*), and naked-stem rhizomnium (*Rhiz nudum*). Alternative C *may impact individuals or habitat but is not likely to cause a trend toward federal listing or reduce viability* for the population or the species for evergreen kittentail (*Synthyris platycarpa*).
Management Indicator Species include American marten, northern goshawk, pileated woodpecker, Rocky Mountain elk, and shiras moose. Under Alternative C, some impacts may occur to individuals or their habitat, but are not expected to result in a loss of viability in the Planning Area nor cause a trend toward federal listing for these species.

Alternative C will conduct regeneration or improvement harvest and landscape burning on up to 30% of elk winter range (Management Area 16) and 3% to 20% of elk summer range within the project area. Most of the project area is considered elk summer range. These treatments will reducing hiding cover, but will also create early seral habitats that will provide high quantity and quality forage for 20 to 30 years until the tree canopy cover closes. Improved forage will benefit the condition of cow elk going into winter, and as a result, calf survival will improve. Forest Plan standards for Management Area 16 will be met by implementing seasonal road closures and restricting public access to roads used for harvest activities. Upon completion of harvest activities, roads will be decommissioned and closed to public motorized access, returning elk security to levels at or near existing conditions. Under Alternative C, no permanent roads will be constructed, and access restrictions on existing roads and trails will not change.

Past road decommissioning from the South Fork/West Fork Clear Creek Road Decommissioning Project was analyzed as part of the existing condition. Other projects that will be implemented in the near future will further improve elk habitat. The Clear Ridge Non-System Road Decommissioning Project (2015) will improve elk security areas. The Johnson Bar Salvage Sale (proposed 2016) will create additional foraging opportunities for elk. The DRAMVU travel management project (proposed 2016) will eliminate cross-country motor vehicle use on National Forest lands.

**CONSISTENCY WITH FOREST PLAN**

Although the Clearwater and Nez Perce National Forests were administratively combined in February 2013, management of the lands formerly within the boundary of the Nez Perce National Forest will continue to be guided by direction found in the Nez Perce Forest Plan until the Forest Plan is revised. The Nez Perce Forest Plan (USDA Forest Service 1987a, as amended) includes goals, objectives, standards, and guidelines that direct management of forest resources. The project tiers to the Nez Perce National Forest Land and Resource Management Plan FEIS and ROD (USDA Forest Service 1987b). Alternative C will move the project area toward a DFC as defined in the Forest Plan (USDA Forest Service 1987a). Specifically, Alternative C meets the goals and objectives of the Forest Plan and is consistent with Forestwide standards for aquatics, cultural resources, economics, fuels, plants, wildlife, fish, roadless areas, soils, vegetation, visual resources, and water through project design and planning.

Consistency findings are discussed throughout the FEIS at the end of each resource section in Chapter 3. I have evaluated the selected alternative with Forest Plan goals, objectives, and standards and have determined that it meets management direction for all resources as indicated below.

**Minimize sediment input to streams, meet beneficial uses, apply BMPs to ensure water quality standards are met or exceeded and manage all water under the designated standards found in the Appendix A of the Forest Plan.** The selected alternative complies with this direction through the implementation of project design features and road improvement and decommissioning activities. FISHED modeling indicates no measurable changes in cobb
embeddedness or summer or winter rearing capacity in any of the prescription watersheds under Alternative C. In addition, road decommissioning and road improvement activities will reduce potential sediment input and allow streams to continue to trend toward meeting desired conditions for cobble embeddedness and summer rearing and winter rearing capacity. Installation of cross drains will help to disconnect the road system from perennial streams (See FEIS, section 3.1, “Aquatics”).

Alternative C is consistent with all applicable State and federal water quality laws because project design criteria and BMPs have been included to protect water resources (FEIS, section 2.2.6). Implementing project design measures, adhering to BMPs, and maintaining PACFISH buffers will reduce potential erosion and further limit the risk of sediment reaching streams. Any sediment yield increases will be short-term (0–6 years after project activities), and beneficial uses in Clear Creek and the Middle Fork Clearwater River will be maintained. No effect to municipal water supplies will occur since no municipal water supplies are within, adjacent to, or downstream of the project area. There are no Source Water Protection areas that extend into the Clear Creek Integrated Restoration project area, although the Source Water Protection area for the city of Orofino (PWS#2180024 – City of Orofino) extends to mainstem Clear Creek downstream of the project area (Clear Creek and Big Cedar Creek confluence) (See FEIS, section 3.11, “Watershed”).

Locate, protect, and interpret significant prehistoric, historic, and cultural resources. An appropriate cultural resource survey has been conducted for the project area and has been submitted to the Idaho SHPO for concurrence. Mitigation measures are in place for the five historic properties, three sites eligible for the National Register of Historic Places, and five cultural sites located within the Area of Potential Effects. The Idaho SHPO has approved all evaluations and protection measures. Consultation with the Nez Perce Tribe has also taken place to protect the cultural sites. (See FEIS, section 3.2, “Cultural Resources”.)

Provide a sustained yield of resource outputs at a level that will help support the economic structure of local communities and provide for regional and national needs. Alternative C best meets this goal because it generates the most timber volume. (See FEIS, section 3.3, “Economics”.)

Protect resource values through cost effective fire and fuels treatment through the utilization of material and using prescribed fire. The selected alternative will decrease the probability of stand-replacing crown fire and increase firefighter effectiveness, reducing the probability of resource damage at a lower cost while utilizing wood fiber. (See FEIS, section 3.4, “Fuels”.)

Implement an effective weed management program with the objectives of preventing the introduction and establishment of noxious weeds; containing and suppressing existing weed infestations; and cooperating with local, State, and other federal agencies in the management of noxious weeds. The selected alternative complies with this direction through the implementation of project design features. (See FEIS, section 3.5, “Noxious Weeds”.)

Provide habitat to contribute to the recovery of threatened and endangered plant and animal species in accordance with approved recovery plans and provide habitat to ensure the viability of those species identified as sensitive. The FEIS has assessed potential impacts to all threatened and endangered and sensitive plant, wildlife and fish species relevant to the project area. (See FEIS, section 3.1, “Aquatics”, section 3.6, “Rare Plants”, and section 3.12, “Wildlife”,

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and the “Threatened and Endangered Species” section in this document. Also see the Biological Opinion, this document, Attachment #3).

**Maintain soil productivity and minimize any irreversible impacts to the soil resource.** Field surveys complying with Regional standards were conducted on each of the proposed Activity Areas to evaluate the potential for soil displacement, compaction, puddling, mass wasting, and surface soil erosion from ground-disturbing activities. Alternative C will control erosion, compaction, displacement, puddling, and detrimental soil conditions through compliance with design criteria (FEIS, section 2.2.6). These measures will minimize detrimental disturbance with the objective of ensuring that Activity Areas meet Regional Guidelines and Forest Plan soil standards, including the Forest Plan amendment, upon completion of the planned activities. Monitoring requirements were established to verify compliance. (See FEIS, section 3.8, “Soils”.)

**Require silvicultural examination and prescriptions before any vegetative manipulation takes place on forested lands.** Final determination of the silvicultural system for areas to be harvested will be made by a certified silviculturist after an on-the-ground, site-specific analysis. All proposed treatment stands have had stand exams or have been examined on-the-ground by a silviculturist, wildlife biologist, and fuels specialist. All vegetative treatments will have silvicultural prescriptions approved by a certified silviculturist prior to treatment implementation. Prescriptions will consider site-specific factors as well as multiple resource objectives; NEPA decisions; other regulatory requirements; and Forest Plan goals, objectives, and standards. (See FEIS, section 3.9, “Vegetation”.)

**Prohibit clear-cutting adjacent to previously harvested areas that are still considered openings.** Under Alternative C, no harvest will occur adjacent to stands that would be considered an opening. All proposed harvest units that are adjacent to previously harvested stands are certified as fully stocked, and the trees are greater than 10 feet in height. (See FEIS, section 3.9, “Vegetation”.)

**Permit timber harvest on lands classified as “unsuitable” for timber management to accomplish multiple use objectives.** No harvest will occur on lands classified as unsuitable under Alternative C. (See FEIS, section 3.9, “Vegetation”.)

**Minimize the impacts of the mountain pine beetle and other insect and disease infestations to the extent necessary to achieve the overall goals and objectives of the Forest Plan.** Loss of the long-lived, early seral components in the ecosystem is a major factor in the lack of ecological resiliency. Regeneration treatments under Alternative C will remove dead, dying, and at-risk vegetation, which would trend the project area toward species compositions with increased resiliency. Treatments under Alternative C will also minimize adverse pest effects and maximize a range of objectives. (See FEIS, section 3.9, “Vegetation”.)

**Retain the existing landscape character and maintain the designated visual quality objectives of partial retention, modification, and maximum modification from travel corridors and use areas.** This area currently meets the Nez Perce National Forest Plan Visual Quality Objectives of Partial Retention in the foreground and Modification/Maximum Modification in the middle and background viewing zones from all identified viewpoints and viewing corridors. Although there are currently harvest units that appear as openings, they do not dominate the existing landscape character of the area. Alternative C retains the visual quality objectives for this landscape (see FEIS, section 3.10, “Visuals”.)
Protect or enhance riparian-dependent resources. Alternative C proposes no timber harvest, precommercial thinning, or prescribed fire within the PACFISH RHCAs. Road decommissioning under Alternative C will remove 13.2 miles of roads and all of their associated perennial and intermittent stream channel crossings and will recontour roads within RHCAs. Decommissioning RHCA roads will contribute to the upward trend requirement as required by the Forest Plan for Pine Knob, Middle Fork, and mainstem Clear Creek. (See FEIS, section 3.1, “Aquatics” and FEIS Appendix J.

Forest Plan Amendment 20 (PACFISH)

The PACFISH Environmental Assessment amended the Nez Perce Forest Plan in 1995 and is incorporated as Amendment 20. PACFISH established riparian goals, established riparian management objectives, and defined RHCAs. It included specific direction for land management activities within riparian areas, wetlands, and landslide-prone terrain. The riparian goals directed the Forest to maintain or improve habitat elements such as water quality, stream channel integrity, instream flows, riparian vegetation, and several others. PACFISH also directed that BMPs be applied to all land-disturbing activities, including prevention of soil erosion during land management activities.

No site-specific analysis has been completed to modify PACFISH default buffers. PACFISH default RHCAs include those areas within 300 feet of fish-bearing streams, within 150 feet of non-fish-bearing streams, and 100 feet on intermittent streams and wetlands of 1 acre or less. Alternative C fully complies with Forest Plan Amendment 20 (PACFISH).

Other Alternatives Considered In Detail

In addition to the selected alternative, I considered three other alternatives, which are briefly discussed below. A detailed comparison of these alternatives can be found in Table 1, Table 4, or Table 5 above or section 2.2 of the FEIS.

All action alternatives include the following actions:

- 1,793 acres of precommercial thinning, 41 acres of grass restoration, and 1,371 acres of prescribed fire
- 119.8 miles of system road reconstruction
- 48.8 miles of system road reconditioning
- 13.2 miles of system road decommissioning
- A site-specific nonsignificant Forest Plan amendment adopting the Region 1 soil standard of 15% for detrimentally compacted, displaced, or puddled soils
- A site-specific, nonsignificant Forest Plan amendment clarifying the Forest’s interpretation of Appendix N of the Nez Perce Forest Plan
- The Design Criteria described in section 2.2.6 of the FEIS

Alternative A – No Action

Under the No Action Alternative, current management plans would continue to guide management of the project area. No timber harvest, improvement cutting, temporary road
construction, prescribed burning, grass restoration, road reconstruction, or road decommissioning would be implemented to accomplish project goals.

Alternative A does not meet the purpose and need for action. Selection of this alternative would not preclude future management proposals.

**Alternative B – Proposed Action (As Modified In Response to Scoping Comments)**

This alternative was developed in response to comments about the Proposed Action that was presented for public scoping in January 2012. Alternative B would move the project area toward the desired conditions identified for the project during the pre-NEPA phase.

During the pre-NEPA phase of project development, the IDT identified large polygons or patches within the project area referred to as “Focus Areas.” The Focus Areas were identified based on a need to promote similar age classes by connecting recently regenerated stands (preferably those regenerated within the last 20 years). The intent was to establish breaks in continuous fuels, favor areas with known or developing forest health issues, and target over-represented mid-seral and mature age classes. The IDT also attempted to delineate these areas with identifiable features, such as forest type breaks, topographic breaks, and administrative boundaries. The Focus Areas served as the basis for developing the Proposed Action. A new Focus Area, developed after the Proposed Action was presented for scoping, was added to all of the action alternatives. It includes about 420 acres of regeneration harvest and some commercial and precommercial thin units. This new Focus Area also includes 1.2 miles of temporary roads, some of which would be on existing templates.

Within the Focus Areas, stands identified for regeneration would be regenerated to improve patch sizes, increase the amount of early seral forest across the landscape, and allow replanting with a mix of species that would improve the long-term resilience of these stands. Healthy grand fir/Douglas-fir, ponderosa pine, and other early seral stands would be commercially thinned. If stands proposed for commercial thinning are not comprised of early seral species and are found to have root disease, treatment of these stands would be **deferred**.

Outside of the Focus Areas, healthy grand fir/Douglas-fir, ponderosa pine, and other early seral stands proposed for commercial thinning would be commercially thinned. If advanced root disease were detected in younger Douglas-fir/grand fir stands not comprised of early seral species proposed for commercial thinning, treatment of these stands would be **deferred**.

Mature timber may be treated with improvement harvest to maintain or improve the vigor/resiliency of preferred trees. This would "fully maintain, or contribute toward the restoration of, the structure and composition of old growth stands..." per PL 111-11 Title IV (2009).

All prescribed fire treatments would occur within the Clear Creek Roadless Area. Prescribed fire treatments will not include ignition within PACFISH buffers.

Table 6 summarizes the activities that would be undertaken under Alternative B.
Table 6. Alternative B Vegetation Treatment and Temporary Road Construction

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Precommercial Thinning (acres)</td>
<td>1,793</td>
</tr>
<tr>
<td>Grass Restoration (acres)</td>
<td>41</td>
</tr>
<tr>
<td>Prescribed Fire (acres)</td>
<td>1,371</td>
</tr>
<tr>
<td>Regeneration, Including Site Preparation and Reforestation (acres)</td>
<td>2,609</td>
</tr>
<tr>
<td>Improvement (acres)</td>
<td>331</td>
</tr>
<tr>
<td>Commercial Thin (acres)</td>
<td>5,606</td>
</tr>
<tr>
<td>Road Reconstruction (miles)</td>
<td>119.8</td>
</tr>
<tr>
<td>Temporary Roads on Existing Templates (miles)</td>
<td>8.7</td>
</tr>
<tr>
<td>Temporary Roads, New Construction (miles)</td>
<td>27.6</td>
</tr>
<tr>
<td>Road Decommissioning (miles)</td>
<td>13.2</td>
</tr>
</tbody>
</table>

**Alternative D – Minimal Temporary Road Construction**

Alternative D would address the need for vegetative rehabilitation in the Clear Creek watershed, but to a lesser degree than Alternative B and C. This alternative would use existing road templates as much as possible. It was developed in response to scoping comments about the following resource concerns:

- Road densities/cumulative impacts of past management
- Sediment input to stream channels
- Cumulative impacts of past timber harvest and road building on fisheries habitat, water quality, and soil productivity
- Effects of the road network on elk security habitat
- Meeting desired conditions for watersheds, fish, and wildlife habitats

A total of 8.7 miles of previously decommissioned roads that have existing templates (were not physically obliterated) would be reopened and 8.8 miles of new temporary roads would be constructed. Existing road templates were identified through photo interpretation, including aerial photos from 1970 and subsequent years, the LIDAR layer, and field reviews. The average length of new temporary road construction would be 375 feet; the average length of the existing template is 820 feet. New temporary construction would be added to the existing templates.

Units would be harvested as described for Alternative B, except that some units would be dropped if they were not accessible by the more limited road system proposed for Alternative D. Other units would utilize longer skidding or yarding distances where possible, along with skidding logs from skyline landings down shorter skid trails to truck loading sites, instead of building roads to the skyline landing.

Mature timber may be treated with improvement harvest to maintain or improve the vigor/resiliency of preferred trees. This would "fully maintains or contribute toward the restoration of, the structure and composition of old growth stands..." per PL 111-11 Title IV (2009). Table 7 summarizes the activities to be undertaken under Alternative D.
Table 7. Alternative D Vegetation Treatment and Temporary Road Construction

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Precommercial Thinning (acres)</td>
<td>1,793</td>
</tr>
<tr>
<td>Grass Restoration (acres)</td>
<td>41</td>
</tr>
<tr>
<td>Prescribed Fire (acres)</td>
<td>1,371</td>
</tr>
<tr>
<td>Regeneration, Including Site Preparation and Reforestation (acres)</td>
<td>2,178</td>
</tr>
<tr>
<td>Improvement (acres)</td>
<td>211</td>
</tr>
<tr>
<td>Commercial Thin (acres)</td>
<td>5,141</td>
</tr>
<tr>
<td>Road Reconstruction (miles)</td>
<td>119.8</td>
</tr>
<tr>
<td>Temporary Roads on Existing Templates (miles)</td>
<td>8.7</td>
</tr>
<tr>
<td>Temporary Roads, New Construction (miles)</td>
<td>8.8</td>
</tr>
<tr>
<td>Road Decommissioning (miles)</td>
<td>13.2</td>
</tr>
</tbody>
</table>

Alternatives Not Considered In Detail

Old Growth
The IDT considered an alternative that would harvest old growth stands, but did not study it in detail, although improvement cuts would be done in some old growth stands containing legacy, long-lived, early seral species to help keep them on the landscape longer. Although the amount of old growth in the project area exceeds the Forest Plan minimum standard, Collaborative Forest Landscape Restoration Act goals and objectives require that large diameter trees be retained as much as possible to the extent they promote fire resiliency.

Watershed Rehabilitation (Road Decommissioning) Only; No Timber Harvest or Prescribed Burning
Some commenters asked that the IDT consider an alternative that would focus only on watershed rehabilitation activities, such as road decommissioning, with no timber harvest or prescribed burning.

The IDT analyzed this alternative, but did not study it in detail because it would not meet the purpose and need for this project. Also, in effect, this “alternative” was previously analyzed in the South Fork–West Fork Clear Creek Road Decommissioning Environmental Assessment (USDA Forest Service 2011a), and is currently being implemented, which decommissioned 10 miles of system roads and 75 miles of non-NFS roads in the Clear Creek watershed. An additional 13.2 miles of NFS road decommissioning is included in the Clear Creek Integrated Restoration Project as an action common to all action alternatives. The Clear Ridge Nonsystem Road Decommissioning Project (signed January 2015) will decommission 65 miles of non-NFS road in the northern portion of the Clear Creek watershed.

Prescribed Burning-Only Alternative
The IDT analyzed an alternative that would use prescribed burning alone to manage vegetation, but did not study it in detail because it would not meet the purpose and need for this project and because of economic concerns. Timber outputs from the Proposed Action would be used to offset treatment costs and support the economic structure of local communities and provide for regional and national needs. Also, burning commercial timber would not be consistent with the Forest Plan. The Clear Creek Integrated Restoration project is within a designated Wildland
Urban Interface (WUI). Prescribed fire inherently involves more risk of escaped fire, which is not appropriate within the WUI when mechanical harvest means are an option.

**No Prescribed Burning**

Some commenters asked that the IDT develop an alternative that would not include any prescribed burning. The IDT analyzed this alternative, but did not study it in detail because prescribed burning is a viable tool available to manage vegetation within the Clear Creek Roadless Area. Prescribed fire is also an important and effective tool for reducing post activity fuels in treatment units as well as for stimulating grass, forb, and shrub regrowth.

**No Temporary Road Construction/Use Existing Roads Only/Helicopter Logging**

Some commenters were concerned about existing road densities in the Clear Creek watershed and the effects of the road system on fisheries and wildlife habitat.

An alternative that would not build any temporary roads was considered but not analyzed in detail by the IDT because it would reduce the managed area to the point where the purpose and need to manage vegetation would not be met. The road system in the Clear Creek watershed has already been substantially reduced. The South Fork–West Fork Clear Creek Road Decommissioning DN/FONSI (USDA Forest Service 2011b) decommissioned 85 miles of system and nonsystem roads. Temporary roads constructed for the Clear Creek Integrated Restoration project will be constructed in locations that are hydrologically disconnected from streams and other PACFISH protected areas, and will be decommissioned and recontoured after use.

Watershed rehabilitation is better achieved by decommissioning old roads in poor locations (unstable, midslope or stream-adjacent). Building new temporary roads in more stable locations away from streams, and then recontouring them after use, creates less chance of erosion and subsequent sediment delivery. The IDT considered an alternative that would build temporary roads only on existing or former road templates. This alternative was not analyzed in detail because it would not provide enough access or access in the appropriate locations to meet the purpose and need to manage vegetation in the project area and would include less environmentally sensitive road locations hydrologically connected to streams and/or other PACFISH-protected areas.

The IDT also considered an alternative that would use helicopter logging instead of building temporary roads. This alternative was not analyzed in detail because a timber sale based on helicopter logging alone would not be economically viable.

**Do Not Use Vegetation Response Unit Desired Future Conditions Developed For This Project**

Some commenters did not want the DFCs that were developed specifically for this project to be used and asked that the IDT use Forest Plan goals and objectives alone to guide management activities. The IDT considered this alternative, but did not analyze it in detail because project-specific desired conditions that were developed during the pre-NEPA stage of the project were based on Forest Plan direction and refined by the best available science. Site-specific, Vegetative Response Unit (VRU)-based desired conditions that were based on Forest Plan goals, objectives, and standards, were used to develop the alternatives analyzed in detail.
Analyze an Alternative with Opening Sizes 40 Acres or Less

Some commenters were concerned that past management has reduced patch sizes and increased fragmentation in the Clear Creek watershed. Conversely, some commenters expressed concern about exceeding the 40-acre opening limitation.

In response to the expressed concerns, the IDT considered an alternative that would not create openings greater than 40 acres; however, this alternative was eliminated from detailed consideration after an analysis of the effects on fragmentation and fire spread (Figure 3). An under-40-acre-alternative would not trend the area toward DFCs, and it would prevent treatment activities from meeting the purpose and need for the project.

There is also a need to trend the landscape toward a more desirable pattern of forest structure and patch sizes created by natural disturbance agents of fire and insects and diseases. The scale of treatments should be matched to the scale of the widespread and increasing root disease and bark beetle (Douglas-fir beetle, fir engraver beetle, and mountain pine beetle) mortality in order to restore resilient tree species. The large majority of the resource area is classified as mature forest (i.e., mature forest is the matrix). Previous regeneration harvesting created the majority of the existing openings within the resource area but left untreated, mature forested stands between and around the openings. Extensive areas of mature forest in the resource area have been severely affected by root disease and bark beetles.
Figure 3. The estimated effects of an under-40-acre alternative on fire spread are displayed in the top figure and the estimated effects of fire spread in Alternative C are shown in the bottom figure.
Within the project area, there is currently very little diversity in patch sizes within the young structure class. Creating openings in excess of 40 acres would increase the diversity of patch sizes within the young structure class and eventually in all structure classes as the young stands grow. This increased diversity in patch sizes would also translate to the long-lived early seral species forest cover types because most of these forest cover types are directly associated with regeneration harvests in the resource area. Developing large patches of resilient forest now may eventually lead to the development of large patches of future old growth that have greater representation of resilient, longer-lived species.

The effects that an under-40-acre-alternative would have on patch sizes are displayed in Table 8. Although there is not a marked reduction in patch size, it does show that this alternative would continue to trend the resource area towards a fragmented landscape.

<table>
<thead>
<tr>
<th>Structural Class</th>
<th>Existing Condition</th>
<th>40 Acre And Less Alternative</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% of Clear Creek</td>
<td>% of Clear Creek</td>
</tr>
<tr>
<td></td>
<td>Project Area</td>
<td>Project Area</td>
</tr>
<tr>
<td></td>
<td>Existing Mean</td>
<td>Existing Mean</td>
</tr>
<tr>
<td></td>
<td>Patch Size</td>
<td>Patch Size</td>
</tr>
<tr>
<td>Seral Shrub</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Stand Initiation</td>
<td>17</td>
<td>17</td>
</tr>
<tr>
<td>Stem Exclusion</td>
<td>26</td>
<td>20</td>
</tr>
<tr>
<td>Understory Re-Initiation</td>
<td>17</td>
<td>17</td>
</tr>
<tr>
<td>Young Multi-Story</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Old Single-Story</td>
<td>17</td>
<td>17</td>
</tr>
<tr>
<td>Old Multi-Story</td>
<td>13</td>
<td>13</td>
</tr>
</tbody>
</table>

Similarly, a need exists to create a pattern of fuel treatments across the landscape that will effectively modify potential fire behavior and produce a safer environment in which to conduct suppression activities. Fire research results show that larger treatment blocks are more effective than scattered smaller treatment blocks at altering fire spread rates and severities within a given treatment block. Research also shows that strategic placement of treatment blocks is important to alter fire spread rates and severities across a given landscape. It is important to match the scale of treatments to the scale of the insect and disease-driven fuel accumulations, and to match the scale of historic ecological processes within the resource area to create “fences and corridors” on the landscape (McKenzie et al. 2011, Chapter 3 in the FEIS). Limiting opening sizes to less than 40 acres would limit their effectiveness at slowing the spread of large fires, and would limit their effectiveness at reducing fire severity. Smaller fuel treatment areas would not have as many significant beneficial effects on the spread, intensity, and severity of large fires, especially if placed randomly on the landscape.

**Public Involvement**

A Notice of Intent (NOI) advertising the scoping period was published in the Federal Register on January 6, 2012. A corrected NOI was published on February 9, 2012, updating the contact information that was published in the original notice. A second corrected NOI was published on February 13, 2012, extending the comment due date to March 1, 2012. A third corrected NOI, advertising two proposed site-specific Forest Plan amendments that were included in the DEIS, was advertised on February 7, 2013.

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As part of the public involvement process, the agency also listed the proposal in the quarterly Schedule of Proposed Actions beginning April 2012. The Project has been presented to the Nez Perce Tribe at quarterly staff-to-staff meetings since April 2012. The CBC has been involved in project development since 2010 when the Clear Creek watershed was selected for assessment to determine the types, locations, and amount of appropriate management actions that would address CFLRP goals and objectives.

The Proposed Action was initially developed from preliminary issues, concerns, and existing conditions that were identified by the IDT. The IDT used issues raised by the public, other agencies, and the Nez Perce Tribe to develop the scope of the actions, alternatives, and effects to consider in the DEIS. Many of the issues were addressed through project design criteria and resource protection measures. The DEIS was advertised for public comment in April 2013. Forty-one comment documents were received, containing more than 525 individual comments. Those comments have been addressed in the FEIS through design criteria, project design, and alternative development.

During 2013 and 2014, the District Ranger and the IDT hosted field trips to the project area that were attended by the Nez Perce Tribe, the CBC, and other interested groups.

A legal notice advertising the start of a 45-day objection period was published in the Lewiston Tribune on February 26, 2015. Three objections were accepted by the Region 1 Regional Forester. As instructed by the Regional Forester, the Forest updated the analysis in the Final Environmental Impact Statement (FEIS) and the updated FEIS was posted on the Forest website in September 2015.

Findings Required by Other Laws and Regulations

My decision is consistent with all laws, regulations, and agency policy relevant to the Clear Creek Integrated Restoration Project. The following discussion is not all inclusive but is intended to provide information on areas raised as issues or comments by the public or other agencies.

Delegation of Authority

Consistent with Forest Service Manual 1230, I have been delegated authority as Forest Supervisor of the Nez Perce-Clearwater National Forests, effective November 16, 2014. I am responsible to the Region One Regional Forester for management, development, and administration of the Nez Perce-Clearwater National Forests.

Clean Air Act

The Forest Service is a member of the Idaho/Montana Airshed Group. This airshed group is composed of State, federal, tribal, and private organizations that are dedicated to the preservation of air quality in Idaho and Montana. The analysis area falls within Airshed 12B.

Alternative C project-related prescribed fire activities will be approved by the airshed group; approval will be contingent on prevailing weather conditions, other planned ignitions in the airshed, and the resultant smoke impacts, including impacts to the Selway–Bitterroot Wilderness (a Class 1 airshed).
Clean Water Act and Idaho State Water Quality Laws

Alternative C complies with the Clean Water Act by following all federal, State, interstate, and local requirements and administrative authorities, processes, and sanctions with respect to control and abatement of water pollution. All major streams in the project area will be improved or maintain water quality conditions and will continue to support beneficial uses.

Region 1 Soil Quality Standards

Project design criteria for Alternative C were developed to better meet soil quality standards. In addition, a nonsignificant, Forest Plan amendment adopting Region 1 soils standards is included in Alternative C. This Forest Plan Amendment is needed because the Regional and Forest Plan Standards are different regarding extent of disturbance area as follows:

- The Nez Perce National Forest Plan soil standard #2 states: “A minimum of 80 percent of an activity area shall not be detrimentally compacted, displaced, or puddled upon completion of activities.” Once the unit exceeds the 20% disturbance threshold, no further entry is allowed.
- The Regional Standard limits disturbance to 15%, but allows entry into units that already exceed the 15% standard as long as the treatment and soil restoration shows an improvement of soil quality at the end of activities.

Therefore, the Forest Plan must be amended in order to enter the units that exceed the Regional and Forest Plan Standard and show improvement to the soil resource by the activities.

The National Fire Plan and the Healthy Forests Restoration Act

Both the National Fire Plan and Healthy Forest Restoration Act provide overarching direction to reduce the threat of wildfire and restore ecosystems. Management actions included under Alternative C within the project area are designed to be consistent with this direction. Particularly, proposed management activities will trend the general landscape condition toward desired fuel profiles and optimize opportunities to treat hazardous fuels in identified Wildland-Urban Interface (WUI) lands and across the project area landscape.

Endangered Species Act

As directed by the Endangered Species Act, Biological Assessments (BAs) were completed for listed and sensitive fish and wildlife species concurrent with Section 7 consultation with the USFWS and NOAA Fisheries for Alternative C. The effects analysis concluded that Alternative C may likely adversely affect steelhead trout and their habitat and may adversely affect essential fish habitat. Alternative C is not likely to adversely affect Canada lynx or bull trout or their habitat. Design criteria will be used to minimize effects to the species and their habitats.

Executive Orders 11988 and 11990

Numerous floodplains and wetlands exist within the analysis area. Alternative C project activities have been designed to be consistent with the requirements of Executive Order (EO) 11988 and EO 11990. No activities, other than road improvements, will occur in floodplains or wetlands. PACFISH buffers will be implemented along streams and seeps/springs in the commercial and precommercial thin units. The protection of health, safety, and welfare, the
prevention of loss of property values, and the maintenance of natural systems will be retained under Alternative C.

**Executive Order 12898**

The selected alternative was assessed to determine whether it would disproportionately impact minority or low-income populations, in accordance with EO 12898. I have reviewed the effects of Alternative C and find that these actions will not have any disproportionately high and adverse impacts to Nez Perce tribal members, minority populations, or low-income populations. Alternative C will not negatively affect tribal members, minority or low-income populations or any United States citizen. No environmental health hazards or adverse impacts to the fishery or wildlife population are expected to result from implementation of Alternative C. This project will not disproportionately affect income level in the economic analysis area. Increasing the life span and health of stands in the project area will help provide a sustained yield of resource outputs, as directed by the Forest Plan. Providing a long-term, sustainable supply of materials for local industries will help support the local economy for all residents, including tribal members, minority, and low-income populations.

**Executive Order 13112**

Project activities under Alternative C have been designed to be consistent with the requirements of EO 13112.

**Idaho Forest Practices Act**

Project activities under Alternative C have been designed to be consistent with the Idaho Forest Practices Act.

**Idaho Roadless Rule**

Alternative C implements low-mixed severity prescribed fire on approximately 1,400 acres within the Clear Creek Roadless Area over a period of several years. Implementing Alternative C will have a *beneficial effect* to the natural qualities of the area, cause *little effect* to the undeveloped characteristics of the Roadless Area, cause *no effect* to wilderness characteristics of the area, cause a *temporary effect* to solitude and primitive unconfined recreation, and cause no effect to the manageability of the Roadless Area.

The State of Idaho, Idaho Roadless Commission reviewed the project’s proposed activities on March 14, 2013.

**Idaho Stream Channel Protection Act**

Project activities under Alternative C have been designed to be consistent with the Idaho Stream Channel Protection Act.

**National Environmental Policy Act (NEPA), Sections 101 And 106**

The requirements of NEPA, as specified in 40 CFR Part 1500, have been fully applied through this project planning effort. The DEIS and FEIS, and the comprehensive analyses and public involvement steps that they incorporate, comply with the letter and intent of NEPA. The FEIS analyzed a reasonable range of alternatives, including a
No Action Alternative, and disclosed the expected environmental effects of each alternative within the context of identified issues. This ROD describes the selected actions and rationale for making these decisions. This project is in full compliance with NEPA.

**National Forest Management Act**

The following NFMA and accompanying regulations require that several specific findings be documented at the project level. The project record clearly supports that this Decision is consistent with the following NFMA provisions.

**Forest Plan Consistency**

All resource plans must be consistent with the Forest Plan goals, objectives, and standards. Forest Plan goals, objectives, and standards are displayed throughout the FEIS. I have determined that the selected alternative will meet Forest Plan standards and will contribute toward reaching Forest Plan goals and objectives as described in the FEIS and this ROD.

Alternative C will comply with applicable Forest Plan management area direction that emphasizes the establishment of white pine, western larch, and ponderosa pine on the landscape. It will improve forest health by shifting species composition and structure toward desired conditions, making stands more resistant and resilient. The project is consistent with the requirements for vegetative manipulation found at 36 CFR 219.28. The action will contribute to meeting the multiple use goals established for the area without undue effect on soil, water, or other resources (16 USC 1604(g)(3)(b).

**Suitability for Timber Production [16 U.S.C. 1604(k)]**

No timber harvest, other than salvage sales to protect other multiple values, shall occur on lands not suited for timber production. This Decision proposes no harvest on unsuitable lands (USDA Forest Service 1987a, pp. III-37, III-38, and III-44). This project has not identified lands not suitable for timber production in the project area (36 CFR 219.12 a(2)).

**Vegetation Management Requirements (FSM 1921.12)**

The minimum specific management requirements for projects and activities that must be met in carrying out projects and activities for the NFS are set forth in this section. Under 16 U.S.C. 1604 (g)(3)(E), “Timber Harvest on National Forest Lands,” a responsible official may authorize site-specific projects and activities to harvest timber on NFS lands only where:

a. **Soil, slope, or other watershed conditions will not be irreversibly damaged.** The effects of Alternative C are disclosed in Chapter 3 of the FEIS. I find that harvest unit locations, silvicultural systems, riparian protections, logging technology, and post-harvest activities, in relationship with the soil and water conservation practices planned, will minimize impairment of site productivity and ensure conservation of soil and water resources. With the application of BMPs and design measures (FEIS, section 2.2.6), the project is expected to fully meet Forest Plan standards, as amended, for soil productivity. Soil decompaction and road decommissioning will ameliorate the effects of past and planned timber harvest and improve existing conditions. The project is expected to have short-
term impacts on sediment yield and water yield followed by long-term improvements. All of the short-term impacts are expected to be within the Forest Plan guidelines.

b. **There is assurance that the lands can be adequately restocked within five years after final regeneration harvest (FSM 1921.12g).** All regeneration harvested stands will be site prepared and planted with long-lived early seral species or allowed to regenerate as required by the silvicultural prescription. Assurance is given that all suited lands under Alternative C will be adequately restocked within 5 years after final harvest. This conclusion is based on site indicators and previous experience.

c. **Streams, streambanks, shorelines, lakes, wetlands, and other bodies of water are protected from detrimental changes in water temperatures, blockages of water courses, and deposits of sediment where harvests are likely to seriously and adversely affect water conditions or fish habitat** (16 USC 1604(g)(3)(E)(iii)). Timber harvest activities are modeled to have increases in sediment yield and water yield for all prescription watersheds. All modeled changes are below thresholds where detrimental local effects might be observed. No stream channel alteration from increased water yield is expected from this project at the Forest Plan prescription watershed scale. When all project activities are considered, Alternative C is expected to have a net, long-term, beneficial (positive) cumulative watershed effect for hydrology-related indicators. Watershed improvement projects and project design measures (FEIS, section 2.2.6) will maintain or improve water quality, channel conditions, and fish habitat.

d. The harvesting system to be used is not selected primarily because it will give the greatest dollar return or the greatest unit output of timber (16 USC 1604(g)(3)(iv)). The estimated economic and timber outputs were determined and displayed in the FEIS (FEIS, section 3.3, “Economics”) and were factors in my decision. The costs associated with the timber harvest, roadwork, fuel treatment, reforestation, design features, and other related timber harvest activities are based on current local projections.

### Clearcutting and Even-aged Management (16 USC 1604(g)(3)(F))

A responsible official may authorize projects and activities on NFS lands using cutting methods, such as clearcutting, seed tree cutting, shelterwood cutting, and other cuts designed to regenerate an even-aged stand of timber, only where:

a. For clearcutting, it is determined to be the optimum method; and for other such cuts it is determined to be appropriate to meet the objectives and requirements of the relevant land management plan (16 USC 1604(g)(3)(F)(i)). Even-age management is appropriate to meet the objectives and requirements of the Forest Plan and was determined to be the optimum method of management where prescribed with even-aged silvicultural prescriptions on 4,156 acres under Alternative C. Even-aged management has been proposed for those stands where no other treatment would meet Forest Plan objectives of improving growth and yield and reducing susceptibility to forest insects while protecting other resource objectives. Post-treatment stocking will continue to meet Forest Plan standards.

b. The IDT review has been completed and the potential environmental, biological, aesthetic, engineering, and economic impacts have been assessed on each advertised sale area and the cutting methods are consistent with the multiple use of the general area (16
USC 1604 (g)(3)(F)(ii). These goals are stated in the FEIS (section 1.8) and vegetative manipulation as a means to the goals is discussed in Chapter 3, section 3.3, “Economics,” and section 3.9, “Vegetation.”

c. Cut blocks, patches, or strips are shaped and blended to the extent practicable with the natural terrain (16 USC 1604 (g)(3)(F)(iii)). This is discussed in the FEIS in section 3.10, “Visuals.” Vegetation treatment will change the appearance of some vegetation as seen in the distance. Visual quality objectives will be met under Alternative C.

d. Cuts are carried out according to the maximum size limit requirements for areas to be cut during one harvest operation (FSM 1921.12e). Direction in Forest Service Manual (FSM) 2471.1 states that the size of openings created by even-aged silvicultural treatments in the Northern Rockies would normally be 40 acres or less, with certain exceptions. One of those exceptions includes catastrophic events such as fire, windstorms, or insect and disease attacks. In these cases, the 40-acre limitation may be exceeded without 60-day public review and without Regional Forester approval, provided the public is notified and the environmental analysis supports the decision (FSM R1 supplement 2400-2001-2 2471.1,

e. 16 USC 1604(g)(3)(F)(iv)). Documentation of the proposed creation of these openings in the scoping letter, DEIS, and FEIS constitutes public notification.

Alternative C will create some openings greater than 40 acres in size. Approval to exceed the 40-acre opening size, with appropriate IDT analysis and documentation, was received from the Regional Forester’s office on September 13, 2013. Alternative C will create openings on the landscape that are closer in scale and pattern to the openings developed under historic disturbance regimes for this area. Proposed harvest openings greater than 40 acres are discussed under “Patch Size” in the direct, indirect, and cumulative effects section of the FEIS (section 3.9.6.3.4). This standard is met under Alternative C. Tree retention will, however, occur throughout these openings. The FEIS, “Vegetation” section (section 3.9) displays the analysis related to openings over 40 acres that will be created with Alternative C.

Timber cuts are carried out in a manner consistent with the protection of soil, watershed, fish, wildlife, visual resources, cultural and historic resources, and the regeneration of timber resources (16 USC 1604(g)(3)(F)(v)). All vegetative treatments have prescriptions prepared by a certified silviculturist who has determined that regeneration harvest is the optimum harvest method, given the mix of species and management objectives on these sites. Reforestation will be accomplished through tree planting and natural regeneration. Site indicators and previous experience indicate that reforestation will be accomplished within 5 years of harvest. All proposed treatments meet Forest plan objectives and requirements. Project design and mitigation measures and BMPs included as part of this project provide direction for the protection of soil, watershed, fish, wildlife, visual resources, cultural and historic resources, and the regeneration of timber resources.
Stands of Trees are Harvested According to Requirements for Culmination of Mean Annual Increment of Growth (16 U.S.C. 1604 (m); FSM 1921.12f; FSH 1909.12, ch. 60)

Alternative C was designed to address the issue of stands not reaching the culmination of mean annual increment; the action alternatives take advantage of thinning opportunity while maintaining and improving stand growing conditions. Approximately 40%–60% of the overstory will be removed, leaving the largest, healthiest ponderosa pine, western larch, white pine, Douglas-fir, and grand fir.

All stands proposed for harvest are within 95% of culmination of mean annual increment. Culmination of mean annual increment of growth does not apply to salvage or sanitation harvesting.

Construction of Temporary Roadways in Connection with Timber Contracts and Other Permits or Leases

Unless the necessity for a permanent road is set forth in the Forest developed road system plan, any road construction of the NFS in connection with a timber contact or other permit or lease shall be designed with the goal of reestablishing vegetative cover on the roadway and area where the vegetation cover has been disturbed by the construction of the road, within 10 years after the termination of the contract, permit or lease either through artificial or natural means (16 U.S.C. 1608(b)).

The analysis considered the current and future transportation needs. Considering this analysis, as well as the site-specific analysis conducted for the Clear Creek Integrated Restoration Project, I have decided to reconstruct 119.8 miles of roads, recondition 48.8 miles of roads, reconstruct 8.7 miles of temporary roads on existing templates, and construct 27.6 miles of new temporary roads. All newly constructed temporary roads will be decommissioned after use, which would include decompaction and fully recontouring slopes. Existing temporary roads would also be decompacted, but those needed for future management would be hydrologically stabilized and not fully recontoured.

Decommissioning 13.2 miles of roads will include decompaction and full recontour methods. Some sections of roads that are ridgetops, stable, have no stream crossings, and are fully vegetated may be abandoned. The intent of abandonment is to administratively decommission roads without redisturbing the road surface already in a stable condition. Based on these actions and analysis in the FEIS, I believe Alternative C meets the intent of the NFMA road requirements.

Standards of Roadway Construction

Roads constructed on NFS lands shall be designated to standards appropriate for the intended uses, considering safety, cost of transportation, and impact on land and resources (16 U.S.C. 1608(c)). Only temporary roads will be constructed with this project; they will be decommissioned after use.
National Historic Preservation Act

Section 101 of the National Environmental Policy Act of 1966 (NHPA) requires federal agencies to preserve important historic, cultural, and natural aspects of our national heritage. The legal processes associated with the protection and preservation of these resources is outlined in the NHPA (36 CFR 800) and subsequent amendments. The Forest meets its responsibilities under NHPA through compliance with the terms of a Programmatic Agreement (PA) signed between Region 1, the Idaho SHPO, and the Advisory Council on Historic Preservation.

The above entities have been consulted and the Idaho SHPO concurred with our findings that Alternative C will have no impacts on historically significant sites. Design features included with the project ensure protection of these historic properties.

Administrative Review Process and Implementation

This decision is subject to the objection process pursuant to 36 CFR 218.

The 45-day objection period for the Draft Record of Decision began February 26, 2015. The Reviewing Officer has responded in writing to all objections, and all concerns and instructions identified by the Reviewing Officer in the objection response have been addressed. A Notice of Availability for the updated Final Environmental Impact Statement (FEIS) was advertised in the Federal Register on September 25, 2015 for a 30-day review period.

All requirements under 36 CFR 218 have been met, and the objection process is complete. This decision may be implemented immediately.

CONTACT PERSON

For additional information concerning this decision or the Forest Service objection process, please contact Joe Hudson, Moose Creek District Ranger, at 208-926-8930 or by email at jbhudson@fs.fed.us; or Lois Hill, Clear Creek Integrated Restoration Project Team Leader, at 208-935-4258 or by email at lrhill@fs.fed.us.

CHERYL F. PROBERT
Forest Supervisor

December 17, 2015
Date
References


