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Decision Notice and Finding of No Significant Impact

Barnyard South Sheep Project

Nez Perce/Clearwater National Forests
North Fork Ranger District
Clearwater County, Idaho

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July 2015

Lead Agency: USDA Forest Service

Responsible Official: Cheryl Probert
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Abstract: *This document describes the final decision and finding of no significant impact for the Barnyard South Sheep project. The decision is based on the analyses documented in the Barnyard South Sheep Environmental Assessment (March 2015) and the Clearwater National Forest Land and Resource Management Plan Final Environmental Impact Statement (September 1987).*

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A. Objection Review

A draft Decision Notice and Finding of No Significant Impact (DN/FONSI) was issued in April 2015, which was subject to the objection process pursuant to 36 CFR 218. The 45-day objection period commenced with publication of a legal notice in the Lewiston Morning Tribune on April 17, 2015. Dick Artley and Gary Macfarlane each submitted objections, which included numerous concerns.

The Regional Forester's staff reviewed each objection, the final Environmental Assessment (EA), draft DN/FONSI, and the contents in the Project File. On July 6, 2015, the Deputy Regional Forester determined the project to be in compliance with all laws, regulation, policies, and the Forest Plan, and that all of each Objector's concerns and suggested remedies did not require further discussion. In his determination, the Deputy Regional Forester instructed the Forest to address the following item prior to signing a final DN/FONSI:

1. Include the Decision Notice for the North Fork Noxious Weeds EA in the project record.

   Action taken: *This document hasbeen filed in the Barnyard South Sheep project record.*

Having complied with this instruction, I am authorized to sign this decision for the Barnyard South Sheep project pursuant to 36 CFR 218.12(b).

B. Purpose and Need

A comparison of the existing conditions to those desired lead to the formulation of four purpose and need statements (refer to EA, pages 3 and 4). In condensed form they are:

- Restore white pine and larch to improve stand vigor and species diversity across the landscape to create stand conditions that are resilient and allow for rapid recovery after disturbances.
- Improve water quality conditions (i.e. reducing stream sediment) and soil productivity to initiate recovery of watershed function.
- Manage the landscape to provide for goods and services.

C. Public Involvement and Scoping

The need for the Barnyard South Sheep project first arose in 2012, when it began appearing in the Forest Schedule or Proposed Action report. On May 7, 2012, the project was presented as part of a Nez Perce-Clearwater Forests Program of Work presentation to the Clearwater Basin Collaborative (CBC), and later in the year a field trip to the area was conducted for members of the CBC.

A Scoping Letter was mailed out to the general public and the Nez Perce Tribal Executive Committee on December 6, 2012, and the project was presented and subsequently updated at Nez Perce Tribe and Nez Perce-Clearwater National Forests quarterly staff-to-staff meetings. All of these scoping activities are outlined on page 9 of the EA.

Using the comments from the public and other agencies, the interdisciplinary team identified several issues regarding the effects of the proposed action (refer to Appendix A, attached to this decision). Main issues of concern included use of existing roads, access management, economic feasibility, sensitive plants, wildlife, soil stability and productivity, and watershed condition. To address these concerns, the Forest Service created several alternatives to the proposed action.

D. Decision

The Barnyard South Sheep project encompasses approximately 17,570 acres of National Forest System lands, within the Washington Creek watershed that drains into the North Fork Clearwater River (see attached vicinity map). Based upon my review of all alternatives, I select Alternative 2 which will implement the following management activities:

1. Vegetation

- Regeneration harvest and reforestation on approximately 860 acres.
- Commercial thin approximately 730 acres.
    - Construct 7.8 miles of temporary road to be decommissioned after use.
    - Reconstruct up to 21.0 miles of existing system roads.
    - Reconstruct up to 9.1 miles of existing non-system roads.

2. Watershed Improvement

- Decommission approximately 44.6 miles of system roads and 31.0 miles of non-system roads.
- Place into intermittent storage 28.4 miles of system roads and 20.6 miles of non-system roads.

Mitigation or Design Measures Common to the Selected Alternative

1. Avoid direct ignition of fuels within RHCAs and/or clumps of live trees. Where low-intensity fire is allowed to back into the edges of some of these areas, the result should be no more than 10% tree mortality. In areas requiring more distributed live-canopy retention and individual leave-trees, the objective will be for a majority (>50%) of the leave trees to survive the prescribed burn.

2. Leave a 50 ft. slope distance (or ½ the height of a site potential tree, whichever is greatest) no-harvest, no-ignition INFISH buffer from perimeter of areas that contain unstable soils.

- Unstable and landslide-prone areas in treatment units have been field-checked and units with potentially unstable areas according to stability assessments are displayed in the soils report. **Units 1-7, 10, 13, 14, 19, 20, 23, 34 and 35** have the highest percentages of unit area with potentially unstable slopes. Site-specific delineation of unstable areas will occur during project layout.

3. Restrict activities when soils are wet to prevent resource damage (indicators include excessive rutting, oil displacement, and erosion).

4. Temporary roads will be located on upper hillslope or ridgetop positions and will not cross highly sensitive or unstable areas such as perennial or intermittent streams, wetlands, areas with wet or poorly-drained soils or unstable steep concavities and dissections that accumulate water to minimize the potential for surface erosion, road failures and sediment delivery. Exceptions are listed below for specific temporary roads that cross sensitive areas:

- Increased drainage frequency (80 to 545 feet) and slash filter windrow placement below the road prism will be required on specific temporary roads identified in Appendix C of the Watershed Report.
- Under Alternative 2, temporary roads 33.5 and the segment of temporary road 29.1 from milepost 0.65 to milepost 0.93 (end of road) will be constructed, used, and decommissioned during one summer/fall season to minimize erosion and the potential for stream sediment delivery.
- Under Alternative 2, temporary road 29.1 from milepost 0.00 to 0.65 will be retained for site preparation activities (expected to occur within 5 years following construction) before being decommissioned. This temporary road will be specifically located and designed by a FS Engineer to alleviate soil and water resource concerns during the extended time period. The road will be closed to public motorized-use and open for administrative use only.
- Under Alternatives 2 and 4, temporary road 11.4 will be constructed, used, and decommissioned during one summer/fall season to minimize erosion and the potential for stream sediment delivery.

5. To restore slope hydrology and soil productivity, all temporary roads will be scarified and recontoured (decommissioned) following use (within 3 years after construction, with exceptions listed in Design Measure #4). Excavated skid trails will also be scarified and recontoured. Reshape cut/fill slopes to natural contours. Apply seed and available slash to the recontoured surfaces (slash is considered available where the equipment is able to reach it from the working area where the decommissioning is occurring).

6. During road decommissioning or long-term storage activities, measures are to be taken to prevent sediment from entering streams during project activities and in the long-term, such as: (a) 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 grasses (weed free) for short-term erosion protection and with shrubs and trees for long-term soil stability; (d) mulching with native materials, where available, or using weed-free straw to ensure coverage of exposed soils; (e) dissipating energy in the newly constructed stream channels using log or rock weirs; and (f) armoring channel banks and dissipating energy with large rock whenever possible.

7. Proposed culvert replacements will be sized to meet or exceed natural bankfull channel width and designed to pass a 100 year flow event. Crossing replacements will follow natural stream grade to accommodate sediment, debris and water transport. BMPs and mitigation measures similar to those listed above for road decommissioning and storage activities will be employed to minimize sediment inputs to streams.

8. Areas with very thin, rocky or droughty soils where soil productivity and reforestation potential is low will be avoided or will receive heavy live-tree retention to assure soil and site protection and regeneration success. These areas may include rock outcrops, areas of bare surface soil lacking vegetation, litter and organic surface horizons, and soils with abundant rock fragments in the surface soil horizons. During field surveys, these sensitive areas were noted in **Units 8, 9, 18, 20, 29 and 33**.

9. Locate and design skid trails, landings and yarding corridors to minimize the area of detrimental soil effects. Space tractor skid trails no less than 80 feet apart (edge to edge), except where converging on landings. This does not preclude the use of feller bunchers. Excavations will be minimized as much as possible.

10. Restrict equipment used for post-harvest excavator piling to existing trails and/or previously impacted areas. When machine piling, existing duff/litter will be retained (as much as possible) and not included in the activity slash piling. Slash will be allowed to overwinter prior to burning.

11. On dry sites, retain an average of 7 to 15 tons/acre of coarse woody debris (greater than 3 inches in diameter) following completion of activities. On moist sites, retain an average of 17 to 33 tons/acre.

12. Scarify non-excavated skid trails and landings that are compacted or entrenched 3 inches or more. Scarify to a depth of 6 to 14 inches, and seed disturbed areas having bare soil. No decompaction work should be done during wet weather or when the ground is frozen or otherwise unsuitable for effective decompaction.

13. Paying attention to **(Alt. 2: Units 1, 4, 6, 7, 11, 18, 22, 33; Alt. 3: Units 1, 6, 11, 22; Alt. 4: 1, 4, 6, 7, 11, 14, 18, 22, 33),** a logging system layout design will be developed to reuse as many of the existing skid trails and landings as possible to limit the amount of new detrimental disturbance.

14. For **Unit 15**, limit acreage of new disturbance (skid trails/landings) to (Alt. 2: 16.8 acres; Alt. 3: 17.2 acres; Alt. 4: 16.8 acres) to be within 15% Standard (Adams and Froehlich 1981). To assure that this unit remains at or below 15% DSD following project implementation, where possible, locate main skid trails only on existing disturbed areas with few one pass trails occurring on undisturbed ground or use a cut-to-length forwarder system.

15. For the purpose of maintaining snag habitat, timber harvest prescriptions will follow Regional guidance (Bollenbacher et al. 2009, pgs 18-20) on project level snag/live tree retention estimates in early seral and mid-seral conditions. The larger legacy/relic tree species (ponderosa pine, western larch, Douglas-fir) will be selected for retention. In regeneration harvest units, snags/live trees will be retained in ¼ to 3 acre groups, with preference to snags or damaged trees that are greater than 15 inches in diameter, greater than 20 feet tall, and with broken tops. Leave clumps of snags mixed with green trees, or lone snags that have little potential to cause safety issues during timber felling. The retention of snags will be avoided near log landings and firelines and within 100 feet below and 200 feet above a road opened to any motorized vehicle.

16. If activities impact previously unknown sensitive plant occurrences, the Botanist will be notified, who will direct appropriate measures depending upon the ecology of the plant species involved and the nature of the activity.

17. For the purpose of meeting the recommended Visual Quality Objectives (VQOs) for OHV trail systems and the Camp 60 Trailhead, a Landscape Architect will assist in the final layout and design of the proposed timber harvest units. The following design measures that may be implemented will include:

- Retaining vertical structure within the regeneration harvest units, edge treatments that emulate natural openings, and keeping trees within a 50-100 foot buffer to screen timber harvest activity from public recreating on popular trails in the area.
- Leaving trees (live and dead) that provide vertical structure within the regeneration harvest units to emulate the same structure that will 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.
- Shaping and feathering unit boundaries visible in the foreground to reduce any hard edges that appear as a man-made features on the landscape.

18. If additional heritage resources are found during implementation of the project, project activities are to cease. The Forest Archaeologist will then be notified, and an assessment will be made regarding the effect of continued activities on the newly identified heritage resource.

19. Any goshawk nests found before and during implementation will be protected with a 40-acre no-activity buffer, and a 420-acre Post Fledging Area will be seasonally restricted from 4/15 to 8/15.

20. If being utilized for either haul/removal of material or crossed for transport of logs, trail templates will be returned to their original size and condition that existed prior to commencement of management activities.

21. Any trail infrastructure, features, etc. (i.e., bridges, puncheon, waterbars, trail tread armoring, geo-block/bull rock, culverts, signs, etc.) that are removed or damaged due to management activities, will be restored to its previous condition upon completion of management activity.

22. Timber and recreation personnel will coordinate the timing of vegetation management to minimize trail closures and impacts to users, as follows:

a. Lodge Creek Loop Trail 606 and/or Tumble Creek Trail 608 (around T39N, R7E, Sections 5 and 32) are both located in the vicinity of Regeneration Harvest **Units 25, 26, 27, 28 and 33**, with the units running adjacent to or through these trails. Both of these trails are part of the Sheep Mountain Trail system, and to minimize impacts to the public, attempts will be made (allowing for public safety during timber haul) to keep at least one trail open to allow for continued availability of loop riding opportunities.

b. Lodge Creek Loop Trail 606 (around T38N, R7E, Sections 6 and 7) is located in the vicinity of **Units 34 and 35**. To maintain public OHV trail access between the Clarke Mountain and Sheep Mountain OHV trail systems, logging activity will not be permitted Friday – Sunday and trail access will be open and available to the public.

c. **Units 14, 15, 16 and 18** are located within Deadhorse Loop Trail 610 (T39N, R7E, Section 7) which provides ATV access to the northern portion of the Sheep Mountain Trail system. While these units are being harvested, to minimize impacts to the public, NFS Road 683 will be made available to the public to ensure access to the northern portion of Trail 610 and the northern portion of the Sheep Mountain Trail system.

d. In the northern portion of the project area **Units 10, 11, 12 and 13** are adjacent to NFS Road 246 and bisect NFS Road 5323, both of which are designated portions of the Sheep Mountain Trail system. To minimize impacts to the public, attempts will be made (allowing for public safety during timber haul) to keep at least one road open to allow for continued availability of loop riding opportunities. .

e. **Unit 9** (T40N, R7E, Section 32) in the northern portion of the project area bisects Swanson Saddle Trail 614 and is also located within portions of Deadhorse Loop Trail 610 and Sheep Mountain Loop Trail 615. To provide public access in the northern portion of the Sheep Mountain Trail system, these trails will be open and available to the public on Friday – Sunday, between May – Oct.

f. No snow plowing will be allowed after December 15th on NFS Road 246, which is a popular groomed snowmobile route accessing the project area.

23. Remove all mud, soil, and plant parts from off road equipment before moving into the project area to limit the spread of noxious weeds. Conduct cleaning off National Forest lands.

24. Rock to be used for surfacing should be pre-treated in the fall or spring (prior to haul) to minimize the transport of noxious weed seeds.

25. If noxious weeds are found on the haul routes for this project, spraying of these weeds will occur along the road prisms two times, once before hauling and once after hauling is completed. Although the intent is to spray pre- and post-hauling, there may be some exceptions to this due to timing of logging and appropriate season of application. Spraying typically occurs during the spring or fall usually between June and early July, or during September. Treatment of invasive plants will be consistent with the strategy outlined in the North Fork Noxious Weed Treatment Environmental Assessment (2005).

26. In all units, to reduce ground disturbance, no ground-based skidding will be allowed on slopes over 35%, unless mitigating measures, such as operating on adequate compacted snow or only over short distances, are approved by the Timber Sale Administrator or Contracting Officer Representative. Mechanical falling and cut-to-length systems will be allowed on slopes exceeding 35% as approved to minimize soil disturbance.

Monitoring

The following monitoring activities will continue Forestwide or be initiated with the Barnyard South Sheep project:

1. The Timber Sale Administrator or Contracting Officer Representative will make periodic checks on the progress of the sale to ensure contractual compliance.
2. INFISH compliance monitoring will be conducted annually by the Forest Fisheries Biologist in conjunction with BMP audits with the Forest Hydrologist. The monitoring is done on a sample of the recently completed activities each year, noted in the Monitoring Plan and reported in the annual Clearwater National Forest Monitoring and Evaluation Report available on the Forest web site http://www.fs.usda.gov/main/nezperceclearwater/home.
3. Soils monitoring will occur across the Forest to assess: (a) the accuracy of disturbance estimates; (b) if project design measures, such as live-tree retention, were effective; and (c) if units meet Regional soil quality standards. Sampling will cover all combinations of treatment and yarding methods, including units from this project. Results will be reported in the annual Clearwater National Forest Monitoring and Evaluation Report.

4. Herbicide effectiveness monitoring will occur following chemical application, within the season of treatment, to determine the success of treatments.

E. Reasons for the Decision

As described in detail below, this decision will improve resiliency in this watershed by obliterating old road prisms and restoring forest species composition and structure to a state that provides for a healthier, longer-lived stand. The project design features for the timber harvest will protect soil productivity, in which areas of unstable soils will have been eliminated from proposed harvest units. The road obliteration will further improve conditions in the watershed. Most of these roads that are currently shown as open are brushed-in and not used as a road. Therefore, the impact on the recreating public is very minor. Also, timber harvest activities will be coordinated with the local snowmobile groups, so that the impact on winter recreation is minimal.

Comparison to Other Alternatives and the Purpose and Need

1. Restore white pine and larch to improve stand vigor and species diversity across the landscape.

When compared to the other alternatives, selected Alternative 2 best meets this purpose by: (a) regenerating 860 acres, followed by the planting of western white pine, larch, and other seral tree species; and (b) commercial thinning 730 acres to reallocate growing space in favor of healthy seral tree species. Timber harvest will cause a 5% decrease in the grand fir/Douglas-fir cover types, and the subsequent planting of seral species will cause a 5% increase in the western white pine cover type.

Alternative 1 (no action) would not implement any timber harvest. Composition of white pine and larch would remain at 0%, and other seral species (lodgepole pine and ponderosa pine) would remain at 5%, dominated by dense stands of western redcedar, grand fir and Douglas-fir, with the latter two displaying poor health and low growth vigor.

Alternative 3 would regenerate 430 less acres and commercial thin 250 less acres. The reduced timber harvest and planting would cause a 3% decrease in the grand fir/Douglas-fir cover types and a 3% increase in the western white pine cover type.

Alternative 4 would regenerate 300 less acres, commercial thin the same number of acres as Alternative 2. The resulting timber harvest and planting would cause a 3% decrease in the grand fir/Douglas-fir cover types and a 4% increase in the western white pine cover type.

2. Improve water quality conditions and soil productivity.

Alternative 2, like Alternatives 3 and 4, meets this purpose by decommissioning 75.6 miles of problem roads and placing 49.0 miles of roads into a self-maintaining condition. Also, the decommissioning of these roads, plus existing skid trails, landings, and temporary roads associated with the timber harvest will have positive effects on soils by initiating recovery of soil productivity functions.

Alternative 1 (no action) would not implement any watershed improvement activities aimed at reducing sediment, and recovery of soil productivity in areas currently detrimentally disturbed would occur over time (i.e. several decades).

3. Manage the landscape to provide for goods and services.

Alternative 2 will harvest an estimated 16.4 MMBF of timber products, valued at $1,601,223, whereas Alternative 3 would harvest an estimated 9.9 MMBF (valued at $982,046), and Alternative 4 would harvest an estimated 12.4 MMBF (valued at $1,060,073). Fish habitat will be protected with the implementation of INFISH buffers and in some cases improved following the decommissioning of problem roads and the replacement of undersized culverts. The effects on recreational opportunities will be mitigated.

Alternative 1 (no action) would not provide any timber products or revenues to the local economy, nor would there be a change in fish habitat or the availability of public recreational opportunities.

Finally, Alternative 2 is consistent with Clearwater National Forest Plan direction, as discussed under each resource area in Chapter 4 of the EA, and meets the requirements under other applicable laws and regulations, discussed further in this notice.

F. Other Alternatives Considered in Detail

In addition to the selected alternative, I considered three other alternatives. A description of these alternatives can be found in the EA on pages 20, 21, 23, and 24.

Alternative 1 - No Action

Under the No Action alternative, the proposed action would not take place. Alternative 1 provided a baseline for comparing the environmental consequences of the other alternatives to the existing condition.

Alternative 3 – Existing Roads

While meeting the project's purpose and need for action, this alternative responded to the public comment asking us to develop an alternative that uses the existing road system. Alternative 3 would have treated 680 less acres than Alternative 2, without having to construct any temporary roads.

Alternative 4 – Openings ≤ 40 Acres

While meeting the project's purpose and need for action, this alternative responded to the requirement to develop an alternative that keeps openings to 40 acres or less. Alternative 4 would have treated 300 less acres than Alternative 2, without exceeding the 40-acre opening limitation.

G. Other Alternative Not Considered in Detail

One other alternative was formulated to address the public comment asking us to "consider a real restoration alternative, one that does not conflate logging with restoration." This alternative, briefly described below, was eliminated from detailed study, as explained in the EA on page 29.

Alternative 5 – Watershed Restoration Only

This alternative only proposed the watershed improvements that were common with the other action alternatives considered. No timber harvest would occur under this alternative.

H. Finding of No Significant Impact

In accordance with CFR 1508.13 and direction provided in the Forest Service Handbook (FSH 1909.15, Chapter 40, Section 43.1), I have determined that the management actions included in the Selected Alternative of the Barnyard South Sheep Project do not constitute a major Federal action, and that the implementation of the proposal will not significantly affect the quality of the human environment. Accordingly, I have determined that an Environmental Impact Statement need not be prepared for this project. I have followed the implementing regulation for NEPA (40 CFR 1508.27) and other criteria for determining the significance of effects.

Before making my determination, I carefully reviewed and considered the following information:

- The direct, indirect, and cumulative effects of these actions as documented in the Environmental Assessment for the Barnyard South Sheep Project;
- The analysis documentation in the Project Record of the Barnyard South Sheep Project;
- Comments received throughout the public comment periods for this proposal; and,
- Past experiences with resource management projects on the Clearwater National Forest.

The Interdisciplinary (ID) Team and I have "screened" the management actions included in the Barnyard South Sheep Project for "significant impact." The results of this screening are summarized on the following pages.

Significant, as used in NEPA, requires consideration of both context and intensity.

Context means that the significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality. Significance varies with the setting of the proposed action. For instance, in the case of a site-specific action, significance would usually depend upon the effects in the locale rather than in the world as a whole. Both short- and long-term effects are relevant (40 CFR 1508.27).

The effects of the proposed actions are limited in context. The project area is limited in size (i.e. 1,590 acres of vegetation treatments, 75.6 miles of road decommissioning, and 49.0 miles of road storage) and the activities limited in duration (i.e. timber management actions associated with the proposal will be completed within a five year time frame). Effects are local in nature and are not likely to significantly affect regional or national resources.

Although all of the project area is located on National Forest lands, private lands are located west of the project area. Foreseeable activities on these lands, similar to those being proposed in the project area, were considered in the cumulative effects analysis.

Within the context of the landscape as a whole, or at the stand level, the ecological consequences are not found to be significant in either the short or long-term for the Barnyard South Sheep Project.

Intensity refers to the severity of impact. The following ten aspects are considered in the evaluation of intensity (40 CFR 1508.27):

1) Impacts may be both beneficial and adverse. A significant effect may exist even if the Federal agency believes that on the balance the effects will be beneficial.

Both beneficial and adverse effects have been taken into consideration when making a determination of significance for this project. While there will be beneficial effects, this action does not rely on those effects to balance adverse environmental impacts. The individual resource sections in Chapter 4 of the EA and the supporting information in the Project Record contain comprehensive effects analyses, and the findings from these resource-specific reports form the basis for my decision.

The project includes a range of activities including timber harvest, prescribed burning, temporary road construction, road reconstruction, and road decommissioning and storage. These activities have varying effects on the physical, biological, or social components of the affected environment. Some of these effects are more favorable to a particular resource component than to another resource component. Below is a synoposis of the more notable effects of the activities; however, none of the effects, whether favorable or unfavorable, beneficial or adverse, are significant.

The cumulative effects associated with the Selected Alternative will be positive, albeit marginal. This alternative has a greater positive effect than the other alternatives by treating more acres with regeneration harvest, where blister rust resistant white pine and other early seral tree species will be planted. The long-term cumulative effects will increase the presence of earl seral forest cover types by 860 acres or 5% of the analysis area. Although 730 acres of commercial thinning will little impact on forest cover types, thinning treatments will allow more room for individual trees to grow, increasing their vigor, lowering their stress, and therefore improving tree and forest health and resistance to deleterious effects of pathogens through time.

Riparian values for all watersheds; including water temperature, filtration of sediment and contaminants, large woody debris recruitment, and stream bank condition; will be maintained because of the application of Riparian Habitat Conservation Area (RHCA) standards.

The temporary road construction and road decommissioning have the highest risk of impacting fish habitat and water quality in the short-term due to the risk of sediment deposition into streams.

However, short-term impacts will be reduced through timing restrictions, and application of Best Management Practices. Temporary roads will be decommissioned after use, and decommissioned roads will provide long-term benefits with improved infiltration and revegetation.

The proposed regeneration harvest will increase foraging habitat for early seral-dependent species such as elk, white-tailed deer, and moose, while decreasing cover habitat but moving these attributes to a more optimal balance for these species. Because the amount of cover in the project area greatly exceeds that of foraging habitat, habitat conditions for these species will be maintained or slightly improved. Wildlife species which are more dependent on older forest stands, such as pileated woodpeckers and northern goshawks, will experience slight decreases in the amount of suitable forage habitat in the project area in the short term, and nesting habitat will remain unchanged. Maturation of abundant middle-aged stands in the project over the next decade, however, should increase the project area acreage of suitable habitat for the more mature stand-dependent species well beyond that is currently present. Species without stand-specific habitat needs and those with small amounts of suitable habitat in the project area under present conditions should not be substantially affected by the proposed activities. Little to no direct effects to individual animals should result from the project activities.

Potential positive benefits to recreation include: (1) additional opportunities for berry pickers due to larger openings in forest canopy; (2) potential long-term benefits for hunters due to expected growth of browse shortly after completion of timber harvest. Potential adverse impacts to recreation include: (1) timber harvest taking place adjacent to and in the vicinity of various trails within the project area, creating inconveniences and potential trail closures; (2) approximately 9% of the project area becoming unavailable to personal use firewood gathering; and (3) impacts to the public due to log truck traffic.

It is my determination, based on review of these analyses and consultation with specialists, that the Selected Alternative, including timber harvest, burning of logging slash, temporary road construction, road reconstruction, and road decommissioning and storage will not have a significant impact on the environment. All effects will be minimal or short-lived. No effects are deemed irreversible or irretrievable and do not set in motion further effects. All potential direct, indirect, and cumulative effects are evaluated in the EA, Project Record reports, and the Biological Assessment and Evaluation.

2) The degree to which the proposed action affects public health or safety.

The burning of slash created by timber harvest activities will comply with State Air Quality Standards and be coordinated through the Montana Airshed Group. Dust from timber hauling activities will be controlled on Forest Service roads using the dust abatement requirements within the stewardship/timber sale contract provisions.

Project design features, such as implementing INFISH default buffers and Best Management Practices, have been developed to address concerns of possible pollutants entering area streams. I believe that the actions in the Selected Alternative will not likely have any significant impact to public health or safety.

3) Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.

The project area does not contain nor is near areas that have been identified as ecologically critical or otherwise unique for the geographic area. Heritage surveys have been completed and no cultural

properties, except for Camp 60, are located within the area of potential effects. The Camp 60 area has historic and cultural value due to the history of logging camps and Civilian Conservation Corp activity at this location.

The project area includes wetlands, but impacts to wetlands will be avoided during project layout through implementation of INFISH buffers and contract provisions for timber harvest. Based on all of this information, I conclude that the Selected Alternative will have no effects on unique resources.

4) The degree to which the effects on the quality of the human environment are likely to be highly controversial.

Based on the limited context of the project within the scope of the human environment, my review of comments received during the scoping of this project, the analysis documented in the EA and Project Record, and the rationale described in this DN, I do not find any highly controversial effects as a result of proposed implementation of the Selected Alternative. The activities prescribed in the Selected Alternative have been designed to minimize the effects on the quality of the human environment. Therefore, I conclude that the effects of the Selected Alternative are not considered highly controversial.

5) The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.

Based on my review of comments received during the scoping of this project, the comments received after the publication of the EA, and the analysis documented in the EA and Project Record, I find the possible effects on the human environment that are uncertain or involve unique or unknown risks to be minimal or non-existent.

Given the familiar nature of the trees proposed to be removed and the large proportion of the vegetation in the drainage to remain, the effects to the quality of the human environment are not significant. The agency has considerable experience with such projects in these landscape conditions, and the consequences of such actions are well established and predictable.

The EA and information contained in the project record discloses potential environmental impacts (which are supportable with use of accepted techniques, reliable data, and professional opinion), and I believe that the impacts of implementing this proposal are within the limits that avoid any thresholds of concern. In conclusion, I find that there are no uncertain or unique characteristics in the project area that have not been previously encountered or that will constitute an unknown risk to the human environment.

6) The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.

The Barnyard South Sheep Project represents a site-specific project that does not set precedence for future actions nor does it present a decision in principle about future considerations. Any proposed future projects must be evaluated on its own merits and effects. The actions in the Selected Alternative are compatible with the Forest Plan and the capabilities of the land. I believe that this action does not represent a decision in principle about a future consideration.

7) Whether the action is related to other actions with individually insignificant but cumulatively significant impacts.

Connected, cumulative, and similar actions have been considered and included in the scope of the analysis. The analysis accounts for past, present, and reasonably foreseeable actions of the Forest

Service and adjacent private lands to the west of the project area. Based on my review of the analysis and disclosure of effects in the EA, Biological Assessments and Evaluations, and other analyses in the Project Record, I conclude that this project will not represent potential cumulative adverse impacts.

8) The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in the National Register of Historic Places or may cause loss or destruction of significant cultural or historical resources.

I am not aware of any features in the affected area that are listed or are being considered for listing on the National Register of Historic Places. Heritage surveys have been completed in the project area, and no cultural properties were located within the area of potential effects (refer to the *Determination of Eligibility and Effect* form in the project file). The potential for impacting undiscovered sites is mitigated by Mitigation Measure #18, included as part of the Selected Alternative. In the event such resources are discovered during project implementation, they will be evaluated and protected. I believe that this action will not have a significant effect on scientific, cultural, or historical resources.

9) The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act.

The current US Fish and Wildlife Service species list for Clearwater County identifies bull trout and Canada lynx (both threatened species). Section 7 of the Endangered Species Act (ESA) of 1973, as amended, requires Federal agencies to ensure that actions authorized, funded, or carried out by them are not likely to jeopardize the continued existence of threatened, endangered, or proposed species, or cause the destruction or adverse modification of their critical habitats. It was determined that the Barnyard South Sheep project will "not likely to adversely affect either of these species. The detailed analyses supporting this determination can be found in the Wildlife and Fisheries reports, Chapter 4 of the EA, and in the attached Biological Assessment.

10) Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.

As described in the EA (Regulatory Framework and Consistency sections for each resource area in Chapter 4), the actions in the Selected Alternative are consistent with all applicable Federal, state, or local laws or requirements imposed for the protection of the environment, including:

- The Clean Water Act and Idaho State Water Quality Standards
- The Endangered Species Act
- The Environmental Justice Executive Order 12898
- The National Environmental Policy Act (NEPA)
- The National Forest Management Act (NFMA)
- The National Historic Preservation Act

I. Findings Required by Other Laws and Regulations

Clean Water Act and Idaho State Water Quality Laws – The selected alternative complies with the Clean Water Act by following all federal, state, interstate and local requirements, administrative authority and process and sanctions, with respect to control and abatement of water pollution. These authorities are listed on pages 9 through 12 of the Barnyard South Sheep Project Watershed Report and have been addressed by design of the project and by mitigation measures described in this document and the EA, which also addresses Section 402 of the Act (see EA, page 7).

Endangered Species Act –The two species with status under the Endangered Species Act and which are administered by the U.S. Fish and Wildlife Service in Clearwater County are Canada lynx and bull trout. The National Marine Fisheries Service also lists Snake River steelhead trout and fall Chinook salmon as occurring in some drainages of the North Fork Clearwater River, both of which will not be affected by the project.

As required by the Endangered Species Act, specific habitat needs for Threatened and Endangered species of fish and wildlife in regards to the proposed project were analyzed and documented in a Biological Assessment (attached). That assessment determined that the project will *not likely adversely affect* individuals of these species. None of these species has designated critical habitat within or in proximity to the project area, so there will also be no effect on critical habitat for the species for which it has been designated. As per the ESA consultation conferencing process, the "not likely to adversely affect" determinations conclude the ESA Section 7 process for the above listed species or their designated critical habitat.

Environmental Justice – In regards to Environmental Justice Executive Order 12898, the human health and environmental effects of the selected alternative will not disproportionately impact minority and low income populations. Also, the implementation of this project will not subject anyone to discrimination because of race, color, or national origin. The selected alternative complies with Executive Order 12898.

National Environmental Policy Act (NEPA) – This law insures that high quality environmental information is available and disclosed to public officials and citizens before decisions are made and before actions are taken. Scientific analysis and public scrutiny are essential in complying with NEPA requirements. I have met these requirements by using a knowledgeable and skilled interdisciplinary team to develop and analyze the proposed action and alternatives. Public involvement was key in identifying issues and continued throughout preparation of the EA. State agencies, special interest groups/organizations, and individuals provided comments to the EA. I have considered their comments in reaching my decision. A summary of public comments and our responses is part of this Notice (see Appendix A). I find the selected alternative in compliance with the National Environmental Policy Act.

National Forest Management Act (NFMA) – The Clearwater National Forest Plan of 1987 establishes management direction for the Clearwater National Forest. This management direction is achieved through the establishment of Forest-wide goals, objectives, and standards. The National Forest Management Act requires that all project-level analyses, such as the Barnyard South Sheep project, are to be consistent with the Forest Plan (16 USC 1604(i)). The EA displays the Forest Plan Management Area direction applicable to the Barnyard South Sheep project area (Chapter 1, pages 5 and 6). The alternative development process is detailed in Chapter 2 of the EA, and the environmental consequences of the alternatives in relation to the Forest Plan are described in Chapter 4 of the EA.

After reviewing the EA, I find that my proposal to select Alternative 2 is consistent with Forest Plan standards, goals, and objectives. I have also reviewed the September 13, 1993, settlement agreement between The Wilderness Society et al., and the Forest Service. I find that the Barnyard South Sheep project complies with the Lawsuit Stipulation of Dismissal, as follows:

- An analysis was completed to verify the old growth status of all stands proposed for harvest or road construction. The settlement agreement stipulates that any harvest or road building in old growth stands greater than 100 acres be preceded by an EIS. All activities of the Barnyard South Sheep project avoid old growth habitat (including step-down stands), and therefore fulfills that agreement.

- Activities that could potentially exceed the criteria for a given watershed were dropped during alternative development and analysis.
- All proposed activities, including prescribed fire, timber harvest, temporary road construction, road reconstruction, road decommissioning and storage were considered in making the determination of "no measurable increase" in sediment, where streams currently exceed the sediment standard.
- Timber harvest and associated road activities are not proposed in any lands identified in proposed Idaho Wilderness Bill HR 1570, nor in any area selected for wilderness by any member of the Idaho delegation.
- This project alone or in combination with other anticipated timber sales will not cause the Forest to exceed the 80 MMBF schedule for any of the Fiscal Years affected by this project's timber sale.

Other NFMA Requirements – I have determined the selected alternative is consistent with the following provisions of the National Forest Management Act:

1. Suitability for Timber Production: The NFMA directs that no timber harvest, other than salvage sales or sales to protect other multiple-use values, shall occur on lands not suited for timber production.

All of the selected vegetation treatments are located in a Management Areas C4 or E1 that are suitable for long-term timber production, as described in the Forest Plan. Further, no vegetation management is proposed on sites that have been identified as unsuitable for timber production.

2. Timber Harvest on National Forest Lands: The NFMA directs that site-specific projects and activities to harvest timber on National Forest System lands can only occur where:

a. Soil, slope, or other watershed conditions will not be irreversibly damaged.

My decision avoids irreversibly damaging soil, slopes, or other watershed conditions. This determination is supported by the effects disclosures in the EA (Chapter 4 Water Resources and Soils sections) and Project Record, through Design Criteria given in the EA (Chapter 2), and through the application of BMPs. If after implementing the decision, there is 15 percent or more detrimental disturbance, restoration activities described in the Design Criteria for the Selected Alternative (EA, Chapter 2) will occur to move the units back towards an improved condition.

b. There is assurance that the lands can be adequately restocked within five years after final regeneration harvest.

Artificial regeneration (planting) is planned for each of the units that will be regeneration harvested and natural regeneration is also expected on these sites. Adequate restocking of these sites is fully expected within five years following final regeneration harvest. Surveys will be performed to identify any additional stand treatment needs to ensure this restocking occurs.

c. Protection is provided for streams, streambanks, shorelines, lakes, wetlands, and other bodies of water 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.

INFISH buffers will be implemented and Idaho BMPs will be followed where harvest is occurring to avoid detrimental changes in water temperatures, blockages of water courses, and deposits of sediment.

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.

My proposal to implement the Barnyard South Sheep project is based on a variety of reasons as discussed elsewhere in this Decision Notice. Economics was only one of the many factors I considered, and my proposed decision is not based primarily on the greatest dollar return or greatest output of timber, but rather changing forest stand conditions to best meet Forest Plan objectives.

3. Clearcutting and Even-aged Management: The NFMA directs that clearcutting, seed tree cutting, shelterwood cutting, and other cuts designed to regenerate an even-aged stand of timber will be used as a cutting method on National Forest System lands 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.

A certified Silviculturist has determined regeneration harvest to be the appropriate treatment for the stands proposed for even-aged regeneration harvest. This is based upon the difference between desired conditions developed by an interdisciplinary team and existing conditions. In order to meet desired conditions for these stands, even-aged regeneration harvest has been deemed necessary. Detailed prescriptions will be prepared or reviewed by a certified Silviculturist, and when these prescriptions are developed, the optimum method of harvest (clearcutting, seed tree, or shelterwood) will be determined based upon site-specific considerations.

b. The interdisciplinary review as determined by the Secretary has been completed and the potential environmental, biological, esthetic, engineering, and economic impacts on each advertised sale area have been assessed, as well as the consistency of the sale with the multiple use of the general area.

The interdisciplinary review requirement has been met by release and review of the Barnyard South Sheep Environmental Assessment. I have found this project to be consistent with the multiple use objectives of the Clearwater Forest Plan.

c. Cut blocks, patches, or strips are shaped and blended to the extent practicable with the natural terrain.

Proposed treatment units will meet Forest Plan Visual Quality Objectives and harvest units will be blended with the natural terrain and laid out, as practicable, to emulate natural disturbance patterns, as stated in design measure 17 (refer to EA, p-28).

d. Cuts are carried out according to the maximum size limit requirements for areas to be cut during one harvest operation, provided, that such limits shall not apply to the size of areas harvested as a result of natural catastrophic conditions such as fire, insect and disease attack, or windstorm.

FSM 2471.1 of the Northern Region clarifies and describes the restrictions on the size of harvest openings created by even-aged silvicultural methods (clearcut, seedtree and shelterwood harvests), as required by FSM 1921.12. Proposed even-aged silvicultural methods will create nine separate openings that are greater than 40 acres in size, ranging from 44 to 100 acres, where western white pine and western larch will be planted. Exceeding the 40-acre limit

was approved by the Regional Forester on October 10, 2014. All other harvest activities in my decision meet the maximum size limitations.

e. Such cuts are carried out in a manner consistent with the protection of soil, watershed, fish, wildlife, recreation, and esthetic resources, and the regeneration of the timber resource.

Design features given in Chapter 2 of the Barnyard South Sheep EA ensure the protection of soil, watershed, fish, wildlife, recreation, and esthetic resources. Regeneration of the timber resource is ensured by requiring that a certified Silviculturist review all detailed harvest prescriptions.

4. Stands of trees are harvested according to requirements for culmination of mean annual increment of growth.

Stands in the Barnyard South Sheep project that are proposed for regeneration harvest have met the requirement to have reached culmination of mean annual increment of growth. The stands proposed for regeneration harvest are mixed conifer stands that have a high percentage of root disease susceptible species and root disease is present and contributing to mortality within these stands. These stands meet the requirements for culmination of mean annual increment.

5. Roads: The NFMA requires that the necessity for roads be documented and that road construction be designed to "standards appropriate for the intended uses, considering safety, cost of transportation, and impacts on land and resources" [36 CFR 219.27(10)]. The NFMA also requires that "all roads are planned and designed to re-establish vegetation cover on the disturbed areas within a reasonable period of time, not to exceed 10 years ...unless the road is determined a necessary permanent addition to the National Forest Transportation System" [36 CFR 219.27(11)].

Management actions associated with the Barnyard South Sheep project include construction of approximately 7.8 miles of temporary roads to be decommissioned after their use and revegetated within 3 years (refer to EA, p-25, design measure #5). Based on these actions and analyses, I believe that we have met the intent of 36 CFR 219.27(10) and (11). Additional information regarding the road network in the analysis area can be found in the Roads Analysis completed for this project.

National Historic Preservation Act (NHPA) – The National Historic Preservation Act of 1966 (as amended) requires that Federal Agencies with direct or indirect jurisdiction over Federal, federally assisted, or federally licensed undertakings to consider the effects of their proposed actions on historic properties and afford the Advisory Council on Historic Preservation a reasonable opportunity to comment on such undertakings. The detailed formal process for meeting this requirement is found in Title 36 Chapter 800 of the Code of Federal Regulations (36CFR800). This process includes requirements for identification and evaluation of historic properties, assessment and resolution of effects, consultation with the Advisory Council, State Historic Preservation Offices, Tribal governments and others, and coordination with NEPA.

The above entities were consulted, and an appropriate inventory was conducted for the Barnyard South Sheep project, in which cultural properties are known to be located within the area of potential effects. However, the Forest Archaeologist determined that the project will have *no adverse effect* to these properties, and Idaho State Historic Preservation Office concurred with that determination.

J. Best Available Science

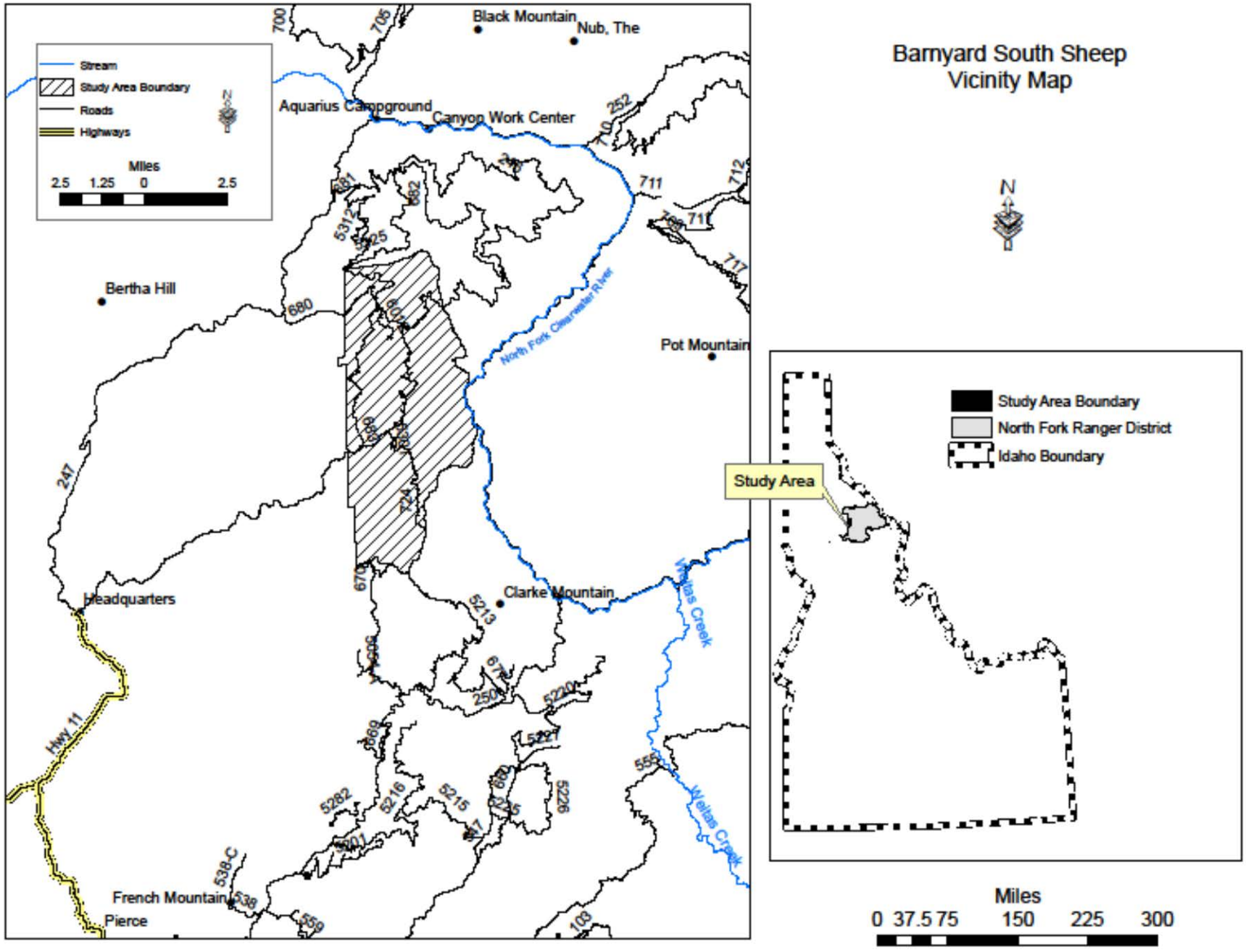
I am confident that the analysis of this project was conducted using the best available science. My conclusion is based on a review of the record that shows my staff conducted a thorough review of relevant scientific information, considered responsible opposing views, and acknowledged incomplete or unavailable information, scientific uncertainty, and risk. Please refer to the specialist reports in the project file for specific discussions of the science and methods used for analysis and Appendix A of this notice for literature reviewed and referenced.

K. Objection Review Process and Implementation

A draft Decision Notice and Finding of No Significant Impact was issued in April 2015, which was subject to the objection process pursuant to 36 CFR 218. The 45-day objection period commenced with publication of a legal notice in the Lewiston Morning Tribune on April 17, 2015. Two objections were received. Each objection was reviewed by the Acting Regional Forester (reviewing officer) who has responded in writing to the concerns raised by each Objector in the attached letters. I have satisfied the requirements under 36 CFR 218.12(b) by addressing the instructions identified by the reviewing officer (see Section A). Implementation may begin immediately.

Further information about this decision can be obtained from Acting District Ranger Roger Staats or George Harbaugh, Project Leader, during normal office hours (weekdays, 8:00 am to 4:30 pm) at the North Fork District Office, 12730 Hwy 12, Orofino, ID 83544; Phone: 208-476-4541, or at the Nez Perce-Clearwater National Forests Supervisor's Office, 903 3rd Street, Kamiah, Idaho 83536; Phone 208-935-2513.

/s/ Cheryl F. Probert *July 8, 2015*
CHERYL F. PROBERT Date
Forest Supervisor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Vicinity Map
Stream
Study Area Boundary
Roads
Highways
Miles
2.5 1.25 0 2.5
N
Black Mountain
Nub, The
Aquarius Campground
Canyon Work Center
Bertha Hill
Pot Mountain
North Fork Clearwater River
Headquarters
Clarke Mountain
Weitas Creek
Hwy 11
French Mountain
Pierce
Study Area
Study Area Boundary
North Fork Ranger District
Idaho Boundary
Miles
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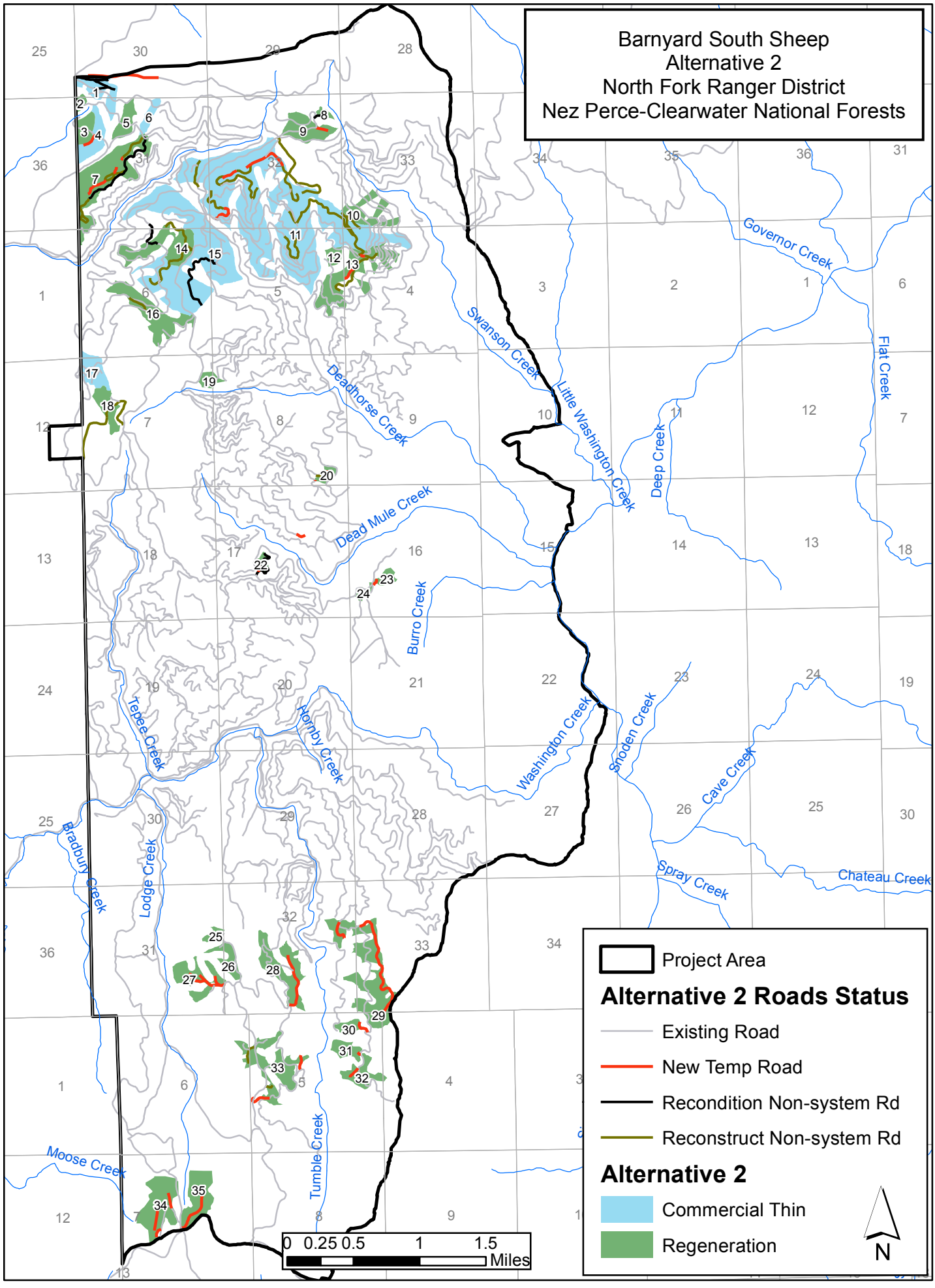
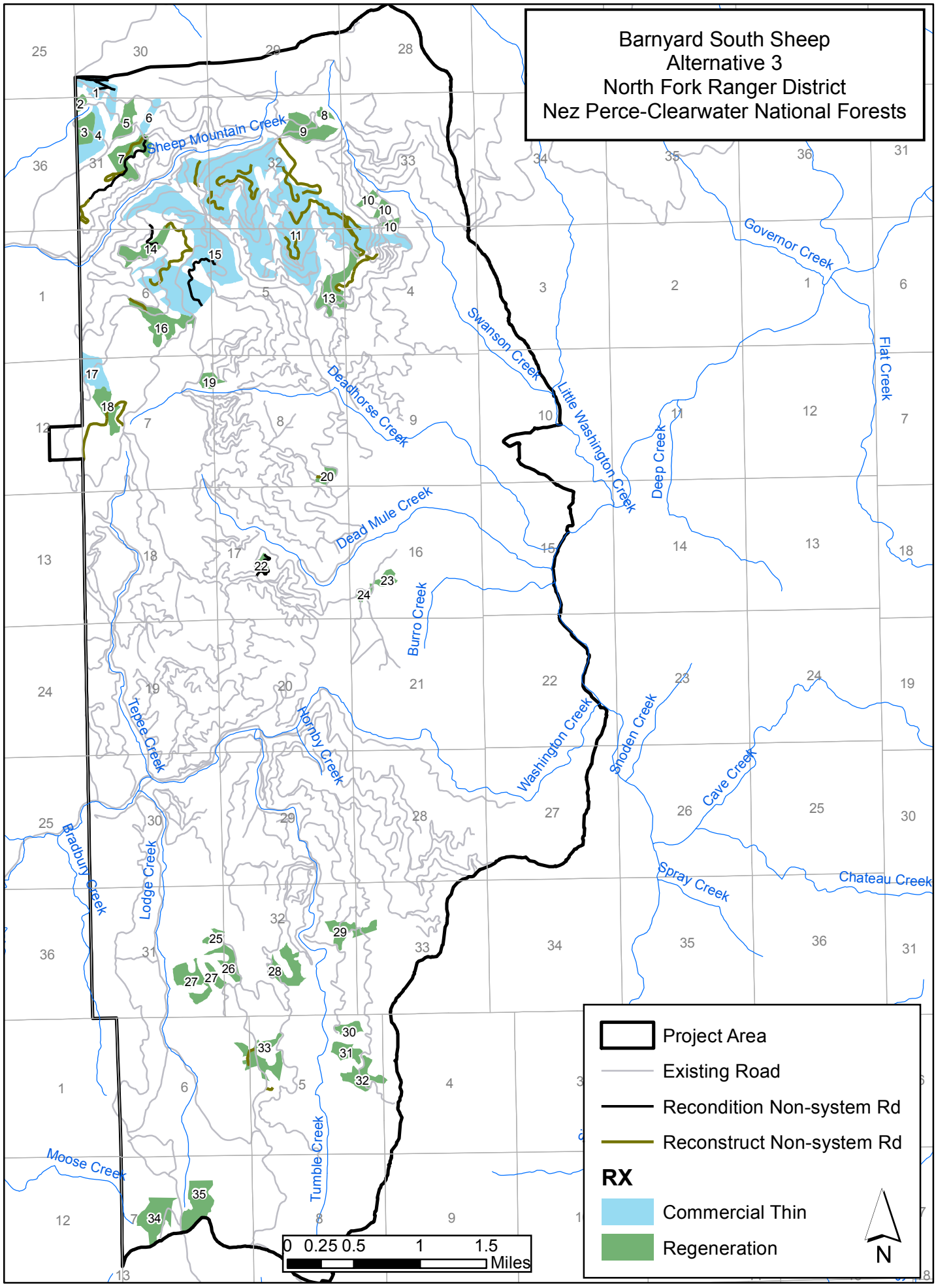
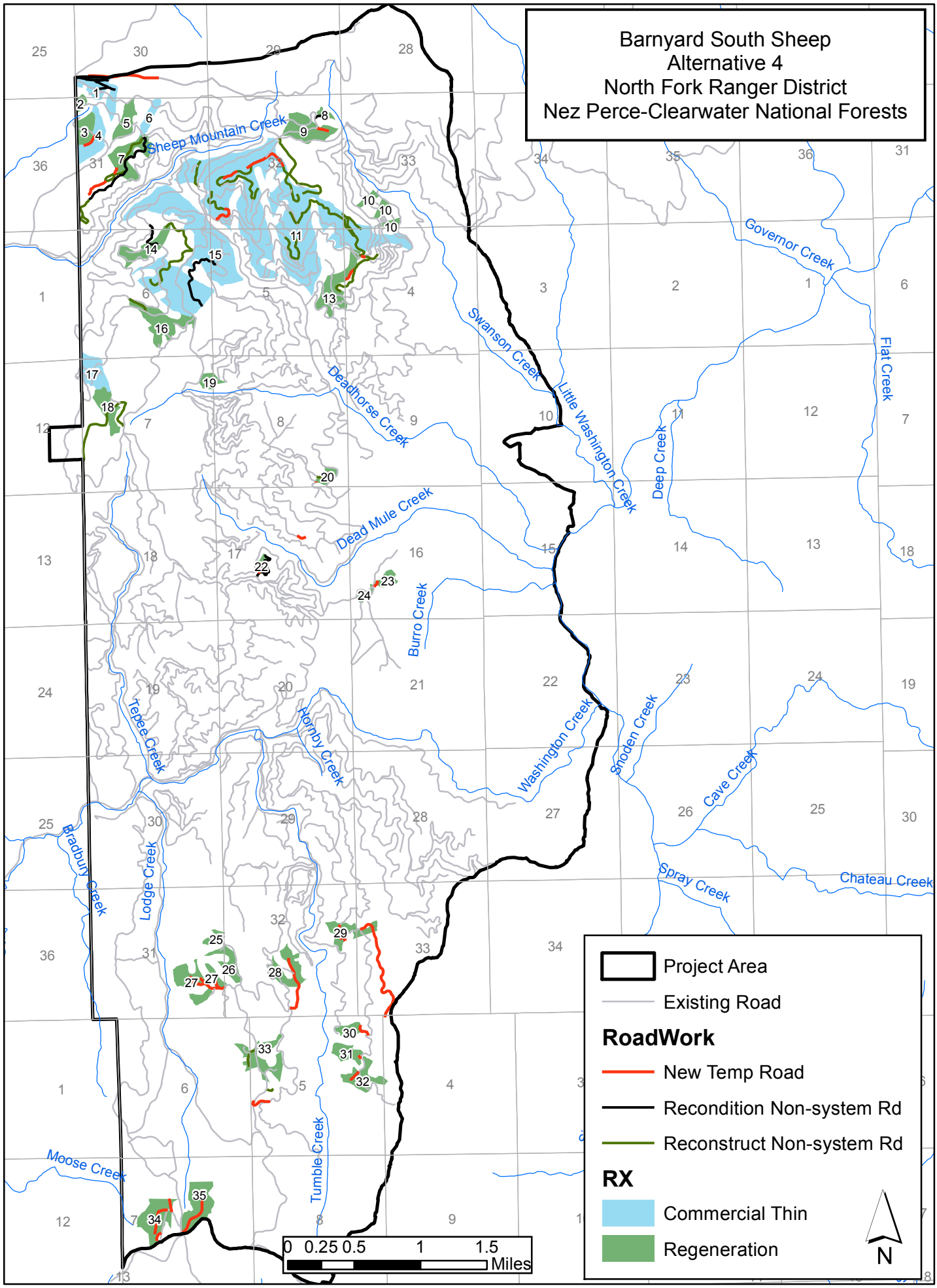
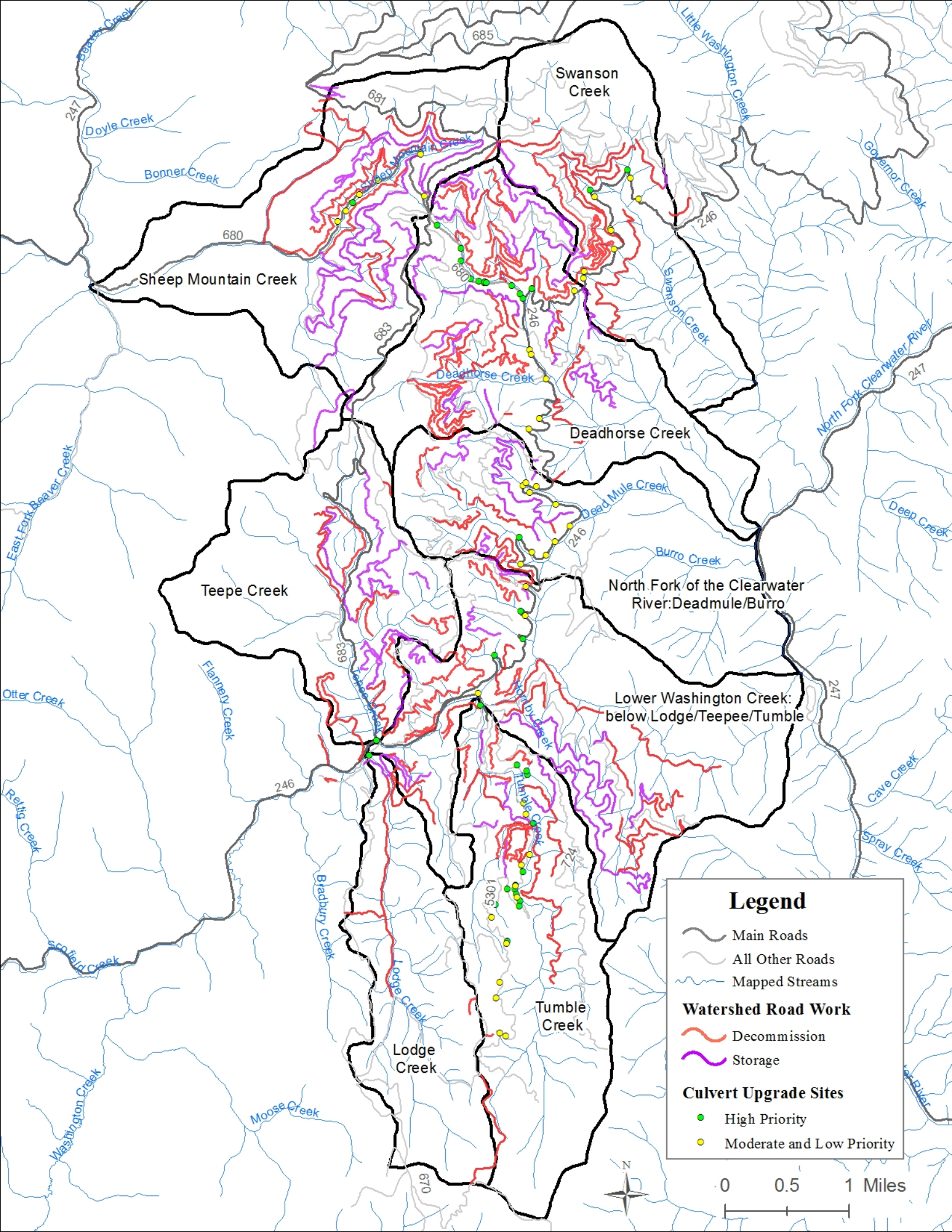

Barnyard South Sheep
Alternative 2
North Fork Ranger District
Nez Perce-Clearwater National Forests
Governor Creek
Swanson Creek
Little Washington Creek
Deep Creek
Flat Creek
Deadhorse Creek
Dead Mule Creek
Burro Creek
Tepee Creek
Hornby Creek
Washington Creek
Smoden Creek
Cave Creek
Spray Creek
Chateau Creek
Bradbury Creek
Lodge Creek
Moose Creek
Tumble Creek
Project Area
Alternative 2 Roads Status
Existing Road
New Temp Road
Recondition Non-system Rd
Reconstruct Non-system Rd
Alternative 2
Commercial Thin
Regeneration
0 0.25 0.5 1 1.5
Miles
N


Barnyard South Sheep
Alternative 3
North Fork Ranger District
Nez Perce-Clearwater National Forests
Sheep Mountain Creek
Governor Creek
Swanson Creek
Little Washington Creek
Deep Creek
Flat Creek
Deadhorse Creek
Dead Mule Creek
Burro Creek
Tepee Creek
Hornby Creek
Washington Creek
Smoden Creek
Cave Creek
Spray Creek
Chateau Creek
Bradbury Creek
Lodge Creek
Moose Creek
Tumble Creek
Project Area
Existing Road
Recondition Non-system Rd
Reconstruct Non-system Rd
RX
Commercial Thin
Regeneration
0 0.25 0.5 1 1.5
Miles
N


Barnyard South Sheep
Alternative 4
North Fork Ranger District
Nez Perce-Clearwater National Forests
Sheep Mountain Creek
Deadhorse Creek
Dead Mule Creek
Burro Creek
Swanson Creek
Little Washington Creek
Deep Creek
Governor Creek
Flat Creek
Washington Creek
Smoden Creek
Cave Creek
Spray Creek
Chateau Creek
Hornby Creek
Tepee Creek
Bradbury Creek
Lodge Creek
Tumble Creek
Moose Creek
Project Area
Existing Road
RoadWork
New Temp Road
Recondition Non-system Rd
Reconstruct Non-system Rd
RX
Commercial Thin
Regeneration
0 0.25 0.5 1 1.5
Miles
N


Swanson Creek
Sheep Mountain Creek
Deadhorse Creek
Teepe Creek
North Fork of the Clearwater River:Deadmule/Burro
Lower Washington Creek: below Lodge/Teepee/Tumble
Tumble Creek
Lodge Creek
Little Washington Creek
Governor Creek
Swanson Creek
North Fork Clearwater River
Deep Creek
Dead Mule Creek
Burro Creek
Cave Creek
Spray Creek
Tumble Creek
Teepe Creek
Bradbury Creek
Lodge Creek
Flannery Creek
Otter Creek
Retig Creek
Scofield Creek
Washington Creek
Moose Creek
East Fork Beaver Creek
Doyle Creek
Bonner Creek
Beaver Creek
Sheep Mountain Creek
685
681
680
683
246
247
724
530
670
Legend
Main Roads
All Other Roads
Mapped Streams
Watershed Road Work
Decommission
Storage
Culvert Upgrade Sites
High Priority
Moderate and Low Priority
N
0
0.5
1 Miles

Appendix A

Forest Service Response to Public Comments On the Environmental Assessment

This appendix consists of three sections, those being (1) list of those publics from whom comments were received; (2) comments received and our response; and (3) consideration of other science/literature submitted by the public.

1. List of Those Publics from Whom Comments Were Received

The following five publics below provided comments on the Environmental Assessment (EA):

Dick Artley (DA), Grangeville, ID

Marilyn Beckett (MB), Moscow, ID

Clearwater Basin Collaborative (CBC) – submitted by Dale Harris and Bill Warren

Idaho Department of Parks and Recreation (IDPR) – submitted by Jeff Cook

Friends of the Clearwater, Alliance for the Wild Rockies & The Lands Council (FOC) – submitted by Gary Macfarlane and Jeff Juel

2. Comments Received and Our Response

The comments below have been sorted by subject area and are followed by a response to each concern from members of the project's Interdisciplinary Team:

Access

1. Comment: The EA talks about a minimum road system. How does this analysis mesh with the forest-wide roads analyses that are required? (FOC)

> **Response:** FS policy requires that most road related NEPA decisions must be informed by a travel analysis. Most project level NEPA documents are meeting this requirement with a project level Travel Analysis Plan (TAP). The chief has requested that each unit complete a Forest-wide TAP including every NFS road on the unit. The Region has elected to meet this requirement through a broad-scale analysis. The forest-wide assessment is useful within the context of the entire forest. The project level has the advantage of finer scale information. If both are scales are available to inform a decision, information may be gleamed from each.

2. Comment: The fill failure on road 246 suggests that many more roads need to be decommissioned. This road has not been repaired since it occurred in 2011 (EA page 154). Indeed, that would only occur "once funds are available." This suggests the minimum road system analysis for this project area is actually more than a minimum road system. (FOC)

> **Response:** USFS Road 246 is a primary access road for the Forest and is essential for both administrative and public access. In the spring of 2011, the Clearwater National Forest experienced an extreme rain on snow event that caused multiple landslides and road fill failures across the Forest. This rain on snow event was determined to be in excess of a 25-year run-off event by the US Federal Highway Administration, Western Federal Lands division, which qualified the two fill failures on Road 246 for Emergency Relief for Federally Owned Roads (ERFO)

funding. In 2011 after the fill failures on Road 246, the Forest took immediate steps to secure ERFO funding to repair the two fill failures. One fill failure was repaired using Forest monies, which the Forest was later reimbursed. The second fill failure at M.P. 22, which still remains, required the ERFO monies in advanced to repair. After multiple attempts over several years, the Forest was unsuccessful in obtaining the ERFO monies that were originally set aside to make this repair. However, the Forest has completed preliminary engineering and has obtained plans, specifications, and estimates for the repair, and is currently awaiting the funding to put out a contract for the repair. Because the Forest was focusing its' attention on obtaining ERFO monies to make this repair, other funding sources were not explored. Now that it is apparent that ERFO monies are not available, the Forest is currently exploring other means of funding the repair of the fill failure and would like to complete the repairs in the near future.

NEPA/NFMA

3. Comment: Logging road construction causes significant ecological harm. Please analyze an alternative in detail that builds no new roads. (DA)

Response: A similar comment was submitted by the public during project scoping, and Alternative 3 that uses the existing road system, without constructing new roads, was developed and analyzed in detail in the EA.

4. Comment: Issues raised in [our] scoping comment letter have not been addressed in the EA. (FOC)

Response: All letters received during scoping were analyzed for comments related to the proposed action. This resulted in the addition of two new alternatives and the identification of issues to be analyzed in further detail. Opinions and comments outside the scope of the proposed action, although noted, were not addressed. A response to all comments received has been documented and is located in the project file.

5. Comment: The rejection of a watershed alternative violates NEPA. (FOC)

Response: The scoping comment asking us to analyze a "watershed improvement only" alternative was the basis for developing Alternative 5, which was later eliminated from detailed study, as explained on page 29 of the EA. Since this alternative failed to meet the purpose and need, its elimination did not violate NEPA (refer to 40 CFR 1502.14 and FSH 1909.15, Section 14.4).

6. Comment: There is no real range of alternatives presented in the EA. (FOC)

Response: A total of five alternatives, including the "no action" alternative were considered, with one of them (Alternative 5) being eliminated from detailed study, as explained on page 29 of the EA. This constitutes a reasonable range of alternatives as suggested under 40 CFR 1502.14.

7. Comment: The project should be analyzed in an EIS. The scope is significant: over 1500 acres of logging, effectively 16 miles of new roads, and 23 miles of reconstructed roads.

Response: Size (or scope) of a project does not necessarily dictate whether or not an analysis be documented in an EIS. Past projects of this size (and larger) have been documented in an EA on this Forest and within the Region. The requirement for an EIS usually comes about when the analysis (often documented in an EA) determines there to be significant impacts that cannot be mitigated. The analysis of this project did not identify any significant impacts.

8. Comment: The pre-decisional EA fails to describe the environmental effects to air quality, old growth habitat, heritage resources, scenic quality, snag habitat, noxious weeds, threatened and endangered species of fish/plants in Chapter 4. (DA)

Response: As stated in the EA on pages 14 and 15, these are issues decided by law or policy, or not affected by the proposal. As such, these issues have already been resolved and do not need to be discussed in Chapters 3 or 4 (refer to 40 CFR 1502.15).

Recreation

9. Comment: We request additional features to provide additional protection of recreation opportunities. These features are: (IDPR)

- Prohibit winter logging after December 15th.
- Require in the timber contract that the trail tread be reestablished after damage. (IDPR)

Response: At this point, it has not been determined if harvest activity will occur during the summer or winter. If certain units are being considered for winter logging, the Timber and Recreation programs will work together to ensure that the snowmobile trail grooming program is minimally impacted and users have access to desired destinations and loop opportunities.

Regarding protection of trail treads, mitigation measure #20 (Draft EA, pg. 28) states that if used for either haul/removal of material or crossed for transport of logs, trail templates will be returned to their original size and condition that existed prior to management activities

10. Comment: The EA indicated that a few of the trails would be impacted by road reconstruction. After timber harvest is complete, the road should be designated for ATV use. After a couple of seasons, the ATV route should be visible on the road bed. The rest of the road bed could then be ripped, fertilized, and seeded with grasses and small shrubs to give the road bed a more natural appearance. This would enhance the ATV riding experience and protect adjacent resources (IDPR)

Response: With the extensive network of motorized trails in the project area, it is not surprising that some trails, particularly those that are coincident roads/trails with a full-sized road template, may be utilized for transport of forest products. It is possible that we will look at designating some of these routes for ATV use only, as you are recommending with this comment. However, some of these roads may be needed for future forest management (reforestation, etc.) and making them available to ATV use only may be too restrictive for multiple use management needs. Additionally, with the continuing decline in recreation and trails budgets, development of new dedicated trail systems are likely to occur in limited situations only.

11. Comment: The EA also indicate that 44.6 miles of system roads would be decommissioned. The OHV Recreation effects analysis on Page 149 needs to be strengthened to show how many of those system roads are currently open to motorized vehicles and how many are closed. (IDPR)

Response: Approximately 40.15 miles of system roads (out of the 44.6 miles that are identified for decommissioning in all action alternatives) are currently open to motorized vehicles. Despite the recommendation to decommission these roads, it is important to note that the majority of them are extremely brushed in and exhibit little-to-no use from either motorized or non-motorized traffic.

12. Comment: The EA needs to disclose how many system roads that are currently designated for motorized use would be closed to motorized use by this project throughout the range of alternatives. (IDPR)

Response: In addition to the mileage listed above in response #11, the 28.4 miles of system roads identified for storage in all Action Alternatives would be closed to motorized use. The majority of these roads (27.38 miles) are currently open to motorized use, but to protect watershed resources and enhance watershed stability, would be closed in all Action Alternatives. Again, the vast majority of these road miles are extremely brushed in and exhibit little-to-no recreation use.

13. Comment: A table would be useful to see how many roads would be decommissioned across the range of alternatives (IDPR)

Response: Table 2.1 "Summary of Proposed Activities by Alternative" (Draft EA, pg. 21) provides information, detailed by Alternative, regarding the miles of system and non-system roads that will be both decommissioned and stored through this project. Also, Appendix B has been added to the final EA, which further describes the proposed watershed improvements, including road decommissioning and storage.

Soils/Watershed/Fish

14. Comment: Please consider bio-engineered techniques (http://www.fs.fed.us/publications/soil-bio-guide/guide/chapter5.pdf) rather than large rock placement for dissipating energy along stream channel banks as proposed in the mitigation or design measures for road decommissioning or long-term storage activities. (CBC)

Response: Road decommissioning and storage methods utilized on the Forest are based on an established program (since the mid-1990s) that has undergone monitoring and feedback to incorporate currently utilized practices (refer to the 2009 Clearwater National Forest Annual Monitoring Report for an extensive summary of methods and monitoring results). Typical methods include utilizing available site materials for establishing proper channel dimensions. Most stream crossing rehabilitation sites are located along small, steep channels where rock is usually the predominant native material available for stream grade and bank stabilization. Wood or sod mats can also be utilized to rebuild bank materials, but are usually associated with lower gradient streams. Revegetation of newly created streambanks, a primary goal of bioengineering, is a focus during road storage and decommissioning and is accomplished by transplanting native forbs and shrubs among new bank materials. Monitoring indicates that the Forest has been largely successful in reestablishing vegetation at restored road/stream crossing locations (USDA 2009).

15. Comment: Provide data and text demonstrating that soil, slope, or other watershed conditions will not be irreversibly damaged by seedtree and shelterwood silvicultural prescriptions. (DA)

Response: The watershed and soils specialist reports and sections of the EA contain detailed effects analysis that used a range of data sources to estimate effects of proposed activities on watershed conditions and soil productivity and stability. Equivalent Clearcut Area (ECA) calculations, GIS generated reports and the WEPP:Road and Disturbed WEPP models were used to compare the predicted effects of the alternatives on water quality and quantity. Throughout the analyses, results were used in project design and mitigation development to minimize impacts on soil watershed resources, evaluate whether Forest Plan standards would be met (refer to EA and watershed specialist report pages 4-8, 15-31, and supporting project analysis files) and avoid irreversible damage.

Effects of regeneration harvest to all resources were analyzed in the EA released for comment. "Regeneration [harvest] method" is a generic silvicultural term which is "a cutting procedure by which a new age class is created; the major methods are clearcutting, seed tree, shelterwood…" (Helms, 1998).

Shelterwood harvest is "the cutting of most trees, leaving those needed to produce sufficient shade to produce a new age class in a moderated microenvironment" (Helms, 1998). Sites that need shade to provide for reestablishment were identified by consulting "Forest Habitat Types of Northern Idaho: A Second Approximation" (1991), and the "Clearwater National Forest Land System Inventory", (1983). These resources both include indicators that a shelterwood harvest should be considered for a site. Using these two resources, performing field surveys, and identifying harsh aspects on which shelterwood harvest may be required due to high insolation rates gives assurance that shelterwood harvest is the appropriate treatment for sites for which it has been proposed. Since no overstory removal is planned following establishment of regeneration, these units would technically be defined as "shelterwood with reserves" (see Helms, 1998) to provide for other resources as identified within the mitigation and design section of the EA.

Seed tree harvest is "the cutting of all trees except for a small number of widely dispersed trees retained for seed production and to produce a new age class in [a] fully exposed microclimate" (Helms, 1998). The units proposed for seed tree harvest have had site visits to identify that this is the appropriate treatment for these sites and the two above mentioned resources were consulted to ensure no known constraints would inhibit regeneration. Since no overstory removal is planned following establishment of regeneration, these units would be defined as "seed tree with reserves" (see Helms, 1998) to provide for other resources as identified within the mitigation and design section of the EA.

Literature Cited

Cooper, S.V., K.E. Neiman, D.W. Roberts. 1991. Forest Habitat Types of Northern Idaho: A Second Approximation. USDA Forest Service Intermountain Research Station. General Technical Report INT-236.

Helms, J. 1998. **The Dictionary of Forestry.** Society of American Foresters, Bethesda, MD. 210p.

Wilson, D., J. Coyner, T. Deckert. 1983. Landsystem Inventory of the Clearwater National Forest. Orofino, Idaho.

16. Comment: If you were really concerned about aquatic species' health, you would indicate in the final EA that all newly constructed temporary roads will be obliterated after use. (DA)

Response: The decommissioning of temporary roads is actually discussed in the pre-decisional EA, as well as the decommissioning of excavated skid trails (refer to Design Measure #5 in the EA).

17. Comment: The EA notes, "there is a need to improve water quality and restore soil productivity on areas with past disturbance from harvest activities, road construction and off-route motorized use." How does the construction of 7.8 new miles of roads, the reconstruction of 9.1 miles of what are essentially new roads (non-system roads), reconstruction of 21 miles of system roads, and logging 1595 acres improve water quality and soil productivity? (FOC)

Response: The activities described in the comment are not considered improvements to water quality and soil productivity. The effects of these activities are disclosed in the EA and specialist reports for soil and watershed resources. Although some reconstruction activities could improve road drainage and stability and reduce impacts to water quality, the majority of improvements to water quality are expected to be recognized through the large number of miles of roads proposed for storage and decommissioning, which are equal among all action Alternatives. For all action

Alternatives, road densities would decrease by 20% or more in all the smaller project analysis drainages (Table 4, page 17 of the Watershed specialist report). Improvements in soil productivity are expected through road decommissioning and rehabilitation of existing skid trails and landings following use for harvest activities. Construction of temporary roads, use of system and non-system roads and associated harvest activities would occur following best management practices that would limit detrimental impacts to water quality and soil productivity.

18. Comment: Units include areas of high hazard soils. How does logging these units meet regional standards and NFMA requirements for soil protection?. (FOC)

Response: Extensive field investigation by a soil scientist occurred in the proposed treatment areas to design the project to meet regional standards and NFMA requirements for soil protection (EA p. 73). Most large areas with high stability hazards or high susceptibility to detrimental soil disturbance were removed from treatment units. Smaller inclusions of high hazard areas remain within the proposed treatment unit boundaries. Mitigation measures will be used to protect soils in these areas (pp. 25-27, 77-80).

19. Comment: About 7 units would be very close to the 15% detrimental soil disturbance threshold. The EA is not clear whether the 15% threshold would be exceeded prior to restoration efforts or if the threshold would never be exceeded. Table 4.3 is confusing in this aspect. (FOC)

Response: No units are expected to exceed the 15% detrimental soil standard (DSD) in this project. The percent detrimental soil disturbance (DSD) in the units expected to be close to but not exceed the 15% detrimental soil standard (in the Reuse design category in Table 4.2) was calculated using the standard disturbance estimates described in EA (p. 79) and does not incorporate restoration efforts which would occur in these units to improve soil productivity. Mitigation measure #14 on p. 13 is aimed at assuring these units remain below the 15% DSD standard. Unit 15 (in the Special design category) was expected to slightly exceed the 15% DSD standard using the standard disturbance estimates (EA p. 79). The project soil scientist and timber staff specifically reviewed the logging systems in this unit and determined it would be feasible to harvest this unit within the limits of allowable new disturbance describe in mitigation # 14 in EA (p. 13). Additional improvements in productivity would be obtained in this unit through soil restoration activities described in EA (pp.25, 27).

20. Comment: The WEPP model predicts more sediment from alternatives 2 and 4 due to roads but does not model the differences in acreage logged in the alternatives. Sediment impacts from road hauling are also not analyzed though the impacts from alternatives should vary because of the amount logged would vary. (FOC)

Response: Sediment from logging activities is evaluated using the Disturbed WEPP model and differences among alternatives are discussed, (Table 8, pages 23-24 of the Watershed specialist report). The watershed specialist report shows that there are very small differences between alternatives for miles of road reconditioning and reconstruction among project drainage areas (Table 3 page 16 of the Watershed specialist report). Short and long term impacts of road maintenance, reconditioning, and reconstruction activities are also addressed (page 25 of the Watershed specialist report).

21. Comment: The impacts of existing roads within RHCAs are not considered. (FOC)

Response: The existence of roads in the project area (inside and outside of RHCAs) is a part of the baseline condition of the area, and is disclosed and the impacts of these roads and proposed activities to reduce these impacts are discussed in many locations. These discussions are too numerous to list fully, but in particular: within the EA (pgs. 2-5, 11-17, 21, and 31) and within

several specialist reports including those for fisheries (pgs. 13-17, 20), watershed (pgs. 6-8, 17-20, 24-26, 39-55), and wildlife pgs. 13, 23-27). The arbitrary distinction between the impacts of road mileage within and outside of default RHCA buffer is not explicitly discussed to any substantial extent within the project documents. This is because the potential impacts of existing roads on watershed health, fisheries, etc., are not limited to the road footprint within delineated RHCAs. The proposed project would, both within and outside RHCAs, reduce existing road mileage and density through extensive decommissioning, and reduce the impacts of existing road mileage in the project area through storage, drainage improvements, culvert replacement, etc. and these activities are fully discussed in project documents.

22. Comment: The EA inconsistently looks at sediment impacts. It acknowledges that more sediment would be produced under alternatives 2 and 4, yet the narrative on 101 treats all action alternatives the same. (FOC)

Response: Differences among the alternatives with respect to sediment generation are discussed throughout the watershed specialist report (pages 20-24, and 29 of the Watershed specialist report). The summary narrative on page 101 of the Environmental Assessment concludes that all 3 action alternatives would meet Forest Plan standards, but does not conclude that the effects are equal among alternatives (refer to summary on page 20 of the Watershed specialist report).

23. Comment: The EA estimates temporary roads would be in place for three seasons. There are two problems with this assumption. First, timber sale contracts routinely last five years and extensions are often granted. Second, watershed impacts from temporary roads don't end with decommissioning. Those impacts are of long-duration. (FOC)

Response: Temporary roads are generally constructed on a unit-by-unit basis and decommissioned in a one to three year time period. Temporary roads would be located on upper hillslope or ridgetop position and would not cross highly sensitive and unstable areas. Possible watershed effects from temporary roads are considered to be short-term based on the assumption that the temporary roads will not be in use for more than three seasons; that appropriate BMPs would be implemented (refer to Appendix C of the Watershed specialist report); and that temporary roads would be fully obliterated after use, following protocols which require decompacting, recontouring, and adding organic material.

24. Comment: The fisheries analysis (see table 4.13) for all alternatives is the same. This is a problem as the EA fails to quantitatively and qualitatively analyze differences between the alternatives. Bull trout in particular need cold and clear water. (FOC)

Response: The vegetation manipulation and fuels treatments for all of the action alternatives would incorporate RHCA buffers and other INFISH standards, which should eliminate or greatly minimize the potential for effects to stream channels, water quality, and aquatic organisms. The road-related activities proposed are essentially identical for the action alternatives. Taken together, this means that the effects of the action alternatives on stream channels, water quality, and aquatic organisms would not be measurably different. These conclusions are summarized in the EA on pages 32 and 103-106, and discussed more fully in the Fisheries Specialist Report on pages 12-21.

Vegetation

25. Comment: One confusing element of the EA is the allegation that Douglas fir and grand fir are not desired because they are less resilient to insects and diseases. What disease or insect elements have the ability to nearly completely eliminate either grand fir or Douglas fir as white pine blister rust has done for white pine? If none, how can the allegations in the EA be true? (FOC)

Response: The Dictionary of Forestry (1998) defines resilience as "the capacity of a (plant) community or ecosystem to maintain or regain normal function and development following disturbance". Neuenschwander and others (1999) assert "western white pine regenerates well after wildfire, logging, or land clearing. Fire is so good for the species that 50 years after a fire, its forests are dense again with thousands of trees per acre." With this information in mind, it is reasonable and accurate to state that white pine is resilient to disturbance.

According to Neuenschwander and others (1999) "the western white pine forests of the Pacific Northwest are today occupied by less stable, diverse, resilient, and productive species than they were a century ago." The authors are referring to the shift that has occurred from white pine dominated forests to more shade tolerant dominated forests. This statement substantiates that western white pine forests are more resilient than the species that have supplanted them.

The purpose of this project is not to eradicate shade tolerant species from the landscape; the purpose is to increase species diversity at the stand and landscape levels by increasing amounts of early seral tree species. According to Tappeiner and others (2007), "Growing mixed-species stands and avoiding dense stands on dry sites are important ways to provide some resistance to pathogens and insects and to preserve options for forest stands when outbreaks occur." This statement reflects what is discussed in the EA: that improving species diversity on the landscape and at the stand level increases resilience.

In the EA (p. 3), balancing vegetative successional stages is listed as one of the ways in which resilient conditions would be created. Raffa and others (2008) support this idea: "Homogeneous species, age, and genetic structures are more likely than more heterogeneous conditions to provide the sudden input of available hosts needed to surpass the eruptive threshold following an exogenous stress." In other words, increasing species and age class diversity increases a system's resistance to disturbance, thus making it more resilient.

Literature Cited

Neuenschwander, L.F., J.W. Byler, A.E. Harvey, G.I. McDonald, D.S. Ortiz, H.L. Osborne, G.C. Snyder, A. Zack. 1999. White pine in the American West: a vanishing species- can we save it? USDA Forest Service, General Technical Report RMRS-GTR-35. 20p.

Raffa, K.F., B.H. Aukema, B.J. Bentz, A.L. Carroll, J.A. Hicke, M.G. Turner, and W.H. Romme. 2008. Cross-scale drivers of natural disturbances prone to anthropogenic amplification: the dynamics of bark beetle eruptions. Bioscience 58: 501-517

Tappeiner, J.C., D.A. Maguire, T.B. Harrington. 2007. Silviculture and Ecology of Western U.S. Forests. Oregon State University Press, Corvallis, OR. 440 pp.

26. Comment: The pre-decisional EA indicates there will be clearcutting associated with the proposed action. Nowhere in the pre-decisional EA does it break down the regeneration RXs into shelterwood, seed tree and clearcut. (DA)

Response: The draft EA did not distinguish among types of regeneration harvest because site specific prescriptions had not yet been completed. Thus, analyses for the various resources were

based on the prescription which would remove the most trees. The regeneration RXs have been broken down in the final EA. However, it should be noted that true clearcuts are not proposed within this project; rather "clearcuts ***with reserves***" (emphasis added). This is an important distinction because under this method, "varying numbers of reserve trees are not harvested to attain goals other than regeneration" (Helms, 1998). The retention of these "reserves" could serve to mitigate potential impacts to wildlife, soils, or aesthetic values.

27. Comment: Provide data and text demonstrating that seedtree and shelterwood sivicultural prescriptions are appropriate to meet the objectives and requirements of the Clearwater National Forest land management plan. (DA)

Response: All proposed harvest would occur within Forest Plan Management A E1, where management is intended to provide optimum, sustained production of wood products and to produce timber in a cost effective way while providing adequate protection of soil and water quality. Another standard for this management area is to schedule timber harvest using logging and silvicultural methods appropriate for the stand and the terrain.

Site visits were made to determine that regeneration harvest would optimize timber production on these sites. Design and mitigation measures in the EA address protection of other resources and are to be incorporated into the site specific prescription and timber sale contract. Also, refer to the response to comment #15 for further discussion on the appropriate use of seed tree and shelterwood prescriptions.

28. Comment: The USFS spends the public tax dollars to take action to eliminate beneficial natural disturbance agents such as insects, disease, and fire. Many natural resources in the forest not only benefit from tree mortality caused by natural disturbance events, but depend on these natural disturbance events occurring to function properly. (DA)

Response: It is not the intent of this project to eliminate natural disturbance agents, nor would this project have that effect. Even if treatment eliminated all disturbance agents (which it would not), treatment of 9% of the project area (as proposed) would not equate to "eliminating beneficial natural disturbance agents such as insects, disease, and fire".

Part of the purpose in restoring historical cover types, (ie. western white pine and western larch) would be to restore insects and diseases to more historic roles as well. Ecologically, the prevalence and function of root disease in stands proposed for regeneration harvest is related to the shift in composition since western white pine has declined from its historic prevalence. Prior to the decline of western white pine in the forest types of northern Idaho, root disease played a role as a "thinning agent", since white pine is tolerant of the most damaging root diseases found in northern Idaho. Root disease worked to maintain stands of root disease tolerant species (white pine, larch, ponderosa pine) and thinned out root disease susceptible species (grand fir, Douglas-fir). Since ecosystems in northern Idaho have shifted so dramatically from being dominated by western white pine, the function of root disease pathogens has shifted dramatically as well. According to Sue Hagle, Plant Pahologist (Ret.), "root diseases exceed all other forest insects and diseases in annual volume losses in forests of Northern Idaho and western Montana" and severe root disease can cause conversion of productive sites to permanent brushfields (2010).

For stands that would be commercially thinned in this project, insects and diseases would be expected at endemic levels within the stands. Endemic levels of insects and diseases within managed stands would provide a source of tree mortality more consistent with historic levels.

Wildlife/Plants

29. Comment: Even though the action alternatives would generate different amounts of temporary roads, and differing amounts of road use, there is no analysis of the impacts to elk habitat effectiveness from the project while it is taking place. (FOC)

Response: The temporary increase in road densities due to the construction of temporary roads (Alternatives 2 and 4 only) was not analyzed. However, when these varying miles of temporary roads are distributed between the four EAU's analyzed for the project, the net increase in road density varies from 0 to 0.5 miles of additional road per square mile. The net effect to elk EHE during implementation is that the 2 EAU's meeting objective (25%) in the baseline continue to meet the objective. The remaining two EAU's not meeting objective see small reductions in EHE. All of the four EAU's meet EHE objectives post project.

30. Comment: The EA notes loss of older forests, which negatively affect goshawk, pileated woodpecker, pine marten and fisher. No forest plan monitoring data is presented. (FOC)

Response: No old-growth or stepdown habitat is being treated as part of this project (see Draft EA, p-14). The Region is currently reassessing FIA data to determine the level of old growth across the Forest. Until it is determined that the Forest Plan standard of 10% old growth across the forest is being met, the 2006 Forest Direction of retaining mature forest (130-150 years of age) will continue, as being done for this project.

The Forest Plan standards relevant to old-growth and old growth dependent species include:

- Maintaining at least 10 percent of the Forest (including Selway-Bitterroot Wilderness) in old-growth habitat.
- Selecting at least 5 percent of each approximate 10,000-acre watershed (timber compartment) or combination of smaller watersheds (sub-compartments) within forested non-wilderness areas to manage as old-growth habitat (II-23).
- Provide habitat for old growth indicator species (pileated woodpecker, goshawk and pine marten) in accordance with guidelines provided in Appendix H. In each 10,000-acre unit of suitable habitat, at least one 300-acre stand should be managed as old growth for pileated woodpeckers. It is recommended that the 300 acres be contiguous, but it is acceptable to divide the 300 acres into not more than three 100-acre areas as long as the areas are within 2 square miles. The 300-acre area (or the three 100 acre areas) should be at least 200 yards wide at any one point. However, the remaining 200 acres (in the minimum 5 percent distribution unit) can be of any width but in not less than 25 acres units (H-2).

The Barnyard South Sheep analysis area lies within OGAUs 310 and 314, which currently meet the 5% standard by having 7.3% and 11.3% verified old growth habitat and 12.3% and 15.2% mature forest, respectively. A 339-acre contiguous block of old growth is within OGAU310, and a 430-acre contiguous block of old growth is within OGAU 314.

31. Comment: Regarding lynx, the EA assumes that there is considerable habitat outside of the project area. However, the cumulative impacts of activities in those areas are not analyzed. There is also no information about whether lynx have been surveyed in the area. As such, conclusions about lynx habitat (or lack thereof) are not well supported in the EA. (FOC)

Response: There are lynx LAU's north, east, and south of the project area, which contain enough habitat to support a lynx. The project area is not in an LAU, because the project area and general vicinity do not contain enough modeled lynx habitat to support a lynx and do not meet the criteria

set out in the NRLMD (2007). The primary impact to lynx from project implementation is the potential to disturb or displace a transient lynx, and having a larger cumulative effects area is not necessary.

We have not conducted lynx surveys on the Clearwater National Forest (CNF) portion of Nez Perce-Clearwater National Forest. The CNF is considered occupied habitat under NRLMD, and as such surveys would not change (the presence or absence during surveys) the analysis or the response.

32. Comment: There is no mention of grizzly bears. One was killed recently on the North Fork District. (FOC)

Response: Grizzly bears are not on the ESA species list for the Nez Perce Clearwater National Forests. The U.S. Fish and Wildlife Service does not consider the Bitterroot Ecosystem to be occupied, or habitat destruction or modification to be a threat in that area. Since the 2007 Kelly Creek bear incident, thorough surveys in the area did not detect grizzly bears, and there has been no evidence of females with cubs. Given the above rationale, it is highly unlikely that grizzly bears would be encountered or impacted during the implementation of the Barnyard South Sheep project.

33. Comment: There is a lack of required forest plan monitoring for these rare species. There is a lack of site specific data. This violates NEPA, NFMA and the ESA. (FOC)

Response: It is assumed that this comment refers to lynx and grizzly bear. As such, there is no Forest Plan requirement to monitor these species. For more discussion about these species, refer to the responses to comments #31 and #32.

34. Comment: Fairly significant portions of rare plant habitat would be negatively affected by the proposed action. In particular, have any surveys been done for the four species that would be harmed by the proposal? What about all the other species? (FOC)

Response: The rare plant section of the EA indicates that there are seven sensitive plant species that may be affected by the proposed management activities. These are listed, along with other plants that have potential habitat in the project area, in Table 3.15 (page 64). Areas of habitat possibly affected is provided in Table 4.40 (page 140). Plant surveys that focused on suitable habitat for all sensitive plant species that potentially occur in the area were conducted by qualified field botanists during the 2013 field season. Documentation of these surveys is provided in the project file.

Misc. Comments

35. Comment: The Forest Service should take the "less is more" approach to timber sales as it lends to more balanced conservation-a top priority component. While it may seem more expedient to build roads and take the peak stage trees at one fell swoop, a more metered approach to harvest will yield better results for the public and for wildlife. (MB)

Response: Slightly less than 1,600 acres are proposed for treatment, which equates to about 9% of the 17,570-acre project area. Numerous criteria were considered in the proposal of treatment units in this project specifically to avoid detrimental effects to resources. Stands considered “old growth” or within 20 years of meeting old growth criteria were not considered for harvest, inventoried roadless areas were avoided, and much of the eastern portion of the project area was avoided, specifically to protect resources. Many areas that would benefit from treatment (from a timber

production or ecological standpoint) were not considered for treatment specifically to avoid causing detrimental effects to various resources. Thus, harvesting only 9% of the project area, with consideration given to the various resources, would be a metered approach.

36. Comment: Unit 23 appears to be in unroaded country contiguous to the Siwash roadless area. This issue was raised in our scoping comments and the EA does not address it. (FOC)

Response: The project area shares the eastern border of the Siwash roadless area, but does not include any of it within the project area boundary. There is a mostly unroaded portion to the north of the roadless area. However, timber harvest in that area was deemed unfeasible, due to the area's breakland landtypes and lack of access. Unit 23 would use an existing road system for logging access.

37. Comment: Please post your responses to public comments online as well as maintaining hardcopy in the project file. (DA)

Response: The response to public comments on the EA is attached to this Decision Notice as an appendix item and is posted online at: http://data.ecosystem-management.org/nepaweb/project_list.php?forest=110105.

38. Comment: The pre-decisional EA fails to evaluate project impacts to climate change and climate change impacts to forest resources and ecosystem services in the sale area. (DA)

Response: We disagree with the conclusion reached in this comment for several reasons: (a) this proposal has several desired outcomes; and (b) the effectiveness of achieving those outcomes is presented throughout the EA and underlying analysis (keeping in mind that NEPA requires an agency to take a hard look at the consequences of its actions on the environment, not the other way around).

The interdisciplinary team carefully considered the existing conditions and trends within the area, as well as risks, in designing this proposal to achieve those outcomes. Global climatic warming is not something that is about to happen. It has been ongoing for many decades and the trend is expected to continue into the distant future, continuing to increase risks to our nation's forests (Dale, et al. 2001; Barton 2002; Breashears and Allen 2002; Westerling and Bryant 2008; Running 2006; Littell, et al. 2009; Boisvenue and Running 2010, Hicke et al 2012). The existing project area conditions and trends are an expression of the local climate (which may or may not parallel ongoing regional, continental, or global trends) as it has interacted with the other local natural and anthropomorphic influences. As such, the ongoing effects of climate change were considered in developing the proposal.

This proposal by necessity addresses site specific forest health, fish and wildlife habitat, and vegetation conditions, trends, and risks that exist within the project area today. Nevertheless, those proposed actions are consistent with adaptation actions and strategies recommended for managing forests in light of climate change (Millar, et al. 2007; Joyce, et al. 2008; Ryan, et al. 2008a). Note: A Climate Change Report for the Barnyard South Sheep project can be found in the project file.

3. Consideration of Other Science/Literature Submitted by the Public

Members of the Barnyard South Sheep (BSS) interdisciplinary team are considered proficient in their field of study by way of academic achievement, agency training, years of professional experience, and in some cases, certification programs. Team specialists identified the methods used in their analyses and referenced the scientific sources upon which their analyses were based (refer to the *References* section in the EA). In their analyses, team specialists discussed responsible opposing science and viewpoints and provided science-based rationale to support their conclusions. They also addressed any incomplete or unavailable information.

All of the opposing science and viewpoints were submitted by Dick Artley, who regularly comments on vegetation management projects on the Nez Perce/Clearwater National Forests as well as many other national forests across the nation. Since 2009, his comments have included an extensive list of numbered attachments; six separate attachments were received for Barnyard South Sheep. The title of each attachment consists of a general statement or viewpoint that is followed by 11 to 99 individual quotes (depending on the Attachment #), often taken out of context, from various newspapers, editorials, magazines, scientific papers and other publications that presumably Mr. Artley believes support the title statement. The individual quotations are followed by electronic links to the source documents, some of which are broken or no longer valid. In any case, the quotations are not tied to specific propose actions, as suggested under 40 CFR 1503.3(a) and 36 CFR 218.2. Rather, they are individual statements gathered together to support a general point of view or position. For numerous past projects since 2009, interdisciplinary teams have been responding to all of the quotations in each attachment submitted during project comment periods. Since past responses have been similar for each project and nothing new was found in the current attachments, the responses made on past projects are incorporated by reference as the official response for the Barnyard South Sheep project.

In conclusion, we have reviewed the submitted attachments and still stand by the analysis in the EA, as, unlike the attachments, it focuses on the site specific cause-effect relationships of the alternatives for each resource area considered in detail. The following table summarizes each submitted attachment, including an overview of past responses or rationale for dismissal, and the past projects affected:

Attachment #	**Title and *Overview***	**Past Projects Affected**
1	Respected Scientists Reveal the Certainty that Natural Resources in the Forest are Harmed (and some destroyed) by Timber Harvest Activities *A large majority of the 80 opposing viewpoints contained in this attachment were found to be generalized opinions or not applicable to the proposed action. Others, when viewed in their entirety, were found to support the science used in the analysis.* *The BBS EA describes the effects of timber harvest for all applicable resources. Best available science, cited throughout the EA, was used in the analysis of those affects.*	Powell Divide EA (2010) Middle Bugs EA (2010) Lower Orogrande EIS (2011) Upper Basin EA (2013)

Attachment #	Title and *Overview*	Past Projects Affected
4	Roads Damage the Proper Ecological Functioning of the Natural Resources in a Forest *Almost half of the 57 opposing viewpoints, when viewed in their entirety, were found to support the project analysis. Others referred to outdated road building practices, watershed models not used, or to areas far outside the project area (i.e. California, Georgia, BC – Canada).* *The BBS EA discloses the impacts of all proposed road activities. A Roads Analysis was completed for the project, which recommended a minimum road system for the area.*	Middle Bugs EA (2010) Lower Orogrande EIS (2011) Upper Basin EA (2013) Little Slate EIS (2013)
5	Insect Activity is a Beneficial Natural Disturbance Event in the Forest *Several of the 26 opposing viewpoints were found to support the science used in the analysis. The remaining viewpoints either applied to areas far outside the project area (i.e. California, Florida, Wyoming, Canada), or were generalized opinion pieces having no connection with the proposed actions.* *Since the BSS proposal would treat < 10% of the project area, insect activity would continue to occur, even within the treated areas. Timber harvest proposed for BSS is consistent with Forest Plan direction and meets the dual purpose of (a) improving stand vigor and species diversity across the landscape; and (b) managing the landscape to provide for goods and services.*	Powell Divide EA (2010) Middle Bugs EA (2010) Lochsa Thin EA (2011)
8	The Natural Resources in the Forest Benefit from Fire *Although a few of the 34 opposing viewpoints were found to support the science used in the analysis, most of them either applied to areas far outside the project area (i.e. Alaska, Minnesota, Canada), discussed post-fire salvaging that is not a part of this project, or were generalized opinion pieces having no connection with the proposed actions.* *Since there is no threat of severe wildfire in the project area, prescribed fire would only be used*	Powell Divide EA (2010) Little Slate EIS (2013)

	in the regeneration harvest units to treat logging slash and prepare each unit for tree planting.	
Attachment #	**Title and *Overview***	**Past Projects Affected**
9a	Herbicides Containing Glyphosate should Never be Applied to Areas where Mammals (including humans), Fish, or Birds Might Visit *This attachment has no bearing on the current project, and was therefore dismissed from further review. There is <u>no</u> proposal to apply herbicides with this project; only design measures (i.e. cleaning of equipment) to reduce the spread of weeds. Any spraying for weeds would be covered under the North Fork Noxious Weed Treatment EA (2005).*	Lower Orogrande EIS (2011) Upper basin EA (2013)
14	Dead and Dying Trees are Important to the Survival of many Natural Resources in the Forest and should not be Removed to Provide Opportunities for Corporate Profit or to Produce a Private Industrial Tree-Farm *Almost half of the 11 opposing views were found to support the project analysis. Those remaining contained general information having no direct connection with the proposed actions.* *The BBS project would adhere to the Regional snag guidelines (refer to design measure #15 in the EA) that would retain, after harvest, sufficient snags (green and dead), used by various species of wildlife.*	Middle Bugs EA (2010)

BIOLOGICAL ASSESSMENT AND BIOLOGICAL EVALUATION OF THE BARNYARD SOUTH SHEEP PROJECT

North Fork Ranger District
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I. INTRODUCTION

This document is a combination Biological Assessment (for Endangered Species Act (ESA)-listed species) and Biological Evaluation (for Forest Service Region 1 "sensitive" species) which evaluates the potential effects of the proposed Barnyard South Sheep (BSS) project on aquatic, wildlife, and plant species with ESA or Region 1 special status. The District will obtain all necessary Clear Water Act permits for the proposed activities, and intends that this BA should be sufficient to meet the Section 7 requirements of the Corps of Engineers and any other Federal agency.

The North Fork District, Nez Perce-Clearwater National Forests is proposing to conduct vegetation treatments and watershed improvement activities in the Washington, Little Washington, and Beaver Creek subwatersheds of Clearwater County, Idaho (Figure 1). The legal description of the activity area is Townships 38, 39, and 40 North and Range 7 East, and 40 acres in Township 39 North, Range 6 East. Implementation of vegetation activities and associated roadwork would begin as early as 2016, and would continue for several years, while watershed improvement activities would be implemented as early as 2016 and might continue through the following decade.

II. SPECIES ANALYZED

Species considered in this analysis include species listed as Threatened or Endangered under the ESA as well as candidates for Federal listing as Threatened or Endangered in the project area and those on the Northern Region Sensitive Species List.

The most recent USFWS species list for Clearwater County, Idaho (dated August 14, 2014, and available online at www.fws.gov/idaho/species/IdahoSpeciesList.pdf), includes three listed, proposed, or candidate species: Canada lynx, bull trout, and whitebark pine. No evidence exists that any other listed, proposed, or candidate species may occur in the project area, however, the USFWS' IPaC online program states the presence of two threatened plant species, water howellia and Spalding's Catchfly, in Clearwater County and so these species are included in this document. NOAA Fisheries does not provide routine county- or Forest-specific ESA-relevant species lists, but shows maps on its website that includes Snake River steelhead and Snake River fall Chinook salmon as present within portions of the Clearwater National Forest.

The Northern Region Sensitive Species List, which contains those species identified as sensitive by the Regional Forester, was last updated in February 2011.

Table 1 lists each of the ESA-status species and Tables 4, 5, and 6 sensitive species. For each species, these tables provide information on occurrence, habitat, whether the species is considered in detail, and an effects determination. The primary references for information on species not considered in detail are Nez Perce Clearwater N.F. files and the Idaho Conservation Data Center (ICDC, now IFWIS, IDFG 2014). Those species for which more detail is provided are signified by a bolded effects determination, and the text description for that species is provided in Section VI.

III. DESCRIPTION OF PROPOSED PROJECT

This project area (Figure 1) encompasses approximately 17,575 acres and is delineated on the west by the Forests boundary, on the south and southeast by the boundary of the Washington Creek subwatershed, on the east and northeast by the North Fork Clearwater River (NFCR) and (primarily) the Swanson Creek drainage of the Little Washington Creek subwatershed, and on the northwest primarily by the portion of the Sheep Mountain Creek drainage (of the Beaver Creek subwatershed) within the Forests boundary. The "town" of Headquarters is located approximately 8.5 air miles west of the project area, which is accessed by the 246, 680, 681 roads. The proposed

Species	Status*	Considered in Detail	Effects Determination**	Rationale
Snake River steelhead trout *Oncorhynchus mykiss gairdneri*	T	No	NE	Native to Washington, Little Washington, and Beaver creeks, but blocked by Dworshak Dam for 40+ years
Snake River fall Chinook salmon *Oncorhynchus tshawytcha*	T	No	NE	Native to Clearwater River, but blocked from all but the lowest 1 mile of the NF Clearwater River (NFCR) by Dworshak Dam for 40+ years
Bull trout *Salvelinus confluentus*	T	Yes	NLAA	Native and present in the NFCR and many of its tributaries, although no record in project area except for NFCR on eastern project boundary (USFWS 2002).
Bull trout Critical Habitat	n/a	Yes	NE	CH is not designated in project area streams/subwatersheds, except for the mainstem NFCR on the eastern project boundary. Project mitigation measures would minimize or eliminate impacts to stream channels in the project area, while project activities would occur substantial distances from CH such that any minor effects would not be transmitted to the NFCR or Beaver Creek.
Canada lynx *Lynx canadensis*	T	Yes	NLAA	Occupied Secondary habitat present in project area, relatively recent sightings on District. Dispersing individuals may occur, but no critical habitat been designated (74 FR 8616). Stray individuals would not be negatively affected by activities.
Water howellia *Howellia aquatilis*	T	Yes	NE	The most common habitat for *Howellia aquatilis* is small, vernal, freshwater wetlands and ponds with an annual cycle of filling with water and drying up late in the season. The only sites currently known to support this species in Idaho are in Latah County (USFWS 2013). No known locations and no suitable habitat are present in the project area (Hays 2014)
Spalding's catchfly *Silene spaldingii*	T	Yes	NE	Individuals of this species are found in rich, relatively mesic fescue grasslands and associated open forest and shrublands; in Idaho County it is found in canyon grasslands. There are no reported locations in Clearwater County (Colket et. al 2006), and suitable habitat for the species is not present in the project area (Hayes 2014).
Whitebark pine *Pinus albicaulis*	C	Yes	NE	Typically found in Idaho on high elevation ridges; present on Clearwater N.F., but typically not below about 7,000 feet above msl. Proposed harvest sites top out at about 5,300 feet, so no individuals should be present in the project area (Hays 2014).

Table 1. ESA-listed Species Considered and Effects Determinations

***Status Abbreviations:** T = ESA Threatened, C = ESA Candidate.

****Threatened and Candidate Species Determination:** NE = No Effect; NLAA = Not Likely to Adversely Affect

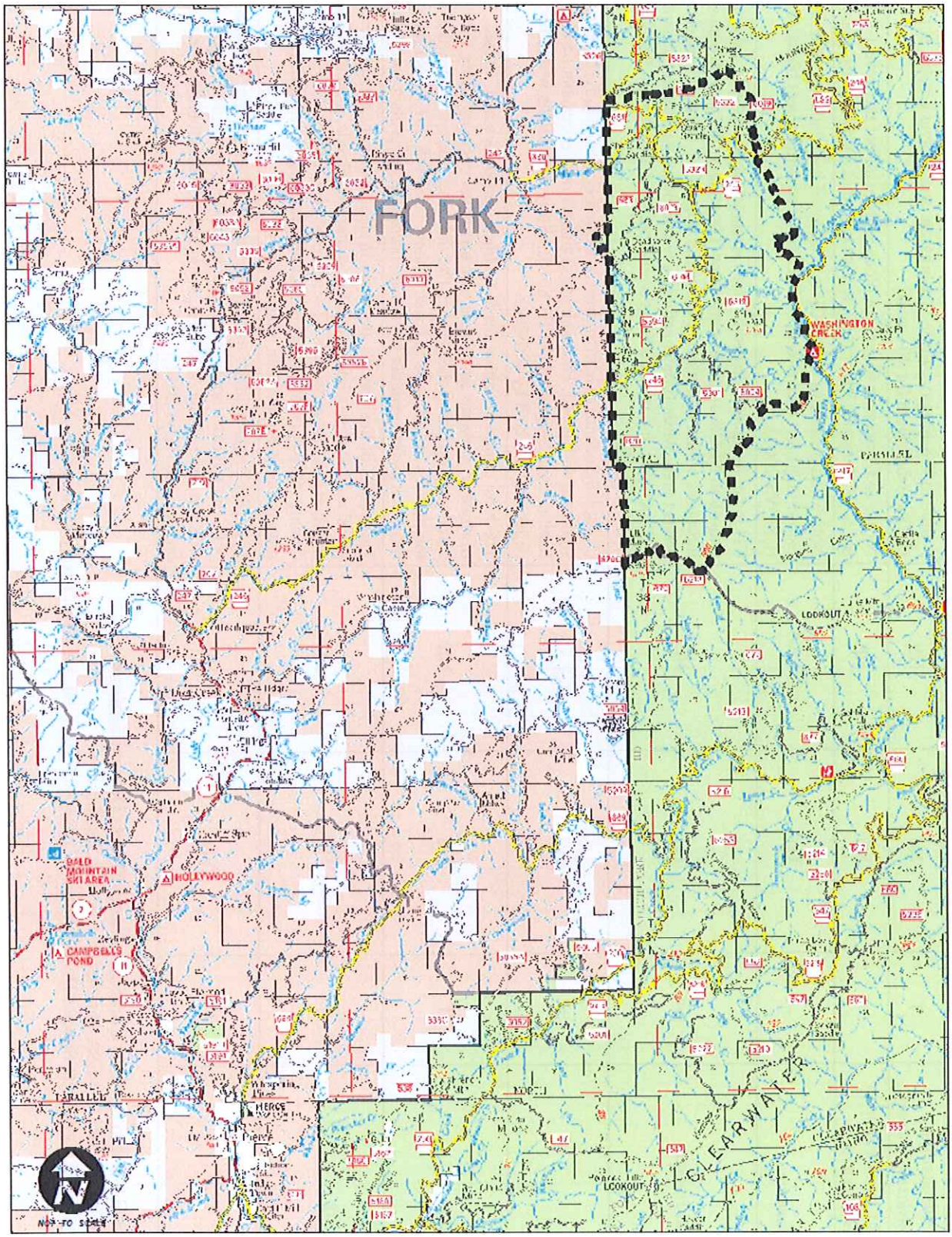

Figure 1. BSS project vicinity (project area is black dashed line on right side of map)

action would include regeneration harvest, commercial thinning, road construction and reconstruction, road decommissioning and storage, and replacement of aging/failing culverts on roads that would remain open to traffic.

Figures 2a and 2b provide graphical representations of the timber harvest and roadwork portions of the proposed action, while the draft Environmental Assessment for the project, as well as the Fisheries and Wildlife specialist reports (available electronically upon request) provide considerably more-detailed treatments of the proposed activities, current conditions, and effects analyses. The Proposed Action is known as Alternative 2 in the Environmental Assessment for the project, which would regeneration harvest approximately 840 acres in 27 units, and commercially thin approximately 745 acres in 7 units. See Tables 1 and 2 for specifics.

Unit	Acres	Treatment	Method	Unit	Acres	Treatment	Method
1	29	Comm Thin	T/S	19	10	Regen Harvest	S
2	5	Regen Harvest	S	20	8	Regen Harvest	S
3	17	Regen Harvest	S	22	7	Regen Harvest	S
4	26	Comm Thin	S	23	9	Regen Harvest	T/S
5	18	Comm Thin	S	24	5	Regen Harvest	T
6	11	Comm Thin	T/S	25	6	Regen Harvest	T/S
7	93	Regen Harvest	S	26	18	Regen Harvest	T/S
8	4	Regen Harvest	S	27	35	Regen Harvest	T/S
9	35	Regen Harvest	T/S	28	51	Regen Harvest	T/S
10	30	Regen Harvest	S	29	100	Regen Harvest	T/S
11	419	Comm Thin	T/S	30	10	Regen Harvest	S
12	9	Regen Harvest	S	31	15	Regen Harvest	S
13	67	Regen Harvest	T/S	32	23	Regen Harvest	T/S
14	53	Regen Harvest	T/S	33	60	Regen Harvest	T/S
15	215	Comm Thin	T/S	34	60	Regen Harvest	T/S
16	56	Regen Harvest	T/S	35	44	Regen Harvest	T/S
17	27	Comm Thin	S				
18	22	Regen Harvest	T/S				

Table 1 (above). Proposed timber harvest and commercial thinning. (T = tractor yarding, S = skyline yarding

Regeneration Harvest: This harvest method would remove most of the existing mature stand, producing a site with high sun exposure that would provide optimum growing conditions for the new stand. Restocking of the harvest unit would occur through the planting of western white pine, western larch, and ponderosa pine, with some natural regeneration of Douglas-fir, grand fir, and western redcedar. Varying numbers of trees would be retained for future snag recruitment, wildlife habitat, and soil productivity. This would ensure that snag levels would meet Northern Region Snag Management protocol.

Approximately five or more snags greater than or equal to 15 inches in diameter would be left to meet Regional snag guidelines in addition to three live tree snag replacements greater than or equal to 15 inches in diameter would be left per acre. Retention objectives are to leave tree structure within the units through a combination of clumps and scattered individual live cull trees. Full default RHCA no-cut buffers (not fully reflected in harvest unit boundaries in Figure 2) would be applied for regeneration harvest units. Tractor and skyline yarding would

Table 2 (below). Other proposed activities

Activity	Proposed Action	Comments
Regeneration Site Preparation	Prescribed burn	
Reforestation	840	Plant a mix of seral species, primarily western white pine.
System Road Construction (miles)	0	
System Road Reconstruction(miles)	21	Portions of the 5323, 5322-A, 5394, 5303, 5303-A, 5213, 670, 670-C, and 724 would be maintained as roads, while portions of the 74195, 6044, 74312, 74315, 74176, and 74187 would be placed into storage after log haul, and portions of the 74192 and 74193 would be decommissioned after log haul. Three culverts on reconstructed roads would be removed from fishbearing streams as part of the post-project storage or decommissioning.
Non-system Road reconstruction (miles)	9.1	All of this mileage would be placed into storage after log haul.
Temporary Road (miles)	7.8	Obliterated following use
System Road Storage	28.4	Road storage/decommissioning is not intended or necessary as mitigation for timber harvest activities, but is proposed for watershed improvement and is subject to funding. Culverts would be removed from road prisms as part of storage and decommissioning, and this storage would include the removal of three culverts from fishbearing streams.
Non-system Road Storage	20.6	See above.
System Road Decommission	44.6	See above. Two culverts would be removed from fishbearing streams as part of the decommissioning.
Non-system Road Decommission	31.0	See above, with one culvert removed from a fishbearing stream as a part of the decommissioning.
Watershed Improvements	79 culverts on roads which would be retained (mostly on the 246, 680, and 5301 roads) are proposed for replacement because of undersize or AOP. Most of these would be 36" or smaller in diameter and on perennial streams too small to be included in the figures in this document. Of the 79 culverts to be replaced, 11 would be on fishbearing streams (see above in this table and in Table 3).	

be performed during periods of dry soil or snow cover to reduce erosion and soil compaction (Mitigation Measure #4).

Commercial Thinning: This intermediate harvest method reduces tree density to improve growth and enhance forest health by retaining as many early seral tree species as possible. All commercial thinning units would be thinned to a 16-18-foot spacing (170 to 130 trees per acre). The intent is to leave 100-140 ft^2 of basal area on each acre. This prescription results in the fairly uniform retention of trees across the unit. Some limbs and tops would be retained in the unit for nutrient retention, but not to the level that would pose a fire hazard. Whole tree yarding would be used in these units to help reduce post-harvest fuels to acceptable levels. Approximately five to nine snags per acre greater than or equal to 15 inches in diameter would be left to meet Regional snag guidelines for intermediate harvest treatments, as safety guidelines allow. Retention objectives are to leave snag tree structure within the units through a combination of clumps and scattered individual live cull trees. Full default RHCA no-cut buffers (not fully reflected in harvest unit boundaries in Figure 2) would be applied for commercial thinning units. Tractor and skyline yarding would be performed during periods of dry soil or snow cover to reduce erosion and soil compaction (Mitigation Measure #4).

Burning following Regeneration Harvest: This would consist of broadcast burning, underburning, jackpot burning, or mechanical or hand piling followed by pile burning. This treatment uses the silvicultural treatment of regeneration harvest to restore early-seral, fire-resilient species to the site. The vertical fuel profile is primarily removed with the harvest. Surface fuels are treated as described below to reduce the horizontal fuel profile to acceptable limits. Post-harvest fuels in regeneration units are expected to be 50 – 80 tons per acre. Prior to burning, some slashing of residual non-merchantable component may occur to ensure a more continuous fuel bed. The burning and/or mechanical treatments would reduce fuel loading to approximately 7 – 33 tons per acre, depending on the coarse woody debris guidelines for the site. Wetter sites would have retention on the upper end of the spectrum, while drier sites would retain less fuel. Activity slash would be retained on the site over the winter before slash treatment occurs as required to mitigate soil resource concerns. Some mortality in leave trees is expected, especially if they are less fire-resilient species. This mortality is acceptable for snag recruitment. Hand surface fuel reduction would be done at the base of some leave trees to protect them better from potential high fire intensity during burning operations.

Units with moderate slopes of less than 35% would likely be machine piled to reduce fuels and achieve adequate site preparation. Units with steeper slopes would be broadcast or underburned to achieve objectives. Units with a mix of slopes may have a mix of piling and burning in order to maximize the effective burn window and ensure units are treated and reforested in a timely manner. Prescribed fire burning windows are unpredictable, and smoke emission concerns can further limit that window. This mix of treatment methods for post-regeneration harvest fuel provides managers with alternatives to accommodate burn windows and achieve objective

Road	Stream	Activity
74192	UT to Sheep Mtn Ck	Decom road-- culvert removal
74194	UT to Sheep Mtn Ck	Decom road--culvert removal
831087	UT to Sheep Mtn Ck	Decom non-system road--culvert removal
6044 (2 sites)	Sheep Mtn Ck	Store road—culvert removal
74192	UT to Sheep Mtn Ck	Reconstruct, then decom road—culvert removal
74195	UT to Sheep Mtn Ck	Reconstruct, then store road—culvert removal
74195	Sheep Mtn Ck	Reconstruct, then store road—culvert removal
680	UT to Sheep Mtn Ck	Retain road, replace culvert with larger pipe
680	Sheep Mtn Ck	Retain road, replace culvert with larger pipe
246	Swanson Ck	Retain road, replace culvert with larger pipe
246	UT to Swanson Ck	Retain road, replace culvert with larger pipe
246	Deadhorse Ck	Retain road, replace culvert with larger pipe
246 (2 sites)	UT to Deadhorse Ck	Retain road, replace culvert with larger pipe
670	Lodge Ck	Retain road, replace culvert with larger pipe
246	Tepee Ck	Retain road, replace culvert with larger pipe
722	Tumble Ck	Retain road, replace culvert with larger pipe
5301	Tumble Ck	Retain road, replace culvert with larger pipe
74224	Lodge Ck	Store road—culvert removal

Table 3 (above). Road and watershed activities with instream work on fish-bearing streams

Road Construction, Reconstruction, and Haul Routes: As shown in Table 2, the Forests proposes to construct up to 7.8 miles of temporary road, but no new permanent road. As described in more detail in Mitigation Measures #5 and #6, below, none of the temporary roads would cross stream channels or easily-erodible soils, and all but one 0.65 mile section would be obliterated within 3 years of construction. As also shown in Table 2, up to 30.1 miles of existing system or non-system road would be reconstructed for the project, with about 11.6 miles of this reconstructed road being retained with drainage improvements or as-is, and the remainder placed into intermittent storage or fully decommissioned (described below). In reconstruction, an existing road prism is

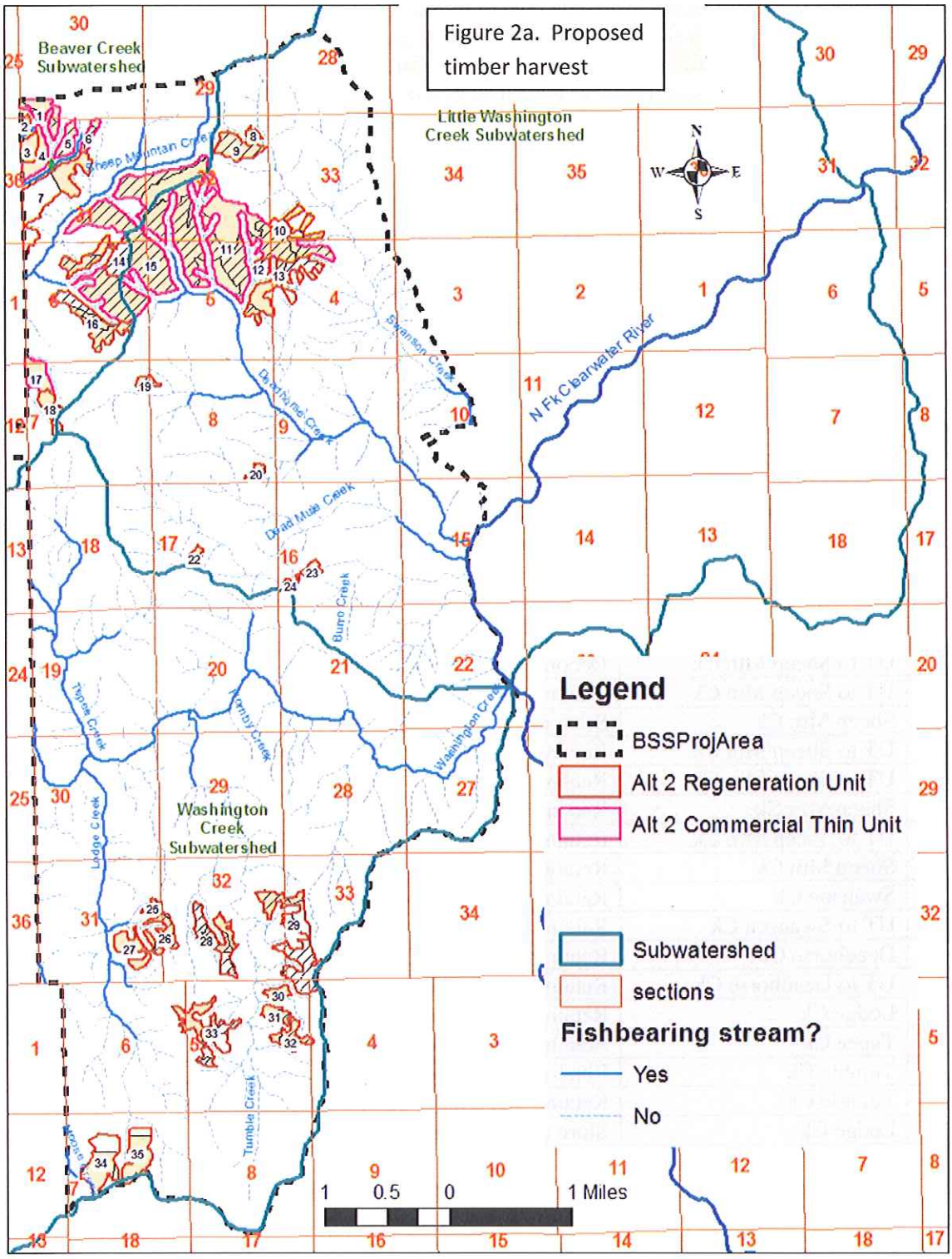

Figure 2a. BSS Project Area and proposed timber harvest (Alternative 2 is the proposed action described in this document).

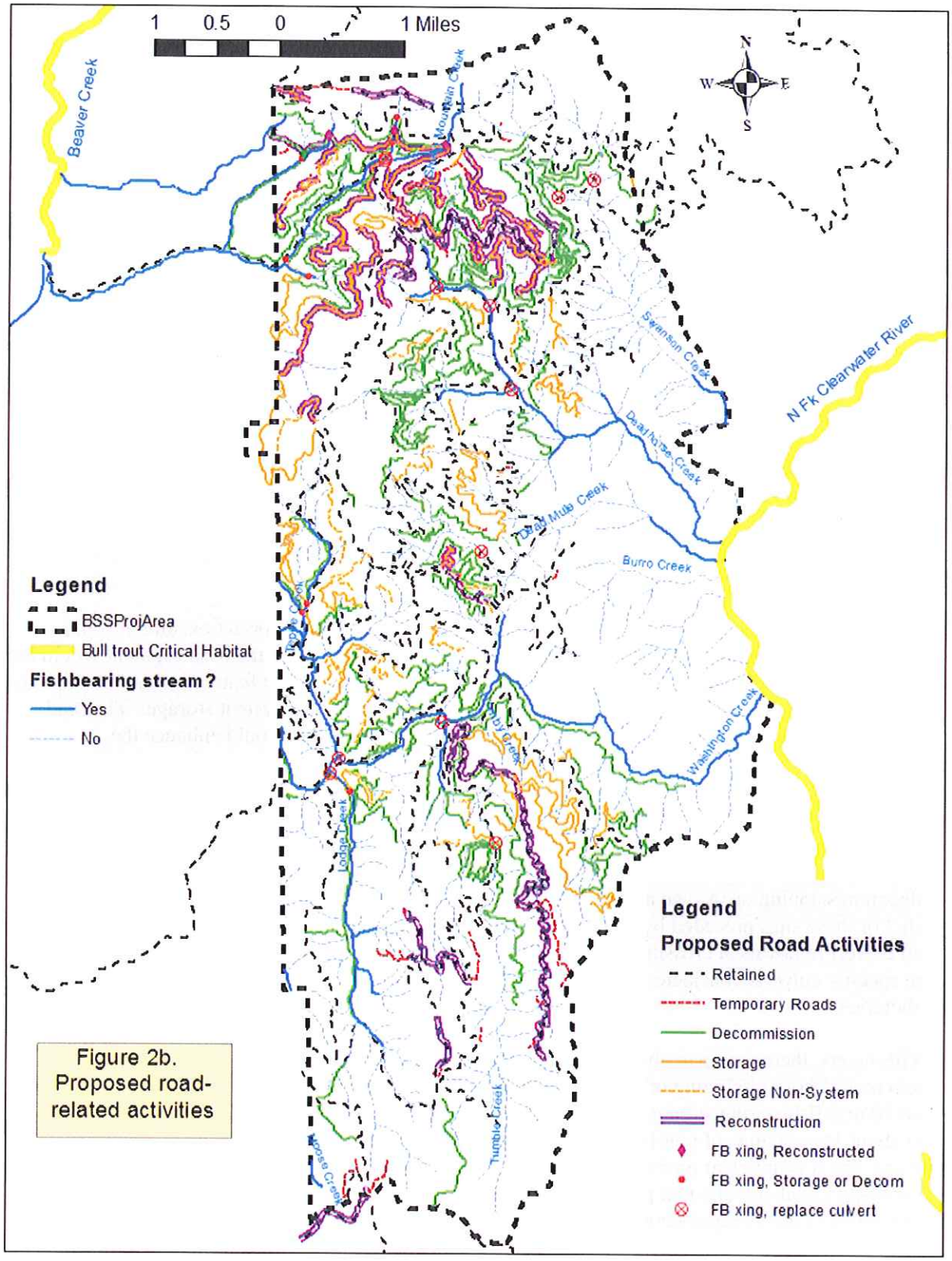

Figure 2b. BSS Project Area and proposed road-related activities. Abbreviation: FB xing = Fishbearing stream crossing. See text for number of crossing activities on non-fishbearing streams.

cleared of vegetation, shaped to a drivable surface, and drainage features/structures are installed, cleaned, reset, or replaced. Project roads and roads leading off the Forests (primarily the 246, 247, and 680 roads) would be used by trucks to transport logs to mills. Road work, including drainage improvements, would be performed during dry periods to avoid causing erosion and soil compaction (Mitigation Measure #4).

Watershed Improvements: Part of the purpose of the Barnyard South Sheep project is to improve watershed conditions, primarily through removal or modification of roads and skid trail mileage (and associated culverts and ditches) which is not needed for future Forests management. Many culverts on roads which would be maintained and which are undersized for their catchments or which pose upstream passage problems for aquatic organisms would be replaced with larger or lower-gradient pipes.

Road Decommissioning and Intermittent Storage: Roads identified as no longer needed for management (see Figure 2b and Table 2) would be decommissioned either through obliteration or abandonment to: (1) decrease soil erosion and instream sediment deposition; (2) help restore channel structure and function; and (3) restore hillslope hydrologic processes to a more natural condition. Roads proposed for abandonment are often ridge top roads with few if any stream crossings, where road surveys show minimal risk of soil erosion or mass failure. Abandonment would leave the road in place and allow vegetation to reclaim the road surface. The mileage of abandoned vs. decommissioned road is not currently known, and will depend on site logistics, funding, etc. Existing roads projected not to be used for the next 20 years or longer would be put into intermittent stored service. Practices used are intended to assure that the road is placed into a self-maintaining condition that removes all high risks of failure. Although these roads are to be retained on the transportation system and closed to full-size motorized vehicles, they may or may not be closed to motorcycles and ATVs – depending on future analyses.

Road decommissioning and placing roads into intermittent storage are proposed to correct existing resource problems and not to mitigate for other elements of this project. In decommissioning, the road segment would be recontoured to or near its former gradient and culverts and other engineered drainage features would be removed, while outsloping but not full recontouring would typically be implemented in intermittent storage. The road prisms would be hydrologically inactivated with both activities, and activities that would enhance the establishment of vegetation implemented.

Culvert removal. Existing road crossings of streams in the project area are mostly made with culverts, although there two bridges over Washington Creek (the 670 and 5301 roads). In the proposed project the culverts on the roads to be decommissioned or stored would be removed. In addition, 9 crossings of fishbearing streams on roads proposed for decommissioning or storage are predicted based on GIS layers and are listed in Table 3 and shown in Figure 2b, with 3 of these sites preceded by reconstruction (to allow access to a harvest unit). With the exception of the proposed culvert removals at crossings of Lodge and Sheep Mountain creeks (one each) on roads proposed for storage, the specific culverts considered for replacement are on generally steep and barely-large-enough-to-be-fishbearing tributaries.

Based on the GIS layers, there are up to about 213 crossings/culvert sites on non-fishbearing streams with proposed system road decommissioning or storage (see Figure 5 for a typical example of such a stream/culvert), and up to about 10 non-fishbearing stream crossing sites on non-system road proposed for decommissioning or storage. Up to about 15 crossings of non-fishbearing streams exist on other roads that would be reconstructed and maintained for use, but it is not clear how many of these culverts (if any) would be replaced or reset. There are presumably many additional culverts that pass the flow from very small drainages/seeps and that drain ditches that would be removed in the storage/decommissioning of existing roads, but the CNF hasn't catalogued these. There are no stream crossing culverts necessary for proposed temporary road; any ditch relief culverts would be pulled upon decommissioning of these roads.

Road decommissioning and storage would be performed with heavy equipment, typically trackhoes (aka excavators) working from the Road decommissioning and storage, would be performed during dry periods to avoid causing erosion and soil compaction (Mitigation Measure #4) and culvert removal associated with decommissioning and storage would be performed during periods of low streamflow (typically late summer and early fall). The Forests would take other measures when decommissioning roads (Mitigation Measure #7) and removing culverts (Mitigation Measure #8) to minimize transmission of sediment into stream channels; these BMPs are described in more detail in Greenup (2014).

Culvert replacement: Some of the culverts passing streams under existing roads which are to be retained after project implementation (as opposed to culverts on roads which are to stored or decommissioned) but some of these culverts are undersized for the size of the relevant stream width or drainage area, or were constructed with or have formed impediments to upstream aquatic animal passage. Part of the project proposal is to replace up to 79 of these culverts with new structures. Of the up to 79 culverts proposed for replacement on either the retained portions of the 246 (Figures 4 and 5, as examples), 670, 680, 722, and 5301 roads, 11 are on smallish fish-bearing perennial streams (see Figure 2b and Table 3 for locations); 4 more are on small non-fishbearing streams which might be large enough for fish if downstream natural barriers did not exist, and about 67 are on small-to-tiny non-fishbearing perennial streams, seeps, or trickles. With the exception of one proposed culvert replacement each on Tumble, Lodge, Tepee, Deadhorse (Figure 4), and Sheep Mountain creeks, the specific culverts considered for replacement are on generally steep and barely-large-enough-to-be-fishbearing tributaries. Culvert replacements would be performed during periods of low streamflow (typically late summer and early fall) and other measures (Mitigation Measure #8) would be taken to minimize transmission of sediment into stream channels; BMPs are described in more detail in Greenup (2014).

IV. DESIGN FEATURES, MITIGATION MEASURES, AND MONITORING

Mitigation measures are designed to eliminate or reduce to acceptable levels the effects of proposed activities, and design measures are aimed at avoiding specific resource issues (...the effects of proposed activities. Design features are...). A majority of these are derived from site specific best management practices (BMPs) from the Idaho Forest Practices Act and Stream Channel Alteration Handbook, with comparable practices from the FS R1/R4 Soil and Water Conservation Practices Handbook (FSH 2509.22). Relevant measures are listed below, and the effectiveness of the each measure is also included, where applicable.

1. INFISH default buffers are to be used to define timber sale unit boundaries. No timber harvest is to occur within 300 feet of fish-bearing streams, 150 feet of perennial non-fish bearing water, 50 feet of intermittent streams, and 150-foot slope distance from the edge of wetlands larger than one acre

Clearwater National Forest audits show this measure to be 99% effective.

2. Avoid direct ignition of fuels within RHCAs and/or clumps of live trees. Where low-intensity fire is allowed to back into the edges of some of these areas, the result should be no more than 10% tree mortality.

Low-intensity prescribed fire and underburning has resulted in incidental mortality of leave-trees, yet mortality is minimal and often limited to edges or isolated trees.

3. Leave a 50 ft. slope distance (or ½ the height of a site potential tree, whichever is greatest) no harvest, no-ignition INFISH buffer from perimeter of areas that contain unstable soils.

• Unstable and landslide-prone areas in treatment units have been field-checked and units with potentially unstable areas according to stability assessments are displayed in the table in the soils report appendix. Units 1-7,

10, 13, 14, 19, 20, 23, 34 and 35 have the highest percentages of unit area with potentially unstable slopes. Site-specific delineation of unstable areas would occur during project layout.

Retention of root strength is important for reduction of landslide hazard (McClelland et al. 1997). Forest soil scientists have observed that adjusting canopy retention based on landscape features has been effective in maintaining slope stability. Avoidance of wet and unstable soils provides effective soil and water protection.

4. Restrict activities when soils are wet to prevent resource damage (indicators include excessive rutting, oil displacement, and erosion).

BMP implementation and effectiveness rates on similar landforms have been found adequate to prevent sediment delivery to streams. On the Forest, BMPs applied to prevent sediment delivery from roads used and maintained for timber harvest activities have high implementation and effectiveness rates, averaging 99% and 98% respectively, from 1990-2009 (USDA 1990-2009).

5. Temporary roads would be located on upper hillslope or ridgetop positions and would not cross highly sensitive and unstable areas such as perennial or intermittent streams, wetlands, areas with wet or poorly-drained soils or unstable steep concavities and dissections that accumulate water to minimize the potential for surface erosion, road failures and sediment delivery. The following design measures would also be implemented:

- Increased drainage spacing (80 to 545 feet) and slash filter windrow placement below the road prism would be required on specific temporary roads identified in Appendix C of the Watershed Report.
- Under the proposed action, temporary roads 33.5 and the segment of temporary road 29.1 from milepost 0.65 to milepost 0.93 (end of road) would be constructed, used, and decommissioned during one summer/fall season to minimize erosion and the potential for stream sediment delivery.
- Under the proposed action, temporary road 29.1 from milepost 0.00 to 0.65 would be retained for site preparation activities (expected to occur within 5 years following construction) before being decommissioned. This temporary road would be specifically located and designed by a FS Engineer to alleviate soil and water resource concerns during the extended time period. The road would be closed to public motorized-use and open for administrative use only.
- Under the proposed action, temporary road 11.4 would be constructed, used, and decommissioned during one summer/fall season to minimize erosion and the potential for stream sediment delivery.
- Select non-system roads with identified resource concerns will be reviewed by FS Engineer prior to haul and site specific design criteria will be developed (e.g. spot gravel, reconstruction, etc.) to alleviate resource concerns. Design considerations for haul and storage are identified in Appendix C of the Watershed Report.

Road design and mitigation can decrease sediment production (Burroughs and King1989; Burroughs et al 1984) with use of slash windrows, application of gravel and application of seed to disturbed areas. Design of cut and fill slopes at gentler grades decrease likelihood of surface erosion. Increasing frequency of drainage structures minimizes the contributing area of surface erosion and sediment introduction to streams (Elliot et al.1999).

6. To restore slope hydrology and soil productivity, all temporary roads would be scarified and recontoured (decommissioned) following use (within 3 years after construction, with exceptions listed in Design Measure #5). Excavated skid trails would also be scarified and recontoured. Reshape cut/fill slopes to natural contours. Apply seed and available slash to the recontoured surfaces (slash is considered available where the equipment is able to reach it from the working area where the decommissioning is occurring).

Decompaction has been shown to decrease bulk density by 30-60% in comparison to compacted areas (Rone 2011). Road decommissioning monitoring on the Forest across a wide range of sites has documented an increase in vegetative cover from 18% the year after decommissioning to 64% at 10 years after decommissioning (USDA 2009). Monitoring has shown decommissioning and storage treatments to be effective at reducing surface erosion, mass failure risk and soil bulk density while increasing water infiltration rates, vegetative ground cover and soil organic matter (Foltz 2007, Lloyd et al. 2013, USDA 1999-2009).

7. During road decommissioning or long-term storage activities, measures are to be taken to prevent sediment from entering streams during project activities and in the long-term, such as: (a) 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 grasses (weed free) for short-term erosion protection and with shrubs and trees for long-term soil stability; (d) mulching with native materials, where available, or using weed-free straw to ensure coverage of exposed soils; (e) dissipating energy in the newly constructed stream channels using log or rock weirs; and (f) armoring channel banks and dissipating energy with large rock whenever possible.

Monitoring has shown decommissioning and storage treatments to be effective at reducing surface erosion and mass failure risk while increasing water infiltration rates and vegetative ground cover (Foltz 2007, Lloyd et al. 2013, USDA 1999-2009).

8. Proposed culvert replacements would be sized to meet or exceed natural bankfull channel width and designed to pass a 100 year flow event. Crossing replacements would follow natural stream grade to accommodate sediment, debris and water transport. BMPs and mitigation measures similar to those listed above for road decommissioning and storage activities would be employed to minimize sediment inputs to streams.

9. Areas with very thin, rocky or droughty soils where soil productivity and reforestation potential is low would be avoided or would receive heavy live-tree retention to assure soil and site protection and regeneration success. These areas may include rock outcrops, areas of bare surface soil lacking vegetation, litter and organic surface horizons, and soils with abundant rock fragments in the surface soil horizons. During field surveys, these sensitive areas were noted in Units 8, 9, 18, 20, 29 and 33.

Adjusting tree-retention on sensitive soil areas and sites with potential regeneration limitations during project layout and implementation has been a routine and effective practice to protect soil and site productivity.

10. Locate and design skid trails, landings and yarding corridors prior to activities to minimize the area of detrimental soil effects. Space tractor skid trails no less than 80 feet apart (edge to edge), except where converging on landings. This does not preclude the use of feller bunchers. Excavations would be minimized as much as possible.

11. Restrict equipment used for post-harvest excavator piling to existing trails and/or previously impacted areas. When machine piling, existing duff/litter would be retained (as much as possible) and not included in the activity slash piling. Slash would be allowed to overwinter prior to burning.

12. On dry sites, retain an average of 7 to 15 tons/acre of coarse woody debris (greater than 3 inches in diameter) following completion of activities. On moist sites, retain an average of 17 to 33 tons/acre.

Effectiveness is moderate to high based on past monitoring and research (Froehlich and McNabb 1983; Graham et al. 1994; Graham et al. 1999; Korb 2004; Neary et al. 2008; Curran et al. 2005). BMPs applied on the Clearwater NF have consistently exceeded 97% implementation and

effectiveness (Clearwater NF 1994, 1997-2009) for soil protection practices.

13. Scarify non-excavated skid trails and landings that are compacted or entrenched 3 inches or more. Scarify to a depth of 6 to 14 inches. No decompaction work should be done during wet weather or when the ground is frozen or otherwise unsuitable for effective decompaction.

Decompaction has been shown to decrease bulk density by 30-60% in comparison to compacted areas (Rone 2011). Vegetative cover increases from from 18% the year after decompaction during road decommissioning to 64% at 10 years after decommissioning (USDA 2009).

14. Paying attention to Units 1, 4, 6, 7, 11, 18, 22, 33, a logging system layout design would be developed to reuse as many of the existing skid trails and landings as possible to limit the amount of new detrimental disturbance.

New soil disturbance can be minimized by using existing skid trails and/or by designating the locations of new skid trails (Froehlich and McNabb 1983). Logging systems developed with limits on the potential area affected have been successful in reducing soil compaction by harvest activities (Adams and Froehlich 1981). Soil improvement through decompaction and decommissioning activities can only moderately offset soil compaction and displacement but these actions initiate recovery on areas otherwise left in an unproductive condition.

15. For Unit 15, limit acreage of new disturbance (skid trails/landings) to 16.8 acres to be within 15% Standard (Adams and Froehlich 1981). To assure that this unis remains at or below 15% DSD following project implementation, where possible, locate main skid trails only on existing disturbed areas with few one pass trails occurring on undisturbed ground or use a cut-to-length forwarder system.

Machine trails can accomplish harvest and site preparation and remain within the 15% standard (Archer 2008), but if uncontrolled, can lead to extensive trails and detrimental soil disturbance. Sale administration and equipment operator skills are necessary for success. Re-use of trails and subsequent decompaction minimizes impacts. Logging systems developed with limits on the potential area affected have been successful in reducing soil compaction by harvest activities (Adams and Froehlich 1981).

16. For the purpose of maintaining snag habitat, timber harvest prescriptions would follow Regional guidance (Bollenbacher et al. 2009, pgs 18-20) on project level snag/live tree retention estimates in early seral and mid-seral conditions. The larger legacy/relic tree species (ponderosa pine, western larch, Douglas-fir) would be selected for retention. In regeneration harvest units, snags/live trees would be retained in ¼ to 3 acre groups, with preference to snags or damaged trees that are greater than 15 inches in diameter, greater than 20 feet tall, and with broken tops. Leave clumps of snags mixed with green trees, or lone snags that have little potential to cause safety issues during timber felling. The retention of snags would be avoided near log landings and firelines and within 100 feet below and 200 feet above a road opened to any motorized vehicle.

Effectiveness is expected to be high, if tree marking guides are properly implemented.

17. If activities impact previously unknown sensitive plant occurrences, the Botanist will be notified, who will direct appropriate measures depending upon the ecology of the plant species involved and the nature of the activity.

Effectiveness is expected to be high, based on past experience with the implementation of other projects, in which new sensitive plant occurrences were brought to the attention of the Forest Botanist and appropriate measures were applied to protect the plants.

18. Any goshawk nests found before and during implementation would be protected with a 40-acre no-activity buffer, and a 420-acre Post Fledging Area would be seasonally restricted from 4/15 to 8/15.

19. Remove all mud, soil, and plant parts from off road equipment before moving into the project area to limit the spread of noxious weeds. Conduct cleaning off National Forest lands.

20. Certify that rock used for surfacing is free of noxious weed seed.

21. If noxious weeds are found on the haul routes for this project, spraying of these weeds would occur along the road prisms two times, once before hauling and once after hauling is completed. Although the intent is to spray pre- and post-hauling, there may be some exceptions to this due to timing of logging and appropriate season of application. Spraying typically occurs during the spring or fall usually between June and early July, or during September. Treatment of invasive plants would be consistent with the strategy outlined in the 2005 North Fork Noxious Weed Treatment Environmental Assessment. Toxic Spill Prevention

The Purchaser/Contractor shall take all reasonable precautions to prevent pollution of air, soil, and water by Purchaser/Contractor's operations. The Contracting Officer Representative will designate the location, size and allowable uses of service and refueling areas. The criteria below will be followed at a minimum:

a. The Purchaser/Contractor shall maintain all equipment operating on Contract Area in good repair and free of substantial leakage of lubricants, fuel, coolants, and hydraulic fluid. Petroleum product storage containers holding more than 120 gallons, stationary or mobile, will be located no closer than 300 feet from stream, watercourse, or area of open water when not actually being used during the working day.
b. Transferring petroleum products: During fueling operations or petroleum product transfer to other containers, there shall be a person attending such operations at all times.
c. Contractor shall not service tractors, trucks, or other equipment on National Forest lands where servicing can possibly result in transmission to streams or other water bodies. Contractor shall furnish oil-absorbing mats for use under all stationary equipment or equipment being serviced to prevent leaking or spilled petroleum-based products from contaminating soil and water resources. Contractor shall remove from National Forest lands all contaminated soil, vegetation, debris, vehicle oil filters (drained of free-flowing oil), batteries, oily rags, and waste oil resulting from use, servicing, repair, or abandonment of equipment.
d. Construction of an engineered containment structure (excavated sump and constructed berms) is required to house fuel storage containers when fuel storage exceeds 1320 gal.
e. In the event any leakage or spillage enters any stream, water course or area of open water, the operator will immediately (in TSC B6.342 or SC G.3.4.1) notify the COR. In the event that Contractor's Operations or servicing of equipment result in pollution to soil or water, Contractor shall conduct cleanup and restoration of the polluted site to the satisfaction of Forest Service.

Moderate effectiveness. Planning ensures foresight, but cannot eliminate the risk of materials being spilled and escaping into waters.

Monitoring

The following monitoring activities would continue or be initiated with the BSS project:

1. The Timber Sale Administrator or Contracting Officer Representative will make periodic checks on the progress of the sale to ensure contractual compliance.

2. INFISH compliance monitoring will be conducted annually by the Forest Fisheries Biologist in

conjunction with BMP audits with the Forest Hydrologist. The monitoring is done on a sample of the recently completed activities each year, noted in the Monitoring Plan and reported in the annual Clearwater National Forest Monitoring and Evaluation Report available on the Forest web site http://www.fs.usda.gov/main/nezperceclearwater/home.

3. Soils monitoring will occur across the Forest to assess: (a) the accuracy of disturbance estimates; (b) if project design measures, such as live-tree retention, were effective; and (c) if units meet Regional soil quality standards. Sampling will cover all combinations of treatment and yarding methods, including units from this project. Results will be reported in the annual Clearwater National Forest Monitoring and Evaluation Report.

4. Herbicide effectiveness monitoring would occur following chemical application, within the season of treatment, to determine the success of treatments.

V. EXISTING CONDITION

The primary human activities in the project area that would have the potential to affect special-status species have been transportation/road construction, timber harvest and associated activities, and recreational activities.

The project area is approximately 17,575 acres and is delineated on the west by the Forests boundary, on the south and southeast by the boundary of the Washington Creek subwatershed, on the east and northeast by the North Fork Clearwater River (NFCR) and (primarily) the Swanson Creek drainage of the Little Washington Creek subwatershed, and on the northwest primarily by the portion of the Sheep Mountain Creek drainage (of the Beaver Creek subwatershed) within the Forests boundary (Figures 1, 2a, and 3). The project area is mostly within the Washington (~8,800 acres) and Little Washington (~6,950 acres) subwatersheds of the Washington Creek watershed of the Upper North Fork Clearwater subbasin, with about 1,800 acres in the Beaver subwatershed of the Beaver Creek watershed in the Lower North Fork Clearwater subbasin (Figure 3). The project area is composed completely of National Forest System (NFS) lands, but the Beaver Creek and Washington Creek subwatersheds are predominantly owned and managed by the Potlatch Corporation and the State of Idaho. All proposed harvest treatments are located on lands primarily managed for timber production (Forest Plan Management Area E1, or on "US" land for which the prescription has been modified or determined on the ground to be unwarranted).

The primary purposes for the project are vegetation treatments which improve tree species diversity and stocking density and which yield timber. The project also includes watershed improvement components (primarily road decommissioning and storage). Much of the project area was previously regeneration or selectively logged since the 1950's.

The relatively heavily-travelled 246 road enters the central portion of the project area from the west and exits at the northeast, while the relatively well-maintained 680 and 681 provide passenger-vehicle access to the northwest portion of the project area. There are also miles of high-clearance vehicle access roads and some system roads not open to motorized travel, some of which are in various states of disrepair and vegetation growth.

The "town" of Headquarters is located approximately 8.5 air miles west of the project area. The Barnyard South Sheep project area receives relatively low recreational use, primarily ATVers in the summer, hunters in the autumn, and snowmobilers in the winter. The primary recreation site in the project area is the Camp 60 dispersed campsite and motorized trailhead. The project area includes many miles of designated motorized trails, with the heaviest use on the Camp 60-Sheep Mountain Trail System.

Most (~70%) of the timberlands in the cumulative effects area escaped the effects of the wildfires of the early 20th Century, but the effects of White Pine Blister Rust and fire suppression left most of the area in an early-seral stage

and shifted from a white pine dominated forest to one dominated by Douglas-fir and grand fir. Timber harvest on National Forest lands within the project area started in the 1950s, primarily as white pine selection and clearcuts, and continued at a relatively rapid pace through the 1960s. Timber harvest declined substantially in the 1980s through the present. On the private and state lands in the upper Washington Creek drainage, timber harvest has continued at a rapid pace as stands mature to commercial size, and so nearly all of the mature and old growth stands in the cumulative effects area are on NFS lands. Road density (primarily for access to timber stands) in the cumulative effects area subwatersheds is very high at between about 4-6 miles of road/square mile of area. The harvest of private and state timber stands will likely continue to occur on a rotation of about 60 years.

Recreational use occurs throughout the summer months, starting around before Memorial Day at lower elevation as snow melts off access roads, continuing through the fall hunting seasons. A number of dispersed campsites are located along the road system. The road system is used by full-size vehicles and OHVs. Along with the developed Camp 60 trailhead area, several system OHV routes exist and OHV use is increasing. Roads are also open to snowmobile use in the winter, which can cause disturbance and/or displacement of wildlife species. Similar or slightly increased motorized and non-motorized winter use is anticipated in the future.

Livestock grazing began at the time of European settlement. Livestock compete for forage with and displace some species of wildlife. Livestock use was concentrated in meadows and riparian areas and reduces the quality of these habitats for fish and wildlife. Although there are no FS grazing allotments, there is likely some cattle grazing on Potlatch land in the upper Washington Creek drainage.

Placer mining was common in most to the NFCR basin in the late 19th and early 20th century, and there was probably some in the cumulative effects area. There does not appear to be much gold in the streams of the cumulative effects area, and no placer mining is known to currently occur.

As described in A.4.a, IDFG has no public records of fish stocking the cumulative effects area, although some (of mostly rainbow trout) occurred in the NFCR up until the 1980s. There was likely unrecorded stocking of rainbow and perhaps cutthroat trout in the cumulative effects area in the mid-20th century, and the ubiquity of brook trout in the upper Washington Creek subwatershed makes it very likely that this species was directly introduced to the drainage.

Ongoing and foreseeable activities that might have the potential to affect aquatic species within the analysis area include primarily include timber harvest and associated road construction, road decommissioning and other rehabilitation, motorized recreational activities, and firewood gathering. Game species are subject to angling, hunting, and trapping under State regulations.

VI. EFFECTS ON THREATENED, ENDANGERED AND SENSITIVE SPECIES

A. Endangered Species Act Listed Species

Bull trout and bull trout critical habitat. Background. Bull trout were listed as threatened under the Endangered Species Act on June 10, 1998 by the U.S. Fish and Wildlife Service (USFWS, 63 FR 31693). The USFWS designated critical habitat for Columbia River Basin bull trout in the lower and upper North Fork Clearwater subbasins on November 17, 2010 (75 FR 63898). The critical habitat designation does not include any portion of the BSS project area, but does include the mainstem of the North Fork Clearwater River (NFCR) and the mainstem of Beaver Creek, to which the project area is tributary (Figure 3).

Distribution. Resident, fluvial and adfluvial populations of bull trout were historically distributed throughout the Pacific Northwest in the United States and western Canada. Resident and fluvial populations occurred throughout

the Snake River basin including the NFCR and its tributaries. Bull trout co-evolved with redband trout (*Oncorhynchus mykiss gairdneri*), westslope cutthroat trout (*O. clarki lewisi*), chinook salmon (*O. tshawytscha*), and mountain whitefish (*Prosopium williamsoni*). Recent surveys in the known range of bull trout in Idaho have shown metapopulations in widely scattered segments of river basins (Rieman and McIntyre 1993), as well as in isolated catchments. Bull trout populations are present in about a dozen subwatersheds in the combined upper and lower NFCR subbasin on the Clearwater National Forest (CNF).

In relationship to the proposed action, bull trout presently occur in the NFCR drainage on the North Fork Ranger District. These fish spawn and rear young in many of the tributaries the NFCR (USFWS 2002), but the mainstem of the river and the lower reaches of many of the tributaries are not considered to be spawning or early (i.e., first year) rearing habitat. The mainstem of the NFCR is thought to harbor adult and advanced juvenile fluvial (i.e., large-river dwelling) bull trout year-around and is known to serve as a migratory corridor for adult and advanced juvenile fluvial and adfluvial (lake-dwelling) bull trout during the spring and fall. In addition, some subadult fluvial and adfluvial bull trout (typically 175-300 mm in length) are known to "wander" into habitat which may not be suitable for spawning or early rearing (as opposed to migration to or from spawning and/or early rearing habitat) and may exist for short or long periods in streams reaches that otherwise would be unoccupied or used only as a migratory corridor (Personal communication, Bruce Rieman, Fisheries Research Biologist, RMRS). Full-time residents of the tributary streams where fluvial and adfluvial fish spawn and conduct early rearing are the third bull trout life history type known to occur in the NFCR drainage.

Presence in Action Area. Native fish species in streams within the project area and its subwatersheds (Figures 2a, 3, 7) include westslope cutthroat trout and redband rainbow trout. Anadromous aquatic species originally inhabited the NFCR and tributaries, but have been blocked from accessing the project area for about 40 years by Dworshak Dam. Introduced kokanee (*O. nerka*) make spawning migrations to the mouth of Beaver and Washington creeks in most years.

There do not appear to be any records of bull trout occurring within the project area, excluding the portion of the eastern boundary formed by the NFCR, which is migratory habitat for several bull trout populations. Within the larger area of the three project subwatersheds (Washington, Little Washington, and Beaver Creek, and again excluding the mainstem NFCR), extensive snorkeling surveys were conducted by CNF contractors in the 1990s (CBS 1991, 1998, 1998a, 1999; IWW 1998), but only a single bull trout was detected, a 90-mm juvenile at the uppermost site on Beaver Creek (CBS 1991, Figure 3). Other sampling effort in these three subwatersheds includes Moffitt and Bjornn (1994) who conducted snorkel transects at two sites on Beaver Creek in 1983, detecting 2 bull trout at one site and one at the other; IDFG followed up with snorkel surveys at these same sites each year from 1994-1998, detecting one bull trout at one site in 1998 (Cochnauer et al. 2001, 2003). In conjunction with a bull trout radiotelemetry study, IDFG snorkeled a total of 11 transects in Beaver Creek from 2002 through 2005 detected a total of 2 bull trout <350 mm and 6 >350 mm (Hanson et al. 2014). In addition to the above efforts, the IDEQ electrofished at 17 sites in the three project subwatersheds from 1997 through 2010 but recorded sampling no bull trout. Kenney (1994) documented electrofishing at 10 sites on Potlatch Corporation land within the Washington Creek subwatershed in 1989 which also detected no bull trout.

In the radiotelemetry study mentioned above (Hanson et al. 2014), IDFG radio-tracked several hundred adult bull trout in Dworshak Reservoir and its tributaries. IDFG determined that, between 2000 and 2005, 7 radio-tagged bull trout entered the Beaver Creek drainage and 5 entered the "Schofield Creek HUC 5" (*sic*) and "presumably spawned" (or it at least survived the spawning period) because they were detected entering these areas and migrating passed a fixed radio antenna in or just upstream of Dworshak Reservoir. Scofield Creek is a tributary of Washington Creek, but the boundaries of this IDFG "HUC 5" include about 15 miles of the mainstem North Fork Clearwater and several other face drainages in addition to the Washington Creek subwatershed. The figures in Hanson et al. (2014) which depict individual radio-tag detections in the mainstem of Beaver Creek do not show any in the Washington Creek drainage, so it appears that there is no evidence than any "Schofield HUC 5" bull trout entered or spawned in the Washington Creek drainage (or the project area).

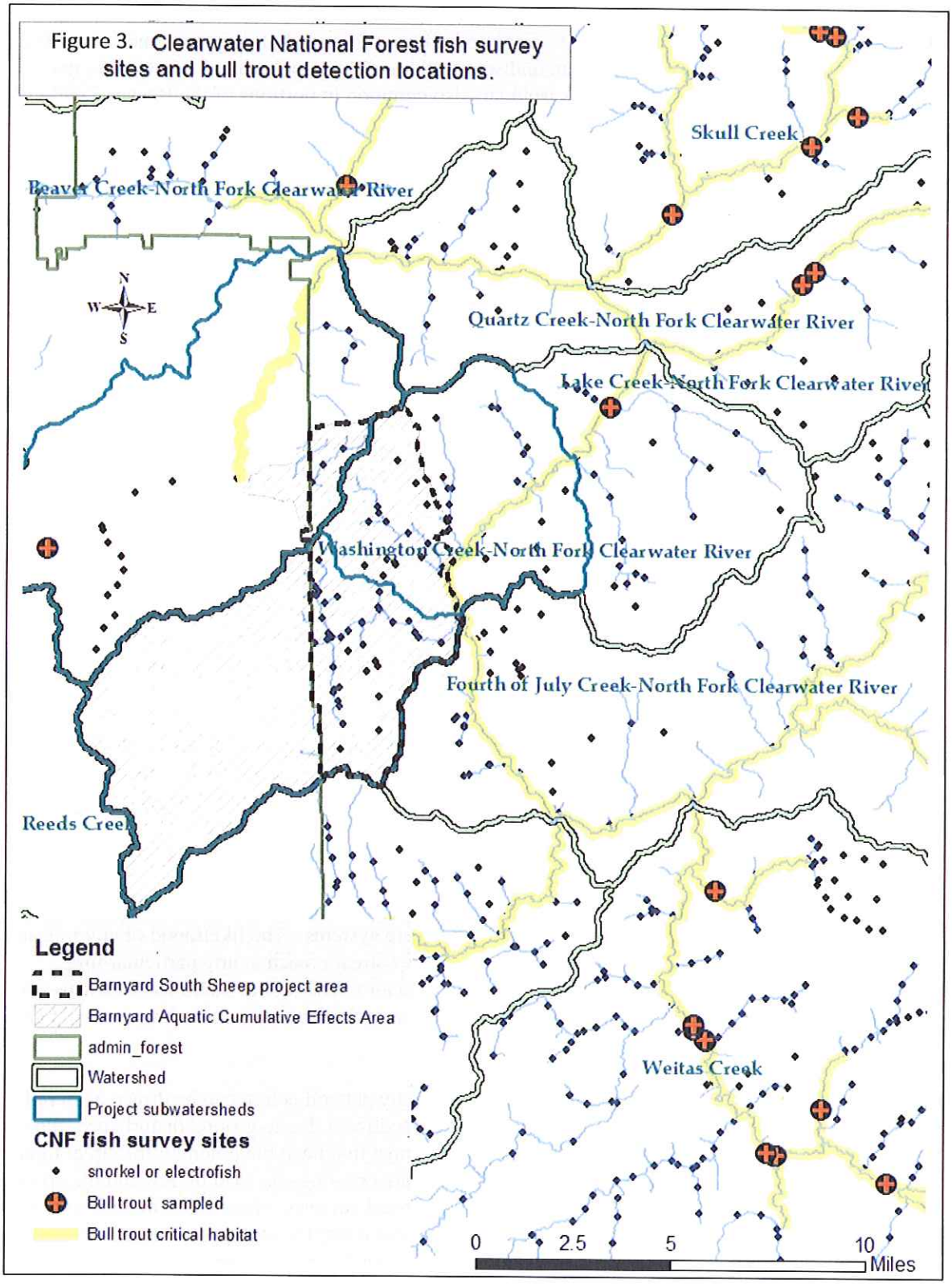

Figure 3. BSS Project Area with fish sampling sites and bull trout information.

In addition, the sampling in streams on private and State-managed land in the upper portion of the Washington Creek drainage (as well sampling in Lodge, Tepee, and Tumble creeks on Forests-managed land, Figure 7) show that introduced brook trout appear to be well established, and often dominant, in these streams. Given the propensity for dominant populations of brook trout to displace bull trout through hybridization and competition (Warnock and Rasmussen 2013), the likelihood of an undiscovered breeding population of bull trout in the Washington Creek drainage seems very low. Brook trout are also common in portions of the Beaver Creek subwatershed (CBS 1991).

The earliest bull trout draft recovery plan (the first plan, USFWS 2002) discusses sampling efforts and professional judgments of knowledgeable biologists regarding presence and distribution of bull trout in streams and drainages in the North Fork Clearwater subbasins, but does not document the species' presence in the project area. Neither the Washington Creek watershed nor the Beaver Creek watershed was considered by the USFWS (2002) as supporting a local population of bull trout, although the latter was identified as an area that had some potential to support a reproducing population. The watershed was actually identified as a "second priority" potential population because "although still important to recovery...they currently have degraded habitat or threats present such that support of bull trout may not be currently possible."

Based on the proven presence of bull trout in the NFCR (into which most project streams flow) and potential presence in Beaver Creek (into which Sheep Mountain Creek flows indirectly by first finding its confluence with the East Fork of Beaver Creek about 2,000 feet upstream from the mainstem of Beaver Creek), stray adults and subadults may rarely enter these streams temporarily and could potentially be present in NFCR or Beaver Creek tributaries within the BSS project area during project implementation. As noted above, some subadult fluvial and adfluvial bull trout (typically 175-300 mm in length) are known to "wander" into habitat which may not be suitable for spawning or early rearing (as opposed to migration to or from spawning and/or early rearing habitat) and may exist for short or long periods (and with timing presumably unrelated to normal migratory seasons) in streams reaches that otherwise would be unoccupied or used only as a migratory corridor. The existence of a stray or wandering fish entering the project area should be the only potential for direct effects of the proposed project on individual bull trout.

In summary, while there is no record that individual bull trout exist for the project area, many or all of substantial streams in the NFCR drainage may harbor adult and advanced juvenile fluvial (i.e., large-river dwelling) from breeding populations elsewhere in the watershed year-around and these streams are known to serve as migratory corridors for adult and advanced juvenile fluvial and adfluvial (lake-dwelling) bull trout during the spring and fall. It is possible that a few transient adults or subadults originating outside of the project are could be present in project area fishbearing streams at any time of year, including the lower reaches of Washington Creek and Sheep Mountain Creek and their tributaries, but probably not in the high-gradient upper reaches of the Little Washington Creek, Swanson Creek, Deadhorse Creek, or Dead Mule Creek stream systems. The likelihood of any transient or wandering individual bull trout being present at any particular project stream reach at any particular time, however is very low. The mainstem of the NFCR and, possibly, Beaver Creek (about 2,000 feet downstream from the mouth of Sheep Mountain Creek) support migratory and fluvial individuals some of the year and are designated critical habitat.

Potential Project Impacts. Potential adverse effects to bull trout of any general action can be direct, as in redd disturbance by heavy equipment, or indirect, as in increases in fine sediment due to ground disturbance. For this specific proposed project, activities proposed within the stream channel that have the potential for direct injury to individual fish present include excavation of culverts and other stream crossings on road prisms and the crossing of vehicles and heavy equipment at fords or sites with recently-removed culverts. Vegetation treatments and associated activities can theoretically have indirect effects on bull trout related to stream sedimentation, channel modification, and reduction in shade and large woody debris, but project design and mitigation measures are intended to prevent or greatly reduce such effects.

Direct effects. Some of the road-related activities associated with the proposed action (especially culvert replacement, storage, and decommissioning) would take place within stream channels, and in-water work would have some potential to cause direct injury or mortality to individual bull trout through mechanical injury or localized and brief changes in water quality, especially high turbidity, if individuals are in proximity to the project sites. There is also some potential for fuel or other contaminant spills into stream channels from vehicles or heavy equipment used for the road-related activities of the proposed action, including log yarding and hauling. The impacts of road-related activities within RHCAs would be minimized and mitigated through design features (Section IV) to reduce potential direct impacts on bull trout and other stream and riparian species.

Per the discussion above, the proposed in-stream activities in fishbearing streams (Figure 2b) would occur about 2.4 and 2.5 miles (the upper reaches of Sheep Mountain and Deadhorse creeks) to (more plausibly) 4 miles (Tumble Creek) upstream from the nearest likely presence of individual bull trout in Beaver Creek or the NFCR, so no direct mechanical injury would likely occur. The closest instream activity to Beaver Creek or the NFCR at any culvert removal or replacement site (including seeps and trickles) at a non-fishbearing stream (per our GIS layer) is an unnamed tributary of Washington Creek about 1.5 miles upstream from the NFCR. The nearest vegetation management to a stream with likely bull trout presence (i.e., either the NFCR or Beaver Creek) is site regeneration harvest Unit 23 in the headwaters of non-fishbearing Burro Creek (Figure 2a) about 1.25 miles upstream from the NFCR, while in proximity to fish-bearing streams, regeneration harvest Unit 16 about 2.7 miles upstream from Beaver Creek (Figure 2a). As described above, the project area would not have any spawning adult bull trout, bull trout redds, or early rearing juveniles present, but the presence of a few "wandering" non-spawning adults or subadults in one or a few of the larger streams cannot be ruled out. The instream culvert removal or replacement described above could potentially directly affect individual bull trout through mechanical injury, although any adult or subadult bull trout present are likely to be agile and alert enough to move away from and so avoid harm from activities such as culvert excavation and stream crossings by heavy equipment.

Another mechanism for the potential direct injury or mortality to bull trout would be the transmission of toxic substances (gasoline, oil, grease, etc.) into streams from fuel spills or leaky or dirty equipment, or the generation and downstream transmission of very high levels of fine sediment from stream crossing or culvert rehabilitation (Muck 2010). As noted above, there are 20 sites where heavy equipment would be used to excavate in a fish-bearing stream channel. Because of the Design Features, etc. in Section IV and the large dilution effect of the flow volume of Beaver Creek or the NFCR, however, contaminants should have essentially no potential to diffuse into streams where bull trout would likely be present at concentrations that would be harmful bull trout in those streams. If bull trout are present in the project area streams, then the potential for direct harm to individuals from contaminants or very high levels of fines sediment would be higher than to bull trout in Beaver Creek or the NFCR, but still very small because of the likely slight bull trout presence and because substantial attenuation of effects would occur within a few dozen or hundred feet (see Indirect Effects section, below). The remainder of the proposed instream work proposed would be on non-fishbearing tributaries, where sediment transmission and ensuing temporary high turbidity would likely be greatly diluted and attenuated prior to reaching fishbearing streams (CNF 2009).

In the long-term, while in-water work would have a negligible potential (for reasons discussed above) to injure or kill individual bull trout during project implementation, culvert replacement and the storage and decommissioning of roads in riparian areas may benefit a few transient individuals by reducing the potential for injury or mortality caused by motor vehicles (primarily from fuel spills) and by reducing the potential for transmission of large slugs of fine sediment from culvert or fillslope failure, both of which are inherently more lethal and could potentially travel much farther downstream than carefully planned and executed culvert work.

Figure 4, (above). Deadhorse Creek carried by 40"culvert (to be replaced by 78" culvert) under FR 246.
Figure 5, (below). Typical perennial non-fishbearing stream culvert to be replaced (in this case an 18" culvert (to be replaced by a 30" culvert) carrying an unnamed tributary to Tumble Creek under FR 5301

Individual bull trout would be protected from regeneration harvest, commercial thinning, and pre-commercial thinning (PCT) activities (including yarding and post-harvest fuels reduction) under the proposed action through application of default no-cut RHCA buffers, so the risk of direct injury or mortality to bull trout from vegetation management-related project activities would be non-existent. There would be some potential for a toxic spill to occur into a stream channel if a log-hauling truck or yarding equipment were to be disabled in an accident or through vandalism, but such an occurrence is very unlikely and entirely speculative.

Given that bull trout would be only transient and infrequent (at most) strays at the sites where in-water work would occur and that the potential sources of injury would be few and mitigated. Based on the above, direct effects to individual bull trout should be very unlikely.

Indirect effects. Timber harvest and road-related activities can have indirect effects on stream salmonid habitat primarily through changes in water yield, sediment production, and modification of riparian vegetation. Large increases in water yield can destabilize stream channels and banks, increase fine sediment input, and increase water temperature. Timber harvest and road-related activities can disturb soil that would potentially be transmitted to stream channels, where fine sediment can alter stream channel and water quality characteristics. Timber harvest in riparian areas can affect stream shading and large woody debris recruitment. The changes in stream channel, water quality, and riparian characteristics associated with the effects of substantially increased water yield and sediment transmission would tend to reduce aquatic habitat quality, especially through reductions in water and spawning substrate quality and in prey production. It should be remembered that the nearest confirmed bull trout habitat to the project area is in the NFCR, which is approximately 1.25 miles downstream from the nearest vegetation management unit. As a result, indirect effects to streams in the project area are unlikely to have much of an impact on bull trout because individuals of the species would be transient and few and so would not be dependent upon the quality of migratory or fluvial rearing habitat in Beaver Creek or the NFCR.

While unmitigated and/or excessive timber harvest can have negative effects on stream organisms, implementation of riparian no-cut buffers, as discussed above, can greatly reduce or eliminate harvest-related indirect effects on bull trout and other aquatic organisms. In the proposed project, fishbearing streams, their tributaries and the riparian areas of both would be protected from regeneration harvest and commercial thinning activities (including fuels reduction and yarding) under the proposed action through application of full RHCA buffers, so the risk of indirect injury though habitat degradation should be minimal to nonexistent. In addition to lack of direct effects in riparian areas described above, the RHCAs will act as "filter strips" to reduce or eliminate sediment transmission to streams from harvest units (Greenup 2014). Greenup (2012) discussed the reasoning behind the likely small magnitude in project related sediment production modeled by and the low likelihood of other indirect effects to project area streams. Regeneration harvest would be avoided on "landslide prone" areas and the route of permanent and temporary roads would be chose to reduce the risk of mass soil movement (Snyder 2014).

Compared to upland activities, soil disturbed during road decommissioning or storage activities or culvert placement/replacement at stream or seep crossings or in riparian areas would have a greater potential to enter stream channels during project implementation and over time. Specifically for upland road decommissioning/ storage, some of this soil would then have the potential to be transmitted downhill until stabilized. Growth of vegetation on road prisms would be enhanced by soil decompaction, live transplants, duff placement woody debris application and seeding. Most of the soil disturbed by the proposed activities would be hundreds of feet or more from stream channels. Vegetation, downed woody material, duff, or topographical features would intercept and stabilize any immobilized soil before reaching a stream. As discussed above, upland activity areas would be at least 1.25 miles distant from the Beaver Creek and NFCR mainstem channels, and so any fine sediment transmitted off of road prisms as a result of the proposed action should be stabilized well before reaching these streams. It is possible that large-scale landslides or debris flows may originate from the road prisms within the

project area and propagate all of the way to the Beaver Creek and NFCR channels, but the proposed activities are intended to reduce the likelihood of such an event.

Compared to upland activities, soil disturbed at stream or seep crossings or in riparian areas would have a greater potential to enter stream channels during project implementation and over time, but BMPs (Section IV, and described in more detail in Greenup (2014) that would minimize sediment inputs to streams during culvert removal and stream crossing stabilization would be implemented. BMPs include dewatering of the site during crossing removal and the placement of sediment catching devices (straw bales, brush dams, settling basins) around the work area and in the stream channel.

Even with BMPs, however, culvert removals would contribute to short-term increases in stream sediment and turbidity levels primarily caused by disturbance of existing instream sediments during channel recontouring and rewatering activities. Monitoring on the Forest has shown that peak sediment input occurs immediately upon culvert removal and stream disturbance, followed by a decrease in sediment transport and turbidity within several hours and with increasing distance downstream, typically within 300 feet due to small stream size and the low flow during the dry season when work would occur. Minor short-term sediment input is expected to occur over a short time frame (1-5 days per site) as the channel adjusts. Subsequent rain and snowmelt events through the following one or two springs are expected to cause short-term increases in sediment and turbidity at the rehabilitated crossing as vegetation reestablishes and stream channels stabilize. Based on the above, little or no fine sediment should reach the mainstems of Beaver Creek or the NFCR, and so little to no effect on the quality or quantity of habitat available for bull trout in either stream.

Further, road prisms mostly would cross RHCAs and stream channels relatively perpendicularly, so the area of impact to habitat would be relatively small compared to that of the full amount of RHCAs and stream channels in the project area. Because the area of impact should be relatively small, the reduction in shade and large woody debris recruitment associated with stream crossings of roads should be minor and biologically undetectable at the project area scale.

Water temperature can potentially be affected by fine sediment input (which can change stream channel morphology to reduce groundwater input and increase solar radiation) and by vegetative shading (reductions in which can increase solar radiation. The Forests periodically monitors water temperature at stream sites and there are two sites on Washington Creek and one on Tumble Creek for project area. The upper site on Washington Creek is just downstream of the Forests boundary, and the second is just above the stream's confluence with the NFCR, while the Tumble Creek thermograph site is a few hundred feet upstream from the Washington Creek confluence. It appears that groundwater/tributary influence and heavy shade allow Washington Creek to actually decrease in temperature over the approximately 5.5 stream miles between the two sites, with the maximum weekly mean temperature (MWMT) over the 1998-2012 period averaging 19.7° C near the Forest boundary and 18.7° C at the mouth. The equivalent average MWMT for Tumble Creek 2002-2012 is 17.0° C. All of these values, when taken in context with stream order, differences in temperature metrics, and bull trout lifestage are suitable for the species (Kenney interpretation of Essig et al. 2003) and are indicative of minimal anthropogenic alteration. The effects of RHCA buffers described above demonstrate that the proposed action would minimize effects on sediment transmission and stream shading so that effects on existing stream water temperature should not be measurable.

Culverts (especially undersized culverts ones) can fail during high flow events, resulting in the rapid erosion of large amounts of road fill and surface into both fishbearing and non-fishbearing stream channels. Roads are also a source of chronic sedimentation of stream channels through erosion of fill and cutslopes and of the running surface, especially if not adequately maintained. In the long-term, culvert replacement (with larger pipes), and storage and decommissioning of roads in riparian areas should benefit bull trout habitat in Beaver Creek and the NFCR by reducing the potential for sedimentation.

Greenup (2014) also estimates that the road decommissioning and storage proposed for the proposed action would reduce sediment production well in excess of any likely sediment production from harvest treatments and road construction. Because the road decommissioning and storage activities would not necessarily be coincident or shortly following vegetation manipulation and road construction/reconstruction, it cannot be said that the proposed action would result in a net reduction in sediment production in the project area for the proposed action. However, as discussed above, sediment yield from the primary project activities should be minimal and non-measurable, so indirect effects on bull trout should be similarly negligible. When completed, the reduction in sediment production associated with road storage and decommissioning should tend to improve aquatic habitat quality in the long term.

Based on the watershed specialist report for this project (Greenup 2014), harvest and road-related activities under the proposed project would slightly increase water yields, but the increase would be well within the range consider natural for the project area and so should not alter stream habitat quality to a measurable or biologically significant degree. The road decommissioning and storage should reduce water yields proportional with the amount of these activities implemented, which should reduce the potential and magnitude of peak flow-induced channel erosion.

Summary. Few, if any, individual adult or subadult bull trout should be present in the interior of the project area (i.e., not including the NFCR project boundary on the east) and no spawning or juvenile bull trout should occur in either the Washington or Little Washington Creek subwatersheds. Documented presence of juvenile or subadult bull trout in the Beaver Creek subwatershed is entirely upstream of Sheep Mountain Creek which drain the project area into the East Fork of Beaver Creek. Vegetation management activities (including road construction, reconstruction, and fuels treatments) would have little if any effect on individuals of the species or on aquatic habitat because of project design and riparian buffers.

Other project activities (road decommissioning, storage, and culvert replacement on retained roads) would reduce long-term sedimentation risks to project streams from chronic road prism erosion and culvert failures, such that there would be a long-term beneficial effect to aquatic habitats and species. Project design features, mitigation measures and BMPs would minimize temporary and short-term sediment transmission and suspension, so potential adverse impacts to streams from projects activities would be minor and temporary.

Effects of the proposed action on individual bull trout in the project area should be limited to possible temporary and site-specific impacts related to road decommissioning, storage, reconstruction, culvert replacement, and log hauling, The road-related activities would be largely harmless to any fish in the project area because of project design, BMPs, and mitigation measures, while bull trout in particular would be very unlikely to be affected by any of the activities because the only individuals potentially present in or for several miles downstream of the project area would be few and transient. In addition, if any bull trout are present at culvert removal/replacement sites, they would be wary, perceptive, and highly mobile individuals of a size that would permit rapid movement away from activity sites, and so such individuals would be unlikely to be harmed by the proposed activities.

Also specific to bull trout, turbidity or suspended sediment would enter or be mobilized in the fishbearing and non-fishbearing stream channels discussed above as the result of proposed project activity, but the degree and duration of these sediment pulses would be moderated or nearly eliminated by the project design and implemented mitigation measures, such that little or no sediment transmission should reach stream segments know to support bull trout (i.e., the NFCR and Beaver Creek) . Additionally because of project design and mitigation measures, the proposed activities should have no biologically significant impact on water temperature, large woody debris recruitment, streambank stability, and other riparian and instream indicators in the project area or in Beaver Creek or the NFCR, where bull trout are expected to occur. The road-related activities may affect aquatic habitat in and just downstream of the project at the site-specific and temporary scales, but in aggregate and in the long term should improve watershed conditions and therefore bull trout habitat.

In conclusion, all potential effects on bull trout or bull trout habitat have been eliminated or minimized to biological insignificance through project location, design, and the mitigation measures that would be implemented. No in-water activities would occur in occupied bull trout habitat and because the risk of the transmission of substantial amounts of contaminants to bull trout habitat should be very low, the risk of direct adverse effects on individual bull trout as a result of the proposed activity should be considered to be very low to nil. For similar reasons, no indirect effects to bull trout or bull trout habitat should be manifested.

Because of project location and design, the effects on occupied or potential bull trout habitat in Beaver Creek and the NFCR should also be biologically negligible at in all temporal scales.

Bull Trout Critical Habitat: The designation of the mainstem of the NFCR and the mainstem of Beaver Creek requires the Forest to consult with the USFWS on any agency action which is likely to result in a may affect determination. The mainstem of Beaver Creek, however, is about 2.4 miles downstream of the project area and activities would also be remote from the NFCR, as discussed above and below, no measurable or discernible effects of the proposed action should be transmitted to these streams. The nine primary constituent elements (PCEs) listed in the proposed rule and any potential impacts associated with the road decommissioning/storage activities are summarized below:

- *Springs, seeps, groundwater sources, and subsurface water connectivity (hyporheic flows) to contribute to water quality and quantity and provide thermal refugia.* Implementation of the proposed action would tend to restore the natural hydrologic functioning of the project area through elimination of flow diversion onto some of the roads that would be decommissioned or put in storage and elimination of some potential future diversions. Restoration of hydrologic functioning should positively affect, at a relatively small scale, the quantity and quality of subsurface flows, springs and seeps.

- *Migration habitats with minimal physical, biological, or water quality impediments between spawning, rearing, overwintering, and freshwater and marine foraging habitats, including but not limited to permanent, partial, intermittent or seasonal barriers.* The mitigation measures are expected to avoid or minimize any adverse impacts to spawning, rearing and migratory of bull trout because all of the proposed instream activities would occur in portions of the Washington, Little Washington, and Beaver Creek subwatersheds remote from the designated critical habitat in Beaver Creek and the NFCR. No biologically significant effects should be transmitted to portions of these streams.

- *An abundant food base, including terrestrial organisms of riparian origin, aquatic macroinvertebrates, and forage fish.* With the exception of changes to substrate conditions in small, localized areas associated with road decommissioning and storage and for a few feet downstream of the culvert replacement sites (which may cause small and transitory changes to macroinvertebrate abundance and diversity in a few hundred feet of stream well upstream of known bull trout presence and critical habitat), the project activities are expected to have no adverse impacts to this element.

- *Complex river, stream, lake, reservoir, and marine shoreline aquatic environments and processes that establish and maintain these aquatic environments, with features such as large wood, side channels, pools, undercut banks and unembedded substrates, to provide a variety of depths, gradients, velocities, and structure.* With the exception of vegetation, substrate, channel, and streambank modifications at and adjacent to some of the road decommissioning and storage and at the culvert replacement sites (which may cause small and transitory changes in stream and riparian characteristics to a few hundred feet of stream well upstream of bull trout presence and critical habitat) the proposed activities are expected to have no adverse impacts to this element.

- *Water temperatures ranging from 2 to 15 °C with adequate thermal refugia available for temperatures that exceed the upper end of this range. Specific temperatures within this range will depend on bull trout life-history*

stage and form; geography; elevation; diurnal and seasonal variation; shading, such as that provided by riparian habitat; streamflow; and local groundwater influence. Metal culverts in the project area would be replaced with larger culverts installed to facilitate Aquatic Organism Passage, so no increase in insolation would occur. Existing culverts on non-fishbearing streams that would be removed as part of decommissioning or storage activities and these culverts currently provide partial to complete shade for their lengths, the proposed daylighting of the 20-40 feet of stream when culverts are removed may cause some immeasurable increase in water temperature in the affected stream channels. Because of the tiny proportion of the length of any of the very small streams that would be affected by the culvert removal, there should be no measureable or long-term increase in water temperature in bull trout critical habitat (many miles downstream) as a result of the proposed action.

- *In spawning and rearing areas, substrate of sufficient amount, size, and composition to ensure success of egg and embryo overwinter survival, fry emergence, and young-of-the-year and juvenile survival. A minimal amount of fine sediment, generally ranging in size from silt to coarse sand, embedded in larger substrates, is characteristic of these conditions. The size and amounts of fine sediment suitable to bull trout will likely vary from system to system.* As noted above, sediment impacts from the proposed project activities will be negligible to nonexistent regarding direct effects to bull trout and direct and indirect effects to existing and potential habitats. Other than localized, short-term changes to water quality (turbidity) and substrate conditions (sediment levels) at and for up to a few hundred feet downstream from the road decommissioning/storage/culvert removal sites (and outside of critical habitat), no significant changes in substrate conditions are expected.

- *A natural hydrograph, including peak, high, low, and base flows within historic and seasonal ranges or, if flows are controlled, minimal flow departures from a natural hydrograph.* The hydrographs for all streams within and above the project area are un-regulated. The project activities are expected to move hydrologic function of the project area slightly closer to the natural condition than currently existing and so Beaver Creek and the NFCR should maintain or move closer to favorable hydrographs.

- *Sufficient water quality and quantity such that normal reproduction, growth and survival are not inhibited.* As noted in the effects analysis above, proposed project activities will have negligible effects to designated critical habitat because all in-channel activities would occur at least critical habitat: at least 2.4 miles upstream of Beaver Creek, and at least 1.25 miles upstream of the NFCR. The project design and mitigation measures are expected to eliminate or greatly minimize any transmission of effects to critical habitat.

- *Sufficiently low levels of occurrence of nonnative predatory (e.g., lake trout, walleye, northern pike, smallmouth bass); interbreeding (e.g., brook trout); or competing (e.g., brown trout) species that, if present, are adequately temporally and spatially isolated from bull trout.* The proposed activities are expected to have no adverse impacts to this element because although brook trout are present in the upper portions of the Washington Creek subwatershed, proposed culvert removals/replacements would not allow brook trout access to currently-isolated bull trout habitat.

Canada lynx. Background. Canada lynx in the contiguous United States were listed as threatened under the ESA in 2000 (65 FR 16052) with critical habitat designated in 2006 (71 FR 66008). Canada lynx live in coniferous forests with cold, snowy winters and on a prey base of snowshoe hares. In the western United States lynx are associated with relatively high-elevation moist conifer forest, primarily lodgepole pine, subalpine fir, and Engelmann spruce, although Douglas-fir and cedar-hemlock habitat types may be used in north and north central Idaho (Ruediger et al. 2000). A substantial amount of Canada lynx habitat considered occupied secondary (USDA Forest Service 2007) exists on the North Fork Ranger District, although this habitat was not designated as critical habitat by the USFWS (74 FR 8616).

In a literature review, Ruediger et al. (2000) noted that lynx inhabit forest which support their primary prey, snowshoe hares, and that forest disturbance (including both natural mortality and tree harvest) creates dense early

successional stage vegetation which is favored by hares. Less-dense, later succession stage vegetation also provides habitat for secondary lynx prey species such as red squirrels, while accumulations of large woody debris (LWD) provide the best maternal denning habitat for lynx.

Ruediger et al. (2000) also cited studies where lynx inhabiting southern montane forests (e.g., Idaho) average home ranges varied from about 10,000 to over 90,000 acres per animal, with female home ranges being typically smaller than those of males. Lynx populations are often controlled by prey availability, with starvation being the most common cause of natural mortality. Some lynx mortality is caused directly by larger predators such as mountain lion and gray wolf, while increased suitability of occupied lynx habitat by competing predators (e.g. coyote and bobcat) may also cause lynx starvation and reduced recruitment. Because the lynx's primary competitive advantage is the ability to efficiently hunt in deep, soft snow, it is possible that road plowing and snow grooming/packing may reduce prey populations where competitors would otherwise be excluded. Lynx appear to be relatively tolerant of human presence and the existence of low-use forest roads does not appear to affect habitat use (Ruediger et al. 2000).

The 2007 Northern Rockies Lynx Management Direction for the Forest Service (NRLMD, USDA Forest Service 2007) applies to mapped lynx habitat within LAUs on National Forest System land presently occupied by Canada lynx, as defined by the *Amended Lynx Conservation Agreement between the Forest Service and the FWS* (USDA FS and USDI Fish and Wildlife Service 2006). When National Forests are designing management actions in unoccupied mapped lynx habitat they should consider the lynx direction, especially the direction regarding linkage habitat.

Distribution and Modeled Habitat. As noted above, in the western United States the Federally Threatened lynx are associated with relatively high-elevation moist conifer forest. The CNF lynx habitat model uses Potential Vegetation Type (PVT) for Region 1 (http://www.fs.usda.gov/detail/r1/landmanagement/gis/?cid=fsp5_030918). We selected subalpine fir, spruce, and lodgepole pine classes as primary lynx habitat. After evaluating the potential of other classes to provide secondary habitat (snowshoe hare habitat that is interspersed or adjacent with lynx habitat) we selected the following PVT classes as secondary habitat: abgr2 (Grand Fir, moist type), abgr3 (grand fir, wet type), psme2 (Doug fir, moist type) (above 4,000 ft. on the Clearwater National Forest), thpl (red cedar, wet type), tshe (western hemlock), tsme1(mtn. hemlock without whitebark pine), tsme2(mtn. hemlock without whitebark pine), and tsme3(mtn. hemlock with whitebark pine). We buffered the primary habitat with 200-meters of secondary habitat. We deleted areas of secondary habitat if it was not directly adjacent to the primary habitat. We excluded habitat in private landholdings. Primary and secondary habitats were merged to create a preliminary coverage of lynx habitat.

The new model (created for Forest Plan Revision) is an improvement over previous modeling efforts (USFS 2010 Clearwater National Forest Lynx Habitat Model) because it uses the PVT data layer instead of USFS "CStands Combo" data layer. The "CStands Combo" data layer is a data set that is based on common stand exams but unless updated it treats a 20 year old stand exam the same as a recent one (no artificial aging of data in the data set). Additionally, it derives portions of its data from a most similar neighbor analysis which (personnel observation) has not been very accurate and this data set is no longer being maintained or updated. The previous modeling effort also included grand fir as primary habitat instead of secondary habitat, as the new model does, which resulted in overstating the amount of primary habitat. Additionally, the previous model clipped or treated

The previous model had a total of 904,450 acres of lynx habitat on the CNF. The new model has a total of 781,656 acres of habitat on the CNF and 740,753 acres of that falls with the 2007 LAU's. The previous modeling effort clipped or eliminated habitat (fragmented and disjoined patches) outside of LAU's. The new lynx habitat model resulted in 2420 acres of habitat within the Barnyard South Sheep project area and the previous model had no habitat in the project area because it is not in a LAU (Figure 6; see Wildlife Specialist Report (Hickey 2014)).

The IDFG's ACD (Idaho Department of Fish and Game 2013) doesn't list any occurrence records within the project area and only listed 2 (unverified) within 25 miles of the project area. No specific population data are available for the lynx, though it is considered critically imperiled (state rank S1) in Idaho (Digital Atlas of Idaho 2014). Based on these and other relatively recent observations on the Forest and on the Idaho Panhandle National Forest, it is possible that individual lynx may occur in proximity to the project area, but there is no evidence that a breeding population exists anywhere within the vicinity.

Direct and Indirect Effects. The proposed action is not within an LAU and all project impacts would be outside of an LAU. Designated linkage areas would not be affected.

Few studies have examined how lynx react to human presence. Some anecdotal information suggests that lynx are generally tolerant of humans, although given differences in individuals and contexts, a variety of behavioral responses to human presence may be expected (Staples 1995, Mowat et al. 2000 *in* Interagency Lynx Biology Team 2013). Preliminary information from winter recreation studies in Colorado indicates that some recreation uses are compatible, but lynx may avoid some developed ski areas (J. Squires, personal communication 2012 *in* Interagency Lynx Biology Team 2013).

Implementation of vegetation management treatments, road maintenance and decommissioning may impact transient lynx during implementation and may result in negligible short-term direct effects to lynx. This disturbance, in the form of increased noise levels, use of mechanized equipment, vibrations, or other disturbances associated with increased human presence and activities during project implementation. Direct effects could be related to disturbance to individual lynx, causing lynx to avoid perceived threats associated with human and equipment presence and increased noise during project activities. However, these actions are expected to result in minimal responses of temporary and insignificant potential avoidance behaviors. These effects are not considered a significant disruption to lynx behavior. No anticipated risks of direct mortality or long-term impacts to the population are expected. Sufficient habitats are available outside the project area to support any transient lynx during project implementation.

The Northern Rockies Lynx Management Direction (NLRMD) (USDA Forest Service 2007) and the LCAS (Ruediger et al. 2000) outlined a number of criteria to represent important life history characteristics (foraging and denning) that should be considered in the mapping of lynx habitat. Additional guidance was provided based on recommendations by the Lynx Steering Committee. The Lynx Steering Committee developed a set of mapping criteria and procedures to guide and clarify the mapping process. The consequences of applying these criteria were also assessed. Once lynx habitat was calculated, it was delineated into management areas (LAUs) that contain suitable lynx habitat in sufficient quantities and juxtaposition to other lynx habitats, and were designed to approximate the size of a female home range (Ruediger et al. 2000). In some geographic areas, lynx habitat is naturally patchy and can be of marginal quality, providing suitable habitat that is noncontiguous and fragmented. In such areas, lynx use extensive exploratory movements (Squires et al. 2003). The utility to lynx of habitat patches that are not of a sufficient amount to comprise a LAU is unknown. The value of smaller patches of habitat could be determined by factors such as size of the patch, quality of the habitat (in terms of foraging opportunities), the spatial arrangement of the patches (within daily movement distance and proximity to other habitat blocks), and the increase in energetic costs of using such habitat. In addition, there are potential differences in the habitat needs of a breeding female versus a transient or dispersing lynx in terms of habitat distribution and size of area used by an individual lynx. Areas classified as "secondary areas" in the 2005 Canada lynx recovery outline (USDI Fish and Wildlife Service 2005) are thought to contribute to lynx persistence by providing habitat to support lynx during dispersal movements or other periods, allowing animals to then return to core areas. Areas classified as "peripheral areas" may provide habitat enabling successful dispersal of lynx between populations or subpopulations. Unlike "core areas", neither of these areas show evidence of historic or current presence of persistent lynx populations or recent evidence of reproduction, but do contain individual occurrence records of lynx. The role of secondary and peripheral areas in sustaining lynx populations is unclear. However, given the fluctuating nature of lynx population dynamics and the ability of lynx to disperse long distances, habitat patches that are too small or too dispersed to provide a home range to a breeding female may still contribute to the

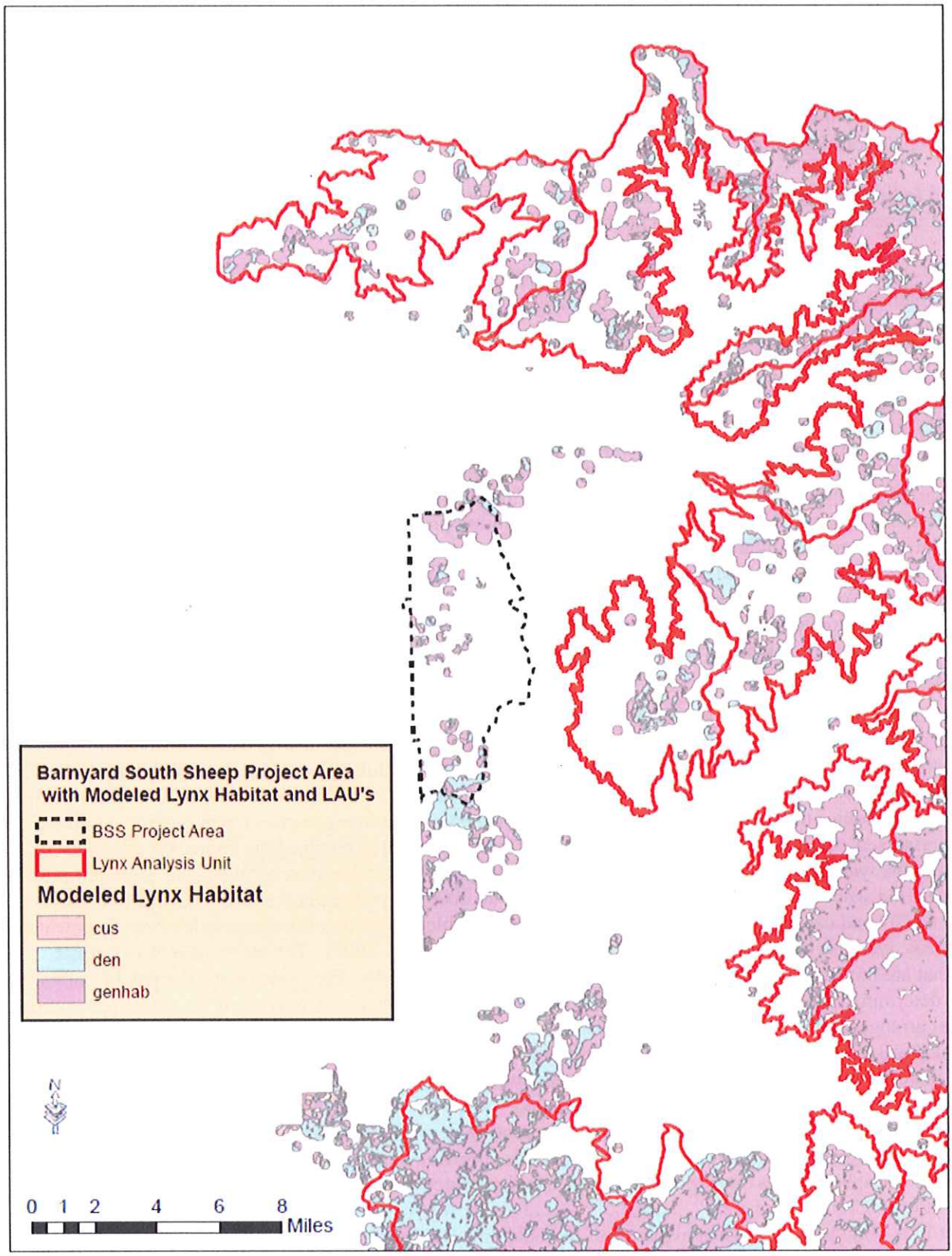

Figure 6. BSS Project Area with relevant Lynx Analysis Units and modeled lynx habitat.

survival of dispersing or transient lynx temporarily residing in an area, and help to maintain connectivity between suitable habitats.

Project activities associated with the Barnyard South Sheep project could potentially impact 81 acres of modeled habitat with regeneration harvest and 281 acres of modeled habitat with commercial thinning. It is possible that project activities (listed above) could impact noncontiguous habitat outside of LAUs. Effects to these habitat patches would not impact the ability of a lynx to establish a home range within a delineated LAU. There is sufficient adjacent habitat available for lynx to avoid the area, and to allow lynx movements around the action area and to avoid forest openings. Suitable conditions for lynx would not be considerably reduced.

Small changes to modeled lynx habitat outside of LAUs, prey species, or probability of occurrence would likely occur as a result of the proposed project. While there would be an increase in human activity in the project area for the duration of the project implementation in comparison to recent years, it is unlikely that this increase will be significant in terms of disturbance of any individual lynx in the unlikely event of occurrence in or near the project area during the period. No change to migratory or dispersal corridors would occur. Therefore, the proposed action as described in Section III would be **not likely to adversely affect** Canada lynx. No critical habitat has been proposed in the project area, so the proposed project would have **no effect** on Canada lynx designated critical habitat.

Whitebark pine. Listing of whitebark pine as threatened or endangered was found to be warranted be the USFWS, but precluded by higher priority actions, and so the species was added to the candidate list on July 19, 2011 (76 FR 42631).

Whitebark pine are widely distributed at high elevation sites in much of western North America, including sites in Idaho (including portions of the Forests and North Fork Ranger District) above about 7,000 feet in elevation. The species appears to be in a range-wide decline primarily due to white pine blister rust and, more recently, mountain pine beetle infestations and climate change. The project area tops out at about 5,800 feet (on Elk Mountain, at the southern boundary), and highest harvest units (34 and 35) are at most 5,300 feet. Because of the location of the project, the proposed the proposed action as described in Section III would have **no effect** on whitebark pine.

Water howellia. The most common habitat for *Howellia aquatilis* is small, vernal, freshwater wetlands and ponds with an annual cycle of filling with water and drying up late in the season. The only sites currently known to support this species in Idaho are in Latah County, where vegetation is a mosaic of riparian shrubland and meadows with inclusions of mature conifers (USFWS 2013). Water howellia or its habitat is not known to occur in the mountainous upper reaches of the North Fork Clearwater River, or at any site in Clearwater County. Because the known Idaho locations are well-separated from the project area and no suitable habitat is present, it is determined that individuals of this species do not occur in the project area. The proposed action as described in Section III would have **no effect** on water howellia.

Spalding's catchfly. Individuals of this species are found in rich, relatively mesic fescue grasslands and associated open forest and shrublands; in Idaho County it is found in canyon grasslands (Lichthardt and Gray 2003). Due to a complete lack of habitat in the project area, and no record of occurrence in Clearwater County, it is determined that individuals of this species do not occur in the project area. The proposed action as described in Section III would have **no effect** on Spalding's catchfly.

B. Region 1 Sensitive Species.
Descriptions of potential impacts on sensitive aquatic and wildlife species are grouped together below by habitat type/niche.

Aquatic/Riparian: Westslope cutthroat trout, redband trout, western pearlshell mussel. Fish surveys confirm the presence of westslope cutthroat trout within the project area in all but one named stream and in several unnamed tributaries (Figure 7; IWW 1998, CBS 1999). Redband trout are present in Washington Creek, Dead Mule Creek, and Swanson Creek within the project area and individuals may occasionally occur within the project area in lower Deadhorse Creek and in larger Washington Creek tributaries. (Figure 7; CBS 1998, 1998a, IWW 1998).

No mussels are known to occur in the project area, but no surveys specific for this species have been performed there. Past cursory surveys on the Clearwater National Forest have found evidence of western pearlshell mussels in the Lochsa River and North Fork Clearwater River drainages, while more targeted surveys have located populations of the species a few miles to the west of the project area within the mainstem of Lolo and Musselshell creeks, and in Jim Brown and Eldorado creeks. Immobile as adults, these mussels are potentially vulnerable to acute and long-term elevated fine sediment levels.

As described above, proposed vegetation management activities within the project area drainages of fishbearing streams should not have measurable effects on individual westslope cutthroat trout, redband trout, and western pearlshell mussels in these streams because these activities would be distant from the stream channels (and so transmission of sediment should not occur). Road related activities in or near the channels or riparian zones, nearly entirely restorative in nature, may injure or kill a few individual trout or mussels through mechanical injury or desiccation from excavation of culverts or channel crossing by heavy equipment. Road-related actions, however, would more typically have temporary and transitory effects on individual animals even in fishbearing streams, and activities in non-fishbearing streams should transmit minimal to no impacts to trout or mussels downstream. See the bull trout discussion, above in Section VI, for a more-detailed discussion of potential effects on aquatic organisms and habitat in the project area. Population-level effects should be minimal to beneficial.

Overall, project activities may impact individual cutthroat and redband trout and mussels but are not likely to lead to the listing of any of these species under the Endangered Species Act. In the long term, the proposed road decommissioning/storage should reduce erosion to and sedimentation of Washington Creek, etc. and their tributaries and so the project would have a long-term beneficial effect on these sensitive species.

Coeur d'Alene salamander, western toad. Coeur d'Alene salamanders are found in coniferous forests near seeps, waterfalls and along streams. Population of this species have been detected in several locations in the North Fork Clearwater River drainage, primarily along the mainstem of the North Fork Clearwater River and along some of the larger North Fork tributaries such as Skull, Orogrande, and Skull creeks. Individuals of the species have been found in or along smaller streams, too (Cassirer et al. 1994), and so the salamanders may occur within the project area in suitable habitat.

Western toads utilize wet and moist habitats across the CNF, but can also be found on forested slopes. They prefer slow water habitats such as puddles, springs, ponds, lakes, reservoirs, and slow moving streams. Eggs are generally laid in puddles, ponds, and slow moving streams. Although specific surveys have not been conducted and individual toads have not been recorded from the project area, many individuals have been observed on the Forest.

Because potions of the road segments to be stored or decommissioned and some of the culverts to be replaced cross perennial streams or include or are adjacent to puddles or spring seeps, the proposed activities have the potential to affect individual salamanders, toads, and their habitat. In addition, vegetation management activities in upland areas have some potential to affect individual toads and toad habitat when these individuals are present outside of riparian areas.

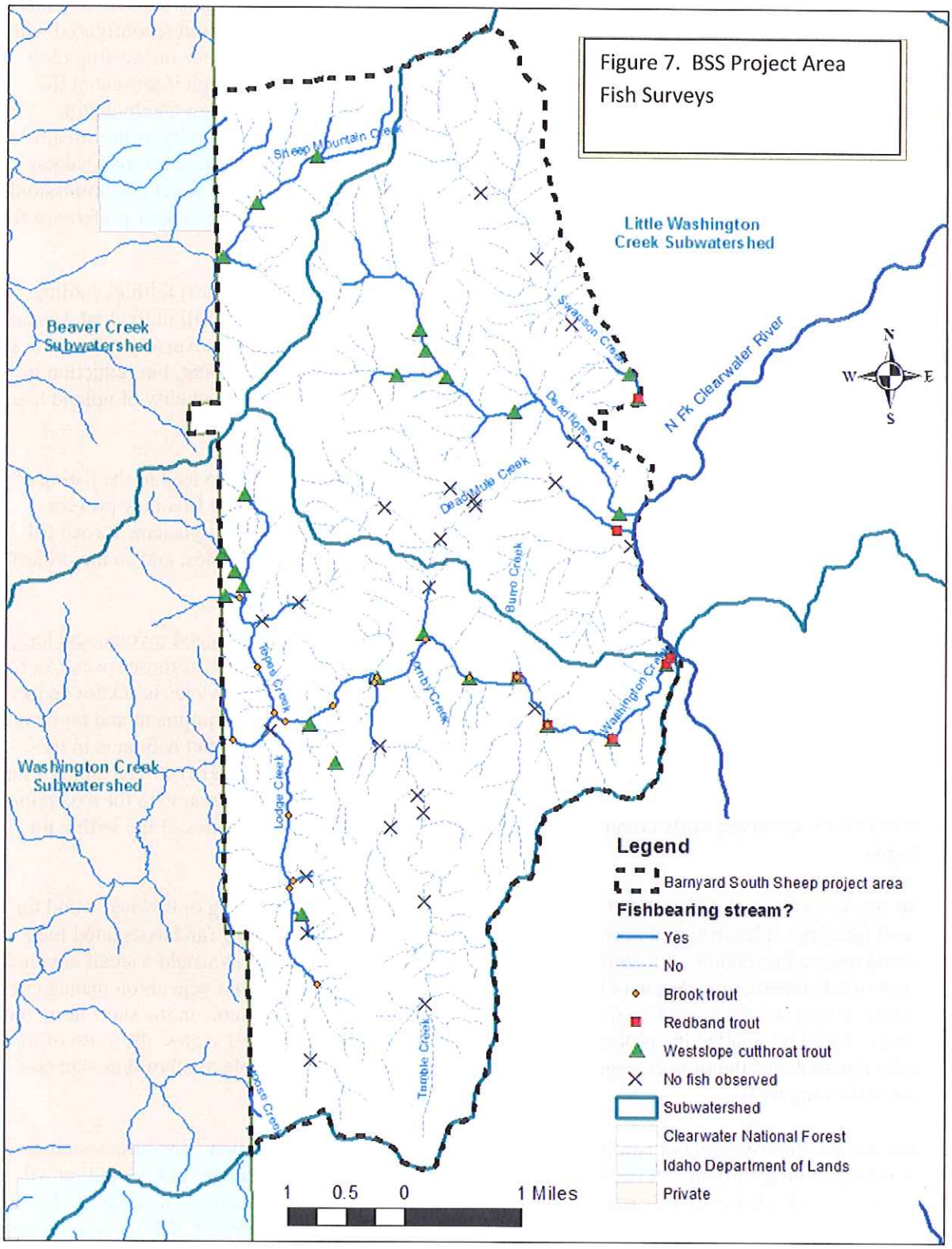

Figure 7. Clearwater N.F. contract fish snorkeling sites in project area and salmonid species observed.

Road decommissioning and storage and culvert replacement may negatively affect Coeur d'Alene salamander or western toad when stream crossings are removed or when soil is disturbed that could be transmitted to streams or riparian areas. Individual salamanders and toads could be injured or killed or existing habitat reconfigured within 20 feet both upstream and downstream of the crossings for both, and puddle habitat for toads on existing road prisms could be destroyed. The risk to individuals of one or the other species would be high if present at the culvert removal sites or if occupied puddles would be destroyed in the process of road prism manipulation. Modification to stream habitat would be short-term and such habitat would increase in quantity as the stream channels now enclosed in culverts and fill are daylighted. Puddles or other wet areas suitable for toad habitat would potentially re-form at ephemeral stream crossings of manipulated road prism sites. Road decommissioning and storage activities outside of riparian areas are not expected to affect either species due to their preference for wet or moist areas.

Because western toads may sometimes occur in upland areas (especially during wet weather) felling, yarding, fuels treatments and road-related activities remote from prime toad habitat could harm or kill individual western toads through mechanical injury. Upland habitat for western toads should not be greatly adversely affected in the long term because the toads don't require any particular type of vegetation in suitable habitat, but reduction in woody debris associated with some of the vegetation treatments could slightly reduce the quality of upland toad habitat in the short term.

Overall, project activities may impact individual salamanders or toads but are not likely to lead to the listing of either species under the Endangered Species Act. In areas where culverts or unstable road fills may prevent species from utilizing stream habitat or are causing habitat degradation, culvert removal/replacement road fill stabilization and stream channel rehabilitation may provide positive effects for these species, and so the project as a whole should have a beneficial impact.

Mature stands, woody debris, snags: Flammulated owl, fisher, fringed myotis, long-legged myotis, and long-eared myotis: The proposed project activities should not affect populations or persistence of these species or their habitat, as described in Table 5, although the potential presence of individuals of these species is acknowledged here, and so some level of disturbance associated with the presence and noise of heavy equipment and humans is possible. Modeled habitat for each of these species is present or if no model exists potential habitat is in the project area (and is discussed in the Wildlife Specialist Report for this project (Hickey 2014)). The author found no records of the occurrence of any of these species in the project area or in the project area, with the exception of fishers, which have been observed fairly commonly in the vicinity of the proposed activities, if not within the actual project area.

Many of these species are associated with old growth or the availability of large standing or downed wood for reproduction and foraging. The proposed regeneration harvest and commercial thinning (and associated fuels treatments) would reduce the amount of mature timber and woody debris in the units, as would a small amount of the proposed new road construction. Some of these species have modeled habitat within vegetation management units so that the proposed activities would reduce the amount of modeled habitat available in the short term, but any loss of habitat would be small at the project scale and tiny at the District and Forest scales. Because of forest succession in the remainder of the project area, the amount of modeled habitat available to all of these species would increase in the long term.

Roads proposed for decommissioning or storage usually have some amount of vegetation (sometimes including young trees) growing in/on the prism, but because the subject roads are only a few decades old, no old growth or mature vegetation would be disturbed by excavation or manipulation of the cut or fill slopes or roadbed. Because the roads affected by proposed activities in this project were constructed for timber harvest, they are mostly not directly adjacent to old growth habitat; likely only a few large snags or downed boles are directly adjacent to the directly adjacent to old growth habitat; likely only a few large snags or downed boles are directly adjacent to the

Table 4. Aquatic Sensitive Species Considered and Effects Determinations

Species	Status*	Considered in Detail	Effects Determination**	Rationale
Westslope cutthroat trout *Oncorhynchus clarki lewisi*	S	Yes	MI	Ubiquitous in project area (Isabella Wildlife Works (CBS 1991, 1998, 1998a, 1999; IWW 1998).
Yellowstone cutthroat trout *(Oncorhynchus clarki bouvieri)*	S	No	NI	Present in Idaho, but not native to Clearwater River subbasin.
Redband trout *Oncorhynchus mykiss gairdneri*	S	Yes	MI	As resident rainbow trout of steelhead origin, native and present in Washington, Little Washington, and a few tributary creeks, especially in lower reaches (CBS 1998, 1998a; IWW 1998).
Snake River spring/summer chinook salmon *Oncorhynchus tshawytcha*	S	No	NI	Native to the Upper North Fork Clearwater subbasin, but native stock extirpated from Clearwater River by Lewiston Dam and re-introduced non-native stock blocked by Dworshak Dam for 40+ years
Pacific lamprey *Lampetra tridentata*	S	No	NI	Likely native to Upper North Fork Clearwater subbasin , but native stock possibly extirpated from Clearwater River by Lewiston Dam and re-introduced non-native stock blocked by Dworshak Dam for 40+ years
Western pearlshell mussel *Margatifera falcate*	S	Yes	MI	May occur in suitable habitats.

Table 5. Terrestrial and Avian Sensitive Species Considered and Effects Determinations

Species	General Habitat	Status*	Considered in Detail?	Effects Determ-ination**	Rationale
Birds					
Bald eagle *Haliaeetus leucocephalus*	Uses larger fish-bearing streams, rivers, and lakes for foraging, nests nearby.	S	No	NI	Little to no suitable nesting habitat exists in the project area. A small portion of the Clearwater River is on the project area boundary but will have no project activity.

Species	General Habitat	Status*	Considered in Detail?	Effects Determ-ination**	Rationale
American peregrine falcon *(Falco peregrinus anatum)*	This species uses many types of habitat, although not typically in heavy timber, but typically nests on cliffs or other rock faces.	S	No	NI	Not known to occur on CNF (USDA FS 2011). Little to no suitable nesting habitat exists in the project area.
Common loon *(Gavia immer)*	Loons nest and feed in lakes.	S	No	NI	Not known to occur on CNF (USDA FS 2011) and no habitat likely present in project area But maybe present during migration in nearby Dworshak Reservoir.
Mountain quail *(Oreortyx pictus)*	Habitat is typically warm/dry shrub.	S	No	NI	Not known to occur on CNF (USFS 2011) and no habitat likely present in project area.
Black swift *(Cypseloides niger)*	Neotropical migratory bird which nests in moist cliff environments, typically near or behind waterfalls or in shallow caves.	S	No	NI	Not known to occur on CNF (USDA FS 2011) and no habitat likely present in project area.
Black-backed woodpecker *Picoides arcticus*	Abundant in recently burned landscapes or other areas of epidemic bark beetle infestation, uncommon but widespread elsewhere.	S	No	NI	Only 23.6 acres of modeled habitat in project area and none is proposed for treatment.
White-headed woodpecker *(Picoides albolarvatus)*	Open canopy mature to old growth ponderosa pine forests.	S	No	NI	Not known to occur on CNF (USDA FS 2011) and no habitat likely present in project area.
Flammulated owl *Otus flammeolus*	Mature or old growth ponderosa pine and Douglas-fir with open understory, favors south aspects below 4,500 feet in elevation.	S	Yes	MI	May occur in suitable habitats, but amount is likely large overestimate.
Harlequin duck *Histrionicus histrionicus*	Forested mountain streams with gradient less than three percent, shrub cover greater than 50 percent, and minimal human disturbance.	S	No	NI	Harlequin nesting habitat is made up of second to fifth order stream with a 1%-7% gradient, which is not present in the project area or general area.

Species	General Habitat	Status*	Considered in Detail?	Effects Determ-ination**	Rationale
Pygmy nuthatch *Sitta pygmaea*	Mid- to late-seral ponderosa pine.	S	No	NI	Modeled suitable habitat, but amount is likely large overestimate. The project area contains 1372 acres of modeled habitat. The project would treat between 0 and 7 acres.
Mammals					
North American wolverine *Gulo gulo*	Remote areas where human disturbance is minimal, often in timber near rockslides, avalanche areas, cliffs, swamps, and meadows.	S	Yes	MI	May occur in suitable habitats.
Gray wolf *Canis lupus*	Present mostly in forest areas in Idaho, but adapted to many habitat types.	MIS, S	Yes	MI/BI	May occur in suitable habitats.
Fisher *Martes pennant*	Diverse, moist, mature forests at low to moderate elevations, with high canopy cover, often along riparian areas, and abundant large diameter woody debris.	S	Yes	MI	May occur in suitable habitats.
Bighorn sheep *(Ovis canadensis)*	Found in a variety of open habitats, but not typically in heavy timber	S	No	NI	Not known to occur on CNF (USDA FS 2011) and no habitat likely present in project area.

Species	General Habitat	Status*	Considered in Detail?	Effects Determ-ination**	Rationale
Long-eared myotis (*Myotis evotis*)	Found in diverse habitats from semiarid shrublands, agricultulral, but prefer coniferous forest. Individuals roost under exfoliating bark, hollow trees, caves, mines, and rock outcrops.	S	Yes	MI	May occur in suitable habitats.
Long-legged myotis (*Myotis volans*)	Primarily found in coniferous forest but seasonally found in riparian areas. Summer day roost include buildings, caves, mines exfoliating tree bark, and hollows within snags. Hibernacula are usually caves of mines.	S	Yes	MI	May occur in suitable habitats.
Fringed myotis *Myotis thysanodes*	Open areas (grassland and shrublands) interspersed with mature forest habitats (pinyon-juniper, ponderosa pine, mixed oak and pine, Douglas-fir) in a mosaic pattern with ample edges and abundant snags. Large snags, hollow trees, buildings, mines, rock crevices, and bridges used for roosting.	S	Yes	MI	May occur in suitable habitats.
Townsend's big-eared bat *Plecotus townsendii*	Distribution is strongly correlated with the availability of caves, cave like roost and abandon mines typically at lower elevations. Major threats include disturbance from recreational caving, mine reclamation, and renewed mining in historic mines	S	No	NI	No habitat in the project area.

Species	General Habitat	Status*	Considered in Detail?	Effects Determ-ination**	Rationale
Amphibians					
Coeur d'Alene salamander *Plethodon idahoensis*	At spring seeps, waterfall spray zones, and banks of small cascading creeks associated with disjunct coastal biota, below 5,000 feet elevation.	S	Yes	MI/BI	May occur in suitable habitats.
Western toad *Bufo boreas*	A diversity of aquatic and moist terrestrial habitats, prefers ponds, pools, and slow-moving streams.	S	Yes	MI/BI	May occur in suitable habitats.
Reptiles					
Ringneck snake *Diadophis punctatus*	Dry forest and shrub habitats; open hillsides with rocks or other debris.	S	No	NI	Modeled suitable habitat, but amount is likely large overestimate. Modeled suitable habitat, but amount is likely large overestimate. The project area contains 566 acres of modeled habitat. The project would treat between 0 and 7 acres.

Table 6. Sensitive Plant Species Considered and Effects Determinations

Species	Status*	Known Occurrence**	Habitat Present	Effects Determination***
Maidenhair spleenwort *Asplenium trichomanes*	S	No	Yes	NI
Payson's milkvetch *Astragalus paysonii*	S	No	No	NI
Deerfern *Blechnum spicant*	S	No	Yes	**MI**
Crenulate moonwort *Botrychium crenulatum*	S	No	Yes	NI
Lance-leaf moonwort *Botrychium lanceolatum* var. *lanceolatum*	S	No	Yes	NI
Linear-leaf moonworts *Botrychium lineare*	S	No	Yes	NI
Mingan moonwort *Botrychium minganense*	S	No	Yes	NI
Mountain moonwort *Botrychium montanum*	S	No	Yes	NI
Northern moonwort *Botrychium pinnatum*	S	No	Yes	NI
Least moonwort *Botrychium simplex*	S	No	Yes	NI
Leafless bug-on-a-stick *Buxbaumia aphylla*	S	No	No	NI
Green bug-on-a-stick *Buxbaumia viridis*	S	No	Yes	**MI**
Broadfruit mariposa *Calochortus nitidus*	S	No	No	NI
Constance's bittercress *Cardamine constancei*	S	Yes	Yes	NI
Buxbaum's sedge *Carex buxbaumii*	S	No	No	NI
Bristle stalked sedge *Carex leptalea*	S	No	No	NI
Many headed sedge *Carex sychnocephala*	S	No	No	NI
Anderegg's cladonia *Cladonia andereggii*	S	No	No	NI
Pacific dogwood *Cornus nuttallii*	S	No	No	NI
Clustered lady's-slipper *Cypripedium fasciculatum*	S	Yes	Yes	**MI**
Dasynotus *Dasynotus daubenmirei*	S	No	No	NI
Idaho douglasia *Douglasia idahoensis*	S	No	No	NI
Giant helleborine *Epipactis gigantea*	S	No	No	NI
Puzzling halimolobos *Halimolobos perplexa* var. *perplexa*	S	No	No	NI
Sticky goldenweed *Haplopappus hirtus* var. *sonchifolius*	S	No	No	NI
Light moss *Hookeria lucens*	S	No	Yes	**MI**
Salmon-flowered desert-parsley *Lomatium salmoniflorum*	S	No	No	NI
Chickweed monkeyflower *Mimulus alsinoides*	S	No	Yes	NI
Spacious monkeyflower *Mimulus ampliatus*	S	No	Yes	NI
Thin sepal monkeyflower *Mimulus hymenophyllus*	S	No	No	NI
Gold-back fern *Pentagramma triangularis* var. *triangularis*	S	No	No	NI

Species	Status*	Known Occurrence**	Habitat Present	Effects Determination***
Sweet coltsfoot *Petasites frigidus* var. *palmatus*	S	No	Yes	NI
Whitebark pine *Pinus albicaulis*	S, C	No	No	NI
Licorice fern *Polypodium glycyrrhiza*	S	No	Yes	NI
Naked rhizomnium *Rhizomnium nudum*	S	No	Yes	**MI**
Mendocino sphagnum *Sphagnum mendocinum*	S	No	No	NI
Evergreen kittentail *Synthyris platycarpa*	S	Yes	Yes	**MI/BI**
Sierra wood-fern *Thelyptris nevadensis*	S	No	Yes	NI
Short style toefieldia *Triantha occidentalis* ssp. *brevistyla*	S	No	Yes	NI
Douglas clover *Trifolium douglasii*	S	No	No	NI
Plumed clover *Trifolium plumosum* var. *amplifolium*	S	No	No	NI
Idaho barren strawberry *Waldsteinia idahoensis*	S	No	Yes	**MI/BI**

*__Status Abbreviations__: S = Region 1 Sensitive and present in Idaho; C = Candidate species under the ESA
**__Know occurrence:__ Within the project area.
***__Sensitive Species Determination__: NI = No Impact; BI = Beneficial Impact; MI = May impact individuals or habitat but not likely to cause trend toward Federal listing or reduce viability for the population or species; LI = Likely to impact individuals or habitat with the consequence that the action may contribute towards federal listing or result in reduced viability for the population or species.

directly adjacent to old growth habitat; likely only a few large snags or downed boles are directly adjacent to the roads or have fallen on the road prism. It is possible that a few live or dead trees currently atop or directly adjacent to the subject roads would have to be felled or moved to safely conduct the proposed activities, but existing downed coarse wood or snag/coarse wood recruitment should be little affected by road prism manipulation because these pieces would be left in situ or moved only as far as needed for safe equipment operation.

Overall, project activities may impact individuals of the subject species but are not likely to lead to the listing of any of the subject species under the Endangered Species Act. In the long-term, road segments decommissioned or stored should develop vegetation more suitable to these species than currently exists, and so the project should have a beneficial impact.

Opportunistic carnivores: Gray wolf, wolverine. Wolves use a variety of habitats and are known to occur in the analysis area (which is likely within the territory of the Granddad and potentially the Hemlock Ridge packs (IDFG 2014)). Wolverine presence in the project area is discussed above under ESA-status species.

Gray wolves occupy diverse habitats, from open meadows to heavily forested stands. Wolves occupy broad territories and travel extensively in search of prey, generally medium to large ungulates, especially elk in Idaho. They are adaptable to human and land management activity in general, but sensitive to disturbance at denning and rendezvous sites.

Within the western U.S., wolverines occur principally in remote, high-elevation mountain basins and cirques, particularly during the breeding season (Rowland et al. 2003). Wolverines are opportunistic scavengers and ungulate carrion is considered an important food source. Productivity of habitats and related ungulate carrion availability are important aspects of wolverine habitat management.

Considering that the project area is within the known foraging area of at least one wolf pack, it is likely that individuals of the pack are often or sometimes within the project area during implementation of the project. On the other hand, wolverines are much rarer than wolves in the project vicinity, and little suitable habitat is present there, so it would be unlikely for an individual wolverine to enter the project area. As there would be an increase in human activity in the project area for the duration of the project implementation in comparison to recent years, it is therefore not unlikely that one or more wolves would be present during project implementation and would be disturbed by the presence and noise of heavy equipment and humans. Conversely, it is unlikely that an individual wolverine would be disturbed by the project activities. In either case, if disturbance of individual wolves or wolverines occurs, these animals are alert and fleet and would be unlikely to suffer significant harm from any project-caused disturbance.

The timber harvest/vegetation management proposed would affect little mature vegetation or cause little woody debris disturbance relative to the project area, District, or Forest, so little wolf or wolverine denning or foraging habitat would not be adversely affected. This is especially true for wolverine, as the project area little modeled suitable habitat, a total of 1367 acres within the project area and up to 82 acres of that could be treated with regeneration harvest. Cervid habitat is predicted to be improved or static with the proposed vegetation and road-related activities, so no adverse effects on the wolf or wolverine prey base should occur. Road decommissioning/storage should reduce human disturbance and so should be of benefit to individual wolves and wolverines.

Overall, project activities may impact individual wolves or wolverines or their habitat, but would not likely to lead to the listing of the species under the Endangered Species Act.

Sensitive plants: Potentially affected species. See Table 6 for a summary and Hays (2014) for a more detailed treatment. Three of the sensitive plants are known to occur in the project area, while 19 species have suitable habitat in the project area, and nine of the latter have occurrences within 4 miles of the project area.

Light moss would not be affected by proposed project activities because individuals of this species would not be expected to occur in areas subject to management or modification. The effects determination for light moss is NI (no impact).

Species that could be negatively impacted because they could occur in vegetation treatment units or new road constructed to access the treatment units, or on or in immediately adjacent areas that could be affected by road reconstruction, decommissioning, or storage: deerfern, green bug-on-a-stick, clustered lady's-slipper, light moss, and naked rhizomnium. While these species or their habitat may be negatively affected, modeled habitats for the species are extensive and any impacts associated with this project would not affect overall species viability in the area. The effects determination for these species is MI (may impact, but not likely to contribute to federal listing).

If any individual evergreen kittentails or Idaho barren strayberry are present in the project area, they could be harmed by the proposed work. However, these species well documented to respond favorably to many forms of disturbance and often do well on road margins or new surfaces such as those created by even-aged management and road decommissioning. The effects determination for these species is mixed - MI/BI (may impact/beneficial impact).

Overall, effects to the sensitive species in the project area are expected to be minimal and not threaten populations or lead to listings under the Endangered Species Act.

Determination of effects on rare plant species from proposed project activities are summarized in Table 6, above. This table includes all plant species on the Clearwater National Forest sensitive plants list.

VII. CUMULATIVE EFFECTS

The Endangered Species Act (ESA) defines cumulative effects (50 CFR 402.2) as the additive effects of state and private activities that are reasonably certain to occur in the watershed where the Federal Action occurs. Under the ESA, an analysis of cumulative effects on ESA-listed species and their critical habitat is relevant only in determining whether the continued existence of a species would be jeopardized or whether critical habitat would be adversely modified or destroyed. No ESA-listed species or critical habitat would be affected by the proposed action to the point that the continued existence of the species would be jeopardized or critical habitat would be modified, so a cumulative effects analysis under the ESA is not relevant to these species.

The potential for cumulative effects on Sensitive species is discussed in detail in Kenney (2014), Hickey (2014), and Hays (2014).

VIII. DETERMINATION AND RATIONALE

A. Endangered Species Act Listed and Candidate Species

Implementation of the proposed action would be **not likely to adversely affect** bull trout. This determination is based on the conclusion (discussed in Section VI) that individuals of the species would be unlikely to be harmed or harassed by the proposed activities (chiefly because bull trout would be unlikely to occur in proximity to project activities, would likely not be directly harmed by these activities even if one or a few individuals are in proximity to project activities, and because transmission of contaminants or fine sediment to stream channels in any large quantities should not occur) and that habitat for bull trout will be maintained with essentially no biologically significant impacts. Prey base and reproductive success will not be impacted by the proposed project. Although individual bull trout may travel upstream to be within proximity of the project area, designated Critical Habitat (CH) for bull trout in Beaver Creek would remain at least about 2.4 miles downstream of project activities; the equivalent distance for CH in the NFCR would be at least 1.25 miles. So, as described above, no measurable effects of the proposed project should be transmitted the substantial distances involved to have adverse impacts on the Primary Constituent Elements and so the proposed project would have **no effect** on bull trout critical habitat.

Implementation of the proposed action would be **not likely to adversely affect** Canada lynx. This determination is based on project adherence to the NRLMD guidelines and lack of likely effect on transient individuals. No portion of the Clearwater National Forest has been designated critical habitat for Canada lynx and so the proposed action would have **no effect** on this component of lynx conservation.

Implementation of the proposed action would have **no effect** on whitebark pine, water howellia, or Spalding's catchfly. This determination is based on lack of individuals of these species in the project area.

B. Region 1 Sensitive Species

See Tables 4, 5, and 6 and Section VI. Briefly, project activities may impact individuals of the some sensitive species but are not likely to lead to the listing of any species under the Endangered Species Act. In the long-term, the project should have a beneficial impact on several of the subject species.

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USDA United States Department of Agriculture | Forest Service | Region One | Northern Region
200 East Broadway
Missoula, MT 59802

File Code: 1570 (218)
15-01-00-0057

Date: JUL 06 2015

Dick Artley
415 NE 2nd St.
Grangeville, ID 83530

Dear Mr. Artley:

This letter is in response to your objection to the Barnyard South Sheep project located on the Nez Perce-Clearwater National Forest. The Responsible Official, Forest Supervisor Cheryl Probert, and I as the Objection Reviewing Officer have read your objections and suggested remedies, and reviewed the Environmental Assessment (EA) and draft Decision Notice (DN) and Finding of No Significant Impact (FONSI), the project file, and the comments submitted to this project. This letter details my responses to your objections based on my review and understanding of the disclosed environmental effects of this project in accordance with 36 CFR 218, *Project Level Predecisional Administrative Review Process.*

As specified at 36 CFR 218.11(b), I must provide a written response that sets forth reasons for the response; however, this written response need not be point-by-point. The Responsible Official and I have reviewed the project in light of the issues presented in your objections. I have considered the issues and suggested remedies and included my reasons for response to these issues, which are detailed below.

The regulations also allow for a meeting between objectors and the Reviewing Official; however, you did not request a meeting so we did not meet.

Together, the objection resolution meeting and this letter satisfy the requirements of 36 CFR 218.11, *Resolution of Objections*. No further review from any other Forest Service or U.S. Department of Agriculture official of my written response to these objections is available.

RESPONSE TO ISSUES

I have reviewed your objections and find that most do not require further discussion or instruction because the analysis and content presented in the EA and draft DN are adequate, and the Forest has complied with all applicable law, regulation, and policy. However, based on my review of the EA and draft DN, and the content in the project file, I concluded that one of your objections warranted instruction to the Deciding Official, as follows:

Issue: You allege that the Responsible Official does not acknowledge that the research conclusions of independent scientists indicate that even casual exposure to glyphosate may cause significant health problems. You state that the EA violates 40 CFR 1501.2 (b), 1502.16(a) and (b), 1502.16 and 1508.8(b) because Chapter 3 omits important environmental effect disclosures.

Further, you allege that the EA also violates Executive Order 13045, *Protection of Children from Environmental Health Risks and Safety Risks* (April 21, 1997), because the Responsible Official does not ensure that this project will not disproportionately expose children to environmental health risks and safety risks.

Finally, you allege that the draft FONSI violates 40 CFR 1508.27(b)(2) because the intensity discussion fails to discuss the degree to which the proposed action affects public health or safety.

Response: As an initial matter, the Barnyard South Sheep project is not a "covered regulatory action" pursuant to Executive Order 13045. Under Executive Order 13045, a covered regulatory action means "Any substantive action in rulemaking, initiated after the date of this order or for which a Notice of Proposed Rulemaking is published 1 year after the date of this order that is likely to result in a rule…" This project is not a regulatory action, nor would this project result in a rule, and therefore is not subject to the executive order.

Further, the Forest, under the North Fork Noxious Weeds Environmental Assessment (2005), addressed the treatment of noxious weeds on the North Fork Ranger District. The project area is covered by the analysis in the noxious weeds EA and decision, and thus there is not a need to separately address the effects of noxious weed treatment in the Barnyard South Sheep EA. Any treatment of invasive plants in the project area will be consistent with the strategy outlined in the noxious weeds decision, as described on page 13 of the Barnyard South Sheep EA and page A-15 of Appendix A of the draft DN.

I find that the Forest is in compliance with the regulatory requirement and executive order you cite in your objection. However, I find that the EA and project record need to include reference to the noxious weeds EA.

Instruction: *I am instructing the Deciding Official to add the North Fork Noxious Weeds EA Decision Notice to the project record.*

SUMMARY

In conclusion, I have reviewed your assertions that the project violates various environmental laws, regulations, polices, and the Forest Plan. My review finds the project is in compliance with all applicable laws and the Forest Plan. I have in one instance provided instructions to the Forest to provide additional information to better demonstrate compliance with law, regulation, or policy.

Once this instruction is completed it will be clear the project and the analysis is in full compliance with all laws, regulations, policies, and the Forest Plan, and the Forest Supervisor may sign the Decision Notice for this project. My review constitutes the final administrative determination of the Department of Agriculture; no further review from any other Forest Service or Department of Agriculture official of my written response to your objection is available (36 CFR 218.11(b)(2)).

Sincerely,

DAVID E. SCHMID
Deputy Regional Forester

cc: Ray G Smith
Cheryl Probert

USDA United States Department of Agriculture | Forest Service | Region One | Northern Region
200 East Broadway
Missoula, MT 59802

File Code: 1570 (218)
15-01-00-0080

Date: JUL 06 2015

Gary MacFarlane
Friends of the Clearwater
PO Box 9241
Moscow, ID 83843

Dear Mr. Macfarlane:

This letter is in response to your objection to the Barnyard South Sheep project located on the Nez Perce-Clearwater National Forest. The Responsible Official, Forest Supervisor Cheryl Probert, and I as the Objection Reviewing Officer have read your objections and suggested remedies, and reviewed the Environmental Assessment (EA) and draft Decision Notice (DN) and Finding of No Significant Impact (FONSI), the project file, and the comments submitted to this project. This letter details my responses to your objections based on my review and understanding of the disclosed environmental effects of this project in accordance with 36 CFR 218, *Project Level Predecisional Administrative Review Process.*

The regulations allow for a meeting between objectors and the Reviewing Official. In my letter accepting your objection I offered to meet with you to discuss this project. Since then I have reviewed the project and your objection and had my staff review your objection, the project file, the NEPA document, and the draft decision. I did not find any points where I thought we could come to a resolution. At this time I do not feel there is enough time left in the review period to make a meeting practical. Therefore I have decided not to have a resolution meeting.

As specified at 36 CFR 218.11(b), I must provide a written response that sets forth reasons for the response; however, this written response need not be point-by-point. The Responsible Official and I have reviewed the project in light of the issues presented in your objections. I have considered your objection issues and suggested remedies. I would like to point out that the regulations require the objection must be based on previously submitted specific written comments (36 CFR 218.8(c)). I notice in your objection you bring up issues about goshawk, marten, pileated woodpecker, and fisher. I do not find were you brought up these issues in your comment letter on the Barnyard South Sheep Project.

After reviewing you objection and the project documentation, I find:

- The project incorporates design measures to minimize and/or avoid actions on high-risk landtypes, and soil resources are adequately protected.
- The analysis properly considers potential impacts to endangered species, management indicator species, and elk habitat.
- The analysis properly considers effects of sedimentation and road activities.

- The project's desired future conditions are properly described and comply with the Forest Plan.
- The cumulative effects analysis is sufficient and satisfies regulatory requirements.
- Although monitoring reports have not been completed since 2009, the Forest has continued to monitor, as required by the Forest Plan.
- The road system analysis in the EA complies with regulatory requirements and the National Environmental Policy Act.
- The project does not conflict with roadless area direction.

In conclusion, I have reviewed your assertions that the project violates various environmental laws, regulations, polices, and the Forest Plan. My review finds the project is in compliance with all applicable laws and the Forest Plan, and no additional further discussion or instruction to the Deciding Official is warranted.

My review constitutes the final administrative determination of the Department of Agriculture; no further review from any other Forest Service or Department of Agriculture official of my written response to your objection is available (36 CFR 218.11(b)(2)).

Sincerely,

DAVID E. SCHMID
Deputy Regional Forester

cc: Ray G Smith
Cheryl Probert