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Lost Creek–Boulder Creek Landscape Restoration Project

FINAL ENVIRONMENTAL IMPACT STATEMENT

Volume 2-Appendices

Payette National Forest

Cover Photo: Lost Creek Falls, photo by Leigh Bailey

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Appendices

Appendix A – Response to Public Comments 5
Appendix B - Riparian Conservation Area Treatments 270
Appendix C - Northern Idaho Ground Squirrel Emphasis Areas 274
Appendix D - Cumulative Effects 276
Appendix E - Project Area Road Management 284
Appendix F – Monitoring and Modeling Forms 317
Appendix G - Legal and Regulatory Requirements 335
Appendix H – Legacy Tree Guide 343
Appendix I - References 363
Appendix J. Glossary and Acronyms 391

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Appendix A – Response to Public Comments

45-DAY PUBLIC COMMENT ANALYSIS PER 36 CFR 218

The Lost Creek-Boulder Creek Restoration Project ID team reviewed all public comments on the DEIS and addressed those comments that were substantive in nature. Substantive comments are defined as "comments within the scope of the proposed action, specific to the proposed action, have a direct relationship to the proposed action and include supporting reasons for the Responsible Official to consider". Substantive comments provide meaningful and useful information from commenters about their concerns and issues and can be used to enhance project analysis and project planning. Responding to substantive comments may result in modifying alternatives, developing new alternatives, improving analysis, and making corrections. Comment letters and IDT responses are listed below. Copies of actual comment letters received from Tribes, local, state, Federal government agencies and elected officials are located at the end of Appendix A.

Comment Letters Received

1. State of Idaho, Department of Environmental Quality, Danielle Robbins
2. State of Idaho, Department of Environmental Quality, Josh Schultz
3. State of Idaho, Department of Fish and Game, Scott Reinecker
4. Nez Perce Tribe, Honorable Silas Whitman
5. Shoshone-Paiute Tribes, Honorable Dennis Smith
6. US Department of Interior, Allison O'Brien
7. US Environmental Protection Agency, Christine Reichgott
8. Adams County Board of Commissioners
9. Alliance for the Wild Rockies and Native Ecosystems Council, Michael Garrity and Sara Jane Johnson
10. Alliance for the Wild Rockies and Native Ecosystems Council, Jeff Juel
11. American Forest Resource Council, Irene Jerome
12. Boise Cascade Corporation, Lindsay Warness
13. Evergreen Forest, James D. Wassmuth
14. Idaho Conservation League, John Robison
15. Idaho Sporting Congress, Ron Mitchell
16. Idaho Sporting Congress, Ron Mitchell- Letter #2
17. Lost Valley Reservoir Company, David R. Tuthill
18. Native Ecosystem Council, Sara Jane Johnson and Alliance for the Wild Rockies, Mike Garrity
19. Payette Forest Coalition, Dennis Murphy
20. Dick Artley

21. Albert Becker
22. Helen Glidden
23. Ron Hamilton
24. Glenn Jacobson
25. Becky Johnstone
26. Kenneth Krone
27. John Lewinski
28. Mike Medberry
29. Karla Miller
30. Rodger Nelson
31. Mike Paradis
32. Jean Public
33. Peter Walker
34. Leonard Wallace

Table A-1. Response to Comments.

Comment #	Concerns	Comment Response
1. State of Idaho, Department of Environmental Quality, Danielle Robbins		
1	Thank you for the opportunity to respond to your request for comment. While DEQ does not review projects on a project-specific basis, we attempt to provide the best review of the information provided. DEQ encourages agencies to review and utilize the Idaho Environmental Guide to assist in addressing project-specific conditions that may apply. This guide can be found at http://www.deq.idaho.gov/ieg/. The following information does not cover every aspect of this project; however, we have the following general comments to use as appropriate:	Thank you for your comment.
2	**1. Air Quality** • Please review IDAPA 58.01.01 for all rules on Air Quality, especially those regarding fugitive dust (58.01.01.651), trade waste burning (58.01.01.600-617), and odor control plans (58.01.01.776). For questions, contact David Luft, Air Quality Manager, at 373-0550. • IDAPA 58.01.01.201 requires an owner or operator of a facility to obtain an air quality permit to construct prior to the commencement of construction or modification of any facility that will be a source of air pollution in quantities above established levels. DEQ asks that cities and counties require a proposed facility to contact DEQ for an applicability determination on their proposal to ensure they remain in compliance with the rules. IDAPA 58.01.01.614 sets out the rules for prescribed burning in Idaho. Please ensure all prescribed burning is done in compliance with the rules, and in compliance with the 2010 Operations Guide of the Montana/Idaho Airshed Group. For questions, contact the DEQ Air Quality Permitting Hotline at 1-877-573-7648.	All prescribed burning is subject to approval from the Montana/Idaho State Airshed Group. All burning will be in compliance with national and state air quality regulations. See FEIS, Section 1.13.4 Air Quality.

Comment #	Concerns	Comment Response
3	**2. Wastewater and Recycled Water** • DEQ recommends verifying that there is adequate sewer to serve this project prior to approval. Please contact the sewer provider for a capacity statement, declining balance report, and willingness to serve this project. • IDAPA 58.01.16 and IDAPA 58.01.17 are the sections of Idaho rules regarding wastewater and recycled water. Please review these rules to determine whether this or future projects will require DEQ approval. IDAPA 58.01.03 is the section of Idaho rules regarding subsurface disposal of wastewater. Please review this rule to determine whether this or future projects will require permitting by the district health department. All projects for construction or modification of wastewater systems require preconstruction approval. Recycled water projects and subsurface disposal projects require separate permits as well. • DEQ recommends that projects be served by existing approved wastewater collection systems or a centralized community wastewater system whenever possible. Please contact DEQ to discuss potential for development of a community treatment system along with best management practices for communities to protect ground water. • DEQ recommends that cities and counties develop and use a comprehensive land use management plan, which includes the impacts of present and future wastewater management in this area. Please schedule a meeting with DEQ for further discussion and recommendations for plan development and implementation. For questions, contact Todd Crutcher, Engineering Manager, at 373-0550.	Thank you for your comment. No wastewater effluent or recycled water would be generated from this project.
4	**3. Drinking Water** • DEQ recommends verifying that there is adequate water to serve this project prior to approval. Please contact the water provider for a capacity statement, declining balance report, and willingness to serve this project. • IDAPA 58.01.08 is the section of Idaho rules regarding public drinking water systems.	Thank you for your comment. Two potable wells that are both regulated public drinking water systems provide the water system for Cold Springs campground within the project area. No new public drinking water systems are planned. No other drinking water systems or municipal watersheds exist within the project area or would be affected by the project.

Comment #	Concerns	Comment Response
	Please review these rules to determine whether this or future projects will require DEQ approval. All projects for construction or modification of public drinking water systems require preconstruction approval. • DEQ recommends verifying if the current and/or proposed drinking water system is a regulated public drinking water system (refer to the DEQ website at http://www.deq.idaho.gov/water-quality/drinking-water.aspx). For non-regulated systems, DEQ recommends annual testing for total coliform bacteria, nitrate, and nitrite. • If any private wells will be included in this project, we recommend that they be tested for total coliform bacteria, nitrate, and nitrite prior to use and retested annually thereafter. • DEQ recommends using an existing drinking water system whenever possible or construction of a new community drinking water system. Please contact DEQ to discuss this project and to explore options to both best serve the future residents of this development and provide for protection of ground water resources. • DEQ recommends cities and counties develop and use a comprehensive land use management plan which addresses the present and future needs of this area for adequate, safe, and sustainable drinking water. Please schedule a meeting with DEQ for further discussion and recommendations for plan development and implementation. For questions, contact Todd Crutcher, Engineering Manager at 373-0550.	
5	**4. Surface Water** • A DEQ short-term activity exemption (STAE) from this office is required if the project will involve de-watering of ground water during excavation and discharge back into surface water, including a description of the water treatment from this process to prevent excessive sediment and turbidity from entering surface water. • Please contact DEQ to determine whether this project will require a National Pollution Discharge Elimination System (NPDES) Permit. If this project disturbs more than one acre, a storm water permit from EPA	No stream alteration or dewatering of ground water is expected due to activities proposed with this project. On March 20, 2013, in Decker v. NEDC, the Supreme Court reversed the Ninth Circuit's decision in NEDC v. Brown and held that the Clean Water Act and its implementing regulations do not require the NPDES permits for storm water discharges from logging roads into the navigable waters of the United States. In 2008 a MOU with IDEQ was renewed which outlines the roles and responsibilities expected of the Forest Service and other resource management agencies. Implementation of Forest Plan Standards and timber harvest BMPs are key elements of

Comment #	Concerns	Comment Response
	may be required. • If this project is near a source of surface water, DEQ requests that projects incorporate construction best management practices (BMPs) to assist in the protection of Idaho's water resources. Additionally, please contact DEQ to identify BMP alternatives and to determine whether this project is in an area with Total Maximum Daily Load storm water permit conditions. • The Idaho Stream Channel Protection Act requires a permit for most stream channel alterations. Please contact the Idaho Department of Water Resources (IDWR), Western Regional Office, at 2735 Airport Way, Boise, or call 208-334-2190 for more information. Information is also available on the IDWR website at: http://www.idwr.idaho.gov/WaterManagement/StreamsDams/Streams/AlterationPermit/AlterationPermit.htm • The Federal Clean Water Act requires a permit for filling or dredging in waters of the United States. Please contact the US Army Corps of Engineers, Boise Field Office, at 10095 Emerald Street, Boise, or call 208-345-2155 for more information regarding permits. For questions, contact Lance Holloway, Surface Water Manager, at 373-0550.	the proposed action and all alternatives. A key concept of BMPs is that if monitoring identifies noncompliance with State water quality standards, then the Forest Service is obligated to restore compliance. Because BMPs will be applied with monitoring and necessary adjustments ongoing, the Forest Service is in compliance with the CWA (IDEQ 2008).
6	**5. Hazardous Waste And Ground Water Contamination** • Hazardous Waste. The types and number of requirements that must be complied with under the federal Resource Conservations and Recovery Act (RCRA) and the Idaho Rules and Standards for Hazardous Waste (IDAPA 58.01.05) are based on the quantity and type of waste generated. Every business in Idaho is required to track the volume of waste generated, determine whether each type of waste is hazardous, and ensure that all wastes are properly disposed of according to federal, state, and local requirements. • No trash or other solid waste shall be buried, burned, or otherwise disposed of at the project site. These disposal methods are regulated by various state regulations including Idaho's Solid Waste Management Regulations and Standards, Rules and Regulations for Hazardous Waste,	No hazardous waste or groundwater contamination is expected to occur with the implementation of this project. Project Design Features are included which require containment of fuel (FEIS, Chapter 2, Table 2-6, PDF 12): "No refueling or storage of fuel or other toxicants within RCAs unless approved by a fisheries biologist and/or hydrologist. Unattended equipment should not be parked in RCAs unless no other practical options are available. Timber sale contract provisions (as well as other service contracts) require a spill response plan be included in the contract."

Comment #	Concerns	Comment Response
	and Rules and Regulations for the Prevention of Air Pollution. • Water Quality Standards. Site activities must comply with the Idaho Water Quality Standards (IDAPA 58.01.02) regarding hazardous and deleterious-materials storage, disposal, or accumulation adjacent to or in the immediate vicinity of state waters (IDAPA 58.01.02.800); and the cleanup and reporting of oil-filled electrical equipment (IDAPA 58.01.02.849); hazardous materials (IDAPA 58.01.02.850); and used-oil and petroleum releases (IDAPA 58.01.02.851 and 852). Petroleum releases must be reported to DEQ in accordance with IDAPA 58.01.02.851.01 and 04. Hazardous material releases to state waters, or to land such that there is likelihood that it will enter state waters, must be reported to DEQ in accordance with IDAPA 58.01.02.850. • Ground Water Contamination. DEQ requests that this project comply with Idaho's Ground Water Quality Rules (IDAPA 58.01.11), which states that "No person shall cause or allow the release, spilling, leaking, emission, discharge, escape, leaching, or disposal of a contaminant into the environment in a manner that causes a ground water quality standard to be exceeded, injures a beneficial use of ground water, or is not in accordance with a permit, consent order or applicable best management practice, best available method or best practical method." For questions, contact Aaron Scheff, Waste & Remediation Manager, at 373-0550.	
7	**6. Additional Notes** • If an underground storage tank (UST) or an aboveground storage tank (AST) is identified at the site, the site should be evaluated to determine whether the UST is regulated by DEQ. EPA regulates ASTs. UST and AST sites should be assessed to determine whether there is potential soil and ground water contamination. Please call DEQ at 373-0550, or visit the DEQ website (http://www.deq.idaho.gov/waste-mgmt-remediation/storage-tanks.aspx) for assistance. • If applicable to this project, DEQ recommends that BMPs be implemented for any of the following conditions: wash water from cleaning vehicles, fertilizers and pesticides, animal facilities, composted waste, and ponds. Please contact DEQ for more information on any of	No underground or above ground storage tanks will be utilized for this project. Wash water from cleaning vehicles or equipment would be the responsibility of the contractor and not occur on National Forest Lands.

Comment #	Concerns	Comment Response
	these conditions.	
8	We look forward to working with you in a proactive manner to address potential environmental impacts that may be within our regulatory authority. If you have any questions, please contact me, or any our technical staff at 208-373-0550.	Thank you for your comment.
2. State of Idaho, Department of Environmental Quality, Josh Schultz		
9	**Upper West Fork Weiser River (ID17050124SW017_03, Corral Creek to Mouth).** The West Fork Weiser River (WFWR) is fully supporting its beneficial uses. It does NOT have a TMDL, but has been assigned a potential natural vegetation target load allocation and requires a 27% reduction in solar loading. Any activities in this watershed should be consistent with meeting this load allocation. Downstream water quality is dependent upon this stream obtaining this target. Any activities that affect solar loading to WFWR should be carefully considered as they may affect the ability of the WFWR to meet this allocation.	Riparian Conservation Area (RCA) vegetation management is proposed within the West Fork of the Weiser subwatershed and along the RCA of the mainstem of this waterbody. See FEIS Chapter 3, water quality effects analysis for predicted effects to shading of the channel. Alternative C proposes to relocate road 50127 outside the RCA of the West Fork Weiser River. This would result in a beneficial effect as it would allow more overstory to grow within the RCA over the long-term for this reach of the West Fork Weiser River.
10	**Upper Lost Creek (ID17050124SW020_02, source to Lost Valley Reservoir).** Upper Lost Creek is fully supporting its beneficial uses. Any activities in this watershed should be consistent with maintaining water quality at or above its current condition.	Beneficial uses are identified for this waterbody and effects analyzed for each alternative in the water quality effects analysis FEIS, Chapter 3, Section 3.3.3.7 and 3.3.4.
11	**Lower Lost Creek (ID17050124SW018_02), Lost Valley Dam to Mouth).** Lower Lost Creek is fully supporting its beneficial uses. Any activities in this watershed should be consistent with maintaining water quality at or above its current condition.	Beneficial uses are identified for this waterbody and effects analyzed for each alternative in the water quality effects analysis FEIS, Chapter 3, Section 3.3.3.7 and 3.3.4.
12	**Upper Weiser River (ID17050124SW007_02, East and West Branches)** This AU contains all 1st and 2nd order streams	Beneficial uses are identified for this waterbody and effects analyzed for each alternative in the water quality effects analysis FEIS, Chapter 3, Section 3.3.3.7 and

Comment #	Concerns	Comment Response
	upstream of Keithly Creek. Both the West Branch and the East Branch are fully supporting beneficial uses. Any activities in this watershed should be consistent with maintaining water quality at or above its current condition.	3.3.4.
13	**Upper Boulder Creek (ID17060210SL005_02,** All 1st and 2nd order tributaries of Boulder Creek; including Boulder Creek to Star Creek). Upper Boulder Creek is fully supporting its beneficial uses. Any activities in this watershed should be consistent with maintaining water quality at or above its current condition.	Beneficial uses are identified for this waterbody and effects analyzed for each alternative in the water quality effects analysis FEIS, Chapter 3, Section 3.3.3.7 and 3.3.4.
14	**Lower Boulder Creek (ID17060210SL005_03,** Boulder Creek from Star Creek to confluence with Little Salmon River), Lower Boulder Creek is Fully Supporting its beneficial uses. Any activities in this watershed should be consistent with maintaining water quality at or above its current condition.	Beneficial uses are identified for this waterbody and effects analyzed for each alternative in the water quality effects analysis FEIS, Chapter 3, Section 3.3.3.7 and 3.3.4.
15	All of the waterbodies in the proposed project area are fully supporting beneficial uses. Only one of the waterbodies has a TMDL allocation: the West Fork Weiser River. While the WFWR is fully meeting its beneficial uses, it requires a 27% reduction in solar loading to meet downstream water quality targets. Any actives in this watershed should be carefully considered and performed in a way to enhance the riparian zone and subsequent shading to the stream. The shade table for the WFWR may be found on page 17 of the Weiser Subbasin Temperature TMDL (http:Uwww.deg.idaho.gov/media/450157-	A discussion on the 27% load reduction is included in the FEIS, Section 3.3.3.7. See response to comment #9.
3. State of Idaho, Department of Fish and Game, Scott Reinecker		
16	Our Department has reviewed the DEIS for the proposed Lost Creek-Boulder Creek Landscape Restoration Project. This project is based, in part, on recommendations provided by the Payette Forest Coalition (PFC) to the Payette National Forest. Our Department participated in the PFC process and we agree that the PFC recommendations are a good foundation from which to build the proposed project. We offer the following comments for consideration prior to completion of the FEIS	Thank you for your comment.

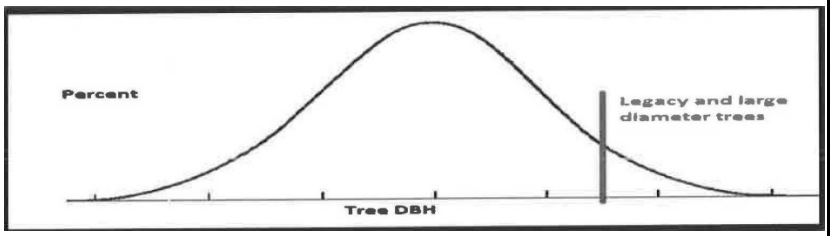
Comment #	Concerns	Comment Response
	and Decision Notice.	
17	Restoration of habitat in the Lost Creek-Boulder Creek area is important to our agency; however, maintenance of effective elk habitat is equally important. Elk habitat effectiveness and security is influenced by amount and proximity of forage and cover components, adequacy of hiding and thermal cover, and open road densities. As hiding cover dissipates the influence of open roads on elk habitat effectiveness is magnified. Implementation of the proposed vegetation treatments will result in a much more open forest condition, and dramatically so from the perspective of an elk living in the area. Tables WL-19 and WL-20 indicate that all of the action alternatives will erode elk security areas. It may be difficult to achieve the elk security guidelines in their strictest sense and maintain a viable restoration project. In this case, suggested ways to mitigate this impact to elk, short of severely reducing vegetation treatments in areas that already provide security habitat, could consist of decommissioning or creating more effective closures on unauthorized roads; placing system roads into long-term closures; closing more system roads seasonally; or a combination of all of these. The road management/improvement package identified in Alternative C provides the best mitigation for elk security.	Alternative C provides for more maintenance of PVG 6 and elk security. In addition, Alternative C also proposes the most long-term road closures and decommissioning. The other action alternatives also reduce overall road densities but may reduce elk security primarily because of the emphasis to move toward the HRV for low and mid-elevation forest stands (resulting in more open stand conditions and canopy cover). To ensure elk populations remain within State objectives the Forest is committed to education and enforcement of the travel management plan. The Forest will also rely on continued cooperation with the Idaho Department of Fish and Game, the public and local county law enforcement.
18	We recommend that the thinning of large tree size class, high canopy cover class stands in PVG 6 shift stands to the medium rather than the low canopy cover class to lessen impacts to elk and other wildlife habitat. We also recommend that any intensive treatments to benefit the northern Idaho ground squirrel should be focused in Priority 1 areas where squirrels have a moderate or high probability of utilizing them. Priority 2 areas should still be treated, but at intensity comparable to the surrounding area.	All proposed action alternatives meet the Forest Plan as it relates to wildlife. However, timeframes to achieve habitat for various species may vary depending on the Alternative chosen or combination of Alternatives. Alternative C retains more PVG 6 in the high and moderate canopy cover class which retains more elk security. Most emphasis for NIDGS will be in Priority 1 areas. Prescriptions for Priority 2 habitat will be consistent with the HRV for the PVG being treated and mimic more of what Habitat Family 1 species historically used (e.g., canopy cover). Canopy cover in some Priority 2 habitat may resemble Priority 1 canopy closure if it is necessary to link populations or improve immigration and/or emigration from existing isolated NIDGS colonies. The Alternatives described in Section 3.6 of the FEIS describes this treatment. Please note an error in the DEIS (page 298) referring to revision of the NIDGS recovery plan. While the plan may be revised in the future, there are no current or imminent revision efforts underway by the US Fish and Wildlife Service at this time.

Comment #	Concerns	Comment Response
		Alternative C proposes to retain higher canopy cover and was developed to address wildlife species (including elk) that utilize forests with higher canopy cover. Alternative C emphasizes the commenter's recommendations. The effects of all alternatives on wildlife and vegetation can be found in Chapter 3 of the FEIS.
19	Thank you for this opportunity to comment on this project. If you have any questions regarding the Department's concerns please contact Jeff Rohlman at our McCall office.	Thank you for your comment.
4. Nez Perce Tribe, Honorable Silas Whitman		
20	On behalf of the Nez Perce Tribe (Tribe), thank you for the opportunity to comment on the Payette National Forest (Forest)'s Draft Environmental Impact Statement (DEIS) for the Lost Creek- Boulder Creek Landscape Restoration Project. The project is one of the Collaborative Forest Landscape Restoration Projects (CLFRP) produced by the Payette Forest Coalition in partnership with the Payette National Forest.	Thank you for your comment.
21	As described in the DEIS, the project area comprises approximately 80,000 acres of National Forest System Lands in the Lost Creek and Boulder Creek Drainages. The Forest is proposing a combination of commercial thinning, pre-commercial thinning, prescribed fire, and reforestation to improve habitat for specific wildlife species, maintain and promote large tree forest structure, reduce the risk of uncharacteristic and undesirable wildland fire, and contribute to the economic vitality of local communities. Road decommissioning, culvert replacements, and road improvements are proposed to restore habitat connectivity, reduce road related sediment, and restore riparian vegetation and floodplain function. Recreation improvements including trail maintenance, trail relocation, and installation of informational signage and restroom facilities are proposed to improve watershed conditions across portions of the Lost Creek and Boulder Creek drainages. The Forest has selected Alternative B as the proposed action for this project. Alternative B responded to recommendations from the Payette Forest Coalition and public concerns regarding recreation access. The Nez Perce Tribe would like to see Alternative C as the alternative adopted by the Forest Service. Alternative C provides more watershed restoration	Thank you for your comment. In the Record of the Decision, the Responsible Official will document his/her rationale for the elements of the selected alternative. Effects to all resources, compliance with laws, regulations, and policies, tribal consultation, and public comments will be considered.

Comment #	Concerns	Comment Response
	efforts, fewer temporary roads, and encompasses more protection for Treaty Resources (including elk and salmonids) than any of the other proposals.	
22	As the Forest is aware, the project is located entirely within the Tribe's aboriginal territory subject to the rights the Tribe reserved, and the United States secured, in the Treat of 1855. The Project is also located within the Tribe's area of exclusive use and occupancy as adjudicated by the Indian Claims Commission. The Tribe's paramount goal is to protect and advance its treaty-reserved and cultural interests in its aboriginal territory. The Forest Service has a trust responsibility to ensure that its actions, including the project, are fully constituent with the 1855 Treaty, executive orders, departmental regulation and other federal laws implicating the United States' unique relationship with the Tribe. Following a careful review of the DEIS, the Tribe has identified several issues and concerns with the project that it requests be addressed through additional information and analysis prior to the Forest Service issuing a final decision. The Tribe requests formal consultation with the Forest Service regarding the project, and stands ready to assist the agency in addressing the Tribe's comments.	The Payette National Forest has formally consulted with the Nez Perce Tribe (March 11, 2014). Section 1.11 of the FEIS describes the tribal consultation process.
23	I. GENERAL COMMENTS a. The Nez Perce Tribe's Interest in the lost Creek-Boulder Creek Landscape Restoration Project Since time immemorial, the Tribe has occupied and used over 13 million acres of lands now comprising north-central Idaho, southeast Washington, northeast Oregon, and parts of western Montana. Tribal members engaged in fishing, hunting, gathering, and pasturing livestock across their vast aboriginal territory and these activities still play a major role in the culture, religion, subsistence, and commerce of the Tribe. In 1855, the United State entered into a treaty with the Nez Perce Tribe. Treaty of June 9, 1855 with the Nez Perce, 12 Stat. 957 (1859). In this treaty the Nez Perce Tribe explicitly reserved, "the right to fish at all usual and accustomed places in common with citizens of the Territory; and of erecting temporary buildings for curing, together with the privilege of	The Payette National Forest consults with the Nez Perce Tribe on all proposed activities. The Forest Service has Tribal Trust Responsibilities to uphold, including but not limited to, Article 3 of the 1855 Treaty with the Nez Perce and Article 8 of the 1863 Treaty with the Nez Perce. Other executive orders, law, and handbook direction apply as well. The Record of Decision document will address applicable law. In order to ensure Nez Perce Tribal members can exercise Treaty-reserved rights to hunt, fish, gather and pasture (Article 3, Treaty of 1855), the Forest Service, to the greatest extent practicable, manages for healthy habitat and sustainable aquatic, terrestrial and vegetative species. Effects for individual resources are disclosed in FEIS Chapter 3.

Comment #	Concerns	Comment Response
	hunting, gathering roots and berries, and pasturing their horses and cattle upon open and unclaimed lands." Id. The lands and waters of the Payette National Forest are part of the vast territory ceded by the Tribe, over which the Tribe has treaty reserved rights. The Project is located on the New Meadows District and entirely within the Tribes ceded territory as well as within the area determined by the Indians Claims Commission to be the exclusive use and occupancy of the Tribe. These NFS lands and waters provide irreplaceable habitat for tribal resources, including Chinook salmon, steelhead and bull trout. These and other aquatic resources are subject to the exercise of the Tribe's treaty reserved rights. See e.g., Sohappy v. Smith, 302 F. Supp. 899 (D.Or.1969}, aff'd, United States v. Oregon, 529 F. 2d 570 (9th Cir. 1976}; Washington v Washington State Commercial Passenger Fishing Vessel Ass', 443 U.S. 658 {1979} (Fishing Vessel}. The treaty-reserved right to take fish and other resources reserved by the Tribe presumed the continued existence of those biological conditions necessary for the resources that area the subject of the treaties. See Kittitas Reclamation District v. Sunnyside Valley Irrigation District, 763 F.2d 1394 {9th Cir. 1985}, cert. denied, Sunnyside Valley Irrigation District v. United States, 474 U.S. 1032 {1985}. Harm to these resources and their habitat will harm the Tribe and its members. Unfortunately, many of the resources sacred to the Tribe are at risk of disappearing. Snake River Spring/Summer Chinook salmon were listed as threatened under the Endangered Species Act in 1992, and bighorn sheep populations continue to struggle in the face of introduced diseases and trophy hunting. The decimation of big game herds and salmon runs has seriously impacted the tribal economy. Today, tribal members face a poverty rate of almost 30% and winter unemployment rates of 62%. Treaty tribes, such as the Nez Perce, have been recognized as managers of their treaty-reserved resources. U .S. v. Washington, 684 F. Supp. 312, 339-40, 403 {W.O. Wash. 1974). As manager, the Tribe has devoted substantial time, effort and resources to the recovery and co-management of treaty-reserved resources within its treaty territory.	
24	SPECIFIC COMMENTS a. The Forest needs to determine the best means of protecting Legacy	Perry and Amaranthus (1997) define forest legacies as anything handed down from a pre-disturbance ecosystem. These legacies can occur at different scales, ranging from

Comment #	Concerns	Comment Response
	Trees and maximizing retention of large diameter trees consistent with the goals of the CFLRP. Legacy Trees have survived stand replacing natural disturbances and represent some of the best genetics for future seed source. Research has shown that legacy Trees provide important habitat elements for many species of wildlife and have a higher level of diversity and richness than control trees (Mazurek 2003). http://www.fs.fed.us/psw/publications/4251/mazurek2.pdf The goal of protecting Legacy Trees and maximizing retention of large diameter trees is outlined in the Collaborative Forest landscape Restoration Program; Sec. 4003{0} fully maintains, or contributes toward the restoration of, the structure and composition of old growth stands according to the pre-fire suppression old growth conditions characteristic of the forest type, taking into account the contribution of the stand to landscape fire adaptation and watershed health and retaining the large trees contributing to old growth structure; (E) would carry out any forest restoration treatments that reduce hazardous fuels by-- (i) focusing on small diameter trees, thinning, strategic fuel breaks, and fire use to modify fire behavior, as measured by the projected reduction of uncharacteristically severe wildfire effects for the forest type (such as adverse soil impacts, tree mortality or other impacts); and (ii) maximizing the retention of large trees, as appropriate for the forest type, to the extent that the trees promote fire-resilient stands. The Forest Service purpose for this project and the goals of the Payette Forest Coalition similarly highlight an increase in large tree class size, decreased canopy cover and increase in the number of early seral species. With the goals clearly outlined, it is imperative to find the best means of protecting legacy Trees and maximizing the retention of large diameter trees that will be the next round of legacy Trees in our lifetime. The issue of the best way to protect legacy Trees and the retention of large diameter trees has been raised in several Payette Forest Coalition meetings. On a September 24th PFC field trip, a location in harvest unit 84 was chosen to highlight how the current marking procedures protect legacy Tree and other large diameter ponderosa pines. During the discussion it was noted that a legacy Tree was marked for removal. The Forest Service marking crew leader was there and noted that it was a mistake made by a less experienced crew member. This highlights the	the landscape to the stand to individual components within a stand (Huckaby et al. 2003; Van Pelt 2008). For example, within a lethal fire area, unburned or underburned patches, as well as individual trees, are legacies. Legacies are not an artifact of current land-use activities—they also occurred on the historic landscape (Huckaby et al. 2003). Old live and dead ponderosa pine and western larch trees are an important legacy of the historical condition in many areas. They are generally resistant to nonlethal/mixed1 fire; provide food and habitat for wildlife, and genetic material reflective of the local site conditions (Huckaby et al. 2003). However, legacies may now be less common in number and/or distribution due to changes in disturbance regimes (Van Pelt 2008, Franklin et. al. 2008, Hagmann et. al. 2013). Since legacies, in particular certain underrepresented old tree legacies, are deficient within many landscapes, retaining old trees, and trees that are transitioning into old provides the greatest opportunity to create and/or replace these important components. Legacy trees are defined as older trees that survived recent disturbances and are a relic of historical communities. These trees are important because they exhibit definitive characteristics and contribute to ecosystem function in a different manner than younger trees. This project has been designed with consideration of the importance of legacy trees and mature forests. A review of applicable science also indicates the value of legacy trees and old-forest habitat (Franklin et. al. 2008, Stine et. al. 2013, Franklin et. al. 2013). Specifications for vegetative treatments (Section 2.3 of the FEIS) as well as the incorporation of a number of Project Design Features (Table 2-6) have been included in the FEIS that address the above listed concerns. Legacy tree guidelines were developed based on research by Van Pelt (2008). Appendix H of the FEIS contains the guidelines that would be used for this project. All action alternatives have been designed consistent with the language in the CFLRP referenced by the commenter. For example, in the description of the commercial thin-free thin treatments "treatment would be accomplished primarily by low thinning with some crown thinning and occasionally sanitation cutting …". In addition, a number of specifications have been incorporated to emphasize the intent of the treatments which would be incorporated into silvicultural prescriptions and marking guidelines. As documented in the Scriver Creek project record on the Boise National Forest, by DellaSala and others (2013), Franklin and Johnson (2013), and Abella and others (2006) this debate is not new. Based on this and other comments, the specifications regarding the intent of the project on large tree and legacy tree retention/removal has been edited between draft and final EIS to provide additional clarity for use in the development of silvicultural prescriptions and marking guidelines associated with the proposed

Comment #	Concerns	Comment Response
	concern that handing this guideline to a contractor's marking crew with varied levels of experience might produce less than desired results for legacy Tree protection in the lost Creek-Boulder Creek Project. After reviewing the legacy Tree guideline, it is clear that it is a well written, well thought out document; however, implementation of the guidelines can be confusing and subjective, leaving open the possibility that the Forest may not meet their desired objectives.	treatments. The result of past projects on the Forest with similar objectives indicate that the quadratic mean diameter of harvested trees is predominantly in the smaller size classes. The proposed alternatives also include treating non-commercial (smaller) trees through the use of mechanical and/or thermal treatments. Although there is interpretation required in utilizing these legacy tree guidelines, the Forest does evaluate vegetative treatments to ensure that the intent of the NEPA and subsequent silvicultural prescriptions are implemented appropriately and consistent with NEPA decisions and makes adjustments to implementation based on this evaluation.
25	**Proposed Idea for Legacy Tree and large diameter tree retention:** The Nez Perce Tribe would like to see an established diameter at breast height (DBH) (with appropriate exceptions for safety and operability issues) for individual stands within this project. This would ensure that there are easy to implement, transparent, quantifiable metrics to protect Legacy trees and the "largest of the large" diameter trees in accordance with the written goals of this project. An established DBH would remove ambiguity from large diameter tree harvest. This DBH could be species specific and calculated using stand data. A suggestion would be to graph stand DBH data to produce a bell shaped curve. Find a logical place on the curve where the majority of Legacy tree and the "largest of the large" diameter trees fall, and establish a DBH for retention. This approach may be able to get down to the unit level should the data be available.  The current Legacy Tree guideline only addresses two species of tree (ponderosa pine and western larch). It is understood that the Forest is promoting early sera! species, however, it would be beneficial to have	The intent of the proposed treatments is move toward the desired conditions in the Forest Plan which includes retaining and promoting biological legacies (including old trees, CWD and snags), large tree size class, and old-forest characteristics consistent with the Forest Plan, the CFLRP and best science available regarding these topics. Project design features (Table 2-6) and the description of the proposed alternatives (Section 2.3) have been incorporated to address these concerns. An evaluation of the legacy tree guidelines proposed for use in this project was conducted by Forest personnel in the project area in the fall of 2013. This evaluation indicated that trees as small as 22 inches are in excess of 225 years old and exhibit the characteristics important for retention as a legacy tree, while trees as large as 37 inches were less than 150 years in age and did not have the characteristics important for classification as a legacy tree. These findings are consistent with research by Van Pelt (2008) and Johnston (2014) as well as with Payette National Forest Inventory data (2004) which indicate there is a poor correlation between age and diameter. In regards to large diameter trees that do not meet legacy tree guidelines (such as the 37 inch 150 year old tree referenced above), the project has been proposed to emphasize the retention of the larger diameter trees within each stand (see FEIS section 2.5.1 and Appendix H) while balancing desired future conditions which include tree size, snags, canopy cover and species composition consistent with studies regarding HRV (Morgan and Parsons 2001) and old-forest in the area on which the desired conditions for the project are based. Evaluation of data from the project area indicates that the “largest of the large” trees, as referenced by the commenter, generally range from the mid 30 inch size class to over 50 inches in diameter in large tree stands. This is consistent with Forest-wide datasets (Forest Plan). A review of cruise data, as well as marking inspection reports and field reviews of recent timber sales with similar objectives, indicate that these projects rarely, if ever, cut trees over 36 inches in diameter. Forest

Comment #	Concerns	Comment Response
	some protection for the "largest of the large" Grand and Douglas fir. If the Forest is trying to promote historic conditions, these larger older trees represent just that. Because the mature tree component is underrepresented across the majority of the area, large trees, regardless of species, need to be protected for both wildlife and as part of the forest's natural heritage. In addition, the Forest Plan and Wildlife Conservation Strategy highlight the value of these mature trees for wildlife. Legacy trees with mistletoe (regardless of mistletoe rating) should be protected using this same DBH for wildlife habitat. We are also willing to discuss a design feature based on a diameter limit that might offer additional flexibility in limited circumstances. For example, the Soda Bear Project on the Malheur National Forest added a design feature to address the circumstance when a large diameter tree is competing with an even larger, more desirable tree. From the center of the larger, more desirable tree, the Forest Service established a circle equivalent to two times the diameter of the drip line. Should a less desirable tree occur within this area, it could be considered for removal. In addition to existing legacy trees, there needs to be provisions in the silvicultural prescriptions to retain "replacement" legacy trees within each stand. A desirable age structure should be developed to provide the next generation of legacy trees to replace existing ones that will be lost from the stand over time. Retaining the largest of the large while removing the majority of commercial trees in the 16-20" DBH class is counter-productive to the long-term goal of promoting sustainable old growth stand conditions. It is in the best interest of the Forest Service to address this topic as it will be highly scrutinized by outside groups during the NEPA process. These additional protections of Legacy Trees and large diameter trees will highlight to outside groups that this project has the restoration goals outlined by the CFLRP truly in mind.	datasets and field reconnaissance in these project areas indicate the largest trees in these projects generally range from 40 to over 50 inches in diameter. This data also indicated that the larger trees being removed (i.e. those over 30 inches in diameter) were typically of late seral species (i.e. grand fir and to a lesser extent, Douglas-fir). While the Forest agrees (and acknowledges in the FEIS) that retention of early seral legacy trees and the large diameter trees (especially of pioneer species) is necessary to meet desired future conditions for the stands (and across the landscape), appropriate stocking levels, resiliency, and species compositions are also a consideration to meet the desired conditions in the long term. The Forest did consider incorporation of a PDF for a diameter limit on this project but the Forest does not feel that utilization of a diameter limit is necessary, nor that it is the best or only method to achieve the project objectives and has therefore proposed to utilize a combination of specifications as to the intent of mechanical vegetative treatments and PDFs (see Chapter 2 of the FEIS) to address retention of appropriate levels of old trees and large trees. In regards to future legacy trees, the project has been designed to retain the appropriate density and species composition to achieve the desired conditions in stands for which active management has been proposed. This includes promoting and/or retaining large diameter trees of the appropriate species at densities resilient and resistant to anticipated disturbance in the area as well as the retention of legacy trees. Silvicultural prescriptions would be prepared for each unit (see PDF 65, and Appendix H) and these prescriptions factor in mid to long term stand objectives as well as the current short term objectives.
26	b. Proposed Riparian Conservation Area (RCA) treatments. The Forest Plan (Appendix B-36) identifies several important considerations when appropriately delineating and designing management	Project Design Features (Chapter 2, Table 2-6) specify that effects to riparian dependent resources, including LWD, shading, sediment delivery, etc. would be assessed on a site-specific basis prior to implementation.

Comment #	Concerns	Comment Response
	activities within or affecting RCAs. These are as follows: a) A stream requires predictable and near natural energy and nutrient inputs. b) Many plant and animal communities rely on streamside or wetland forests and vegetation for migratory or dispersion habitat. c) Small streams are generally more affected by hillslope activities than are larger streams. d) As adjacent slopes become steeper, the likelihood of disturbance resulting in discernible instream affects increase. e) Riparian vegetation 1} provides shade to stream channels; 2} contributes large woody debris 3} adds small organic matter; 4} controls sediment inputs from surface erosion; 6} and regulates nutrient and pollutant inputs to streams. Searching the available scientific literature, it becomes apparent that RCA treatments are generally new, understudied, and has varied biological effects (some positive and some negative). In the alternatives contemplated in the draft EIS, RCA treatments may involve up to 2,000 acres. Because none of these treatments occur in the Boulder Creek watershed this would mean heavy treatment in the Lost Creek watershed RCA. RCA's are often referred to as buffer zones because they reduce sediment and pollutants from entering water bodies. For this project the Forest Service has proposed to treat within RCA buffer zones using commercial thinning, non-commercial thinning and burning. Compared to Payette Forest Plan guidelines, this is a reduced buffer zone for RCA protection. The proposed treatments have the ability to impact Large Woody Debris (LWD) recruitment, water temperatures through reduced canopy cover shading, stream bank stability through the removal of upland trees just outside of the no cut zone, fine organic litter from entering streams, riparian microclimate and productivity, wildlife habitat, and sediment and pollutants entering water bodies. In the Forest Plan under the Management Direction for Soil, Water, Riparian, and Aquatic Resources SWST10 states; Trees or snags that are felled within RCAs must be left unless determined not to be necessary for achieving soil, water, riparian, and aquatic desired conditions. Felled trees or snags left in RCAs shall be left intact unless resource protection (e.g., the	

Comment #	Concerns	Comment Response
	risk of insect infestation is unacceptable) or public safety requires bucking them into smaller pieces. Riparian Management Objectives for this project need to be clearly defined and specifically linked to improving riparian function. This criterion should be more specific than'the blanket statement aimed at reducing large scale fires in RCA's. Riparian areas should only be treated if the treatment will clearly and positively meet Riparian Management Objectives and create positive biological effects. RCA treatments should be light in nature, non-mechanical, non-commercial and reduced in acreage as they are still experimental. Ideally RCA treatments should be covered by burning and non-commercial hand lines. Removal of wood in RCA's should only occur when streams have adequate LWD as defined by your Watershed Condition Indicators (>20 pieces per mile,>12 inches in diameter,>35 feet length) and directed by SWST10.	
27	c. Full hillslope recontour of roads (decommissioning) should be elevated in all alternatives Amongst the alternatives there is a range in the number of miles for full recontouring (51-132). Road densities in these watersheds are some of the highest in all of the Payette National Forest. High road densities have been documented to have deleterious effects on watershed ecosystem health. One method for reducing these road densities is through road recontouring. Studies have shown that road recontouring had a significant positive correlation on the reduction of fine sediments in stream substrate cores (McCafferty et al. 2007). On the Payette National Forest, a direct correlation was found between road densities and degraded streambed conditions (fines, median particle size (050) and geometric mean particle diameter (D50) (Nelson et al. 2004). Higher road densities and the resulting sediment have been correlated to lower abundance of Chinook and steelhead parr (Thompson and Lee, 2000). In some of the alternatives there is the management prescription to abandon roads (long term closure) instead of fully recontouring (decommissioning). In a recent study published in Frontiers of Ecology, two road treatment prescriptions: fully recontoured (decommissioned) versus roads that were	Full recontour of proposed decommissioning of system roads and for unauthorized route treatments is analyzed for all alternatives. The assumption is that full recontour would be achieved where practicable. However, for some roads this may not be achievable due to a lack of fill or rock cuts, etc. More explanation of proposed road decommissioning is found in the FEIS, Chapter 3, Watershed Resources Analysis, sections 3.3.2.2, and 3.3.4. Long-term closure (LTC) treatment is not abandonment of the road. This treatment is applied to system roads that are to be retained on the forest network. It is the goal of this treatment to stabilize the road prism and reduce the maintenance needed so it can be utilized for future vegetative management entries. There are unauthorized routes in the project area that were categorized as low priority, and not proposed for treatment in any of the Lost Creek-Boulder Creek alternatives. These routes are not precluded for restoration by future projects; they are simply not identified as priority for this project. These routes could become a higher priority if utilized by a future project or a natural event, such as flood or fire, make them vulnerable to erosion or resource damage. The proposal on which roads and routes were to be treated was completed for each alternative using the indicators used in the Watershed and Fisheries analyses. They can be seen on the maps shown in the FEIS (Watershed Restoration Treatments in section 2.5).

Comment #	Concerns	Comment Response
	simply abandoned (gated), were compared for belowground recovery of soil and hydrologic characteristics. http://www.esajournals.org/doi/abs/10.1890/120116 After 10 years, recontoured roads had carbon storage, nutrient cycling rates, and organic matter quantities similar to never-roaded areas, while abandoned roads, after 30-50 years of recovery and revegetation showed very little carbon storage, soil organic matter, and nitrogen. Results from this paper suggested abandoned roads are strongly nutrient limited. Recontouring roads increases infiltration capacity, water storage, and decreases time to runoff in storm event over abandoned roads. Active road recontouring can dramatically accelerate (by 100- 1000's of years) the recovery of aboveground and belowground properties towards that of a never roaded reference reach (Lloyd et al. 2013). Proposed Idea for when full road recontouring should be prioritized: Because GRAIP data is being collected on the roads in the project area numerous metrics will be available to aid in road recontouring prioritization, we would recommend focusing on the following metrics; tons of sediment delivered to streams, %of road in riparian areas and the number of stream crossings as the primary metrics used for the recontouring prioritization. Given the documented benefits of full road recontouring where funds are available this should be the preferred method of road closure. If funds are not available to fund full recontour of a road slated for decommissioning we would suggest the following priorities in the order they are listed below. • Roads that show the highest sediment delivery to streams should take the highest prioritization for full road recontour. Roads in watersheds where ESA listed species are present should take priority over watersheds without ESA listed species. • Roads in RCA's should have high priority for full road recontour. Roads often wind in and out of RCA's. We recommend that when a management prescription is given to a road it encompasses the entire road. • Roads with high numbers of stream crossings should rank higher for full road recontour than roads with lower number of stream crossings.	The Travel Analysis Process (TAP) (see FEIS section 1.5.2 and project record, Travel Analysis Report 1/08/13) utilized road location with respect to several factors including wildlife, RCAs and LSP areas. The need for each system road was reviewed spatially and in context with other system roads that were very close and accessed the same area. The Lost Creek-Boulder Creek project NEPA analysis further prioritized system roads and additionally unauthorized roads (UR) using field surveys, raw GRAIP data, and location with respect to streams, springs, and wetlands, The highest priority for treatment was given to roads with existing erosion problems in the priority subwatershed of Boulder Creek. Full recontour is the preferred method of decommissioning where practicable. LTC does not bring about the same benefits because it retains these roads for future use.

Comment #	Concerns	Comment Response
	• Roads with a well-defined road prism should rank higher for recontouring than roads with minimal road compaction. • Roads where sensitive wildlife species will be negatively impacted should rank higher for recontouring than roads where sensitive species are not present. Due to the numerous benefits of fully recontouring roads such as; reduced in-stream sediment delivery, fish and wildlife concerns, stopping the spread of weeds and overall forest health, it should be the preferred method of decommissioning. Roads in long term closure do not bring the benefits seen in recontoured roads. Ripping of roads could be effective on flat, low gradient roads. Where funds will not allow full recontour of roads the list above could be a starting point for prioritization.	
28	d. Bring Boulder Creek Watershed to the Functioning Appropriately Category Due to the amount of money available for restoration and the amount of time spent analyzing this project we would like to see the Boulder Creek Watershed restoration work result in a "functioning appropriately" category. It could be numerous years before the Forest has additional opportunities for restoration critical for the protection of ESA listed fish species found in this watershed. Currently listed alternatives would move the Boulder Creek Watershed from the "impaired" category to the "functioning at risk" category as defined by the Watershed Condition Framework. The Tribe asks the Forest staff to identify the restoration activities needed to get the Boulder Creek Watershed as close to the "functioning properly" category as possible. We suggest the Forest take a more in depth look at additional road decommissioning opportunities. With the weighting of the Watershed Condition Framework, (12-indicator model) roads and their associated impacts make up 30% of the modeled weight. Roads also play a large role in other aspects of the model; the Aquatic Physical includes water quality (303-d) that is impacted by sedimentation from roads and increased water temperatures due to streamside roads that impact riparian vegetation. Impacts from roads also limit the Aquatic Biological section of the model;	FS Road 50074 extends along Boulder Creek within the RCA. Removing this road was not considered a feasible proposal, which prevents Boulder Creek from achieving Class 1 status. Alternative C proposes more road decommissioning and unauthorized route treatments than Alternative B, which results in substantial reduction of the road density in the subwatershed compared to existing conditions. The restoration treatments are considered enough to move the subwatershed from Class 3 to Class 2. Alternative C proposes to relocate road 50127 outside the RCA of the West Fork Weiser River. This would result in a beneficial effect to the downstream TMDL for temperature as it would allow more overstory to grow within the RCA over the long-term for this reach of the West Fork Weiser River.

Comment #	Concerns	Comment Response
	high density roads will reduce diversity in macroinvertebrates. Decommissioning (full recontour) of all unauthorized roads could make a substantial difference in moving Boulder Creek and Lost Creek toward the "functioning properly" category.	
29	e. The Nez Perce Tribe would like to see Alternative C as the proposed action adopted by the Forest Service There are currently five alternatives (A-E) listed for consideration regarding this project. The Forest Service has selected Alternative B as their proposed action. Out of the available Alternatives, Alternatives C does the best job of protecting Tribal Treaty Resources. The advantages of Alternative C, over Alternative B, are that it provides more watershed restoration efforts, as listed in the categories below. Vegetation-In Alternative C, vegetation treatments occurring in RCA's would be achieved exclusively with prescribed fire and are more in line with our recommendations above. In Alternative B, 1,800 acres would be treated in RCA's using commercial thinning treatments. The type of vegetative treatments in Alternative C would be less intensive (14,500 acres of commercial, 22,000 acres of non-commercial vs22, 000 acres of commercial and 18,000 acres of non-commercial). This reduction in commercial treatments and the lack of regeneration treatments (patch cuts or shelterwood) would ensure that channel scour is reduced from elevated stream flows and that elk have more security. System Road Treatments-In Alternative C, more system and unauthorized route treatments (decommissioning) are performed than in Alternative B, moving the Boulder Creek Watershed and Lower West Fork Weiser River subwatershed closer to "Functioning Appropriately" category. This increase in decommissioning would improve conditions for ESA listed fish species and provide for more elk security. Fish Passage/Habitat Connectivity- Fish passage projects occurring outside the Boulder Creek Watershed are identical for Alternative C and Alternative B. The main difference between these two alternatives occurs in the Boulder Creek Watershed where under Alternative C, instead of improving culverts they are restored to natural stream channels through the decommissioning process." In a watershed where three ESA listed fish species (Chinook,	Thank you for your comment.

Comment #	Concerns	Comment Response
	steelhead and bull trout) are present this seems like the correct alternative. Recreation Improvements- Alternative C and Alternative B have similar recreation improvements except for the additional 20 miles of non-motorized trails (horse trails) and the limit on dispersed camping to designated sites. Dispersed camping has impacted fishery resources on other watersheds in the Payette National Forest, and limiting such activity would be a step in the right direction for ESA listed fish.	
30	Cultural Resource Concerns for the Lost Creek- Boulder Creek Restoration Project 1. Adequacy of Cultural Resource Consultation Efforts The Payette National Forest has not made a sufficient effort to consult with the Nez Perce Tribe on cultural resource concerns or impacts for this undertaking, as required under NHPA Section 106. The Nez Perce Tribal Archaeologist received the cultural resource compliance report for the project (PY2012-2605) on November 20, 2013, 2 months after it was completed by the Forest Heritage Manager, and 5 weeks after receiving Idaho SHPO concurrence. The Payette NF has also prepared a memorandum of agreement (MOA) for signature with the Idaho SHPO before initiating tribal consultation on cultural resources. The Payette NF and Idaho SHPO are entering a binding commitment to address impacts to tribal resources without tribal consultation, and the language of the MOA excludes future consultation with the tribe. 2. Project Goals It is unclear what the Payette NF means by “trending the forest vegetation toward a Pre-European state and fire regime.” It is equally unclear how this can be accomplished through non-native forest management treatments, including commercial thinning, pre-commercial thinning, commercial cut-patch, commercial plantation thinning, or prescribed fire (Whiteman 2013:1). Assuming that the Payette NF desires to replicate forest conditions before Euroamericans assumed management of the project area and its resources in the late nineteenth century, the management plan should explicitly acknowledge that that condition of the forest was not a “state of nature,” but	1. The project was presented at the quarterly staff to staff meetings on 3/6/13, 6/5/13, 9/4/13, and 12/5/2013 per established protocol. No comments regarding the project were received from Nez Perce Tribe Cultural/Archaeological staff at those meetings. 36 CFR 800.4 (b)(2) provides an avenue for the Forest and SHPO to enter into MOA allowing for the phased identification of Archaeological resources within a large project area. There is no timeline in the regulations stating the order of consultation shall occur (36CFR800). This agreement does not preclude the Forest’s responsibility to consult with interested tribes throughout the planning and implementation process. 2. Language regarding the pre-European state was corrected in the Forest Archaeologist’s technical report. 3. Previous identification efforts that will be accepted for implementation of this project will meet current professional standards outlined in the Secretary of the Interior’s Standards and Guidelines for Archaeology and Historic Preservation. This agreement does not preclude the Forest’s responsibility to consult with interested tribes throughout the planning and implementation process. 4. The Forest agrees that staff to staff discussions about Traditional Cultural Properties and Sacred Sites could be improved. The Forest presented the topic of Traditional Cultural Properties during formal consultation with the Nez Perce Tribal Executive Committee on March 11, 2014. 5. Technical concerns identified by the commenter on the DEIS have been addressed and corrected in the FEIS.

Comment #	Concerns	Comment Response
	instead was the result of thousands of years of active, symbiotic management and use by the Nez Perce Tribe. 3. Archaeological Survey The Payette NF lists 51 previous cultural resource compliance efforts within the project area, for total of 17,542 acres of inventory. This appears to be as much as 20 percent of the total project area. Unfortunately, the survey report PY2012-2605 fails to summarize how many unique acres were surveyed, but instead provides a table of surveyed acres for each project. It is critical to know if any of these project areas overlap, and if areas have been surveyed more than once. The report also fails to apply any objective analysis of the survey quality. Archaeological survey methods and results in 1977 are not equal to those from 2013. The Memorandum of Agreement states that the Forest Service shall, Conduct systematic archaeological surveys (30-meter transects or less) of the Area of Potential Effects (APE) associated with the Lost Creek – Boulder Creek Restoration Project, in areas either lacking previous inventory or where previous inventory is deemed inadequate. Surveys will conform to the Forests' Sites Identification Strategy and will be reported to the Idaho SHPO utilizing standard reporting formats." There are no defined criteria for determining when previous inventory is inadequate, and the Payette NF and the Idaho SHPO have formally agreed that the Nez Perce Tribe has no role in the discussion. 4. Traditional Cultural Properties The Payette NF has made no effort to identify sacred sites, traditional cultural properties, or historic properties of religious and cultural significance to Indian Tribes for this undertaking, beyond expecting that Tribal staff will identify sensitive areas and resources in technical meetings. This level of effort is insufficient to meet the minimum requirements of Section 106 or National Register of Historic Places (NRHP) and Advisory Council on Historic Preservation (ACHP) guidance. 5. Technical Concerns with the DEIS Appendix F, ARPA (page 50): Incorrectly states that cultural resource surveys for the project have been completed, and misstates the number of	

Comment #	Concerns	Comment Response
	NRHP eligible cultural resources to be avoided. Appendix F, National Historic Preservation Act of 1966, as Amended (page 54): Incorrectly states that cultural resource surveys for the project have been completed, and that all cultural resources would be avoided during project implementation. Appendix H (page 85): This "cultural resource" definition excludes modern Nez Perce people and their continuing use and occupation of their homeland.	
5. Shoshone-Paiute Tribes, Honorable Dennis Smith		
31	For over 18 months the Shoshone-Paiute Tribes have engaged in mandated Government-to-Government consultation with the Payette National Forest over the Lost Creek Boulder Creek Landscape Restoration Project on the New Meadows Ranger District. This project will be a watershed in forest restoration management. We were able to move beyond the consultation relationship between the tribes and the Payette National Forest to forge a collaborative partnership. We characterize this Environmental Impact Statement as a mutual project and stand prepared to support your efforts to protect yet maximize forest management of vital tribally-related resources. We look forward to further deepening our partnership between the Shoshone-Paiute Tribes and the Payette National Forest.	Thank you for your comment. The FEIS Section 1.11 contains information relating to tribal rights and interests..
6. US Department of Interior, Allison O'Brien		
32	The Department of the Interior has reviewed the Draft Environmental Impact Statement for the Lost Creek-Boulder Creek Landscape Restoration Project. The Department does not have any comments to offer. We appreciate the opportunity to comment.	Thank you for your comment.

Comment #	Concerns	Comment Response
7. US Environmental Protection Agency, Christine Reichgott		
33	The EPA is supportive of the overarching goals and objectives of the proposed project, and we find the DEIS to be clear, well organized, and robust. We also appreciate the Forest's responsiveness to issues raised during the scoping process. We support the approach to Riparian Conservation Area Treatments laid out in Appendix A, as well as the document's thoughtful approach to vegetation treatments. Overall, we find the treatments proposed under Alternatives B and D to align well with the broad body of science emerging about dry and moist mixed conifer forests. We are less supportive of Alternative C as we believe the ecological return would be less in terms of quality and duration when compared to Alternative B and D. We also recognize the Forest's focus on improving hydrologic condition within the project area. We are very supportive of the proposed road closure, decommissioning and culvert replacement work. In addition we appreciate the attention placed on supporting the implementation of the West Fork of the Weiser River TMDL (IDEQ 2013). We also commend the Forest for using the Geomorphic Roads Analysis and Inventory Package to help prioritize sediment related work, and we support the continued use of GRAIP to identify additional site specific sediment improvement activities. Our review identified questions related to burning, planting, and the establishment of grass/forb/shrub/seedling habitat that we recommend be addressed in the Final EIS. We also recommend definitional clarity/consistency around the terms "canopy closure" and "canopy cover." These questions are detailed below.	Thank you for your comment. Alternative C was developed to address concerns regarding soil, water, riparian and aquatic resources, and wildlife concerns, and is intended to be a more effective watershed restoration alternative.
34	**Artificial Regeneration** The DEIS notes that artificial regeneration (planting trees) may be a component of the project where the desired species composition would not be expected to be met with natural regeneration, or where necessary to meet desired stocking levels. Where that planting would occur, it would be done consistent with Standard with TRST01 on page III-42 of the Forest Plan (USDA Forest Service 2003). The EPA is supportive of ensuring stands are on an ecologically appropriate trajectory in terms of species composition, and we note the	Site specific silvicultural prescriptions would be developed for each unit (Table 2-6). Standard TRST01 does allow for lower minimum stocking requirements and appropriate minimum stocking requirements would be developed on a site by site basis consistent with the project objectives. In most instances, the desired minimum stocking levels are felt to be appropriate for restoration objectives. The Forest Plan minimum stocking levels (TRST01) range from 50 to 200 trees per acre depending upon the forest type. This stocking only applies in regenerated portions of stands and would be adjusted based on retention of legacies (i.e. legacy trees and replacements) necessary for retention in order to meet project objectives and associated short and long term stand objectives. Minimum stocking levels would also take into account anticipated mortality due to

Comment #	Concerns	Comment Response
	challenge associated with reestablishing early seral species (ponderosa pine, larch, etc) in patches where grand fir has a well-established seed bank. We also note however that Potential Vegetation Groups 2, 5 and 6 are below the desired range for grass/forb/shrub/seedling and sapling tree size classes. In addition, we note that a number of recent studies point to historical stand densities in dry and moist mixed conifer stands that are lower than those reflected in the 2003 Forest Plan Recommendations: • We recommend the FEIS give additional consideration to the effects on GFSS habitat associated with artificial regeneration. • We recommend the FEIS consider recent science and provide additional context and direction regarding when artificial regeneration would be appropriate • We recommend the FEIS discuss potential planting and stocking densities beyond referencing Standard TRSTOl in the 2003 Forest Plan. We believe the Forest Plan provides some flexibility for management by noting that, "a certified silviculturist may prescribe different minimum stocking requirements, which are more appropriate for site-specific conditions and stand management objectives."	factors such as competition from other vegetation, animal browse, gophers, etc. With anticipated mortality and future management of stands (based on MPCs) the stocking levels identified in TRST01 is generally appropriate to achieve long term density and structural objectives defined in the Forest Plan and is felt to generally be consistent with the referenced documents Hagmann et. al. (2013) and Merschel (2012). Reviews of the citations provided by the commenter are located in the Response to Literature Cited/Submitted table in the project record.
35	**Prescribed and Maintenance Burning** Under Alternative B the Forest would conduct prescribed burning on approximately 45,000 acres of the project over the next 15-20 years. Further, the DEIS states on page 37 that maintenance burning would occur every 5-10 years to maintain suitable north Idaho ground squirrel habitat and areas representative of high frequency fire regimes. The EPA supports the reintroduction of fire into these fire prone landscapes, and we believe maintenance burning is critical to ensuring treated stands remain on the desired trajectory. What is not clear in the DEIS is whether or to what extent artificial regeneration might affect the scheduling of maintenance burning. Could planting potentially delay maintenance burning until such time as seedlings are more fire resilient? If so, could this affect the long term species composition and.fire resiliency of the	Site specific silvicultural prescriptions would be developed (Table 2-5). Consideration of the timing and sequence of proposed burning are factored into these prescriptions and subsequent burn plans. It is not anticipated that planting would occur in NIDGS habitat as natural regeneration in those habitat types is anticipated to be successful when necessary to meet stand and project objectives. Areas proposed for regeneration treatments are generally in habitat types that historically had slightly longer fire return intervals and planting is not anticipated to affect maintenance burning intervals. In instances where prescribed fire would not be recommended or low intensities would be prescribed in order to meet stand objectives, the forest has successfully managed prescribed fire in the past by excluding or managing fire intensity on past similar projects. Planting may impact the restoration of fire in some situations or the geographic extent to which fire is applied during a burn. The impacts to fire restoration efforts would be considered in treatments requiring artificial

Comment #	Concerns	Comment Response
	stand? Recommendation: • We recommend the FEIS clarify management intent with regard to planting in those areas where maintenance burning should be pursued.	regeneration.
36	**Canopy Cover/Canopy Closure** In the discussion of alternatives, the DEIS uses the terms "canopy cover" and "canopy closure" interchangeably. These terms both refer to ways of measuring forest canopies, but "canopy cover" refers to the percent of a fixed area covered by the tree crown, whereas "canopy closure" is the proportion of the sky hemisphere obscured by vegetation when viewed from a single point. We recommend the FEIS identify one approach for measuring forest canopy and use it consistently throughout the document. In general, the EPA prefers canopy cover as a measure of forest canopy.	The Forest acknowledges the discrepancy in terminology and has made changes from the DEIS to FEIS to clarify this. See the FEIS Glossary for terminology.
37	Based on our review, we are rating the DEIS as LO (Lack of Objections). We support the collaborative, science-based ecosystem restoration of priority forest landscapes consistent with the purpose of the Collaborative Forest Landscape Restoration Program. We also support the Forest's continuing engagement of the Payette Forest Coalition on this project.	Thank you for your comment.
8. Adams County Board of Commissioners		
38	The Board of Adams County Commissioners feels very strongly that the Forest Service direction should be to maximize fuel load reduction, timber harvesting and a minimization of road obliteration.	Thank you for your comment.
9. Alliance for the Wild Rockies and Native Ecosystems Council, Michael Garrity and Sara Jane Johnson		
39	Alliance is concerned that the size and scope of this project makes it impossible to ensure that the Forest Service's obligations under NEPA, NFMA, the ESA and the APA are met. The project area is roughly 80,000 acres in size and project activities (including logging, burning and road building) will occur on roughly 40,000 acres, yet the analysis of the	The Lost Creek-Boulder Creek project includes Project Design Features (Chapter 2, Table 2-6) and monitoring (Chapter 2, Table 2-C) that will provide protections for various resources during project implementation. At the time of the release of the Lost Creek-Boulder Creek Project FEIS, the Forest has completed the Biological Assessment based on consultation with the US Fish and

Comment #	Concerns	Comment Response
	"affected environment and environmental effects" in the DEIS is portrayed in about 300 pages - a depth of analysis similar to projects of 5000 acres or less. While [sic] Alliance encourages analyzing management impacts, habitat conditions, and wildlife recovery across a landscape, we are very concerned that important details will be diluted and public oversight will be hard with a project of this size. We are also concerned, given the ongoing issue of limited agency resources, that mitigation measures, BMPs, monitoring, etc. cannot be ensured for a project of this size and duration.	Wildlife Service and National Marine Fisheries Service on the potential effects of the project to species and habitat listed under the Endangered Species Act. The Letter of Concurrence and a Biological Opinion will be completed by the regulatory agencies prior to a final Record of Decision for this project. The Payette National Forest has received funding under the Collaborative Forest Landscape Restoration Program (CFLRP) for the Weiser-Little Salmon Headwaters landscape, of which the Lost Creek-Boulder Creek project is a part of. The Forest will receive approximately 3.5 million dollars annually for implementation, and monitoring. The Forest will then match those funds dollar for dollar, with 10% of the total funds slated for monitoring (See FEIS Chapter 1, section 1.10). The Payette National Forest is both committed and legally bound to meeting obligations under the NEPA, NFMA, ESA and the APA, as the commenter states.
40	The DEIS says that there is less seral species of aspen and blames this to past fire exclusion. Please examine the effects cumulative effects of this project, cattle grazing and other management activities on aspen and lynx. Page 285 of the DEIS says "No current or historical records indicate lynx use the project area. Track surveys have not been conducted in existing Source habitat due to the inability of access during the winter. This portion of the Forest is not considered part of core lynx population, due to the lack of observations and the isolated, disjunct nature of the habitat." Please do a current scientific defensible survey for lynx.	The DEIS acknowledged other factors (including livestock grazing, forest management, recurrent commercial harvest, and other factors) that led to a change in species composition (FEIS Section 1.5.1) including "less early seral species (i.e. aspen) than desired". This acknowledgement is also included in the FEIS. Suited contiguous lynx habitat exists in the Rapid River Inventoried Roadless Area (IRA) where no vegetation treatments are planned. Proposed treatments outside the IRA should complement the existing habitat in the IRA by moving it toward HRV and making it more resilient. Any prescribed fire would be applied in a manner to reduce surface fuels and not change canopy cover or habitat. Surveys have not been performed in the area due to higher priorities and because the project is not expected to impact lynx habitat. Core lynx habitat exists primarily on the east side of the Forest (McCall and Krassel Ranger Districts). The biological assessment and forthcoming biological opinion will outline any terms and conditions.
41	The DEIS and the Forest Plan are not following the best available science. Squires et al (2010) with additional research again identified that older, multi-storied forests are essential as winter lynx habitat, and thus essential for the viability of lynx. The removal of any of this key winter habitat may cause a loss of local lynx viability, as lynx are already at a threshold level of survival in regards to winter hare populations; even minor reductions may result in winter starvations for lynx, Id. It is currently recognized that there is a threshold of forest thinning and logging below which lynx may not persist in the area (Squires et al 2010; Squires 2010). Management of winter	Lynx require a mosaic of habitats that vary from summer to winter, region to region, and north to south within their range. Limiting factors in their distribution is often prey base e.g .snowshoe hare or red squirrels depending on location. Early seral habitats created by fire or logging are essential to maintaining foraging areas for prey (Koehler and Aubrey 1994, Koehler and Brittell 1990) The Lost Creek-Boulder Creek project is a landscape level project that is based on the best available science as used in the development of the Payette National Forest's draft Wildlife Conservation Strategy. Both the Forest Plan and the draft WCS incorporate the

Comment #	Concerns	Comment Response
	hare habitat will not ensure viability of the lynx. Nowhere in the DEIS does it address the connection between the historic loss of lynx winter habitat and the population decline of lynx in the Northern Rockies. Lynx winter habitat is clearly limited in the LAUs that will be impacted by this project. The DEIS seems to believe that because no lynx have been found in the project area even though no searches for lynx were conducted because it was too hard to search for them that it is somehow OK to destroy more lynx winter habitat. This is a violation of the ESA, NFMA, NEPA and the APA. While the NLAA determination does also rely on impacts to lynx habitat within the LAU, habitat assessments were limited to areas above 4000 feet even though lynx have been found to utilize habitat below this elevation. The DEIS also indicated that the Forest Service does not actually know whether the LAU currently has 30% of habitat in unsuitable condition and / or whether project activities will increase unsuitable habitat to levels beyond this limit. Because the Project involves extensive thinning, an activity known to adversely impact lynx, this information is critical in assessing impacts to lynx and its habitat.	science in the Lynx Conservation and Assessment Strategy (2000). The emphasis is on moving toward HRV that existed pre-European settlement. This includes thinning and using prescribed fire to move existing stands to mimic historic conditions that have been altered by past logging practices and fire suppression. No lynx habitat will be destroyed. The Lost Creek-Boulder Creek project does not propose to treat any existing lynx habitat by logging. Any prescribed fire will be designed to mimic what would have occurred naturally and used to increase herbaceous and browse components that support prey items – no stand replacing fire will occur. Although roads are not likely a limiting factor for lynx, the project will reduce road densities and fragmentation of habitat over time.
42 24	This area is habitat for bull trout. Please formally consult with the U.S. Fish and Wildlife Service and conference about the impacts on bull trout and bull trout critical habitat. Please re-initiate a programmatic consultation with the U.S. Fish and Wildlife Service on PACFISH/INFISH in Bull Trout Critical Habitat since critical habitat for bull trout was designated after PACFISH and INFISH were adopted and the impact of these standards on bull trout critical habitat have not been assessed. PACFISH and INFISH were adopted before bull trout were listed so the Forest Service needs to reinitiate a programmatic consultation on PACFISH/INFISH effect on bull trout. Since Boulder Creek and at least one of its tributaries are now designated as bull trout critical habitat, the Forest Service must complete this consultation before project activities can move forward. This consultation must also be available for the public to comment on before a decision for this Project is signed.	A project specific biological assessment (BA) has been completed and submitted to the US Fish and Wildlife Service and the National Marine Fisheries Service for section 7 consultation (BA available in the project record). A Biological Opinion will be completed by US Fish and Wildlife Service and National Marine Fisheries Service prior to the final record of decision for the Lost Creek-Boulder Creek project. The BA includes a crosswalk with bull trout critical habitat primary constituent elements and Forest Plan Watershed Condition Indicators. The 2003 Forest Plan replaced PACFISH/INFISH requirements but adopted much of the direction through the Aquatic Conservation Strategy.
43	This watershed is functioning at risk or unacceptable risk for habitat parameters important to bull trout, Chinook salmon and steelhead and will remain so post project. Alliance is concerned that all of the action alternatives, except alternative C, include logging in the RCAs.	Effects to listed and sensitive species from project activities, including road decommissioning, are addressed in the Biological Assessment (located in the project record), the Fisheries Specialist Report (located in the project record) and in Chapter 3 of the FEIS.

Comment #	Concerns	Comment Response
	Additionally, while Alliance is generally supportive of the Forest Service's road decommissioning efforts, Alliance is concerned that the Forest Service may not be able to accurately assess the short term impacts on sensitive and listed aquatic species without population trend data on these species and without knowledge of long-term viability elements for these species.	
44	The DEIS does not disclose how this project supposed improvements meet INFISH objectives. According to the USFWS, four elements are necessary to asses long-term viability (extinction risk) of bull trout populations: 1) the number of local populations, 2) adult abundance, 3) productivity (reproductive rate), and 4) connectivity (presence of migratory life history form). The DEIS fails to address any of the above parameters either at the project level or the watershed level. Nor has the agency provided documentation or discussion of the impacts threshold that the local bull trout population can sustain. Please fix this.	The 2003 Forest Plan replaced PACFISH/INFISH requirements but adopted much of the direction through the Aquatic Conservation Strategy. The Fisheries section in Chapter 3 of the FEIS discloses the effects to fish and fish habitat. A project specific biological assessment (BA) has been completed and submitted to the US Fish and Wildlife Service and the National Marine Fisheries Service for section 7 consultation (BA is available in the project record). A biological opinion will be completed by US Fish and Wildlife Service and National Marine Fisheries Service prior to the final record of decision for the Lost Creek-Boulder Creek project.
45	Bull trout are an MIS for the Forest. The DEIS on page 211 admits that the project area contains habitat for bull trout in the Weiser River Subbasin but couldn't find them. "Five patches of habitat capable of supporting bull trout are delineated by the RMRS in the Weiser River sub basin of the project area … It is believed, however, that bull trout do not exist in those areas…" This is a violation of NFMA, the APA and the ESA. The Forest Service and the Fish and Wildlife Service are required by the ESA to recover populations not maintain them at extreme risk of extinction. Other areas known or suspected to contain bull trout have not been surveyed according to the bull trout monitoring protocol.	Bull trout distribution within the project area and RMRS modeled potential habitat are described in Chapter 3 of the FEIS, the Fisheries Specialist Report and the Biological Assessment prepared for this project (both included in the project record). Chapter 3 of the FEIS and the Biological assessment addresses the potential bull trout habitat and provides rationale and discloses a "No Effect" determination for bull trout outside of the Boulder Creek Subwatershed.
46	One of the major contributors to aquatic habitat degradation in the project area is the high road density. The disclosure of current road density (including total, open, closed) and project and post project densities (including temporary roads needed to facilitate logging activities) is not clear in the DEIS now is it clear how sedimentation from haul routes will impact stream quality. However, it does appear clear that nearly all of the subwatersheds are functioning at an unreasonable risk due to road densities. It also appears clear that road densities are impacting elk security. The DEIS	The Lost Creek-Boulder Creek project area contains approximately 640 miles of roads (FEIS, section 3.8.3). Of these 640 miles, approximately 473 miles are National Forest System Roads (NFSR), of which approximately 265 miles are managed as open or seasonally open. Approximately 134 miles NFSR are managed as closed (FEIS section 3.8.3). Open road densities as relate to elk are high and although road/route densities will be reduced, they are likely going to continue to be higher than what is desired under EHE

Comment #	Concerns	Comment Response
	also discusses road closures for various alternatives, but also states that the project will not appreciably change motorized access in the project area. The DEIS also discusses an ongoing problem with unauthorized motorized use, but does not discuss how the Forest Service plans to fix this problem. Because road density is such an important factor in habitat quality for aquatic and many terrestrial species, disclosure and analysis of road density percentages before, during, and after project implementation is imperative as well as compliance with the Forest Plan road density standards.	(Hillis 1991). Unauthorized motorized use is a problem in the project area. The Lost Creek-Boulder Creek project action alternatives all propose to install effective closures (berms, gates, or obliteration) to roads not identified as open to the public on the Motor Vehicle Use. The Forest is committed to education and enforcement of the travel management plan using articles in the local papers, signing, extra on-site patrol, and by producing and making available maps of both summer and winter motorized designations. The Forest will also rely on continued cooperation with the Idaho Department of Fish and Game, the public and local county law enforcement. Road density is analyzed for different types of roads and at different scales for watershed resources (subwatershed) and various wildlife species. Temporary roads are fully-recontoured and obliterated within a short time frame and are not added to the post-project road density. FEIS Section 3.3 and Appendix E provide information on closed system roads and those for which improving or constructing a road closure device in accordance with the current Forest Travel Plan is proposed as part of this project.
47	Please formally consult on effect of this project on the northern Idaho ground squirrel with the USFWS. If there is critical habitat for this species please consult on effect of this project on the northern Idaho ground squirrel critical habitat with the USFWS. Please formally consult on effect of this project on the Chinook salmon and Chinook salmon designated critical habitat with the USFWS. Please formally consult on effect of this project on the Snake River steelhead and Snake River steelhead designated critical habitat with the USFWS.	Critical habitat for NIDGS has not been designated by the US Fish and Wildlife Service. The intent of this project is to improve habitat conditions over a large area for this species so that the population increases across its range. Section 7 consultation with US Fish and Wildlife Service and National Marine Fisheries Service is in progress for this project. A project specific biological assessment (BA) has been completed and a Biological Opinion will be completed prior to a final record of decision on this project.
48	This project attempts to sidestep NFMA requirements that a viable population be maintained, with habitat and populations <u>well-distributed throughout the planning area.</u> Managing for extinction is not a legal option. The Forest Service and the Fish and Wildlife Service are required by the ESA to recover populations not maintain them at extreme risk of extinction. The Forest Service should formally consult with the Fish and Wildlife Service and initiate a project that will recover bull trout instead of maintaining them at risk for extinction in violation of the Endangered	The existing conditions in the project area are in part a result of past timber management and fire suppression. The best available science used in the development of the draft WCS encourages the Payette National Forest to restore habitats back toward historical condition. This approach in management creates habitat for white-headed woodpeckers and other Family 1 species that the WCS analysis found is lacking. NFMA require the Forest to manage for habitats across the entire Forest. Although some of the denser habitats may become more open as a result of the Lost Creek-Boulder Creek project, those denser habitats will still exist in the project area and across the

Comment #	Concerns	Comment Response
	Species Act.	Forest. The species associated with those habitats will still remain viable but be arranged on the landscape in a different manner.
49	Please examine all of the past present and future cumulative effects, including logging, grazing and ATV use.	See Appendix D of the FEIS for a list of past, present and reasonably foreseeable actions that were considered in cumulative effects analyses, including past harvest and livestock grazing. Cumulative effects were analyzed in Chapter 3 of the FEIS under each resource section. Each resource specialist takes into account the past, present and reasonably foreseeable future actions that could contribute to cumulative effects for their resource. For cumulative effects to watershed resources the BOISED model and Channel Condition Risk assessment both consider past and proposed logging and existing and proposed roads. ATV use, other recreation, and grazing are analyzed with respect to watershed and soil resources in Section 3.3.5 of the Watershed Resources section and 3.4.5 of the Soil section.
50	1. Will the Forest Service be considering binding legal standards for noxious weeds in its revision of the Payette Forest Plan? 2. How effective have BMPs been at stopping (i.e. preventing) new weed infestations from starting during logging and related road operations? 3. Is it true that new roads are the number one cause of new noxious weed infestations? 4. Why isn't the Forest Service considering a Forest Plan amendment in this Project to amend the Forest Plan to include binding legal standards that address noxious weeds? 5. Is it true that noxious weeds are one of the top threats to biodiversity on our National Forests? 6. How can the Forest Service be complying with NFMA's requirement to maintain biodiversity if it has no legal standards that address noxious weeds?	1. Revision of the Payette Forest Plan and how that process may address noxious weeds is outside the scope of this project. 2. Use of BMPs have been shown to be more effective at stopping and/or preventing new weed infestations on logging operations than not using BMPs. 3. The number one cause of new infestations in a particular area is dependent on various site-specific factors such as: 1) the presence of existing noxious weed populations within the project area and along access routes to the project, and 2) the susceptibility of the habitat type to noxious weed invasion. For this reason, site-specific analysis of risk factors is taken into consideration during each project design. 4. Specialist's consideration of invasive species issues related to this project did not identify concerns sufficient to trigger a Forest Plan Amendment for this project. 5. Unmanaged invasive species populations can be one of the top threats to biodiversity on a National Forest. A local threat is dependent on various local factors including the weed species in question, habitat resiliency, climate, soil disturbances and local integrated weed management practices. 6. The Forest Service complies with State and Federal Invasive Species laws, the Payette National Forest Noxious Weed and Poisonous Plant EA, on-going consultations with the National Marine Fisheries Service and US Fish and Wildlife

Comment #	Concerns	Comment Response
		Service, Code of Federal Regulations, and Forest Service Manual and Handbook direction.
51	7. Will this Project address all Project area BMP needs, i.e. will the BMP road maintenance backlog and needs from this Project all be met by this Project?	This project proposes road maintenance on all routes that will be used to implement the selected alternative (see haul route map in the project record). In some cases, funds may be allocated for road maintenance on roads that are currently considered a lower priority for maintenance. Each alternative for the Lost Creek-Boulder Creek project identifies the Minimum Road System for the project area by proposing roads for long-term closures and decommissioning (see FEIS, Chapter 2). By implementing treatments to achieve the minimum road system, road maintenance costs should be reduced in the future.
52	8. The DEIS is not clear if any MIS were found. What MIS did you find, how many and how did you look for these MIS?	Terrestrial MIS are analyzed in FEIS section 3.6.4. Bull trout distribution (including survey results) within the project area and RMRS modeled potential habitat are described in Chapter 3 of the FEIS (section 3.5.3, Figure FH-4), the Fisheries Specialist Report and the Biological Assessment prepared for this project (both included in the project record).
53	9. How will the decreased elk security and thermal cover affect wolverines? Please formally consult with the US FWS on the impact of this project on wolverines.	Ungulate numbers in general are likely to remain above historic levels, therefore scavenging by wolverines, if using the project area, is not expected to be negatively affected. Proposed treatments on elk winter range are likely to improve nutritional quality and quantity of forage. We are consulting with US Fish and Wildlife Service on potential effects to wolverine.
54	10. How will this project affect northern long-eared bats? Please formally consult with the US FWS on the impact of this project on northern long eared bats.	The range of the northern long-eared bat includes much of the eastern and north central United States, and all Canadian provinces from the Atlantic Ocean west to the southern Yukon Territory and eastern British Columbia. This bat is not known to occur in west-central Idaho, and is not on the US Fish and Wildlife Service list of listed, proposed, or candidate species for the Payette National Forest, therefore consultation is not necessary (see Official Species List for the Lost Creek-Boulder Creek project, 2/05/14, project record).
55	11. Which wildlife species and ecosystem processes, if any, does fire-proofing benefit? 12. Which species and processes do fire-proofing harm?	Fire-proofing is not feasible or an objective of the project. Landscape prescribed burning is proposed under all action alternatives. While prescribed burning and vegetation treatments are expected to reduce the severity of a potential wildfire, wildland fires are expected to continue to occur across the project area.

Comment #	Concerns	Comment Response
56	13. What evidence do you have that this logging will make the forest healthier for fish and wildlife?	The purpose and need of the project is defined in section 1.7 of the FEIS. In relation to wildlife the purpose of the treatments is "Improving habitat for specific wildlife species of concern…." How this will be accomplished through vegetation treatments is described in Chapter 3 of the FEIS, in the Forested Vegetation and Wildlife and Wildlife Habitat sections. The underlying philosophy of the science and related conservation concepts supporting the ICBEMP, the Forest Plan, and this project is that restoration of historic vegetative conditions and emulation of their inherent disturbance processes would conserve the vast majority of these species (Haufler et al. 1996; Hunter et al. 1988; Noss 1987; Raphael et al. 2000; McComb and Duncan 2007; Wisdom et al. 2000). Analysis completed for the ICBEMP, the Forest Plan, the draft WCS and for this project all find that vegetative conditions have departed from historic conditions. The wildlife species in our Forest Plan that are associated with these forests are expected to benefit the most and expand their range in the project area. Watershed restoration actions included in this project such as replacement of fish passage barriers, reduction of road-related sediment and other road-related impacts (including reductions in total and RCA road density and system road improvements) are expected to improve RCAs and fish habitat conditions in the project area, (which is described in Chapter 3 of the FEIS).
57	14. What about the role of mixed severity and high severity fire – what are the benefits of those natural processes? 15. How have those processes (mixed and high severity fire) created the ecosystems we have today? 16. Over how many millennia have mixed and high severity fire have been occurring without human intervention?	14/15. Regarding the role and benefits of Mixed-Severity and High-Severity Fire Regimes, please refer to Fire Ecology of the Forest Habitat Types of central Idaho (Crane and Fischer, 1998). 16. Maintaining the various historic fire regimes conditions across a landscape is key to maintaining key ecosystem processes which is essential in perpetuating resilient landscapes that provide a suite of benefits. The areas proposed for treatment are predominantly in historically nonlethal and mixed-severity fire regimes (more than 65,000 acres of the 80,000-acres project area). The Forest Plan recognizes that "fire operates within historical fire regimes appropriate to the vegetation type and management objectives" (Forest Plan, III-38). The Forest is to "use fire alone or with other management activities to restore or maintain desirable plant community attributes including fuel levels, as well as ecological processes" (Forest Plan, III-38). This project proposes to use thinning and prescribed fire as a means to restoring fire consistent with historic fire regimes. Managing natural ignitions for resource objectives is not an option across the entire

Comment #	Concerns	Comment Response
		project area (Forest Plan Direction by MPCs associated with various Management Areas). Regarding proposed treatment areas, managing natural ignitions is only an option within in a portion of Boulder Creek drainage, MPC 5.1 within Management Areas 4 and 5. Fire-response decisions are outside the scope of the project. Prescribed fire is an option for restoring this natural process across, and consistent with the Forest Plan. It can be assumed that fire managers will not succeed in their efforts to suppress and contain every new start to less than 1 acre in size. And these fires that escape suppression efforts are likely to result in severities uncharacteristic of historic fire regime conditions if within non-lethal and mixed-1 fire regimes. However, if these wildland fires are within historically mixed 2 and lethal fire regimes, then severities are more likely to be representative. It is unclear the extent to which early people used fire within this specific landscape, or what time of year, and what that they used it for. As Williams (2000) states, "Fire was the most powerful tool Indians could use to create landscapes capable of sustaining thriving, growing societies (Trudel 1985; Whitney 1994). Indian-set fires differed from natural fires in their seasonality, frequency, and intensity (Lewis 1985; McClain and Elzinga 1994; Pyne 1995). Reasons for burning were many; they varied from tribe to tribe and region to region. Most accounts indicate that Indians used fire to achieve "mosaics, resource diversity, environmental stability, predictability, and the maintenance of ecotones" (Lewis 1985).
58	17. Will all WQLS streams in the project area have completed TMDLs before a decision is signed?	There are no WQLS, 303(d) listed or impaired waterbodies, or pending TMDLs within the project area.
59	18. Why is logging that removes all/almost all trees considered regeneration (and not loss of existing forest), when a stand-replacing fire is considered loss of the forest (and not regeneration)?	Stand replacing fire is not considered "loss of forest" it causes a recognized stage in ecological succession. Although, stand replacing fire would move stands into the Grass/Forb/Shrub/Seedling category as defined in the Forest Plan. The proposed vegetation treatments would retain tree canopy cover and maintain stands in a forested condition as defined in the Forest Plan. Regeneration harvest treatments would allow natural regeneration to occur or be planted, both with the intent of promoting desired species establishment and future desired species composition. Regeneration is defined as the act of renewing tree cover by establishing young trees naturally or artificially (Helms 1998).

Comment #	Concerns	Comment Response
60	19. How will the project improve watershed health?	All action alternatives propose watershed restoration actions that reduce road densities, documented erosion concerns, undersized culverts, and fish barriers. See Chapter 2, Section 2.3 for the restoration activities proposed in each alternative, and Chapter 3, Watershed Resources Effects Analysis for more information on direct, indirect, and cumulative effects of watershed improvements, and Fisheries effects analysis.
61	20. Will this project leave enough snags to follow the Forest Plan requirements and the requirements of sensitive old growth species such as flammulated owls and goshawks? 21. After snags are cut down for safety for OSHA requirements will there still be enough snags left for old growth sensitive species?	See Project Design Features Table 2-6. Analysis of effects to wildlife is addressed in the FEIS Chapter 3, section 3.6.4. As documented in the "Snag Habitat" section of the wildlife analysis in Chapter 3 of the FEIS, snag levels across the Forest are generally within HRV. In areas where a snag may need to be felled for safety reasons, the action alternatives allow for girdling of live trees or retention of additional stocking to achieve snag objectives post treatment to create necessary snags. Chapter 3 discusses effects to flammulated owl and northern goshawk.
62	22. Will this Project exacerbate existing noxious weed infestations and start new infestations?	This project design includes prevention techniques and monitoring for new invasive species infestations (see FEIS Chapter 2, Tables 2-5 and 2-6). Existing populations of noxious weeds within the project area and along access routes to the project area are treated annually prior to seed set to reduce the risk of exacerbating these populations and spreading the weeds to new areas.
63	23. Do unlogged old growth forests store more carbon than the wood products that would be removed from the same forest in a logging operation? 24. What is the cumulative effect of National Forest logging on U.S. carbon stores? How many acres of National Forest lands are logged every year? How much carbon is lost by that logging? 25. Is this Project consistent with "research recommendations (Krankina	23. Trees take up carbon dioxide (CO_2) and release oxygen (O2) through photosynthesis, transferring the carbon (C) to their trunks, limbs, roots, and leaves as they grow. When leaves or branches fall and decompose, or trees die, the stored carbon will be released by respiration and/or combustion back to the atmosphere or transferred to the soil. Because of these processes, forests and forested landscapes can store considerable carbon and their growth can provide a carbon sink (Ryan et al. 2012). Harmon et al. (1990) relay that harvesting old-growth forests for their forest products is not an effective carbon conservation strategy; however, Harmon (2001) adds that forests

Comment #	Concerns	Comment Response
	and Harmon 2006) for protecting carbon gains against the potential impacts of future climate change? That study recommends "increasing or maintaining the forest area by avoiding deforestation," and states that "protecting forest from logging or clearing offer immediate benefits via prevented emissions."	do not remove carbon from the atmosphere in perpetuity. The ability of an ecosystem to accumulate additional carbon reaches an equilibrium whereby the rate that new material can be added is equal to the rate at which it is lost through mortality, decomposition and fire (Harmon 2001). Keith et al. (2009) refute the notion of equilibrium of carbon flux in old-growth forests, but further add that large carbon stocks can develop in a particular forest as a result of a combination and interaction of environmental conditions, life history attributes, morphological characteristics of tree species, disturbance regimes, and land-use history. They add that conserving forests with large stocks of biomass from deforestation and degradation avoids significant carbon emissions to the atmosphere. Ryan et al. (2012) continue that forest managers must recognize that carbon is only one of many ecosystem services that forests provide and that focusing solely on carbon could lead to non-optimal management decisions. Fuels treatments and forest restoration activities in frequent-fire forests will promote a more adaptable, sustainable forest that tends to experience low intensity fires instead of crown fires, yet such treatments may move carbon from the forest to the atmosphere. Intensive biomass use could also move carbon from the forest to the atmosphere, at least in the short term. Carbon should be only one of the many factors considered when making forest management decisions. This project is designed to maintain and restore desired conditions as described in the 2003 Payette National Forest Land and Resource Management Plan (LRMP). These desired conditions are developed to lie within the historic range of variability for forest components. We use several references in the document that support the notion that managing for forests within historical reference conditions offer a resiliency and resistance to future climatic changes. This resiliency and resistance within historical ranges would also apply to carbon cycling in an ecosystem. As many of our ecosystems have deviated from historical ranges of conditions, so have their ecological processes and functions, which would include not only carbon cycling, but other nutrient cycling, fire regimes, invasion by non-native species etc. Our premise is to maintain and restore forests to the desired ranges, to restore ecosystem processes that may continue to function and evolve with future climatic perturbations. Although much literature points to the carbon sequestration functions of old-growth forests, there is an equal body of literature that points to not only slowing deforestation, but combining it with an increase in forestation and other management measures to improve forest ecosystem productivity and processes, which could conserve or sequester significant quantities of carbon (Millar et al. 2007, Keith et al. 2009, Van der Werf and Peterson, 2009, Malmsheimer et al. 2011). More resilient ecosystems have a greater potential to withstand the ecological stresses associated with climate change, and help maintain long-term carbon sequestration

Comment #	Concerns	Comment Response
		capability in forests. Furthermore, as described in the 2003 Payette LRMP, old-growth late successional stage characteristics were important but not extensive on the historic landscape; however the large tree component was common (Wisdom et al. 2000, Morgan and Parsons, 2001) due to the disturbance regimes present in Central Idaho. This project seeks to restore the large tree component with the seral species that would have been more prevalent on the landscape. This will produce not only large trees that are better at carbon sequestration than smaller trees, but will also decrease the probability of uncharacteristic fires which release carbon to the atmosphere. Additionally, the desired conditions provide for snags and coarse woody debris to be left on the landscape, to continue ecosystem processes in the soil and below-ground components of the ecosystem. As stated in Littell et al. (2012), many National Forest management priorities are consistent with adaptation to climate change and with promoting resilience to the effects of climate change. We believe the 2003 Payette LRMP, under which this project was designed, meets these criteria. However, as indicated by Millar et al. (2007) and Littell et al. (2012), adaptive management will provide the best general strategy for learning how to detect and manage the effects of climate change on forest ecosystems. The 2003 Payette LRMP provides for an adaptive management framework through monitoring which may indicate the direction that future management should take, including the work of ongoing science in the field of climate change. 24. The science on climate change and forest management is complex and there are many factors that influence how forests act as either carbon sinks or carbon sources. Turner et al. (1995) indicate that for more accurate measurements in the carbon flux associated with National Forest management, stand-level carbon budgets that account for both living and non-living components within an age-class based system would be necessary for modeling national carbon budgets. In their paper, they discuss how carbon fluxes change in forest ecosystems through succession with changes associated in both live and dead components. These components are found both above and below the ground, further complicating assessment. Approximately 33% (303 million hectares) of the U.S. land base is forested (Smith et al. 2009). This represents roughly 7.5% of the world's total forestland (FAO 2011). The Forest Service administers the largest portion that is within public ownership (147 million acres). The proportion of public ownership has remained stable for at least the past 50 years. (USDA Forest Service 2012). Total U.S. timber harvest has declined since the late 1980s, with less than 400 cubic meters per year (in millions) being harvested in 2010 (USDA Forest Service 2012). Breakdown of the proportion of this

Comment #	Concerns	Comment Response
		between total and National Forests was unavailable. In 2010, U.S. forests and long-lived wood products accounted for a net sink of 251 million metric tons of carbon (922 million metric tons CO_2) (U.S. EPA 2012). Forest growth and afforestation currently offset approximately 16% of U.S. emissions from burning fossil fuels (Vose et al. 2012). This is an enormous ecosystem service; Jackson and Schlesinger (2004) estimated that offsetting another 10 percent of emissions would require the conversion of one-third of our current U.S. cropland to forest plantations. While individual trees or tracts release some or all of their carbon if harvested, burned, or otherwise disturbed, subsequent forest regrowth will sequester carbon from the atmosphere. Forested landscapes tend to include a mix of disturbed and regrowing forest stands, and have a carbon balance of near zero over the medium and longer term. Our large carbon sink today is a legacy of harvesting and forest conversion that took place in the past. These disturbances released much carbon dioxide (CO_2) into the atmosphere decades ago, and the regrowing forest is recovering some of that released CO_2 on land that has not been permanently converted to non-forest cover (Birdsey et al. 2006). The persistence of the current U.S. forest carbon sink is uncertain because the effects of historic land use should taper off, while projected increases in the rates of natural disturbances such as fire may liberate current carbon stocks (Vose et al. 2012). Atmospheric factors may change forest growth rates, since increased nitrogen deposition and atmospheric CO_2 concentrations from fossil fuel emissions can enhance tree growth. These factors may also augment current rates of carbon sequestration by forests (Canadell et al. 2007). However, other global change factors, such as increased transpiration rates and atmospheric pollutants and the likelihood of increased drought, may offset potential increased sequestration rates (Felzer et al. 2005). In the decade since 2002, forest fires annually burned 0.9 percent of forested land in the United States, with the largest fire year (2006), burning 1.3 percent of forested land. This corresponds to an overall average return interval of 100 years for U.S. forest fires. Models run with downscaled climate data for the Greater Yellowstone Ecosystem predict substantial increases in fire in this region by mid-century, with fire rotation reduced to less than 30 years from the current 100-300 year return interval (Westerling et al. 2011). If fires become more severe, especially where ecosystems are not adapted to severe fire, the likelihood that fire will change forest to shrublands or grasslands may increase (Smithwick et al. 2007). Annual carbon emissions related to fire vary considerably depending upon the year. Circumstances that directly affect fire activity include atmospheric circulation, temperature, and moisture patterns (McKenzie et al. 2011). Estimates of fire-related emissions range from 22.6 million metric tons/year (2010) to 84.4 million metric tons (2006), compared to net forest sequestration of 251

Comment #	Concerns	Comment Response
		million metric tons/year (U.S. EPA 2012). While individual disturbance events may result in carbon release to the atmosphere, generally these emissions will be matched over the long term by carbon uptake during recovery. The long-term net carbon flux from forests depends on changes in the rates of disturbance, such as changing rates of fire suppression, harvest, or insect outbreaks (Goward et al. 2008). Forest management and conversion also affect carbon cycling. The U.S. Forest Service has estimated that approximately 4.05 million hectares of forest lands are affected by harvest each year, corresponding to about 1.3% of the U.S. forest land base (Smith and Darr 2004). Timber harvest transfers aboveground biomass to wood products pools, which (if long lived) can be considered a type of carbon sink. Pacala et al. (2007) estimate that the United States and Canada sequester 0.06 and 0.01 petagrams of carbon per year, respectively, via the extraction of wood products. Therefore, the cumulative effects of forest management, whether for commercial purposes or forest restoration for improving ecological processes, are part of a complex nutrient cycling equation. More resilient ecosystems have a greater potential to withstand the ecological stresses associated with climate change, and help maintain long-term carbon sequestration capability in forests. The intent of this project is to move towards desired conditions which should move towards a more resilient ecosystem. 25. Krankina and Harmon (2006) highlight options to increase carbon storage on forest land and mitigate carbon accumulation in the atmosphere. These measures include increasing or maintaining the forest area by avoiding deforestation, increasing carbon density (ton of carbon per hectare), either at the forest-stand level using silvicultural techniques that accelerate forest regeneration and growth or slow decomposition, or at the landscape level, using longer rotations, conservation, and protection against fire and insects, and by increasing product substitution using forest-derived materials to replace materials with high fossil fuel requirements, and increasing the use of biomass-derived energy to substitute fossil fuels. They further elaborate, as you have highlighted, that protecting forests from logging or clearing offer immediate benefits via prevented emissions, while effects of silvicultural practices like afforestation (new planting) often follow an S-shaped growth curve with accrual rates highest after an initial lag phase and then declining towards zero as carbon stocks approach a maximum. They expand upon their discussion of forest management options for increasing carbon storage on-site citing the complexities of successional status, harvest rotations, decay rates, etc. They acknowledge that management objectives including recreational use of forests, protecting habitat for endangered species, biodiversity, fire management, watershed

Comment #	Concerns	Comment Response
		management, forest health, etc. are generally compatible with the goal of increasing carbon stores on-site. This is because they require maintenance of forest cover and prevention of large-scale catastrophic disturbance events that would release large quantities of carbon into the atmosphere. However, there are also significant trade-offs and additional factors to consider when carbon storage becomes a management objective. They use examples such as maintaining the current harvest rotation and forest productivity which will eventually lead to steady-state carbon stores in a forest landscape (with no net change over time). The recent effort to design landscapes for fire or disease prevention can also help in maintaining carbon stores. Consideration of carbon losses in catastrophic fires may influence the analysis of trade-offs between maintaining large unroaded areas vs. those accessible to ground-based firefighting equipment and evaluation of fuel reduction programs. Fuel reduction measures such as prescribed burns reduce carbon stores as well (at least temporarily), but they can reduce the burning intensity in future fires and thus maintain higher carbon stores in forest landscapes in the long run. They add that the choice of species for planting at a given site is important when considering their potential growth and resilience in a warmer climate, with possibly more frequent droughts and weather extremes. Drought resistance is probably the most important trait, as few trees die of excess temperature alone. Long-term resistance to fire, pests, and pathogens is also important as all may become more active. In addition to local pest and pathogen species, species likely to migrate from the south need to be considered as well. Stand and landscape architecture can further be designed to increase resistance and resilience of forests. For example, avoiding extensive coverage by a single species and maintaining mixed species within stands and landscapes or creating fire breaks with reduced fuel loads tend to increase the stability of forests. Thinning treatments can improve stand stability as well. They suggest that plans for coping with large-scale disturbance events are needed to ensure optimal timing for salvage, regeneration, and other management options. This project is designed to maintain and restore desired conditions as described in the 2003 Payette National Forest Land and Resource Management Plan (LRMP). These desired conditions are developed to lie within the historic range of variability for forest components. We use several references in the document that support the notion that managing for forests within historical reference conditions offer a resiliency and resistance to future climatic changes and its effects. This resiliency and resistance within historical ranges would also apply to carbon cycling in an ecosystem. As many of our ecosystems have deviated from historical ranges of conditions, so have their ecological processes and functions, which would include not only carbon cycling, but other nutrient cycling, fire regimes, invasion by non-native species etc. Our premise is

Comment #	Concerns	Comment Response
		to maintain and restore forests to the desired ranges, to restore ecosystem processes that may continue to function and evolve with future climatic perturbations. More resilient ecosystems have a greater potential to withstand the ecological stresses associated with climate change, and help maintain long-term carbon sequestration capability in forests.
64	26. Please list each visual quality standard that applies to each unit and disclose whether each unit meets its respective visual quality standard. A failure to comply with visual quality Forest Plan standards violates NFMA. 27. For the visual quality standard analysis please define "ground vegetation," i.e. what age are the trees, "reestablishes," "short-term," "longer term," and "revegetate."	26. Two Scenic Environment standards are listed on page III-67 of the Payette Forest Plan: SCST01: All projects shall be designed to meet the adopted VQOs as displayed on the Forest VOQ map; SCST02**:** Allow for short-term reductions in VQOs to accommodate Burned Area Emergency Rehabilitation projects, emergency needs for protection of investments, and public safety needs. When reducing VQOs, attempt to meet the next-highest objective at the closest viewer distance or most relevant distance given the probable sensitive viewer. A Visual Quality Objective map was produced that mapped the entire project area and is located in the Recreation specialist project file. All harvesting and mechanical treatment proposals meet Forest Plan Standard SCST01 as displayed on the Forest VQO map and are located in either "Modification" or "Partial Retention" VQO. The Recreation specialist report details the number of acres that proposed actions fall into for each alternative. All proposed treatments would maintain the existing VQO of either modification or partial retention, thus meeting the Forest Plan Standard SCST01. FEIS Section 3.7 discusses the Scenic Environment, Visual Quality standards. Table 2-5 discusses Management Requirements that all projects shall be designed to meet the adopted VQOs on the Forest VQO map. Project Design Features in Table 2-6 Scenic and Visual Project design features 84 and 85, specify specific measures to meet the VQO. The SCST02 standard does not apply to this project because there were no BAER projects, emergency needs of public safety needs. 27. The Recreation specialist report (located in the project record) contains literature that includes definitions.

Comment #	Concerns	Comment Response
65	28. Please disclose whether you have conducted surveys in the Project area for this Project for wolverines, pine martins, northern goshawk and lynx, grizzly bears as required by the Forest Plan. 29. Please disclose the last time and how the Project area was surveyed for wolverines, pine martins, fisher, northern goshawk, northern Idaho ground squirrels, whitebark pine, grizzly bears and lynx. 30. Please disclose how often the Project area has been surveyed for wolverines, pine martins, fisher, northern Idaho ground squirrels, northern goshawks, grizzly bears, whitebark pine, and lynx. Is it impossible for wolverines, pine martins, northern goshawks, fisher, grizzly bears and lynx to inhabit the Project area? 31. Would the habitat be better for wolverines, pine martins, northern goshawks, grizzly bears, fisher, northern Idaho ground squirrels and lynx if roads were removed in the Project area?	28. The Forest Plan (WIGU05 and TEGU02) directs that during project-scale analysis, we should determine if habitat for MIS, Sensitive, and TEPC wildlife species occurs within or near the project area. If suitable habitat occurs, surveys should be conducted or documentation provided for not conducting surveys. The Wildlife analysis section in the FEIS discusses those MIS and TEPC and sensitive species expected or known to occur in the project area. For example, northern goshawk and northern Idaho ground squirrels (NIDGS) inhabit the project area and goshawk nest sites and NIDGS colonies have been surveyed for and mapped. Marten occur in the area, but are not a TES species. Grizzly bear are a threatened species, but do not occur in or near the project area. 29-30. Surveys for whitebark pine were conducted in in the summer of 2012. More information about these surveys is contained in the Wildlife Specialist report and biological evaluations in the project record. 31. Effects of roads on wildlife vary depending on the species habitat needs and behavior. Generally speaking, wildlife habitat is considered better where there are little or no roads. The Lost Creek-Boulder Creek project action alternatives all propose to reduce overall road/route density across the project area.
66	32. What is the U.S. FWS position on the impacts of this Project on wolverines, pine martins, northern Idaho ground squirrels, whitebark pine, northern goshawks, grizzly bears and lynx? Have you conducted ESA consultation? 33. Please provide us with the full BA for the wolverines, pine martins, northern goshawks, northern Idaho ground squirrels, fisher, northern Idaho ground squirrel, grizzly bears and lynx.	32. Please see response to comments #28-30 above. The Forest Service consults with US Fish and Wildlife Service on proposed and listed species; these include wolverine, northern Idaho ground squirrel, and lynx. The Forest Service has worked closely with US Fish and Wildlife Service and has designed this project to minimize impacts to federally listed species. For NIDGS, the project is designed to improve habitat and expand populations and meet the 2003 Recovery Plan. Section 7 consultation will be complete prior to a final Record of Decision for the Lost Creek-Boulder Creek project. The biological assessment was submitted to the US Fish and Wildlife Service and National Marine Fisheries Service on 3/6/14. 33. Consultation is not required on pine martens, northern goshawks, and fisher, because they are not proposed or listed under the ESA. Grizzly bear do not occur in or near the project area.
67	**THE AGENCIES SHOULD CONDUCT ESA CONSULTATION FOR THE NORTHERN ROCKIES FISHER.** This year, USFWS found "substantial scientific or commercial information indicating that listing a [Distinct Population Segment] of fisher in the [Northern Rocky Mountains] of the United States [under the ESA] may be	In 2011, the US Fish and Wildlife Service announced a 12-month finding on the petition to list the list a distinct population segment (DPS) of the fisher (*Martes pennanti*) in its U.S. Northern Rocky Mountain range, including portions of Montana, Idaho, and Wyoming. The US Fish and Wildlife Service concluded that listing of fisher in the Northern Rocky Mountains was not warranted (76 FR 38504, June 30, 2011). If

Comment #	Concerns	Comment Response
	warranted." 75 Fed. Reg. 19925 – 19935 (April 16, 2010). In particular, USFWS found that listing the Northern Rockies fisher under the ESA may be warranted in primary part "due to the present and potential future modification and destruction of habitat from commercial timber harvest and commercial wood production by methods that may prevent succession to the mature forest stages preferred by fishers." The Forest Service admits that the fisher and/or its habitat are present within the project area and would be impacted by the project. The Forest Service did no ESA consultation for the fisher for this project.	fisher become federally listed in the future, the Forest Service is responsible for initiating consultation on this species. All project alternatives propose to reduce road densities in the project area by decommissioning which would reduce habitat fragmentation.
68	**THE AGENCIES SHOULD CONDUCT ESA CONSULTATION FOR THE WOLVERINE.** The wolverine, which was chosen by the Forest Service as a management indicator species forth project area, was recently determined to be warranted for listing under the ESA. 75 Fed. Reg.78030 (Dec. 14, 2010). It is currently a candidate species, waiting for work to be completed on other species before it is officially listed. The USFWS found that "[s]ources of human disturbance to wolverines include . . . road corridors, and extractive industry such as logging . . .." .The Forest Service admits that the wolverine and/or its habitat are present within the project area and would be impacted by the project. The Forest Service must go through ESA consultation for the wolverine for this project. Lofroth (1997) in a British Columbia study found that wolverines use habitats as diverse as tundra and old growth forests. Wolverines are also known to use mid to low elevation Douglas-fir forests in the winter (USDA Forest Service, 1993). The cumulative impacts of logging and road building on a species that depends upon remote, wild areas needs to be better studied in the EIS.	A biological assessment (BA) has been prepared and submitted to the US Fish and Wildlife Service and National Marine Fisheries Service. An analysis of effects to wolverine is included in the BA (see project record). A Biological Opinion will be completed prior to the final record of decision.
69	**POPULATION VIABILITY AND HABITAT MANAGEMENT OF MANAGEMENT INDICATOR AND SENSITIVE SPECIES** Regarding another Sensitive species, the black-backed woodpecker, Cherry (1997) states: > The black-backed woodpecker appears to fill a niche that describes everything that foresters and fire fighters have attempted to eradicate.	The black-backed woodpecker is not a Management Indicator Species (MIS) or sensitive species on the Payette National Forest. Cherry (1997) suggests that the "landscape is badly out of balance". This is the same reason that we are proposing this project for the benefit of white-headed woodpecker. Because the black-backed woodpecker is not an MIS or sensitive species on this Forest, and because the Lost Creek-Boulder Creek project does not propose salvage logging, which the commenter suggests is the largest threat to this species, and proposes to maintain snags within the

Comment #	Concerns	Comment Response
	For about the last 50 years, disease and fire have been considered enemies of the 'healthy' forest and have been combated relatively successfully. We have recently (within the last 0 to 15 years) realized that disease and fire have their place on the landscape, but the landscape is badly out of balance with the fire suppression and insect and disease reduction activities (i.e. salvage logging) of the last 50 years. Therefore, the black-backed woodpecker is likely not to be abundant as it once was, and continued fire suppression and insect eradication is likely to cause further decline. The Region 1 black-backed woodpecker assessment (Hillis et al., 2003) notes that the black-backed woodpecker depends upon dead and dying trees: Black-backed woodpeckers occupy forested habitats that contain high densities of recently dead or dying trees that have been colonized by bark beetles and woodborer beetles (Buprestidae, Cerambycidae, and Scolytidae). These beetles and their larvae are most abundant within burned forests. In unburned forests, bark beetle and woodborer infested trees are found primarily in areas that have undergone natural disturbances, such as wind-throw, and within structurally diverse old-growth forests. (Internal citations omitted.) …Black-backed woodpeckers also occur in unburned landscapes Bull et al.1986, Goggans et al.1987, Bate 1995, Hoffman 1997, Weinhagen 1998, Steeger and Dulisse in press, Taylor unpublished data). Taylor's observations of black-backed woodpeckers in unburned forests in northern Idaho suggest that they may occur at substantially lower densities in unburned forests, but no rigorous comparisons between black-backed woodpecker densities in burned and unburned forests have been done. Hutto (1995) hypothesized that black-backed woodpeckers reproduce at source reproductive levels in burns, but may drop to sink reproductive levels in the intervening periods between large burns. Dolan (1998a,b) states in regards to impacts on the black-backed woodpecker fire suppression and post-fire logging states: It seems that we have a huge cumulative effects problem here, and that each salvage sale removes habitat that is already very limited. We are having trouble avoiding a "trend to federal listing" call for the BBWO in salvaging burns, unless comparable acres of fire-killed dead are	project area, Hillis et al. 2003, Dolan, 1998b, and other references cited in this comment are not reviewed individually.

Comment #	Concerns	Comment Response
	being created through prescribed burns. The comments by other biologists attached to Dolan, 1998a, b reveal that the FS has yet to design a consistent, workable, scientifically defensible strategy to ensure viable populations of the black-backed woodpeckers. The fire suppression and "salvage" logging policies of the PNF are the biggest threat to black-backed woodpecker population viability on the Forest, unfortunately in failing to create a conservation strategy the cumulative impacts of the PNF's ongoing fire suppression policy will remain unexamined. The Hidden Lake Fuel Reduction project continues an unspoken management for extinction policy.	
70	The flammulated, boreal owl and the great gray owl are species of concern that are sensitive to logging and other management activities. The Northern Goshawk has habitat in the project area that will be impacted by project logging. The large decrease in canopy cover from project activities will adversely impact all of these species, and given the size and scope of the project, as well as monitoring limitations, the Forest Service cannot ensure continued viability of these species. The PNF provides inadequate management strategies to insure their viability. See, for example, Hayward and Verner, 1994. Wright, et al. (1997) point out that habitat restoration for the flammulated owl must be carefully targeted to the correct habitat types. The FS can't simply cut and/or burn forest area and expect flammulated owls to start using it as habitat. Wright, et al. (1997) state: (W)e never detected Flammulated Owls in mesic old-growth ponderosa pine stands with a Vaccinium understory. Thus, within suitable landscapes, it may be most effective to conserve and restore stand structural characteristics within suitable habitat types (e.g., xeric ponderosa pine/ Douglas-fir stands in our study area), rather than within any stand containing ponderosa pine trees. Sensitive and MIS species in the project area are dependent upon large tree class sizes, and the Forest Plan requires that 20% of the acres in each forested PVG be maintained in the large tree class size. The PVGs in the project area are violating this standard, and it appears from the DEIS that	Goshawk nest stands have been identified and will be protected as recommended by GTR---RM-217. Post Fledgling Areas (PFAs) are established around the existing nest stands. Goshawk nest stand occupancy is being monitored in the project area, and will continue to be monitored during project implementation. See Chapter 3, Wildlife Analysis, for the analysis of effects to other wildlife species of concern (i.e. flammulated owl). PDF's 50-65 Table 2-6 identify measures to minimize impacts to various wildlife species. Treatments are designed to thin stands and grow larger diameter seral species where applicable. Stands would not be moved from a large size tree class to a medium size class. Refer to Section 1.13 of the FEIS for further information regarding old forest / old growth.

Comment #	Concerns	Comment Response
	logging will occur in these areas in violation of the Forest Plan, NEPA and NFMA. It also appears that logging will occur in old growth ponderosa pine stands not currently meeting forest plan standards.	
71	Alliance is particularly concerned about the DEIS analysis of road density and logging impacts to elk. Project logging will result in a sharp decrease in elk security cover and Project area road density further compound the negative impacts to this species. The DEIS does not provide an adequate discussion of Project impacts to the MIS elk.	Elk are not an MIS under the 2003 Payette National Forest Plan. Elk are a species of special interest (SOSI) and the Forest works with IDFG on helping them meet their elk population objectives. Elk are discussed in FEIS Chapter 3, Wildlife section.
72	The Forest Service is utilizing habitats and species classifications from the Wildlife Conservation Strategy; to the extent that the Forest Service is tiering to these classifications and standards and to the extent that the Forest Service is using the WCS to override any prior binding standards, the Forest Service is in violation of NEPA as the WCS has not been subjected to a full NEPA review.	The draft WCS was prepared in response to direction in the 2003 Forest Plan in WIOB03 that called for development of a strategy to prioritize wildlife habitat maintenance and restoration (USDA Forest Service 2003, p. III-26). The DEIS for Forest Plan Amendments Proposed to Facilitate Implementation of the 2011 Plan-Scale Wildlife Conservation Strategy, Phase 1: Forested Biological Community" (also known as the DEIS for the WCS) provided the format for summarizing the results of the WCS analysis and proposed Forest Plan amendments to integrate the recommendations of the WCS. Due to numerous other Forest priorities, we now expect to complete the FEIS for the WCS and the ROD in 2015. Because the FEIS and ROD for the proposed amendments have not been completed, we cannot refer to the WCS recommendations as Forest Plan direction. The FS is not using the WCS "to override any prior binding standards", instead the project is designed to be consistent with current FP direction while focusing on restoration of habitats for wildlife species of greatest concern. The Forest used the best available science in the Lost Creek-Boulder Creek project analysis.
73	The DEIS does not adequately consider cumulative effects on upland habitat for boreal toads. This does not make sense, since such small populations that are likely to persist are especially susceptible to fragmentation and extirpation due to isolation of smaller populations. See Maxell, 2000. In fact, the PNF has never performed a genuine analysis of cumulative impacts of logging activities on boreal toads. From Ch. 3 p. 173 of the Bristow Area Restoration Project EA, Kootenai	Boreal toads are not a species associated with this project area. Current research suggests they occur from south-central Wyoming, mountainous regions of Colorado and extreme north-central New Mexico. Because the project area is outside the known extent of the boreal toad, individual references as cited by the commenter are not reviewed individually.

Comment #	Concerns	Comment Response
	National Forest, (USDA Forest Service, 2003a: Little quantitative data are available regarding the boreal toad's use of upland and forested habitats. However, boreal toads are known to migrate between the aquatic breeding and terrestrial nonbreeding habitats (TNC Database 1999), and that juvenile and adult toads are capable of moving over 5 km between breeding sites (Corn et al. 1998). It is thought than juveniles and female boreal toads travel farther than the males (Ibid). A study on the Targhee National Forest (Bartelt and Peterson 1994) found female toads traveled up to 2.5 kilometers away from water after breeding, and in foraging areas, the movements of toads were significantly influenced by the distribution of shrub cover. Their data suggests that toads may have avoided macro-habitats with little or no canopy and shrub cover (such as clearcuts). Underground burrows in winter and debris were important components of toad selected micro-sites in a variety of macro-habitats. The boreal toad digs its own burrow in loose soil or uses those of small mammals, or shelters under logs or rocks, suggesting the importance of coarse woody debris on the forest floor. …(T)imber harvest and prescribed burning activities could impact upland habitat by removing shrub cover, down woody material, and/or through compaction of soil. Montana Fish, Wildlife & Parks, 2005 (a more recent version of the above cit Database, 1999") also discuss boreal toad habitat: Habitats used by boreal toads in Idaho are similar to those reported for other regions, and include low elevation beaver ponds, reservoirs, streams, marshes, lake shores, potholes, wet meadows, and marshes, to high elevation ponds, fens, and tarns at or near treeline (Rodgers and Jellison 1942, Brunson and Demaree 1951, Miller 1978, Marnell 1997, Werner et al. 1998, Boundy 2001). Forest cover in or near encounter sites is often unreported, but toads have been noted in open-canopy ponderosa pine woodlands and closed-canopy dry conifer forest in Sanders County (Boundy 2001), willow wetland thickets and aspen stands bordering Engelmann spruce stands in Beaverhead County (Jean et al. 2002), and mixed ponderosa pine/cottonwood/willow sites or Douglas-fir/ponderosa pine forest in Ravalli and Missoula counties (P. Hendricks personal observation). Elsewhere the boreal toad is known to utilize a wide variety of	

Comment #	Concerns	Comment Response
	habitats, including desert springs and streams, meadows and woodlands, mountain wetlands, beaver ponds, marshes, ditches, and backwater channels of rivers where they prefer shallow areas with mud bottoms (Nussbaum et al. 1983, Baxter and Stone 1985, Russell and Bauer 1993, Koch and Peterson 1995, Hammerson 1999). Forest cover around occupied montane wetlands may include aspen, Douglas-fir, lodgepole pine, Engelmann spruce, and subalpine fir; in local situations it may also be found in ponderosa pine forest. They also occur in urban settings, sometimes congregating under streetlights at night to feed on insects (Hammerson 1999, P. Hendricks personal observation). Normally they remain fairly close to ponds, lakes, reservoirs, and slow-moving rivers and streams during the day, but may range widely at night. Eggs and larvae develop in still, shallow areas of ponds, lakes, or reservoirs or in pools of slow-moving streams, often where there is sparse emergent vegetation. Adult and juvenile boreal toads dig burrows in loose soil or use burrows of small mammals, or occupy shallow shelters under logs or rocks. At least some toads hibernate in terrestrial burrows or cavities, apparently where conditions prevent freezing (Nussbaum et al. 1983, Koch and Peterson 1995, Hammerson 1999). Maxell et al., 1998 state: We believe that the status of the Boreal toad is largely uncertain in all Region 1 Forests. …Briefly, factors which are a cause for concern over the viability of the species throughout Region 1 include: (1) a higher degree of genetic similarity within the range of Region 1 Forests relative to southern or coastal populations; (2) a general lack of both historical and current knowledge of status in the region; (3) indications of declines in areas which do have historical information; (4) low (5-10%) occupancy of seemingly suitable habitat as detected in recent surveys; (5) some evidence for recent restriction of breeding to low elevation sites and; (6) recent crashes in boreal toad populations in the southern part of its range which may indicate the species' sensitivity to a variety of anthropogenic impacts.	
74	LYNX	Lynx are analyzed in the FEIS in section 3.6.4 and in the biological assessment (project record). Effects are disclosed to the US Fish and Wildlife Service under Section 7 of the

Comment #	Concerns	Comment Response
	In December 1999, the Forest Service and Bureau of Land Management completed their "Biological Assessment Of The Effects Of National Forest Land And Resource Management Plans And Bureau Of Land Management Land Use Plans On Canada Lynx" ("Programmatic BA"). The Programmatic BA concluded that the current programmatic land management plans "may affect, and are likely to adversely affect, the subject population of Canada lynx." The BA team recommended amending or revising Forest Plans to incorporate conservation measures that would reduce or eliminate the identified adverse effects to lynx. The Programmatic BA's determination means the Payette Forest Plan implementation is a "taking" of lynx. The fact that continued implementation of the Forest Plans constitutes a "taking" of the lynx is not disclosed in the EA or in the EA's Biological Assessment. Such taking can only be authorized with an incidental take statement, issued as part of a Biological Opinion (B.O.) during a Section 7 consultation. The FS must incorporate terms and conditions from a programmatic B.O. into a Forest Plan amendment or revision before projects affecting lynx habitat, such as this Project, can be authorized. The Programmatic BA's "likely to adversely affect" conclusion was based upon the following rationale (p. 4), all of which apply here. Forest Plans within the Northern Rockies: • generally direct an aggressive fire suppression strategy within developmental land allocations. …this strategy may be contributing to a risk of adversely affecting the Lynx by limiting the availability of foraging habitat within these areas. • allow levels of human access via forest roads that may present a risk of incidental trapping or shooting of Lynx or access by other competing carnivores. The risk of road-related adverse effects is primarily a winter season issue. • are weak in providing guidance for new or existing recreation developments. Therefore, these activities may contribute to a risk of adverse effects to lynx. • allow both mechanized and non-mechanized recreation that may contribute to a risk of adverse effects to lynx. The potential effects	ESA in the project BA (project record). The 2003 Payette Forest Plan incorporated conservation measures as identified in the Lynx Conservation Strategy and Assessment (LCAS, Ruediger et al. 2000) and the Lost Creek-Boulder Creek project complies with Forest Plan direction for Lynx. The biological assessment of effects to lynx from the LCBC project determined the activities "may affect, but are not likely to adversely affect," this species.

Comment #	Concerns	Comment Response
	occur by allowing compacted snow trails and plowed roads which may facilitate the movements of lynx competitors and predators. • provide weak direction for maintaining habitat connectivity within naturally or artificially fragmented landscapes. Plans within all geographic areas lack direction for coordinating construction of highways and other movement barriers with other responsible agencies. These factors may be contributing to a risk of adverse effects to lynx. • fail to provide direction for monitoring of lynx, snowshoe hares, and their habitats. While failure to monitor does not directly result in adverse effects, it makes the detection and assessment of adverse effects from other management activities difficult or impossible to attain. • forest management has resulted in a reduction of the area in which natural ecological processes were historically allowed to operate, thereby increasing the area potentially affected by known risk factors to lynx. The Plans have continued this trend. The Plans have also continued the process of • fragmenting habitat and reducing its quality and quantity. Consequently, plans may risk adversely affecting lynx by potentially contributing to a reduction in the geographic range of the species. • The BA team recommends amending or revising the Plans to incorporate conservation measures that would reduce or eliminate the identified adverse effects to lynx. The programmatic conservation measures listed in the Canada Lynx Conservation Assessment and Strategy (LCAS) should be considered in this regard, once finalized. The BA notes that the LCAS identifies the following risk factors to lynx in th geographic area: • Timber harvest and precommercial thinning that reduce denning or foraging habitat or converts habitat to less desirable tree species; • Fire exclusion that changes the vegetation mosaic maintained by natural disturbance processes; • Grazing by domestic livestock that reduces forage for lynx prey; • Roads and winter recreation trails that facilitate access to historical lynx	

Comment #	Concerns	Comment Response
	habitat by competitors; • Legal and incidental trapping and shooting; • Being hit by vehicles; • Obstructions to lynx movements such as highways and private land development; The EA and BA fail to fully demonstrate Project consistency with all LCAS Standards and guidelines. Important Programmatic Standards include: Identify key linkage areas that may be important in providing landscape connectivity within and between geographic areas, across all ownerships. (p. 87) Develop and implement a plan to protect key linkage areas on federal lands from activities that would create barriers to movement. Barriers could result from an accumulation of incremental projects, as opposed to any one project. (Id.) Map and monitor the location and intensity of snow compacting activities that coincide with Lynx habitat, to facilitate future evaluation of effects on Lynx as information becomes available. (p. 82) On federal lands in Lynx habitat, allow no net increase in groomed or designated over-the-snow routes and snowmobile play areas by LAU. The EA fails to provide adequate maps of LAUs and habitat components along with areas of human activity as the LCAS requires, making it impossible for the public and decision maker to understand the impacts of motorized travel, as well as to understand impacts on habitat and connectivity of habitat. The BA lacks a genuine analysis of the full range of cumulative impacts of other activities. The EA and BA also fail to disclose the cumulative effects of livestock grazing on the grazing allotments in the project area. We also have to question the validity of the percentage habitat standards set by the LCAS itself. The Forest Service would be hard-pressed to find many Lynx Analysis Unit in the Northern Region—heavily logged or otherwise—that already don't meet these percentages. Basically, what these Standards	

Comment #	Concerns	Comment Response
	accomplish is to validate the management status quo—the very situation that led to the listing of the lynx under the ESA.	
75	Alliance has reviewed the statutory and regulatory requirements governing National Forest Management projects, as well as the relevant case law, and compiled a check-list of issues that must be included in the EIS for the Project in order for the Forest Service's analysis to comply with the law. Following the list of necessary elements, Alliance has also included a general narrative discussion on possible impacts of the Project, with accompanying citations to the relevant scientific literature. These references should be disclosed and discussed in the EIS for the Project. I. NECESSARY ELEMENTS FOR PROJECT EIS: A. Disclose all Payette National Forest Plan requirements for logging/burning projects and explain how the Project complies with them; B. Disclose the acreages of past, current, and reasonably foreseeable logging, grazing, and road-building activities within the Project area; C. Solicit and disclose comments from the Idaho Department of Fish and Game regarding the impact of the Project on wildlife habitat; D. Solicit and disclose comments from the Idaho Department of Environmental Quality regarding the impact of the Project on water quality; E. Disclose if there are any WQLS streams in the project area and if TMDLs are completed; F. Disclose the biological assessment for the candidate, threatened, or endangered species with potential and/or actual habitat in the Project area; G. Disclose the biological evaluation for the sensitive and management indicator species with potential and/or actual habitat in the Project area; H. Disclose the snag densities in the Project area, and the method used to determine those densities; I. Disclose the current, during-project, and post-project road densities in the Project area; J. Disclose the Payette National Forest's record of compliance with state best management practices regarding stream sedimentation from	A. See project record for Forest Plan Consistency checklist and Fire and Fuels specialist report. B. Refer to Section 3.1.5 of the FEIS for disclosure of acres of past, present and reasonably foreseeable timber harvest. Appendix D of the FEIS provides additional information regarding these activities. C. Idaho Department of Fish and Game (IDFG) has been part of the Payette Forest Coalition. In addition, the Forest received several comment letters from IDFG (see comments #16-19 above). D. The Forest Service received comment letters from the EPA and IDEQ the Lost Creek-Boulder Creek project. See comments #1-15 and 33-37 above. E. There are no WQLS or TMDLs within the project area. A temperature TMDL exists downstream of the project area on the West Fork of the Weiser River. F. A Biological Assessment has been prepared. The BA determined the project was "not likely to adversely affect" lynx and "not likely to jeopardize" wolverine. The Forest expects to receive a Letter of Concurrence on these determinations. .A Biological Opinion for the effects to listed fish and the northern Idaho ground squirrel will be completed prior to the final Record of Decision for this project. G. Biological Evaluations for wildlife, fish, and plant species are located in the project record and summarized in the FEIS. H. Refer to section 1.13 of the FEIS for information regarding snags. Additional information regarding snags is available in the Forested Vegetation Specialist Report, Wildlife Specialist Report, and FEIS Chapter 3. I. Pre- and post-project road densities are displayed for subwatersheds in section 3.3.4 Watershed Effects Analysis. The analysis did not analyze road density "during" the project because 1) most temporary roads are already located on existing unauthorized road beds and are already counting toward existing roads density, 2) temporary roads exist in a "temporary" time frame. One issue analyzed for roads is sediment, for which all existing roads, temporary roads, and reductions or changes to roads is analyzed cumulatively for each subwatershed using the BOISED model. J. The Forest uses the federal Best Management Practices as described in the National Core BMP

Comment #	Concerns	Comment Response
	ground-disturbing management activities; K. Disclose the Payette National Forest's record of compliance with its monitoring requirements as set forth in its Forest Plan; L. Disclose the Payette National Forest's record of compliance with the additional monitoring requirements set forth in previous DN/FONSIs and RODs on the Payette National Forest; M. Disclose the results of the field surveys for threatened, endangered, sensitive, and rare plants in each of the proposed units; N. Disclose the level of current noxious weed infestations in the Project area and the cause of those infestations; O. Disclose the impact of the Project on noxious weed infestations and native plant communities; P. Disclose the amount of detrimental soil disturbance that currently exists in each proposed unit from previous logging and grazing activities; Q. Disclose the expected amount of detrimental soil disturbance in each unit after ground disturbance and prior to any proposed mitigation/remediation; R. Disclose the expected amount of detrimental soil disturbance in each unit after proposed mitigation/remediation; S. Disclose the analytical data that supports proposed soil mitigation/remediation measures; T. Disclose the timeline for implementation; U. Disclose the funding source for non-commercial activities proposed; V. Disclose the current level of old growth forest in each third order drainage in the Project area; W. Disclose the method used to quantify old growth forest acreages and its rate of error based upon field review of its predictions; X. Disclose the historic levels of mature and old growth forest in the Project area; Y. Disclose the level of mature and old growth forest necessary to sustain viable populations of dependent wildlife species in the area; Z. Disclose the amount of mature and old growth forest that will remain after implementation; AA. Disclose the amount of current habitat for old growth and mature forest dependent species in the Project area; BB. Disclose the amount of habitat for old growth and mature forest	K. Forest Plan Monitoring Reports are produced annually by the Payette National Forest and are available at http://prdp2fs.ess.usda.gov/detail/payette/landmanagement/planning/?cid=STELPRDB5203156 Past monitoring is also documented in the Annual Soil and Water Monitoring Report published each year in May. These documents are on file in the Supervisors Office, McCall, ID. L. Monitoring outside of Forest Plan requirements, such as project specific monitoring, is located in the project files for individual projects at the Forest Supervisor's office or at district offices. M. See Wildlife Specialist Report, and the Biological Assessment and Biological Evaluation for the project. N. Known infestations of noxious weeds are mapped in the project record, and occur mostly along roads. These infestations are likely attributable to dispersal from vehicles. Native plants are discussed in the biological evaluation, located in the project record. O. Impacts of the project on native and sensitive plants are documented in the plants Biological Evaluation in the project record, and summarized in FEIS section 1.13.1. The project is not expected to exacerbate current noxious weeds infestations due to the use of management requirements and Project Design Features as described in FEIS Chapter 2, Tables 2-4 and 2-5. P. Detrimental Disturbance (DD) surveys were completed where units were field verified in fall of 2013. Some units exceeded 15% and will need to have restoration of existing skid trails and landings. No new DD is expected to occur with this project as existing skid trails and landings would be utilized and all new skid trails and most landings would be obliterated. Surveys for DD are completed during implementation so amounts of DD by unit are not available at this time. Q. See P. above. R. See P. above. S. See FEIS Appendix I references for Soil Effects analysis. T. Implementation of the project would begin in 2014 and is anticipated to last approximately 10 years. In general terms, activities associated with vegetation management will be completed first, followed by prescribed burning and road decommissioning and/or closures. Activities not associated with vegetation treatments,

Comment #	Concerns	Comment Response
	dependent species that will remain after Project implementation; CC. Disclose the method used to model old growth and mature forest dependent wildlife habitat acreages and its rate of error based upon field review of its predictions; DD. Disclose the amount of big game (moose and elk) hiding cover, winter range, and security currently available in the area; EE. Disclose the amount of big game (moose and elk) hiding cover, winter range, and security during Project implementation; FF. Disclose the amount of big game (moose and elk) hiding cover, winter range, and security after implementation; GG. Disclose the method used to determine big game hiding cover, winter range, and security, and its rate of error as determined by field review; HH. Disclose and address the concerns expressed by the ID Team in the draft Five-Year Review of the Forest Plan regarding the failure to monitor population trends of MIS, the inadequacy of the Forest Plan old growth standard, and the failure to compile data to establish a reliable inventory of sensitive species on the Forest; II. Disclose the actions being taken to reduce fuels on private lands adjacent to the Project area and how those activities/or lack thereof will impact the efficacy of the activities proposed for this Project; JJ. Disclose the efficacy of the proposed activities at reducing wildfire risk and severity in the Project area in the future, including a two-year, five-year, ten-year, and 20-year projection; KK. Disclose when and how the Payette National Forest made the decision to suppress natural wildfire in the Project area and replace natural fire with logging and prescribed burning; LL. Disclose the cumulative impacts on the Forest-wide level of the Payette National Forest's policy decision to replace natural fire with logging and prescribed burning; MM. Disclose how Project complies with the Roadless Rule; NN. Disclose the impact of climate change on the efficacy of the proposed treatments; OO. Disclose the impact of the proposed project on the carbon storage potential of the area; PP. Disclose the baseline condition, and expected sedimentation during and after activities, for all streams in the area; QQ. Disclose maps of the area that show the following elements: 1. Past, current, and reasonably foreseeable logging units in the	such passage barrier improvements and recreation improvements could take place as soon as late summer or early fall of 2014. U. Funding sources would be sought after a decision is made. Generally, non-commercial thinning is achieved through a combination of timber receipts on stewardship contracts, federal appropriations (including CFLRP funds) and grants. V, W, X. Refer to Section 1.13.9 of the FEIS for further information regarding old forest / old growth. Y. Viability is determined at the Forest Plan level and not at the project level. The Payette National Forest does not include any "old forest" dependent wildlife species. While some species are associated with old forest habitat, all species assessed (ESA listed, Region 4 sensitive, MIS, and focal species) in the LCBC analysis use wider habitat parameters than those defined as old forest habitat. See FEIS Chapter 3, Table WL-15 for pileated woodpecker that shows existing and projected tree size/canopy cover class for a MIS species that prefers large tree with moderate to high canopy cover. See also response to comment #84. Z. All of the proposed treatments would maintain large tree size class stands in the large tree size class. Refer to section 1.13.9 of the FEIS for further information regarding old forest / old growth. AA. See FEIS, Chapter 3, Table WL15 that describes existing condition by PVG for pileated woodpecker which prefer large tree, closed canopy conditions. BB. Post treatment acres will vary by alternative chosen. See table WL15 for pileated woodpecker that shows a range of projected changes to canopy cover by PVG. CC. Source habitat models for wildlife species associated with low-elevation and broad-elevation old forests are described in the wildlife section of the FEIS, Chapter 3, and in the Wildlife Specialist Report. Forest Vegetation information is in the respective Specialist Report and in the project record. DD. Big game (elk) habitat is discussed in the wildlife section of the FEIS, Chapter 3. Moose have not been documented in the project area, but the most likely area where they could occur is in riparian areas of the Boulder Creek Watershed that will be protected from mechanical harvest. EE. Big game habitat is discussed in the wildlife section of the FEIS, Chapter 3. FF. Big game habitat is discussed in the wildlife section of the FEIS, Chapter 3. GG. Big game habitat is discussed in the wildlife section of the FEIS, Chapter 3.

Comment #	Concerns	Comment Response
	Project area; 2. The cumulative effects of past, current, and reasonably foreseeable logging units; 3. Past, current, and reasonably foreseeable logging units in the Project area; 4. The cumulative effects of past, current, and reasonably foreseeable grazing; 5. Past, current, and reasonably foreseeable grazing allotments in the Project area; 6. Density of human residences within 1.5 miles from the Project unit boundaries; 7. Hiding cover in the Project area according to the Forest Plan definition; 8. Old growth forest in the Project area; 9. Big game security areas; 10. Moose winter range;	HH. Forest Plan definitions for old growth can be found in the Forest Plan. However there is no desired future condition for old growth which historically was found in very small percentages across the landscape on the Payette. (Forest Plan A-22). The Forest has monitored population trends for MIS since 2004 and has conducted a variety of inventories for sensitive species (see Egnew 2009). II. The Forest Service has no jurisdiction over how other landowners manage their lands. Forest Service Prevention Technicians do visit many of these landowners to discuss activities to improve defensible space conditions. These efforts also occur at Home Owner Association meetings and through public announcements through various mediums. There are six areas where private lands are adjacent to the project area and only one area that is of concern from a protection aspect (i.e. private property within Boulder Creek subwatershed, along the northern boundary of the project). The homes and structures within the Boulder Creek drainage are primarily along the stream and/or within the riparian areas. Some thinning has been completed and a wildfire in 2012 has treated fuels immediately adjacent to multiple structures, but little fuels reduction within the entire corridor itself has occurred. All other adjacent private lands exhibit very low risk due to a lack of forested conditions and proximity to unburnable landscapes (e.g., scabs, streams). JJ. The proposed activities intend to restore and/or maintain vegetation and fire regimes, thereby moving towards historic severities over 20 years of treatment. The effects of our treatments would be graduated across the 20 years of treatments (i.e., as more thinning is accomplished there are generally more acres available for the application of fire). The New Meadows Ranger District alone has applied an average of more than 3,000 acres of prescribed fire per year in the last 5 years across 7 project locations. It is expected that at least 2,000 acres of prescribed fire could be applied annually within the Lost Creek-Boulder Creek project; some years may exceed 5,000 acres of prescribed fire. The Forest projects at least 2,000 acres of thinning will be completed per year. The ability to produce the intended result is expected to be high, but variability in year to year accomplishments are expected. See Chapter 3 of the FEIS for projected changes in fire regime conditions for year 2033. KK. Wildfire suppression was decided in the Forest Plan. Managing natural ignitions for resource objectives is not an option across the entire project area (Forest Plan Direction by MPCs associated with various Management Areas). Regarding proposed treatment areas, managing natural ignitions is only an option within in a portion of

Comment #	Concerns	Comment Response
		Boulder Creek drainage, MPC 5.1 within Management Areas 4 and 5. Fire-response decisions are outside the scope of the project. Vegetation treatments, including prescribed fire, are tools available to achieve the desired conditions per MPCs and Management Areas within the Forest Plan. LL. See response to KK above. Cumulative effects are discussed in FEIS Chapter 3 under each resource area. MM. An Inventoried Roadless Area effects analysis was completed as part of the Lost Creek-Boulder Creek project (project file). NN, OO. See response to comments # 63 regarding climate change. PP. The existing conditions of streams in the project area are disclosed in FEIS Chapter 3, Sections 3.3.3 and 3.5.3. Effects of project related activities on sediment are disclosed in sections 3.3.4 and 3.5.4. QQ. 1. See FEIS Appendix D. Maps of past activities are located in the project record. Additionally, Section 3.1 of the FEIS discloses the existing condition and cumulative effects to forested vegetation regarding past, present and reasonably foreseeable actions. 2-5. See response to comment QQ1. 6. This project is not designed to address wildland urban interface, therefore this comment is outside the scope of the project. 7. FEIS Chapter 3, Wildlife section discusses big game habitat. 8. Refer to Section 1.13.9 of the FEIS for further information regarding old forest / old growth. 9. FEIS Chapter 3, Wildlife section discusses big game habitat. 10. FEIS Chapter 3, Wildlife section discusses big game habitat. Moose are not documented in the project area.
76	Does this project have a 404 permit from the Army Corp of Engineers to dredge and fill or harm a wetland? Please provide a map of all of the wetlands or wetland complexes. If they are not mapped nothing in the EA ensures that wetlands won't be permanently converted to uplands and result in a net decrease in wetlands by dredging and filling when building temporary roads, skid trails or landing sites in wetlands. It is also a violation of NEPA, NFMA and the APA to not notify the public that the	Culvert replacement often requires a section 404 permit from the US Army Corps of Engineers. The Forest will apply for this permit when the design of the stream crossing is prepared. The 404 permit from the Corps of Engineers cannot be obtained until the designs are completed. Generally, no dredging or filling of wetlands would occur when culvert replacement occurs. Culvert replacement projects are proposed for the purpose of passing bankfull flows, providing fish passage, and improving a stream's access the adjacent floodplain. A map of the field mapped wetlands, wetlands on the USGS

Comment #	Concerns	Comment Response
	Forest Service does not have a 404 permit and is not following the Clean Water Act.	topographic map, and the National Wetland Inventory of wetlands is located in the planning record for the Watershed Specialist Report.
77	The Ninth Circuit Court of Appeals recently ruled that sediment from culverts and ditches on Forest Service roads are a point source pollutant and require a NPDES permit from the E.P.A. Do you have this permit? The analysis for whether there are such culvert and ditch point sources in the project area must be done before the project is approved so that the public can be engaged and notified of the process. The entire point of NEPA is to do the analysis before the action is approved, not after. A necessary part of NEPA analysis is documenting that the project does not violate federal laws. There is no guarantee that the agency will conduct the necessary analysis on potential point source discharges if the analysis is not included in the EIS. In other words, the time for analysis is NOW. A failure to consider this important factor violates the APA and NEPA. It is a violation of NEPA to not conduct this analysis and disclose the results to the public.	On March 20, 2013, in Decker v. NEDC, the Supreme Court reversed the Ninth Circuit's decision in NEDC v. Brown and held that logging roads are not point sources of industrial pollution and consequently don't require Clean Water Act permits.
78	**Weeds** Native plants are the foundation upon which the ecosystems of the Forest are built, providing forage and shelter for all native wildlife, bird and insect species, supporting the natural processes of the landscape, and providing the context within which the public find recreational and spiritual opportunities. All these uses or values of land are hindered or lost by conversion of native vegetation to invasive and noxious plants. The ecological threats posed by noxious weed infestations are so great that a former chief of the Forest Service called the invasion of noxious weeds "devastating" and a "biological disaster." Despite implementation of Forest Service "best management practices" (BMPs), noxious weed infestation on the Forest is getting worse and noxious weeds will likely overtake native plant populations if introduced into areas that are not yet infested. The Forest Service has recognized that the effects of noxious weed invasions may be irreversible. Even if weeds are eliminated with herbicide treatment, they may be replaced by other weeds, not by native plant species. Invasive plant species, also called noxious weeds, are one of the greatest modern threats to biodiversity on earth. Noxious weeds cause harm because they displace native plants, resulting in a loss of diversity and a change in	Weeds are always a concern and botanical surveys for rare plants done in 2012 specifically looked for weedy species. No noxious weeds were found in rare plant populations. Forest BMPs do help control and contain weedy species in rare plant habitat and surveys done to detect new weed populations help with control. Management requirements and Project Design Features are intended to prevent the spread of existing noxious weed infestations and prevent the establishment of new infestations. This project is designed to comply with all Forest Plan standards for Non-native plants (Forest Plan pp. III-35 – III-37). Current populations of noxious weeds within the project area have been inventoried and are scheduled for regular treatment and monitoring into the future (maps of known infestations are located in the project record). Best management practices for prevention, treatment and monitoring will be included in the operations plan and prescribed burn plan (see FEIS Chapter 2, Table 2-6 PDF #68). By adopting a proactive approach to noxious weed control, especially in areas of human-caused disturbances, we can ensure that the potential for introducing new noxious weed species is eliminated and the spread of existing invaders is reduced. Noxious weed management through prevention and early detection and rapid response is more cost-effective than treating large infestations.

Comment #	Concerns	Comment Response
	the structure of a plant community. By removing native vegetative cover, invasive plants like knapweed may increase sediment yield and surface runoff in an ecosystem. As well knapweed may alter organic matter distribution and nutrient through a greater ability to uptake phosphorus over some native species in grasslands. Weed colonization can alter fire behavior by increasing flammability: for example, cheatgrass, a widespread noxious weed on the Forest, cures early and leads to more frequent burning. Weed colonization can also deplete soil nutrients and change the physical structure of soils. The Forest Service's own management activities are largely responsible for noxious weed infestations; in particular, logging, prescribed burns, and road construction and use create a risk of weed infestations. The introduction of logging equipment into the Forest creates and exacerbates noxious weed infestations. The removal of trees through logging can also facilitate the establishment of noxious weed infestations because of soil disturbance and the reduction of canopy closure In general, noxious weeds occur in old clearcuts and forest openings, but are rare in mature and old growth forests. Roads are often the first place new invader weeds are introduced. Vehicle traffic and soil disturbances from road construction and maintenance create ideal establishment conditions for weeds. Roads also provide obvious dispersal corridors. Roadsides throughout the project area are infested with noxious weeds. Once established along roadsides, invasive plants will likely spread into adjacent grasslands and forest openings. Prescribed burning activities within the analysis area would likely cumulatively contribute to increases to noxious weed distribution and populations. As a disturbance process, fire has the potential to greatly exacerbate infestations of certain noxious weed species, depending on burn severity and habitat type (Fire Effects Information System 2004). Soil disturbance, such as that resulting from low and moderate burn severities from prescribed fire and fire suppression related disturbances (dozer lines, drop spots, etc.), provide optimum conditions for noxious weed invasion. Dry site vegetation types and road corridors are extremely vulnerable, especially where recent ground disturbance (timber management, road construction) has occurred. Units proposed for burning within project area may have closed forest service access roads (jammers) located within units. These units have the highest potential for noxious weed infestation and exacerbation through fire activities. Please provide an alternative that eliminates units that have noxious weeds present on roads within units from	Prescribed fires in the Lost Creek-Boulder Creek project area will most likely be done under cool conditions, which would reduce the fire severity and ground disturbance leading to weed spread. Based on the results of research on the Bitterroot National Forest after the 2000 fires, it appears that over time high severity fires are more conducive to weed spread than low severity fires in Douglas-fir habitats (Ferguson et al 2007). The Payette National Forest requires that native species be used in restoration and post disturbance activities (NPST01, Forest Plan p. III-36). Select areas such as landings shall be seeded with native grasses and forbs following disturbance activities.

Comment #	Concerns	Comment Response
	fire management proposals. Please address the ecological, social and ascetic impact of current noxious weed infestations within the project area. Include an analysis of the impact of the actions proposed by this project on the long and short term spread of current and new noxious weed infestations. What treatment methods will be used to address growing noxious weed problems? What noxious weeds are currently and historically found within the project area? Please include a map of current noxious weed infestations which includes knapweed, Saint Johnswort, cheat grass, bull thistle, Canada thistle, hawkweed, hound's-tongue, oxeye daisy and all other Category 1, Category 2 and Category 3 weeds classified as noxious in the Idaho County Noxious Weed List. Noxious weeds can invade undisturbed areas where native plant communities are intact. These species can persist in shaded conditions and often grow underneath shrubs making eradication very difficult. Their stoloniferous (growing at the surface or below ground) habit can create dense mats that can persist and spread to densities of 3500 plants per square mile (Thomas and Dale 1975). Are yellow and orange hawkweeds present within the project area? Please address the cumulative, direct and indirect effects of the proposed project on weed introduction, spread and persistence that includes how weed infestations have been and will be influenced by the following management actions: road construction including new permanent and temporary roads, and skid trails proposed within this project; opening and decommissioning of roads represented on forest service maps; ground disturbance and traffic on forest service template roads, mining access routes, and private roads; removal of trees through commercial and pre-commercial logging and understory thinning; and prescribed burns. What open, gated, and decommissioned Forest Service roads within the project area proposed as haul routes have existent noxious weed populations and what methods will be used to assure that noxious weeds are not spread into the proposed action units? Noxious weeds are not eradicated with single herbicide treatments. A onetime application may kill an individual plant but dormant seeds in the ground can still sprout after herbicide treatment. Thus, herbicides must be used on consistent, repetitive schedules to be effective. What commitment to a long-term, consistent strategy of application is being	

Comment #	Concerns	Comment Response
	proposed for each weed infested area within the proposed action area? What long term monitoring of weed populations is proposed? When areas treated with herbicides are reseeded on national forest land, they are usually reseeded with exotic grasses, not native plant species. What native plant restoration activities will be implemented in areas disturbed by the actions proposed in this project? Will disturbed areas including road corridors, skid trails, and burn units be planted or reseeded with native plant species? The scientific and managerial consensus is that prevention is the most effective way to manage noxious weeds. The Forest Service concedes that preventing the introduction of weeds into uninfested areas is "the most critical component of a weed management program." The Forest Service's national management strategy for noxious weeds also recommends "develop[ing] and implement[ing] forest plan standards . . . ." and recognizes that the cheapest and most effective solution is prevention. Which units within the project area currently have no noxious weed populations within their boundaries? What minimum standards are in the Payette National Forest Plan to address noxious weed infestations? Please include an alternative in the DEIS that includes land management standards that will prevent new weed infestations by addressing the causes of weed infestation. The failure to include preventive standards violates NFMA because the Forest Service is not ensuring the protection of soils and native plant communities. Additionally, the omission of an EIS alternative that includes preventive measures would violate NEPA because the Forest Service would fail to consider a reasonable alternative.	
79	**<u>Rare Plants</u>** The ESA requires that the Forest Service conserve endangered and threatened species of plants as well as animals. In addition to plants protected under the ESA, the Forest Service identifies species for which population viability is a concern as "sensitive species" designated by the Regional Forester (FSM 2670.44). The response of each of the sensitive plant species to management activity varies by species, and in some cases, is not fully known. Local native vegetation has evolved with and is adapted to the climate, soils, and natural processes such as fire, insect and disease infestations, and windthrow. Any management or lack of management that causes these natural processes to be altered may have impacts on native	No threatened or endangered plants are known to occur on the Payette National Forest. The Biological Evaluation (project record) identifies the rare plants found in the proposed project area and addresses the direct and indirect effects.

Comment #	Concerns	Comment Response
	vegetation, including threatened and sensitive plants. Herbicide application – intended to eradicate invasive plants – also results in a loss of native plant diversity because herbicides kill native plants as well as invasive plants. Although native species have evolved and adapted to natural disturbance such as fire on the landscape, fires primarily occur in mid to late summer season, when annual plants have flowered and set seed. Following fall fires, perennial root-stocks remain underground and plants emerge in the spring. Spring and early summer burns could negatively impact emerging vegetation and destroy annual plant seed. What threatened, endangered, rare and sensitive plant species and habitat are located within the proposed project area? What standards will be used to protect threatened, rare, sensitive and culturally important plant species and their habitats from the management actions proposed in this project? Describe the potential direct and indirect effect of the proposed management actions on rare plants and their habitat. Will prescribed burning occur in the spring and early summer; please give justifications for this decision using current scientific studies as reference.	
80	**Whitebark Pine** Not all ecosystems or all Rocky Mountain landscapes have experienced the impacts of fire exclusion. In some wilderness areas and roadless areas where in recent decades natural fires have been allowed to burn, there have not been major shifts in vegetation composition and structure (Keane et al. 2002). In some alpine ecosystems, fire was never an important ecological factor. In some upper subalpine ecosystems, fires were important, but their rate of occurrence was too low to have been significantly altered by the relatively short period of fire suppression (Keane et al. 2002). For example, the last 70 to 80 years of fire suppression have not had much influence on subalpine landscapes with fire intervals of 200 to several hundred years (Romme and Despain). Consequently, it is unlikely that fire exclusion has yet to significantly alter stand conditions or forest health within Rocky Mountain subalpine ecosystems. Whitebark pine seedlings, saplings and mature trees, present in subalpine forests proposed for burning, would experience mortality from project	Rare plant surveys were conducted to identify whitebark trees and habitat. All habitat and plants of whitebark pine should be out of any vegetation treatments and burn units. This will protect whitebark pine saplings and seedlings. Currently, no restoration efforts are planned by whitebark pine by planting rust-resistant stock. No research study has documented the effects of daylighting treatments on whitebark pine survival, vigor and cone production. Keane is currently studying the effect of daylighting treatment on whitebark pine. See http://www.firelab.org/research-projects/fire-ecology/62-restoring-whitebark-pine.

Comment #	Concerns	Comment Response
	activity. Whitebark pine is fire intolerant (thin bark). Fire favors whitebark pine regeneration (through canopy opening and reducing competing vegetation) only in the presence of **adequate seed source** and dispersal mechanisms (Clarks Nutcracker or humans planting whitebark pine seedlings). White pine blister rust, an introduced disease, has caused rapid mortality of whitebark pine over the last 30 to 60 years. Keane and Arno (1993) reported that 42 percent of whitebark pine in western Montana and central Idaho had died in the previous 20 years with 89 percent of remaining trees being infected with blister rust. The ability of whitebark pine to reproduce naturally is strongly affected by blister rust infection; the rust kills branches in the upper cone bearing crown, effectively ending seed production. Idaho is currently experiencing a mountain pine beetle epidemic. Mountain pine beetle prefer large, older whitebark pine, which are the major cone producers. In some areas the few remaining whitebark that show the potential for blister rust resistance are being attacked and killed by mountain pine beetles, thus accelerating the loss of key mature cone-bearing trees. Whitebark pine seedlings and saplings are very likely present in the subalpine forests proposed for burning and logging. In the absence of fire, this naturally occurring whitebark pine regeneration would continue to function as an important part of the subalpine ecosystem. Since 2005, rust resistant seed sources have been identified in the Northern Rockies (Mahalovich et al 2006). Due to the severity of blister rust infection within the region, natural whitebark pine regeneration in the project area is prospective rust resistant stock. Although prescribed burning can be useful to reduce areas of high-density subalpine fir and spruce and can create favorable ecological conditions for whitebark pine regeneration and growth, in the absence of sufficient seed source for natural regeneration maintaining the viability and function of whitebark pine would not be achieved through burning. Planting of rust-resistant seedlings would likely not be sufficient to replace whitebark pine lost to fire activities. What surveys have been conducted to determine presence and abundance of whitebark pine re-generation? If whitebark pine seedlings and saplings are present, what measures will be taken to protect them? Please include an alternative that excludes burning in the presence of whitebark pine	

Comment #	Concerns	Comment Response
	regeneration (consider 'Daylighting' seedlings and saplings as an alternative restoration method). Will restoration efforts include planting whitebark pine? Will planted seedling be of rust-resistant stock? Is rust resistant stock available? Would enough seedlings be planted to replace whitebark pine lost to fire activities? Have white pine blister rust surveys been accomplished? What is the severity of white pine blister rust in proposed action areas?	
81	FIRE RISK The FS must have a detailed long-term program for maintaining the allegedly safer conditions, including how areas will be treated in the future following proposed treatments, or how areas not needing treatment now will be treated as the need arises. The public at large and private landowners must know what the scale of the long-term efforts must be, including the amount of funding necessary, and the likelihood based on realistic funding scenarios for such a program to be adequately and timely funded. The FS must assess the fuel and fire risk situation across land ownership boundaries to understand, and disclose to the public, the likely fire scenarios across the area's landscape. Only then can the context of your proposal be adequately weighed on its merits and evaluated on its merits. The FS (Cohen, 1999) reviewed current scientific evidence and policy directives on the issue of fire in the wildland/urban interface and recommended an alternative focus on structure ignitability rather than extensive wildland fuel management: The congruence of research findings from different analytical methods suggests that home ignitability is the principal cause of home losses during wildland fires… Home ignitability also dictates that effective mitigating actions focus on the home and its immediate surroundings rather than on extensive wildland fuel management. [Research shows] that effective fuel modification for reducing potential WUI fire losses need only occur within a few tens of meters from a home, not hundreds of meters or more from a home. This research indicates that home losses	The Forest Service is tasked with preventing the movement of wildfires from the wildlands into the WUI area, out of the WUI area into the wildlands, and improving efficiency of wildfire suppression in WUI situations. There are only two areas within the 80,000 acre project area that are considered to be within the WUI (one mile from Price Valley Guard Station and one mile from the private property in Lost Creek within the southern portion of the project boundary). The planned restoration treatments are expected to improve vegetation and fuel conditions to a state that would improve the probability of protecting these values. A majority of these acres have been treated in the last 10 years and/or are not forested. Treated areas would likely receive prescribed fire again in the next five years as analyzed under past projects. Therefore, no WUI-focused treatments are planned within this restoration project. Vegetation and fuels treatments within the dry habitat types, and those areas exhibiting the greatest need for restoration would be prioritized. Therefore it is likely that treatments would start in the southern portion of the project area. Additionally, in many situations, thinning would occur prior to the application of fire. It is difficult to predict when contracts will be complete as well as when burn windows will be available. Efforts will be made to inform the public and private landowners in the area prior to the application of fire. Maintenance burns, timing and extent, would be conditional to effectiveness of prior treatments. Thinning can and does increase potential fire behavior in many forested conditions. Overstory thinning alone can decrease shading from the canopy and decrease sheltering from the wind, thereby increasing potential flame lengths, fire spread rates, and the average number of days that a fire could occur within a stand in a given year. Reducing ground, surface, and ladder fuels with fire in order to make a significant impact on fire behavior are imperative activities in reducing potential fire behavior. Overstory thinning would decrease crown fire potential and promote fire resilient species.

Comment #	Concerns	Comment Response
	can be effectively reduced by focusing mitigation efforts on the structure and its immediate surroundings. Those characteristics of a structure's materials and design and the surrounding flammables that determine the potential for a home to ignite during wildland fires (or any fires outside the home) will, hereafter, be referred to as home ignitability. The evidence suggests that wildland fuel reduction for reducing home losses may be inefficient and ineffective. Inefficient because wildland fuel reduction for several hundred meters or more around homes is greater than necessary for reducing ignitions from flames. Ineffective because it does not sufficiently reduce firebrand ignitions (Cohen, 1999) That research also recognizes "the imperative to separate the problem of the wildland fire threat to homes from the problem of ecosystem sustainability due to changes in wildland fuels" (Ibid). Please consider that thinning can result in faster fire spread than in the unthinned stand. Graham, et al., 1999a point out that fire modeling indicates: For example, the 20-foot wind speed must exceed 50 miles per hour for midflame wind speeds to reach 5 miles per hour within a dense Stand (0.1 adjustment factor). In contrast, in an open stand (0.3 adjustment factor), the same midflame wind speeds would occur at only a 16-mile-per-hour wind at 20 feet. Graham, et al., 1999a also state: Depending on the type, intensity, and extent of thinning, or other treatment applied, fire behavior can be improved (less severe and intense) or exacerbated." … Fire intensity in thinned stands is greatly reduced if thinning is accompanied by reducing the surface fuels created by the cuttings. Fire has been successfully used to treat fuels and decrease the effects of wildfires especially in climax ponderosa pine forests (Deeming 1990; Wagel and Eakle 1979; Weaver 1955, 1957). In contrast, extensive amounts of untreated logging slash contributed to the devastating fires during the	All actions are designed to restore vegetative and fuel conditions and would attempt to use fire in conjunction with thinning or use fire alone to reduce the risk of losing key ecosystem processes. However, there are many limitations in using fire alone to restore landscapes. These include funding, personnel availability, impacts to airsheds, seasonal fuel conditions, etc. Thinning provides managers with a more precise tool to move stands toward the desired conditions in a more timely fashion, and given a wildfire event occurring prior to the application of fire, improve the likelihood that wildfire severities would be more representative of historic conditions. Federal and Forest fire policy are beyond the scope of the Lost Creek-Boulder Creek project. This project tiers to direction from the Payette Forest Plan.

Comment #	Concerns	Comment Response
	late 1800s and early 1900s in the inland and Pacific Northwest forests. In their conclusion, Graham, et al., 1999a state: Depending on intensity, thinning from below and possibly free thinning can most effectively alter fire behavior by reducing crown bulk density, increasing crown base height, and changing species composition to lighter crowned and fire-adapted species. Such intermediate treatments can reduce the severity and intensity of wildfires for a given set of physical and weather variables. But crown and selection thinnings would not reduce crown fire potential. Since the scientific literature suggests that your thinning activities will actually increase the rate of fire spread, you need to reconcile such findings with the contradictory assumptions expressed in the DEIS. Also, Hessburg and Lemkuhl (1999) suggest that prescribed burning alone can be utilized in many cases—possibly here—where managers typically assume mechanical fuel reductions must be used. Proposed activities could artificialize the forest ecosystem. Some tree species are particularly subject to blowdown, once thinned. And any forest condition that is maintained through mechanical manipulation is not maintaining ecosystem function. The proposed management activities would not be integrated well with the processes that naturally shaped the ecosystem and resulted in a range of natural structural conditions. Thus, the need for standards guiding both the delineation of zones where artificializing fuel reduction actions may take place, and that also set snag and down woody debris retention amounts. Veblen (2003) questions the premises the FS often puts forth to justify "uncharacteristic vegetation patterns" discussions, that being to take management activities to alter vegetation patterns in response to fire suppression: The premise behind many projects aimed at wildfire hazard reduction and ecological restoration in forests of the western United States is the idea that unnatural fuel buildup has resulted from suppression of formerly frequent fires.	

Comment #	Concerns	Comment Response
	This premise and its implications need to be critically evaluated by conducting area-specific research in the forest ecosystems targeted for fuels or ecological restoration projects. Fire regime researchers need to acknowledge the limitations of fire history methodology and avoid over-reliance on summary fire statistics such as mean fire interval and rotation period. While fire regime research is vitally important for informing decisions in the areas of wildfire hazard mitigation and ecological restoration, there is much need for improving the way researchers communicate their results to managers and the way managers use this information. Since disruption of fire cycles is identified, the PNF needs to take a hard look at its fire policies. The development of approved fire management plans in compliance with the Federal Wildland Fire Policy was the number one policy objective intended for immediate implementation in the Implementation Action Plan Report for the Federal Wildland Fire Management Policy and Program Review. In general, the FS lags far behind other federal land management agencies that have already invested considerable amounts of time, money, and resources to implement the Fire Policy. Continued mismanagement of national forest lands and FS refusal to fully implement the Fire Policy puts wildland firefighters at risk if and when they are dispatched to wildfires. This is a programmatic issue, one that the current Forest Plan does not adequately consider. Please see Ament (1997) as comments on this proposal, in terms of fire policy and Forest Planning.	
82	Many adverse consequences to soil, ecological processes, wildlife, and other elements of the natural environment are associated with thinning. (Ercelawn, 1999; Ercelawn, 2000.) For example: "Salvage or thinning operations that remove dead or decayed trees or coarse woody debris on the ground will reduce the availability of forest structures used by fishers and lynx." (Bull et al., 2001.)	The project was designed with consideration for soil, ecological processes, wildlife and other elements of the natural environment. See FEIS Chapter 3, and project record specialist reports. The wildlife specialist report, the FEIS, and the BA (project record) analyze effects to fisher and lynx.
83	For every project proposal, it is important that the results of past monitoring be incorporated into planning. All Interdisciplinary Team Members should be familiar with the results of all past monitoring	Past monitoring data has been used in the development of the Lost Creek-Boulder Creek project analysis. This data is referenced throughout the FEIS, and incorporated into the project record.

Comment #	Concerns	Comment Response
	pertinent to the project area, and any deficiencies of monitoring that have been previously committed to. For that reason, we expect that the following be included in the NEPA documents or project files: • A list of all past projects (completed or ongoing) implemented in the proposed project area watersheds. • The results of all monitoring done in the project area as committed to in the NEPA documents of those past projects. • The results of all monitoring done in the proposed project area as a part of the Forest Plan monitoring and evaluation effort. • A description of any monitoring, specified in those past project NEPA documents or the Forest Plan for proposed project area, which has yet to be gathered and/or reported. Please disclose the names of all other past projects (implemented during the life of the Forest Plan) whose analysis area(s) encompass the areas to be "treated" under this proposal. Please disclose if the FS has performed all of the monitoring and mitigation required or recommended in any NEPA documents, and the results of the monitoring.	Appendix D of the FEIS lists the names of past projects and activities that have taken place within the project area and the dates when those activities occurred. Annual Forest Plan monitoring reports are incorporated into the project record, and available on the Forest website at: http://www.fs.usda.gov/detail/payette/landmanagement/planning/?cid=STELPRDB5203156 Project specific monitoring from past projects within the Lost Creek-Boulder Creek project area have been reviewed and incorporated into the analysis and project record where applicable.
84	For the proposal to be consistent with the Forest Plan, enough habitat for viable populations of old-growth dependent wildlife species is needed over the landscape. Considering potential difficulties of using population viability analysis at the project analysis area level (Ruggiero, et. al., 1994), the cumulative effects of carrying out multiple projects simultaneously across the PNF makes it imperative that population viability be assessed at least at the forestwide scale (Marcot and Murphy, 1992). Also, temporal considerations of the impacts on wildlife population viability from implementing something with such long duration as a Forest Plan must be considered (id.) but this has never been done by the PNF. It is also of paramount importance to monitor population during the implementation of the Forest Plan in order to validate assumptions used about long-term species persistence i.e., population viability (Marcot and Murphy, 1992; Lacy and Clark, 1993). The U.S. District Court ruled in Native Ecosystems Council vs. Kimbell on the Keystone Quartz project that the Forest Service presented no hard data	Refer to Section 1.13.9 of the FEIS for further information regarding old forest / old growth. The DEIS for the WCS assessed effects to species of concern (particularly species associated with large tree and old forest habitats) at the forest-wide scale. Because population viability analyses are difficult at any scale, the analysis focused on effects to sustainability of wildlife species of concern (including the northern goshawk, flammulated owl, pileated woodpecker, fisher, Canada lynx, and wolverine). The 2011 DEIS for the WCS summarizes the habitat amounts, distribution, connectivity, and natural processes important to the persistence of ESA-listed, sensitive, MIS, and other focal species that occupy the planning unit. This analysis assessed sustainability in both the short and long-term. The sustainability rating for most species in Family 2 (Broad elevation old forest habitat) (i.e., northern goshawk, flammulated owl, pileated woodpecker, and fisher) was B – "Suitable habitats are either broadly distributed or of high abundance compared to their historical distribution, but gaps exist…Species with this outcome are likely well distributed throughout most of the planning area." The analysis showed that sustainability for Family 1 (low elevation, Old Forest habitat)

Comment #	Concerns	Comment Response
	to support or demonstrate the biological impact on old-growth species viability across the forest of further reducing Douglas-fir old-growth habitat below minimum forest plan standards, which themselves may be inadequate in light of more recent scientific information. Species thought to prefer old-growth habitat for breeding or feeding include northern goshawk, flammulated owl, pileated woodpecker, black-backed woodpecker (after wildfire or beetle epidemic), fisher, marten, Canada lynx, and wolverine.	species was of greater concern than for Family 2 species, particularly in the longer term (see DEIS for the WCS, tables 3-40 and 3-42). The Lost Creek-Boulder Creek project was designed to meet the science of the WCS, which promotes the maintenance and restoration of adequate habitat well distributed across the planning unit to support the continued existence of wildlife species known to occupy this unit. Specifically, the project was designed to enhance habitat for Family 1 species, as represented by the focal species – the white-headed woodpecker, while maintaining habitat for other species (See FEIS 1.7 Purpose and Need). Both the Forest Plan and the Lost Creek-Boulder Creek project, as part of the CFLRP, make a substantial commitment to monitor wildlife populations and habitat. In fact, to help validate assumptions, the Forest has partnered with the RMRS, USGS, and universities to monitor effects to two species of great concern: the white-headed woodpecker and northern Idaho ground squirrel. In addition, implementation monitoring is designed to ensure that habitat and populations of other species (i.e., northern goshawk, flammulated owl, pileated woodpecker) is maintained to ensure sustainability across the planning unit.
85	Please demonstrate that this project will leave enough snags to follow the Forest Plan requirements and the requirements of sensitive old growth species such as flammulated owls and goshawks. Loggers are required to follow OSHA safety standards. Will these standards require snags to be cut down? After snags are cut down for safety for OSHA requirements will there still be enough snags left for old growth sensitive species?	Refer to section 1.13 of the FEIS for more information regarding snags and old forest /old growth. Effects to snags are discussed in FEIS Chapter 3 in the Wildlife section. Following harvest and prescribed fire, snag levels are expected to be maintained. Project Design Features #2 and #3 (FEIS Table 2-6) provide additional guidance to help maintain snags.
86	The Project is also designed to reduce under-story density through thinning. What surveys has the PNF specifically designed to detect flammulated owls? The FS has not developed a conservation strategy for the flammulated owl in the PNF, or in the Northern Rockies. Absent an appropriate landscape management strategy for insuring their viability, based upon the best available science, it is arbitrary and capricious to dismiss potential impacts on the ground where the FS has failed to conduct the kind of comprehensive surveys that would reveal their presence. This convenient excuse for not protecting for a species that is becoming exceedingly rare, a strategy of managing for extinction (since protection premised on detection affords greatest protection to the species that least need it) has been condemned by the FS's own leading expert in the northern region, Mike Hillis:	Surveys for flammulated owls have been conducted across the Payette National Forest, particularly on the west side where the Lost Creek-Boulder Creek project occurs. These owls are detected relatively frequently and the surveys have shown persistence of the species across the planning area, following timber harvest and fire (see "Status of the Flammulated Owl, Great Gray Owl, Northern Goshawk and Pileated Woodpecker on the Payette National Forest," Egnew 2009). In addition, the WCS analysis determined the flammulated owl has a sustainability rating of B on the Forest (see response to comment #84 above). The Lost Creek-Boulder Creek FEIS and wildlife specialist report analyzes effects to flammulated owls specifically from the Lost Creek-Boulder Creek project, in the context of the other analyses described in the paragraph above.

Comment #	Concerns	Comment Response
	With the exception of the Spotted Owl…, the U.S. Forest Service has not given much emphasis to owl management. This is contrary to the National Forest Management Act of 1976 (NFMA) which mandates that all wildlife species be managed for viable populations. However, with over 500 vertebrate species this would be difficult for any organization. Recognizing the absence of detailed information on owl habitat, the apparent association of owls with snags, mature, and old-growth timber (both rapidly declining), it seems inconsistent that the U.S. Forest Service has placed little emphasis on owl management. One might conclude that the agency's painful experiences with the Spotted Owl in Oregon and Washington have evolved into a 'hear no evil, see no evil' approach for other forest owls as well.	
87	**Holt and Hillis, "Current Status and Habitat Associations of Forest Owls in Western Montana" (1987).** State-of-the-art conservation biology and the principles that underlie the agency's policy of "ecosystem management" dictate an increasing focus on the landscape-scale concept and design of large biological reserves accompanied by buffer zones and habitat connectors as the most effective (and perhaps only) way to preserve wildlife diversity and viability (Noss, 1993). The FS has stated: "Well distributed habitat is the amount and location of required habitat which assure that individuals from demes, distributed throughout the population's existing range, can interact. Habitat should be located so that genetic exchange among all demes is possible." (Mealey 1983.) The FS has acknowledged that viability is not merely a project area consideration, that the scale of analysis must be broader: Population viability analysis is not plausible or logical at the project level such as the scale of the Dry Fork Vegetation and Recreation Restoration EA. Distributions of common wildlife species as well as species at risk encompass much larger areas than typical project areas and	This is a landscape level project focused on restoration of ponderosa pine dominated wildlife habitats and designed to meet the best available science. The underlying philosophy of the science and related conservation concepts supporting the ICBEMP, the Forest Plan, and this project is that restoration of historic vegetative conditions and emulation of their inherent disturbance processes would conserve the vast majority of these species (Haufler et al. 1996; Hunter et al. 1988; Noss 1987; Raphael et al. 2000; McComb and Duncan 2007; Wisdom et al. 2000). See also response to comment #84.

Comment #	Concerns	Comment Response
	in most cases larger than National Forest boundaries. No wildlife species that presently occupy the project area are at such low numbers that potential effects to individuals would jeopardize species viability. No actions proposed under the preferred alternative would conceivably lead to loss of population viability. (Lewis and Clark NF, Dry Fork EA Appendix D at p. 9.) The FS should firmly establish that the species that exist, or historically are believed to have been present in the analysis area are still part of viable populations. Since Forest Plan monitoring efforts have failed in this regard, it must be a priority for project analyses. Identification of viable populations is something that must be done at a specific geographic scale. The analysis must cover a large enough area to include a cumulative effects analysis area that would include truly viable populations. Analysis must identify viable populations of MIS, TES, at-risk, focal, and demand species of which the individuals in the analysis area are members in order to sustain viable populations.	
88	Unfortunately, region-wide the FS has failed to meet Forest Plan old-growth standards, does not keep accurate old-growth inventories, and has not monitored population trends in response to management activities as required by Forest Plans and NFMA (Juel, 2003). Please disclose how stands to be treated compare to Forest Plan or Regional old-growth criteria. In order to disclose such information, please provide all the details, in plain language, of these areas' forest characteristics (the various tree components' species, age and diameter of the various tree components, canopy closure, snag density by size class, amounts of down logs, understory composition, etc.).	Refer to section 1.13.9of the FEIS for further information regarding old forest / old growth. In fact, the PNF has monitored population trends in response to management activities (see response to comments #84 and #86.)
89	One of the biggest problems with the FS's failure to deal forthrightly with the noxious weed problem on a forest wide basis is that the long-term costs are never adequately disclosed or analyzed. The public is expected to continuously foot the bill for noxious weed treatments—the need for which increases yearly as the PNF continues the large-scale propagation of weeds, and fails to monitor the effectiveness of all its noxious weed treatment plans to date. There is no guarantee that the money needed for the present management direction will be supplied by	The state of Congressional funding for noxious weed management is beyond the scope of this project. This project tiers to the Payette Forest Plan and is guided by the Payette Noxious Weed and Poisonous Plant EA. See FEIS Chapter 1, section 1.10 for a description of monitoring funds for this project.

Comment #	Concerns	Comment Response
	Congress, no guarantee that this amount of money will effectively stem the growing tide of noxious weed invasions, no accurate analysis of the costs of the necessary post-treatment monitoring, and certainly no genuine analysis of the long-term costs beyond those incurred by site specific weed control actions.	
90	Please utilize the NEPA process to clarify any roadless boundary issues. It is not adequate to merely accept previous, often arbitrary roadless inventories—unroaded areas adjacent to inventoried areas were often left out. Additionally, there is a lot of public support for adding unroaded areas as small as 1,000 acres in size to the roadless inventory.	Issues associated with roadless area boundaries were not identified for this project. Discussion of IRA's specific to the project area, was added to the Final EIS (see Chapter 1), and the IRA report can be found in the project record.
91	We request a careful analysis of the impacts to fisheries and water quality, including considerations of sedimentation, increases in peak flow, channel stability, risk of rain-on-snow events, and increases in stream water temperature. Please disclose the locations of seeps, springs, bogs and other sensitive wet areas, and the effects on these areas of the project activities. Where livestock are permitted to graze, we ask that you assess the present condition and continue to monitor the impacts of grazing activities upon vegetation diversity, soil compaction, stream bank stability and subsequent sedimentation. Please disclose in the NEPA document the results of up-to-date monitoring of fish habitat and watershed conditions and how this project will affect the fish in the project area.	The Watershed Resource effects analysis is found in FEIS section 3.3. A map of the field mapped wetlands, wetlands on the USGS topographic map, and the NWI wetlands is located in the Watershed Specialist Report. Range monitoring occurs each season based on established monitoring protocols described in the permittees Annual Operating Instructions for each Term Grazing Permit, Payette National Forest Land and Resource Management Plan, and individual Allotment Management Plans for each allotment. Baseline conditions of selected WCIs are located in Chapter 3 of the FEIS. Effects of each of this project's alternatives to fish and fish habitat are described in Chapter 3 of the FEIS, the Fisheries Specialist Report and Biological Assessment (both located in the project Record). Effects to Forest Plan WCIs (including sediment, peak flow, streambank stability, and temperature) are analyzed for each of this project's alternatives and located in the Fisheries Specialist Report.
92	It is extremely important the FS disclose the environmental <u>baseline</u> for watersheds. Generally, this means their condition <u>before</u> development or resource exploitation was initiated. For example, the baseline condition of a stream means the habitat conditions for fish and other aquatic species prior to the impacts of road building, logging, livestock grazing, etc. Therefore, proper disclosure of baseline conditions would mean estimates of stream stability, pool frequency conditions, and water temperature range—essentially the values of Riparian Management Objectives along with such parameters as sediment levels. When such	Current (baseline) conditions for all subwatersheds in the project area were assessed using the WCIs in Appendix B of the Forest Plan and are located in in the Fisheries Specialist Report (located in the project record). The Baseline conditions describe the current conditions and were compared to the "Functioning Appropriately" (desired conditions) described in the Forest Plan. Anticipated effects of the action alternatives were assessed using these WCIs and are described in the Fisheries Specialist Report located in the project record. FEIS Appendix D provides a list of past present and reasonably foreseeable future actions in the project area. Effects of past actions on the current conditions are described

Comment #	Concerns	Comment Response
	information is provided, comparison with the current conditions (after impacts of development) will aid in the assessment of cumulative effects of all alternatives.	under each resource section in Chapter 3 Sections (cumulative effects for Watershed Resources and Fish and Fish Habitat are located in sections 3.3.5 and 3.5.5). The Forest Service follows handbook direction with respect to cumulative effects analyses. Specifically, Forest Service Handbook 1909.15. Chapter 10 15.1 states "With respect to past actions, during the scoping process and subsequent preparation of the analysis, the agency must determine what information regarding past actions is useful and relevant to the required analysis of cumulative effects. Cataloging past actions and specific information about the direct and indirect effects of their design and implementation could in some contexts be useful to predict the cumulative effects of the proposal. The CEQ regulations, however, do not require agencies to catalogue or exhaustively list and analyze all individual past actions. Simply because information about past actions may be available or obtained with reasonable effort does not mean that it is relevant and necessary to inform decision making. (36 CFR 220.4 (f))".
93	Prescribed fires and mechanical treatments may adversely affect soil productivity. NFMA requires the FS to "not allow significant or permanent impairment of the productivity of the land." [36 C.F.R. § 219.27(a)(1).] NFMA requires the Forest Service to "ensure that timber will be harvested from National Forest System lands only where—soil, slope, or other watershed conditions will not be irreversibly damaged." [16 U.S.C. 1604 (g)(3)(E).]	Burn plan prescriptions would include objectives to meet duff consumption and mineral soil exposure. Monitoring of prescribed fire has shown results are generally well within prescription and a mosaic of low severity fire has not adversely affected soil productivity (see soil and water monitoring results for the Warm Springs prescribed fire, 2013 on file at Payette National Forest Supervisor's Office). TSRC and DD are within Forest Plan standards for all alternatives (FEIS, Chapter 3, Soils Analysis, section 3.4.
94	Please disclose how the productivity of the land been affected in the project area and forestwide due to noxious weed infestations, and how that situation is expected to change in the coming years and decades. Harvey et al., 1994 state: The ...descriptions of microbial structures and processes suggest that they are likely to provide highly critical conduits for the input and movement of materials within soil and between the soil and the plant. Nitrogen and carbon have been mentioned and are probably the most important. Although the movement and cycling of many others are mediated by microbes, sulfur phosphorus, and iron compounds are important examples. The relation between forest soil microbes and N is striking. Virtually all N in eastside forest ecosystems is biologically	Long-term soil productivity is analyzed in FEIS Chapter 3 Soils effects analysis. Productivity studies related to noxious weed populations have not been conducted within the Lost Creek-Boulder Creek project area. Forestwide studies are outside the scope of this project. The noxious weed inventory, treatment and monitoring records of populations within the Lost Creek-Boulder Creek project area show no increase in size or number of sites for the past three years. The effectiveness and adequacy of soil protection laws for federal lands is outside the scope of this project. Forest Plan standards for TSRC, DD, and Coarse Woody Debris (CWD), are met for all alternatives. Project design features and BMPs guide implementation to ensure standards are met and monitoring is planned to provide a feedback loop. Estimates of TSRC are provided for the existing condition and each alternative in the

Comment #	Concerns	Comment Response
	fixed by microbes... Most forests, particularly in the inland West, are likely to be limited at some time during their development by supplies of plant-available N. Thus, to manage forest growth, we must manage the microbes that add most of the N and that make N available for subsequent plant uptake. (Internal citations omitted.) Lacy, 2001 examines the importance of soils for ecosystem functioning and points out the failure of most regulatory mechanisms to adequately address the soils issue. From the Abstract: Soil is a critical component to nearly every ecosystem in the world, sustaining life in a variety of ways—from production of biomass to filtering, buffering and transformation of water and nutrients. While there are dozens of federal environmental laws protecting and addressing a wide range of natural resources and issues of environmental quality, there is a significant gap in the protection of the soil resource. Despite the critical importance of maintaining healthy and sustaining soils, conservation of the soil resource on public lands is generally relegated to a diminished land management priority. Countless activities, including livestock grazing, recreation, road building, logging, and mining, degrade soils on public lands. This article examines the roots of soil law in the United States and the handful of soil-related provisions buried in various public land and natural resource laws, finding that the lack of a public lands soil law leaves the soil resource under protected and exposed to significant harm. To remedy this regulatory gap, this article sketches the framework for a positive public lands soil protection law. This article concludes that because soils are critically important building blocks for nearly every ecosystem on earth, an holistic approach to natural resources protection requires that soils be protected to avoid undermining much of the legal protection afforded to other natural resources. The article goes on: Countless activities, including livestock grazing, recreation, road building, logging, mining, and irrigation degrade soils on public lands. Because there are no laws that directly address and protect soils on the public lands, consideration of soils in land use planning is usually only	FEIS, Chapter 3, Soils Effects Analysis, section 3.4. For all alternatives, DD levels would meet the Forest Plan standard. Existing conditions where 15 percent or more of the activity area (cutting unit) are considered to be DD would receive restoration treatments for compaction, recontouring of existing skid trails and landings. Fully recontouring where practicable of constructed skid trails replaces the upper horizon material where soil displacement has occurred. The West Fork Weiser River (WFWR) is fully supporting its beneficial uses. It does NOT have a TMDL, but has been assigned a potential natural vegetation target load allocation and requires a 27% reduction in solar loading (Comment Letter from IDEQ above).

Comment #	Concerns	Comment Response
	in the form of vaguely conceived or discretionary guidelines and monitoring requirements. This is a major gap in the effort to provide ecosystem-level protection for natural resources. The rise of an "ecosystem approach" in environmental and natural resources law is one of the most significant aspects of the continuing evolution of this area of law and policy. One writer has observed that there is a fundamental change occurring in the field of environmental protection, from a narrow focus on individual sources of harm to a more holistic focus on entire ecosystems, including the multiple human sources of harm within ecosystems, and the complex social context of laws, political boundaries, and economic institutions in which those sources exist. As federal agencies focus increasingly on addressing environmental protection from an holistic perspective under the current regime of environmental laws, a significant gap remains in the federal statutory scheme: protection of soils as a discrete and important natural resource. Because soils are essential building blocks at the core of nearly every ecosystem on earth, and because soils are critical to the health of so many other natural resources—including, at the broadest level, water, air, and vegetation—they should be protected at a level at least as significant as other natural resources. Federal soil law (such as it is) is woefully inadequate as it currently stands. It is a missing link in the effort to protect the natural world at a meaningful and effective ecosystem level. … This analysis concludes that the lack of a public lands soil law leaves the soil resource under-protected and exposed to significant harm, and emasculates the environmental protections afforded to other natural resources. (Emphasis added.) The problems Lacy (2001) identifies of regulatory mechanisms exist in Regional and Forest-level standards and other guidance applicable for the proposed project. Please provide estimates of current detrimental disturbance in <u>all</u> previously established activity areas in the watersheds affected by the proposal.	

Comment #	Concerns	Comment Response
	Please disclose the link between current and cumulative soil disturbance in project area watersheds to the current and cumulative impacts on water quantity and quality. Please disclose if there are any WQLS streams or TMDL streams in the project area. Please disclose measures of, or provide scientifically sound estimates of, detrimental soil disturbance or soil productivity losses (erosion, compaction, displacement, noxious weed spread) attributable to off-road vehicle use. Please disclose the results monitoring of weed treatments on the PNF that have been projected to significantly reduce noxious weed populations over time, or prevent spread. This is an ongoing issue of land productivity.	
95	Please disclose how the proposed "treatments" would be consistent with Graham, et al., 1994 recommendations for fine and coarse woody debris, a necessary consideration for sustaining long-term soil productivity.	Project Design Features Chapter 2, FEIS, Table 2-6: In each treatment unit, coarse woody debris (tons per acre) will be evaluated to ensure desired ranges based on PVG. If necessary, material will be left behind of the appropriate size classes to meet standards. When coarse woody debris in the larger size classes is not available for retention in an activity area, smaller size classes may be utilized to meet desired conditions described in Forest Plan Appendix A. "… ignition operations within RCAs shall be implemented to maintain RCA function and processes by creating a mosaic of burned and unburned areas, minimizing severity and intensity; maintaining stream-shading vegetation; retaining adequate ground cover and sediment filtering capacity; and maintaining current and recruitable large and coarse woody debris... Sufficient live trees of appropriate size should be retained for future CWD and snag recruitment where CWD or snag levels are below desired ranges (to meet Appendix A, Payette National Forest Plan).
96	It has been well-established that site-specific Biological Evaluations (BEs) or Biological Assessments (BAs) must be prepared for all actions such as this. Further, the Forest Service Manual requires that BEs/BAs consider cumulative effects. The Forest Service Manual states that project BEs/BAs must contain "a discussion of cumulative effects resulting from the planned project in relationship to existing conditions and other related projects" [FSM 2672.42(4)]. "Existing conditions" obviously are the current	The fisheries and wildlife sections, chapter 3, provide a summary of effects analyses and determinations for listed and sensitive species. The results of the Biological Evaluation for plants are summarized in Chapter 1. . Biological Evaluations (BEs) and Biological Assessments (BA's) are in project record. A Biological Assessment has been prepared and submitted to the regulatory agencies. The Forest expects to receive a Letter of Concurrence on the determinations of effects to lynx and wolverine. A Biological Opinion for the effects to ESA-listed fish species and the northern Idaho

Comment #	Concerns	Comment Response
	conditions of the resources as a result of past actions.	ground squirrel will be completed by the regulatory agencies prior to the final Record of Decision for this project.
97	Published scientific reports indicate that climate change will be exacerbated by logging due to the loss of carbon storage. Additionally, published scientific reports indicate that climate change will lead to increased wildfire severity (including drier and warmer conditions that may render obsolete the proposed effects of the Project). The former indicates that this Project may have a significant adverse effect on the environment, and the latter undermines the central underlying purpose of the Project. Therefore, the Forest Service must candidly disclose, consider, and fully discuss the published scientific papers discussing climate change in these two contexts. At least the Forest Service should discuss the following studies: the commenter listed citations which are reviewed separately.	Literature submitted is reviewed in the Literature Cited/Submitted Table in the project record.
10. Alliance for the Wild Rockies and Native Ecosystems Council, Jeff Juel		
98	Thank you for the opportunity to comment. Please accept these comments on the Lost Creek–Boulder Creek Landscape Restoration Project Draft Environmental Impact Statement (DEIS), on behalf of the Alliance for the Wild Rockies (AWR) and Native Ecosystems Council.	Thank you for your comment.
99	**Draft Wildlife Conservation Strategy** The DEIS makes numerous references to the Payette National Forest's Wildlife Conservation Strategy (WCS), which exists in draft form and on which AWR commented in a 43-page letter dated April 19, 2011. AWR's letter expressed many concerns about the draft WCS but have yet to receive a response from the Payette National Forest (PNF). Now, references to the WCS in the present DEIS indicate that the PNF plans to be implement the WCS with the Lost Creek–Boulder Creek Landscape Restoration Project: The purpose of the Lost Creek-Boulder Creek Restoration Project is to: 1) Move vegetation toward the desired conditions defined in the Forest Plan and consistent with the science in the Forest's draft Wildlife Conservation Strategy (WCS)… (DEIS at 10.) Also, "Although a ROD for the WCS is not expected until 2014, the Lost Creek-Boulder Creek Project analysis relied upon the best science available, including the draft WCS analysis…" (DEIS at 260.) Well,	The draft WCS was prepared in response to direction in the 2003 Forest Plan in WIOB03 that called for development of a strategy to prioritize wildlife habitat maintenance and restoration (USDA Forest Service 2003, p. III-26). The DEIS for Forest Plan Amendments Proposed to Facilitate Implementation of the 2011 Plan-Scale Wildlife Conservation Strategy, Phase 1: Forested Biological Community" (also known as the DEIS for the WCS) provided the format for summarizing the results of the WCS analysis and proposed Forest Plan amendments to integrate the recommendations of the WCS. Due to numerous other Forest priorities, we now expect to complete the FEIS for the WCS and the ROD in 2015. Because the FEIS and ROD for the proposed amendments have not been completed, we cannot refer to the WCS recommendations as Forest Plan direction, except where consistent with current FP direction (Note that revised direction often is consistent -- the proposed amendments simply better define existing direction).

Comment #	Concerns	Comment Response
	AWR challenged some of that "best science," and without having PNF response to our comments on the draft WCS, our ability to comment on this DEIS is severely hampered. And whereas the DEIS states that the PNF expects the WCS to be finalized in 2014, the PNF website currently states that the WCS is "on hold." Since the PNF is planning on implementing this project under the final PNF, the Forest Service has prematurely issued this DEIS. AWR's April 19, 2011 comments on the WCS DEIS quite appropriately apply to the Lost Creek-Boulder Creek DEIS and are therefore being transmitted as Appendix 1 to these comments. The agency must complete the WCS NEPA and NFMA processes, including responding to objections/appeals on the WCS ROD, and then prepare a Supplemental Draft EIS on the Lost Creek-Boulder Creek Project prior to proceeding. The Revised Forest Plan (RFP) and draft WCS were prepared in response to litigation. The court in ISC v. Madrid stated that the Forest Service must consider the limited amount of old-growth habitat on the Payette National Forest, and institute a program of population trend monitoring of key wildlife species. We note that nothing in the draft WCS, the RFP, or this project DEIS provides a specific response to Judge Winmill's order.	The Payette National Forest acknowledges that you previously commented on the DEIS for the WCS and have now submitted these comments for response in the Lost Creek-Boulder Creek analyses (as Appendix 1). We have reviewed the additional comments in Appendix 1 and have provided responses to those comments that are pertinent to the Lost Creek-Boulder Creek project, such as comments on the validity of the science that the WCS and Lost Creek-Boulder Creek analysis relied upon. We did not respond to comments that pertained to decisions yet to be made in the ROD for the FEIS for the WCS, such as revised Forest Plan direction, unless the direction was similar to existing direction. The court in ISC vs. Madrid (2005) did call for the Payette National Forest to "conduct a study of the population of the flammulated owl, great gray owl, northern goshawk, and pileated woodpecker ….This study shall be governed by standards set in the 2003 Plan, and will apply those standards (1) to render an opinion on the viability of those species, and (2) to set forth restorative measures, if any, deemed necessary to ensure viability." The results of that study were summarized in a document published in 2009 (Status of the flammulated owl, great gray owl, northern goshawk, and pileated woodpecker on the Payette National Forest). The WCS analysis was instigated in part to help provide the information needed to make a viability opinion in the 2009 document. Recommendations made in the 2009 document helped inform proposed Forest Plan amendments analyzed in the DEIS for the WCS. We believe that studies begun in 2004 and summarized in the 2009 document, along with required Forest Plan monitoring conducted since 2003, in concert with the WCS analysis and the DEIS for the WCS (Forest Plan Amendments Proposed to Facilitate Implementation of the 2011 Plan-Scale Wildlife Conservation Strategy, Phase 1: Forested Biological Community) provide a well-crafted and substantial response to the 2005 court order.
100	**Overall lack of data** A reading of the DEIS reveals several other ways its issuance is premature. These include: • Lack of on-the-ground surveys for vegetative conditions in many proposed treatment areas • Lack of field surveys of riparian areas • Lack of field surveys of soil conditions • Failure to analyze the 2013 Geomorphic Roads Analysis and Inventory	See FEIS, Chapter 3 introduction. The final bullet statement in this comment was based on an incorrect statement made in the DEIS referring to the revision of NIDGS recovery plan. While revision of the plan may happen in the future, the US Fish and Wildlife Service has no current or imminent plan for revision. This language has been removed from the FEIS.

Comment #	Concerns	Comment Response
	Package (GRAIP) survey results within the DEIS • Lack of field surveys of dead trees and down wood • Incomplete surveys to determine fish-bearing streams • Incomplete determination of which roads would be haul routes under action alternatives • Incomplete indicators for determining effects of proposed vegetation treatments inside RCAs • Lack of field surveys for landslide prone areas in proposed treatment units and proposed new road locations • Deficiencies of inventory of unauthorized roads and trails, and their restoration needs • The need to consider of the imminent revision of the threatened North Idaho Ground Squirrel Recovery Plan Given the above noted deficiencies in the DEIS, the public cannot be adequately informed for full participation in the NEPA process before the PNF prepares a Supplemental Draft EIS for public comment.	
101	**Roadless** The project area includes a portion of the Rapid River Inventoried Roadless Area (IRA). Our groups support Wilderness designation for the Rapid River IRA, as proposed in the Northern Rockies Ecosystem Protection Act, which has been introduced into Congress. Yet the DEIS contains no map of this IRA, and despite the fact that "activities are proposed immediately adjacent to the Rapid River IRA and its boundary" (Appendices – 54) none of the maps in the map packet delineate the IRA boundary. Some of the wildlife maps show the Rapid River IRA, but don't show proposed project activities. Extrapolating from those maps, however, shows a high likelihood of project activities directly affecting uninventoried roadless areas adjacent to the IRA boundary. The Forest Service has a legal obligation to analyze and disclose impacts on such unroaded areas.	See FEIS section 1.13.6. A "Roadless Area Analysis and Analysis of Unroaded Lands Contiguous to Roadless Areas", specific to the IRAs within the project area, was completed as is contained within the project record. The Rapid River IRA and boundary was added to the alternative maps for each resource in the FEIS.
102	**Restoration** We support project activities included in the action alternatives that would address the highest restoration priorities of the 80,000 acres in the project area, which are the ecological and economic impacts of the excessive road system and the impacts of poorly regulated dispersed recreation and motorized vehicle use. However, the action alternative leave out a lot of	See FEIS, Chapter 1, section 1.10, Collaborative Forest Restoration Program.

Comment #	Concerns	Comment Response
	critical watershed restoration needs at the same time they propose risking riparian areas and degrading wildlife habitat for management indicator species (MIS) and threatened, endangered, and sensitive (TES) species. The DEIS states that "Costs associated with restoration activities under the proposed action are anticipated to exceed potential revenue generated over the life of the project." (20) Please disclose a full list of restoration activities guaranteed to be fully funded and implemented for each alternative.	
103	**Livestock Grazing** More cumulative effects left barely analyzed are past and ongoing ecological damage from livestock grazing. Six allotments affect the cumulative effects analysis area (DEIS Appendices - 11). Not only are effects on soil, water quality, riparian areas, and wildlife habitat from grazing not disclosed—the impacts on the structure of forest stands is ignored, as AWR's draft WCS comments discuss in detail. Reduced understory biomass from grazing prevents the occurrence of frequent and low-severity fires that are considered to be a normal disturbance in many western forests (Belsky and Blumenthal 1997). The DEIS includes no alternative that adequately deals with the adverse cumulative effects of grazing, in violation of NEPA. Riparian areas occupy a small percentage of western landscapes but generally are the most productive for plant biomass (National Research Council 1996, 2002; Kauffman et al. 2001). Riparian areas are disproportionally utilized by livestock (Kauffman and Krueger 1984), thus reducing the abundance and vigor of riparian vegetation, preventing its recovery, and contributing to invasions of exotic species and a host of negative impacts on aquatic dependent species (Belsky et al. 1999; Fleischner 2010). The DEIS states that livestock permittees would be allowed to use motorized vehicles on otherwise restricted roads, but does not disclose the environmental impacts of such use. Under "Cumulative Effects" the DEIS states, "Actively grazed range allotments within the cumulative effects area contribute to loss of ground cover in RCAs and conversion of desirable native vegetation to less	The FEIS acknowledges the role that livestock grazing has played in the current conditions of the project area (see FEIS, Chapter 1, section 1.13.3). The Lost Creek-Boulder Creek project proposes no new grazing or changes to the status of grazing on existing allotments. Cumulative effects of livestock grazing are analyzed in FEIS Chapter 3 in various resources sections, including Fire and Fuels, Watershed, Fisheries, and Wildlife.

Comment #	Concerns	Comment Response
	favorable weedy species. Wetlands are at risk for compaction as well and possible effects to shallow water tables." (188) This discloses that impacts are occurring, but it is not a genuine cumulative effects **analysis**.	
104	**Noxious Weeds** The DEIS states that "Activities proposed under the Project are not anticipated to substantially cause or promote the introduction or spread of invasive species." (Appendices – 51) This is a misleading statement, given that there is scientific consensus that the cumulative effects of land disturbing and other human actions such as motorized travel greatly exacerbate the conditions for noxious weed spread. Noxious weeds are one of the top threats to biodiversity on national forests. We note that there are no binding legal standards to address noxious weeds in the Forest Plan, leaving it nonresponsive to NFMA requirements for diversity. The DEIS does not disclose the present level of noxious weed infestations in the Project area and the cause of those infestations. The DEIS does not disclose the impacts that noxious weed infestations cause to native plant communities. The DEIS does not disclose the effectiveness of BMPs for preventing new weed infestations following logging and related road operations. The DEIS does not disclose how this project may exacerbate existing noxious weed infestations or cause new infestations.	While it is true that improperly managed disturbance activities can greatly exacerbate the conditions for noxious weed spread, the combined management activities of BMP's, preventative measures and ongoing treatment, inventory and monitoring of noxious weed species within the project area are expected to greatly reduce the conditions for noxious weed spread. The project has been designed to meet Forest Plans standards for Non-native Plants, as described in the Forest Plan, pages III-35 - III-37. The project record includes information about the effectiveness of BMPs for preventing the new weed infestations following logging and related road operations. The project is not expected to exacerbate existing noxious weed infestations due to the application of Project Design Features and, best management practices, and Forest Plan standards.
105	**Watershed Resources analysis** The DEIS's Watershed Resources analysis provides data from exactly zero measurements actually taken inside riparian areas over the last ten years.	For the FEIS, measurements on WEPP Model inputs (ground cover, rock content, and slope) were collected in fall of 2013 for development of a project design feature for RCA treatments (FEIS, Chapter 2, Table 2-6, Project Design Features, Watershed Specialist Report Effects Analysis). Riparian Inventory data, which included stream channel stability, Rosgen type, riparian vegetation conditions, gradient, substrate size, etc., is dated from 1994 – 2004. Watershed Improvement Needs surveys were also collected in 2011 and 2012 (PNF 1994-2012).
106	"(R)oad decommissioning is designed to improve Boulder Creek subwatershed from 'Impaired' to the 'Functioning at Risk' condition class. Road densities in the remaining subwatersheds would be reduced toward the desired condition, but would likely remain in the 'Impaired' category." (39) This reveals the fallacy of having Forest Plan direction based on "desired	Thank you for your comment.

Comment #	Concerns	Comment Response
	conditions"—there is no requirement or incentive for the agency to ever actually achieve the desired condition.	
107	"Although additional barriers are present in all subwatersheds on unnamed and intermittent stream channels, this project will focus on mainstem fish-bearing streams and tributaries." (40) Please disclose the remaining lengths of fish-bearing streams that will be blocked from fish passage. Also, please disclose the number and location of fish barriers and other poorly functioning culverts (risk of flood damage or blowout) will remain in the project area under each alternative.	Culvert survey information for the project area is described in section 2.5.3.
108	Alternative C "would limit crown cover removal in drainages where ECA would increase over 25 percent, or where the Channel Condition Risk is moved into the High category." (51) Such constraints don't apply to other action alternatives. Even under this least impacting action alternative, watershed Equivalent Clearcut Area (ECA) has already reached or will exceed the amount recommended by the science cited in the DEIS: "Under Alternative C there are 7 drainages that: • Have a proposed increase to the amount ECA; • Are rated High or Very High for existing ECA; • Are rated High for CCR; • Are surveyed as sensitive channel types (Rosgen 1996), and/or have been surveyed as in Fair or Poor condition for stream bank stability." (173) This is also shown in Table WS-10. The PNF is proposing a lot of road decommissioning, which itself would eventually reduce sediment levels in streams. But by increasing ECAs and therefore annual peak flows and risk from rain-on-snow events, channel sidecutting and bedloading will increase sediment input to streams, potentially nullifying the benefits of road decommissioning. There are no numbers in the DEIS that compares the amount of sediment reduced by watershed restoration activities vs. the sediment increases of higher ECAs and project activities within riparian areas?	A comparison in the amount of sediment reduced by watershed restoration activities vs. the sediment increases of higher ECAs is not possible given that increasing the ECA and therefore the risk to channel stability is only an estimate of risk and potential bank destabilization, dependent on geomorphic, weather and climate variables. Additional analysis and consideration regarding ECA has been completed between the DEIS and the FEIS. A project design feature (see PDF #29) has been incorporated to address these concerns the effects of which are disclosed in Section 3.3.4 of the FEIS.
109	The DEIS does not demonstrate consistency with forest plan Standards	"SWST01 - Management actions shall be designed in a manner that maintains or

Comment #	Concerns	Comment Response
	SWST01 and SWST04. The DEIS does not demonstrate consistency with forest plan Guidelines FROB04 and FROB05.	restores water quality to fully support beneficial uses and native and desired non-native fish species and their habitat, except as allowed under SWRA Standard 04 (below). Use the MATRIX located in Appendix B to assist in determining compliance with this standard" – All waterbodies within the project area are currently fully supporting its beneficial uses. The MATRIX from Appendix B of the Forest Plan is found in the Fisheries Specialist Report the Watershed Specialist Report. SWST04 – Management actions would neither degrade nor retard attainment of properly functioning soil, water, riparian, and aquatic desired conditions, except: Where outweighed by demonstrable short- or long-term benefits to watershed resource conditions. a) Where the Forest Service has limited authority (e.g., access roads, hydropower, etc.) In these cases, the Forest Service shall work with permittee(s) to minimize the degradation of watershed resource conditions. Use the MATRIX located in Appendix B to assist in determining compliance with this standard. See Watershed and Soils Effects Analysis, Ch3 FEIS, sec. 3.3.4 and sec 3.4.4 and Fisheries Resources Chapter 3, Sec 3.5.4 for a description of how project activities affect SWRA conditions. Vegetative treatments are designed to maintain properly functioning conditions of SWRA resources. "FROB04 - During fine-scale analysis identify opportunities to reduce road-related degrading effects to help achieve other resource objectives." – This project proposes 141 to 249 miles of road decommissioning and restoration treatments and 60 miles of stabilization treatments on existing closed roads. FRGU05 – Where practical alternatives exist, roads in RCAs that are degrading riparian-dependent resources should be evaluated for obliteration or relocation. This project includes road decommissioning and restoration treatments within RCAs
110	Forest plan Guideline FRGU06 requires new roads landings to be located outside of RCAs "whenever possible." We are glad it will be possible. What are the PNF's proven methods for mitigating degrading effects, as is required?	Implementation of BMPs as described in the National Core BMP Handbook and project monitoring of implementation and effectiveness (Soil and Water Monitoring Reports on file at the Payette NF Supervisors Office, McCall, ID).
111	The DEIS refers to a Figure SP-3 in the Soil Specialist's Report for a map of potential landslide prone areas. (176) We request that the PNF present such a map for each alternative overlaid with proposed activities (roads, logging, burning) so risks can be more easily displayed.	A map overlaying proposed activities with potential LSP areas is included in the project record.

Comment #	Concerns	Comment Response
112	(A)ctual actual sediment yields for individual years may exceed modeled values by an order of magnitude or more … .” (Appendices – 48) This implies the error or inaccuracy of BOISED sediment yield estimates may be expressed in powers of 10. For this reason, the values displayed in sediment tables should be bound by confidence intervals. The DEIS would also convey more understanding if separate columns in such a table convert percentages/ranges into a range of estimated tons of sediment over natural. The accuracy and validity of the BOISED sediment modeling depends upon the accuracy of each separate model input. The DEIS should disclose the varying levels of error attributable to each BOISED input, raising the model’s usefulness for comparing alternatives. The DEIS does not disclose the **results of PNF monitoring** that might validate BOISED assumptions or indicate modeling accuracy. Does the BOISED sediment methodology attempt to estimate sediment delivery to each project area waterbody, for each alternative? How does the BOISED model consider sediment inputs to streams due to rain-on-snow and other storm events that cause very high, short duration peak flows?	BOISED output is not expressed in confidence interval ranges. Percent over natural is a preferred output because the tons per year figure is likely inaccurate. No monitoring of the BOISED validation monitoring has taken place by the Payette National Forest. However, a paper entitled “R1-R4 and BOISED Sediment Prediction Model Tests Using Forest Roads in Granitics” was published in 1999, by Ketcheson et al (JAWRA, Vol. 35, Issue 1, pages 83-98, Feb 1999) and compares actual measurements to predicted values. BOISED estimates sediment generated throughout the modeled watershed. The BOISED sediment yield model calculates predicted sediment delivered to streams for the analysis area based on past harvest, road, and fire events. The measure "percent over natural" is the predicted amount of sediment from management activities that is above the natural level that would be expected for each watershed without management activities. Natural erosion rates are based on the inherent erodibility of landtypes described in the Soil-Hydrologic Reconnaissance Survey, New Meadows Ranger District, Payette National Forest (Thompson et al 1973). The BOISED model evaluates surface and mass erosion to provide estimates of natural sediment yields. Model outputs are expressed as average annual yields of total sediment from a watershed. Actual sediment yields for individual years may vary from modeled values by an order of magnitude or more. Results are not reliable predictions of absolute sediment quantities and are best used for developing a quantitative index of cumulative sediment yield from different management proposals within a watershed (Reinig et al. 1991). See Appendix E for BOISED Modeling Assumptions. Sediment that is delivered to stream channels in the watershed can be stored behind rocks and logs or transported downstream. High flows transport most of the bedload in any given year. Variability in climatic conditions such as intense rainfall, rain on snow conditions, or a heavy snowpack melting quickly, can all influence how and when sediment moves through the stream network and is transported downstream.
113	“The aquatic biota indicator assesses the distribution, density, and structure of native and introduced aquatic species. The riparian/wetland vegetation indicators address the condition and function of riparian vegetation.” (208) The DEIS not include any analysis utilizing those indicators.	These indicators were used to create the watershed condition classes described in the WCF. A crosswalk that compares the Forest Plan WCIs to the WCF indicators is located in the Watershed Specialist Report (project record). WCIs located in Appendix B of the Forest Plan were used to analyze baseline conditions and effects of this project.
114	“Increases in the duration of flows near bankfull may lead to bank and bed erosion problems in susceptible channels (Troendle and King 1985). …The	Channel stabilities are discussed in the FEIS, Chapter 3, Watershed Resource section 3.3.3. It is likely that changes in peak flows have influenced channel stability in some

Comment #	Concerns	Comment Response
	current ECA for the drainages throughout the analysis area ranges from 0 to 48 percent. Many are within the range where increases in peak flows may occur (greater than 25 percent)." (156) What Project Area streams are showing the impacts of management elevated annual peak flows?	channels found to be in Fair or Poor condition. However, other factors are also cumulative factors such as road influences, livestock grazing, or other past natural or human induced disturbance.
115	The DEIS rely upon 40+ year-old stream inventory data (Tabled WS-3, WS-4, WS-5, WS-6) to compare with data that is at least ten years old to determine riparian area trends. (163) Are the trends observed over that thirty-year period (ending about ten years ago) considered reflective of riparian functioning trends now?	The riparian inventory data were the best information available for the Watershed effects analysis.
116	"Roads are included in the calculation of ECA." (156) Does the ECA analysis consider the effects of the increased transport of water by the elevated surface flow network of ditches and culverts in the Project Area? Increasing ECAs in any watershed which the DEIS describes the trend or current conditions in such dismal terms would be inconsistent with even the RFP's weak direction.	The acres of road are part of the total ECA calculated for each drainage. However, this component of increased flow is more complicated than just adding ECA as it does increase surface flow network via ditches and culverts. It is also evaluated with the WCI for Drainage Network Increase. The indicator for this WCI is total miles of system and unauthorized routes by subwatershed.
117	"The West Fork of the Weiser has a TMDL in place published in June of 2006 for temperature. All the other waterbodies within the analysis area are recognized in the Final 2010 305(b) Integrated Report as Fully Supporting (Beneficial Uses) or not accessed (IDEQ 2011a)." (165) Why doesn't the Final 2010 305(b) Integrated Report correlate with Watershed Condition Framework (WCF) ratings and the riparian surveys cited in the DEIS?	The Final 2010 305(b) Integrated Report evaluates the attainment of Fully Supporting (Beneficial Uses) with very different criteria than the WCF indicators (http://www.deq.idaho.gov/media/725927-2010-integrated-report.pdf) The Payette Forest Plan describes desired conditions that go beyond the state of Idaho beneficial uses for soil, water, riparian, and aquatic resources.
118	The Watershed Condition Framework (WCF) and Watershed Condition Indicators (WCIs) the forest plan and DEIS rely upon are not well grounded in science and appear to be a linguistic exercise in shifting arbitrarily delineated categories. Improvements in WCIs are assumed to make a significant difference, but ultimately only monitoring could validate their use. As it stands, the DEIS assumes that taking actions that bump up a given WCI from "Functioning at Unacceptable Risk" (current rating of most project area WCIs) to "Functioning at Risk" provides justification for other actions known to cause watershed damage. Road densities, one WCI, are a prime example. For three of four alternatives (B, D, and E), road density in the Boulder Creek watershed would be reduced from 3.1 to 2.0 miles per square mile, "moving" this WCI from "Functioning at Unacceptable Risk" to "Functioning at Risk." This is an example of arbitrary use of language	Road density criteria and functional levels from Appendix B of the Forest Plan were used to assess the current conditions and effects of this Project to the Road Density/Location WCI. This is described in Chapter 3 of the FEIS and in the Fisheries Specialist Report (located in the project record). Subwatershed road density values for each of the alternatives are displayed in Chapter 3 of the FEIS and have been updated from the DEIS to include both system roads and unauthorized routes.

Comment #	Concerns	Comment Response
	and terminology, since the U.S. Fish and Wildlife Service states that "bull trout are absent when road densities exceed 1.71 mi. /sq. mi." (1998 Bull Trout Biological Opinion at p. 67.) With the other action alternative, C, road density would be reduced to 1.1 miles/sq. mi. which the DEIS, forest plan, and WCF say "moves" this WCI to a "Functioning Appropriately" rating. Yet the U.S. Fish and Wildlife Service states that "bull trout are …depressed when the road density = 1.36 mi./sq. mi. …and strong when road density equals or is less than .45 mi./sq. mi." (Id.) **And assuming WCI category improvement achieves meaningful restoration, it is revealing that so many Project Area WCIs would remain at "Functioning at Unacceptable Risk" regardless of the alternative chosen.**	
119	The Watershed section concludes with this "Cumulative Effects Summary": > Existing harvest units and roads (especially roads in RCAs), road maintenance, livestock grazing, and recreational activities may affect stream conditions and watershed indicators within the effects area and would be expected to continue to affect water quality parameters such as stream temperature, nutrients, bacteria, and sediment. <u>In combination with the other activities in the cumulative effects area, the proposed project is not expected to have any detectable cumulative effect on watershed resources or water quality in the Little Salmon River, Weiser River, or their tributaries.</u> Road decommissioning planned within the cumulative effects area is expected to result in a reduction of sediment produced by roads over time. (189, emphasis added) That second sentence makes no sense in the context of the other two sentences (or the rest of the watershed analysis).	Clarification has been made to section 3.3.5 (cumulative effects summary): "In combination with the other activities in the cumulative effects area, the proposed project is not expected to have any additional detectable negative cumulative effect on watershed resources or water quality in the Little Salmon River, Weiser River, or their tributaries. Road decommissioning planned within the cumulative effects area is expected to result in an incremental reduction of sediment produced by roads over time."
120	**Riparian Zones and Aquatic Species** The Fisheries analysis also cites very little recent data from measurements of WCIs taken inside the project area. Large woody debris measurements in streams were probably the most ample, but "Temperature data are not available for all streams in the analysis area." (225) The DEIS does not state how surface fines (sediment) were measured. (Table FH-10)	Current (baseline) conditions for all of the WCIs described in Appendix B of the Forest Plan (which incorporate data collected through 2012) are located in Chapter 3 of the FEIS and in the Fisheries Specialist Report (project record). A description of surface fines measurements is located in the FEIS.
121	The DEIS does not demonstrate that population numbers and distribution	Chapter 3 of the FEIS describes impacts to fish and habitat as a result of this project.

Comment #	Concerns	Comment Response
	assure viability of native fish in the project area streams.	
122	The PNF proposes 6,100 acres of commercial logging within Riparian Conservation Areas (RCAs) and another 6,500 acres in RCAs that "may need" prescribed fire. Further, the DEIS indicates that instead of utilizing the default INFISH/PACFISH RCA delineations, the Forest Service will be implementing the RFP Aquatic Conservation Strategy (ACS) "Option 2" provision that allow them to shrink RCAs to 240 feet along perennial and fish-bearing streams (down from INFISH/PACFISH 300 feet) and to 120 feet beside ponds, lakes, reservoirs, wetlands, and intermittent streams (down from INFISH/PACFISH 150 feet). But the DEIS does not adequately consider flood-prone width in its RCA delineation. Also, if there is support for ACS "Option 2" from the years of PACFISH/INFISH monitoring, we ask that the PNF cite those specific monitoring results. Finally, we note that the PNF refrains from RCA logging in the Priority Boulder Creek watershed. We think RCA logging is too risky in the other watersheds. Proper delineation of RCAs would entail highly detailed field surveys, the costs of which are not justified considering the agency can simply implement INFISH/PACFISH default RCA widths.	Acres of RCA vegetation treatments are disclosed for each of the Action Alternatives in Chapter 3 of the FEIS (Table FH-19), which range from 0-1,990 acres. The 12,600 acres referred to in this comment are acres that were identified as needing treatment to move or maintain vegetation toward the desired vegetative conditions in the project area (see Section 1.5.2 and Appendix B of the FEIS). Based on Forest Plan direction for other resource concerns, fewer acres were proposed in all action alternatives. RCA delineation, including incorporation of flood-prone width, is described in the FEIS in Chapter 1, PDFs in Chapter 2 (Table 2-6), and Chapter 3 (Watershed Resources) and in the Watershed Resources Specialist Report (located in the project record). The largest of the site-potential tree heights (from Table B-5 of the Forest Plan) is120 feet, will be used throughout the project area (unless exceeded by flood-prone width), which provides the largest of the RCA distances described in Option 2 in Appendix B of the Forest Plan.
123	Has the PNF successfully implemented RCA logging and burning in the past, with demonstrable "success" based upon measured outcomes consistent with project objectives?	The Forest has implemented commercial thinning in RCAs in the past on projects with similar objectives to this project. The Crooked River project and (the 2012) Mill Creek – Council Mountain project have completed commercial thinning treatments. Although, not all burning or required monitoring has been completed in these areas. Regarding burning within RCAs, the Forest has directly applied fire to RCAs and results were favorable and consistent with project objectives. Monitoring data is available in the project record for the following RCA-related measurements: overstory mortality, riparian vegetation mortality, CWD, litter consumption, and duff consumption.
124	The DEIS utilizes percent natural vegetation (PNV) as a proxy for stream water temperature. Please disclose the scientific research basis for the use of PNV. Rain-on-snow events and chronically high annual peak flows cause stream channel aggradation, resulting in channel widening (Dose & Roper, 1994) and likely shallower streams which contribute to elevated water temperatures even in the absence of shade loss (Bartholow, 2000). The DEIS's use of PNV does not consider this science.	The analysis in IDEQ's Weiser River Subbasin Temperature Addendum for the Weiser River TMDL (IDEQ 1997) utilizes PNV as a proxy for expected shade and reductions to temperature, not the DEIS. The Forest Service agrees that increases in width/depth ratio correlate to potential increases in temperature.

Comment #	Concerns	Comment Response
125	The DEIS does not demonstrate that RCA logging or burning would be consistent with the Weiser River TMDL for Temperature. (152) This would require monitoring following similar previous RCA activities. We don't see data from the measuring of stream temperatures in the DEIS.	The assumption is made that if RCA treatments are in accordance with the Project Design Features FEIS Table 2-6) than no effects to shade or temperature would occur. Temperature data is found on the Fisheries Resource Effects analysis, FEIS, Table FH-13. Data gathered from the Upper West Fork of the Weiser meets the Summer MWMT standards. The Upper Weiser River and Lost Creek were found to be exceeding MWMT.
126	"Indicators for determining effects within RCAs from proposed vegetation treatments was not completed for the DEIS. Site-specific data needed to input into the WEPP model was not collected prior to the release of this DEIS and therefore the sediment delivery distances are not calculated in this document. Site-specific data will be collected, and results of the WEPP Analysis are planned for release in the FEIS." (168) The PNF is proposing 6,100 acres of commercial logging within RCAs, yet the effect analysis is not included in the DEIS. The public cannot be adequately informed for participation in the NEPA process if the federal project proponent isn't even informed.	Approximately 1,600 to 2,000 acres of commercial treatments in RCAs are proposed. These numbers would likely be reduced during implementation due to application of Project Design Features. For the FEIS, the assumption is made that if RCA treatments are in accordance with the Project Design Features (FEIS, Chapter 2, Table 2-6, than no detrimental effects riparian dependent resources, sediment delivery, or temperature would occur.
127	Although Burns et al. 2005 was cited in the DEIS, it does not disclose that they evaluated bull trout viability and trend on the Forest and concluded that bull trout viability is low in the Weiser River drainage with a long-term declining trend on the West Zone of the Forest. "Outside Boulder Creek subwatershed, anadromous species and bull trout are absent in the project area. The Forest Plan recommends developing species specific criteria for other fish species (such as redband/rainbow trout)." (223) "Five patches of habitat capable of supporting bull trout are delineated by the RMRS in the Weiser River subbasin of the project area … It is believed, however, that bull trout do not exist in those areas…" (211) The Endangered Species Act (ESA) requires federal agencies to recover populations, not maintain them at extreme risk of extinction. Also, how can the DEIS rely on the bull trout as a management indicator species (MIS) when it doesn't even occur in most project area streams? Even the Sensitive Westslope cutthroat trout are mostly absent. According to the U.S. Fish & Wildlife Service, four elements are necessary to assess long-term viability (extinction risk) of bull trout populations: 1)	The 2003 Forest Plan identified bull trout as the aquatic management indicator species. Elements of the draft Bull Trout Recovery Plan are included in the action alternatives which include removal of barriers and reduction of road related impacts to streams. A project specific biological assessment (BA) has been completed and submitted to the US Fish and Wildlife Service and the National Marine Fisheries Service for section 7 consultation (BA available in the project record). A biological opinion will be completed by US Fish and Wildlife Service and National Marine Fisheries Service prior to the final record of decision for the Lost Creek-Boulder Creek project. The BA includes a crosswalk with bull trout critical habitat primary constituent elements and Forest Plan Watershed Condition Indicators.

Comment #	Concerns	Comment Response
	the number of local populations, 2) adult abundance, 3) productivity (reproductive rate), and 4) connectivity (presence of migratory life history form). The DEIS fails to address any of those parameters. Nor has the agency provided documentation or discussion of the impacts threshold that the local bull trout population can sustain. Since critical habitat for bull trout was designated after the RFP and its ACS were adopted, the Forest Service must reinitiate programmatic consultation for bull trout. The ESA also requires formal consultation for Snake River steelhead, and Snake River spring/summer and fall Chinook salmon.	
128	Please provide a map of all of the wetlands or wetland complexes in the project area.	A map of all mapped hydrography, including streams, springs, and wetlands, is included in the Watershed Specialist Report (project record)...
129	**Soil productivity** The DEIS's Soil analysis provides data from exactly zero measurements actually taken inside proposed treatment units or riparian areas by IDT members.	Field data was collected by a contractor. The report submitted can be found in the project record. DD data was collected in the fall of 2013 by a hydrologic technician in the Fourth of July drainage. This data is found in the Soils Specialist Report.
130	The forest plan soil standards are another example of managers never having to achieve restoration when soil conditions have previously exceeded a threshold of acceptability—the project merely needs to show the conditions are "moved back" slightly. The PNF's approach to soils is—damage now, and promise mitigation for later. That is not a sound management strategy for an ecosystem component so fundamentally vital for sustaining every other resource. The DEIS does not cite scientifically validated or monitoring validated methodology for soil damage mitigation for restoring the productivity of soils. And the lack of field surveys of existing detrimental disturbance (DD) and total soil resource commitment (TSRC) is troubling. Costs of mitigation and even feasibility of proposed treatments hinge upon current soil conditions, admittedly impacted to an unacceptable degree following past management actions including logging, burning, livestock grazing, road building, and motorized recreation. The DEIS doesn't even disclose what it considers to be scientifically sound methodology for measuring DD whether pre- or post-logging/burning. That the monitoring is only projected to cost $600 (Appendices – 35) reveals the	The Forest Plan standards for maintaining long-term soil productivity, i.e., limits on TSRC and DD by activity area, are outside the scope of this project and were decided in the 2003 Record of Decision for the Payette National forest Land and Resources Management Plan. Estimates of TSRC are based on the existing road layer and known campgrounds, administrative sites, livestock congregation areas, etc. Findings are found in the FEIS, Chapter 3, Section 3.4, Soils Effects Analysis. DD sampling methodology is found in the DD Monitoring Plan in Appendix F of the FEIS and the Soils Specialist Report.

Comment #	Concerns	Comment Response
	agency is not serious about demonstrating compliance with soil standards.	
131	What is the correlation between the **amount of DD** in each activity area to the **reductions of soil productivity** in each of those activity areas?	Detrimental Disturbance is defined in the Payette Forest Plan as "the alteration of natural soil characteristics that results in immediate or prolonged loss of soil productivity and soil-hydrologic conditions (Forest Plan page GL-10)."
132	At p. 37, the DEIS states: "After the harvest activities are completed and prior to planting in patch cuts, site preparation may be completed (by) …mechanical scalping (exposing mineral soil) with heavy equipment. …This applies within and outside of areas designated for prescribed fire treatments." This illustrates another concern that arises from the DEIS's tree farming mentality. The important ecological role of almost every kind of organic material is either ignored or downplayed in the DEIS's soil analysis. "In areas where existing barriers are insufficient to control fire spread, fireline would be constructed." (Id.) We assume this also means some sort of shovel scalping to mineral soil. Which units would receive such treatments, and what proportion of each unit? And would organic matter in firelines be restored immediately after prescribed fire?	See Project Design Feature #11, FEIS Table 2-6 that requires reclamation of firelines promptly following burn activities.
133	"Those areas where DD soils were produced more than 50 years ago have recovered, for the most part, through natural processes over time…" (198). How was this recovery measured? Do any such assumptions of recovery use a landtype component?	DD is surveyed for all units that occur where past logging has occurred. The observations of different types of DD are made occularly. Aerial photographs and field observations made along transects through the units are utilized.
134	"Presently, the amount of TSRC in the Lost Creek-Boulder Creek Project area (activity area) is estimated to be 4259 acres or 6.8 percent of the project area." (199) How did the Forest Service measure "roads, landings, primary skid trails and gravel pits" (198) to arrive at this figure? "This alternative would result in a reduction to 5.9 percent TSRC for the project area due to the decommissioning of roads." (201). Would those acres be considered DD post-project?	Total acres of TSRC is a percentage of a given activity area. The activity area was the Forest Service ownership within the project area by subwatershed. Large waterbodies such as Lost Valley Reservoir and the Inventoried Roadless Area in Boulder Creek were excluded. DD is estimated for cutting units as the activity area. DD is not estimated by subwatershed or by project area.
135	"These areas have not been ground-truthed but where landslide-prone areas are modeled as falling within the boundaries of proposed harvest units, they will be visited by a specialist trained in field identification of slope stability	Project design features include limiting thinning to less than 20 percent crown cover removal, maintaining long-term rooting strength vegetation, favoring deep rooted species such as ponderosa pine and Douglas Fir, avoiding road and skid trail

Comment #	Concerns	Comment Response
	to determine if site-specific measures need to be taken to maintain the stability of the slope." (199) What site-specific measures would be applied, if not just completely avoiding disturbance of a landslide-prone area, and what are their demonstrated levels of effectiveness? Is there any scientific evidence that supports the DEIS assumption that thinning trees helps prevent landslides?	construction, and concentrating water onto LSP areas from road drainage (FEIS, Chapter 2, Section 2.10, Table 2.5) Regarding the last question of this comment, The FEIS does not assume nor propose that thinning helps prevent landslides.
136	The discussion of travel plan implementation reveals that demonstrating compliance with soil standard SWST03 is not achieved in the DEIS.	The amount of TSRC in the Lost Creek-Boulder Creek Project area is estimated to be 4,259 acres or 6.8 percent of the project area. The Forest Plan (SWST03) requires that management actions reduce TSRC to lower levels when existing conditions are greater than 5 percent of the activity area. All action alternatives would reduce project area TSRC (FEIS section 3.4.4).
137	Do SINMAP modeling results identify locations where events like the recent West Fork Weiser River landslide are likely to occur?	Yes, the model uses past landslide locations to potential risk areas. However, the model is limited with the accuracy of the input data and needs field verification for site specific hazard identification.
138	The DEIS's soils analysis fails to disclose that one of the impacts of noxious weed infestations is the reduced soil productivity on those sites. The forest plan also is nonresponsive to this science.	Forest Plan direction on noxious weeds is beyond the scope of this project and was decided in the 2003 Record of Decision for the Payette National Forest Land and Resources Management Plan.
139	What is the definition of a "Constructed skid trail"? (81)	A constructed skid trail is defined as having a cut and fill.
140	The DEIS at 198 gives examples features that are considered to be part of the TSRC. Does the PNF keep an inventory of the acreage of such features?	The Payette National Forest does not keep an inventory specific to acres of TSRC. Features such as roads, campgrounds, grazing facilities, gravel pits, and administrative areas, are parts of our spatial geographic library and are utilized to determine TSRC.
141	Based upon monitoring of similar projects in the past, what would be the expected areal extent of high soil burn severity inside treated areas?	Monitoring has been completed on several prescribed fires on the New Meadows Ranger District and across the Payette National Forest and have found very little high soil burn severity during prescribed fire monitoring, no more than 5% can be expected on a given burn. Crane and Fischer (1986) state that "properly applied, prescribed fire has a low risk of causing long-term adverse effects on the fertility of the most common central Idaho soils."
142	The DEIS presents pages of discussion about landtypes, that have varying degrees of sensitivity to logging and burning activities. However, forest	There is no discernment made in the Forest Plan for DD incurred on specific landtypes. The landtype mapping is very coarse and must be field verified at the project scale.

Comment #	Concerns	Comment Response
	plan soil standard SWST02, which limits DD in treated areas, is applied identically regardless of landtype. How do the varying soil productivity risks associated with each Landtype translate to varying activity area analyses?	Specific soil limitations are documented during riparian inventory or managed during implementation.
143	**Wildlife** "The WCS includes several key terms, including source habitat, habitat family, and focal species. Definitions for terms used in this analysis can be found in the "Glossary" section of the DEIS." (260) The definition of the terms "habitat family" and "focal species" do not appear anywhere in the project DEIS, despite the fact that much of the wildlife analysis implements those terms. Since different focal species are used to represent various habitat families, it appears that focal species is a management indicator species (MIS) for those habitat families.	These terms have been added to the FEIS glossary. Many of the concepts in the WCS are based on Wisdom et al. and the ICBEMP. See Wisdom et al. Volume 3, p. 522.
144	The DEIS does not disclose the **amount and distribution** of source habitat needed to insure population viability of wildlife. The analyses for focal species by habitat families do not provide this information. The DEIS does not explain how source habitat is modeled for each of the various species of wildlife it analyzes. And source habitat is basically only described in terms of acres, not spatially. The DEIS does not include any "Measurements" for improved MIS wildlife habitat, despite Objective 4. (DEIS at 12, 13.)	As noted in your comment #84, population viability is generally determined at the Forest-scale. The source habitat models and the effects to habitats for various wildlife species in the project area are disclosed in the FEIS Chapter 3, Wildlife section and in the Wildlife Specialist Report. The wildlife section includes maps that display the spatial arrangement of various wildlife habitats. A key objective of this project is to improve habitat for the white-headed woodpecker – a MIS. Additional supporting information is located in Volume 1 (Chapter 3) of the draft WCS DEIS.
145	"Restoring NIDGS habitat in Family 12 sites is a goal in the Recovery Plan for the Northern Idaho Ground Squirrel (USDI FWS 2003)." (296) The DEIS does not provide a definitive pathway for achieving that goal for the project area.	The project area serves as a core area for current known NIDGS populations. The Forest is working with the US Fish and Wildlife Service, IDFG, University of Idaho, College of Idaho, etc. to determine the efficacy of vegetation and prescribed fire treatments and NIDGS response to those treatments. Research gathered will help the Forest Service implement the NIDGS Recovery Plan over a large, landscape scale.
146	Why are the new skid trails and roads through or alongside occupied North Idaho ground squirrel habitat not considered a "taking" under the Endangered Species Act? It appears that livestock grazing in North Idaho ground squirrel habitat is likely also a "taking."	The Forest is consulting with the US Fish and Wildlife Service on the effects of the project on northern Idaho ground squirrels. A primary purpose of the project is to improve habitat for the northern Idaho ground squirrel. Project design features have been incorporated to minimize effects to the squirrels from project implementation activities (i.e., skid trails). Livestock grazing is not part of the project activities, although it is considered in the combined and cumulative effects analysis in the BA. The

Comment #	Concerns	Comment Response
		occurrence and extent of "take" will be determined by the FWS, if applicable.
147	The DEIS's wildlife analyses fail to disclose that impacts of noxious weed infestations include reduced forage for North Idaho ground squirrel habitat and other wildlife species.	While noxious weed infestations can reduce forage for wildlife, weed inventories and site-specific surveys and research at northern Idaho ground squirrel sites have found that weed infestations are not extensive enough to adversely affect species in the Lost Creek-Boulder Creek project area.
148	Given the effects of the project, the DEIS's determination that the project would "not likely adversely affect" the North Idaho ground squirrel is illogical.	Given further review and discussion with US Fish and Wildlife Service, a determination of "Likely to Adversely Affect" has been made.
149	"The project area contains no Forest Plan MIS transects for white headed …woodpeckers" (255). Since a major objective of the project is to "improve" such habitat, we wonder how a species that the Forest Service does not survey for in the project area, and for which there are very few observed individuals, can be utilized as an MIS by the project analyses. Wildlife Guideline WIGU05 requires that "Habitat should be determined for MIS or Sensitive wildlife species within or near the Project Area. Surveys to determine presence should be conducted for those species with suitable habitat." Since the term "focal species" doesn't occur in the forest plan, does the PNF interpret WIGU05 to include the DEIS's focal species? Standards WIST02, WIST03, WIST04, among others, imply that the Forest Service will be thoroughly surveying for species' presence in the project area. Guideline WIGU12 contains a similar implication for the presence of big game calving/fawning areas. Do we interpret those forest plan elements correctly?	Habitat conditions for white-headed woodpeckers in the project area have departed from what they were historically as described in the wildlife analysis, Chapter 3, FEIS Transects for monitoring white-headed woodpecker have been established throughout the CFLRP, including the LCBC project area but the current canopy cover is generally higher in the project area than what white-headed woodpecker prefer, so it is not unexpected that few white-headed woodpeckers have been seen.. All focal species use dint he LCBC analysis are currently also sensitive or MIS species so WIGU05 pertains to them. See FEIS Chapter 3, Wildlife section for consistency with Forest Plan standards, and the Forest Plan Consistency checklist in the project record. Surveys for sensitive species, MIS, and wildlife species of concern has been ongoing for a number of years in the project area and will continue through project implementation. In addition, the project area is part of the CFLRP area where a rigorous multi-year study is being undertaken with the Rocky Mountain Research Station to monitor the project effectiveness at improving habitat for white-headed woodpeckers (PDF #62). Monitoring of project effectiveness for northern Idaho ground squirrels is being conducted by the University of Idaho and USGS. Fawning/calving is subject to PDF 60 (FEIS, Table 2-6).
150 . 151	The DEIS states that "No old forest has been identified in the Project Area." (301) It appears that based upon other disclosures in the DEIS, adequate surveys for forest stand conditions have not been completed. Please disclose the results of final surveys for old forest. If there are no old-forest habitat conditions within the project area, it is likely the project area does not provide habitat conditions that assure viability of many wildlife species. The PNF did not monitor population	Refer to section 1.13.9 of the FEIS for further information regarding old forest / old growth. MIS population trends are monitored across the Forest, with special emphasis on the CFLRP area (see response to comment #149). Although, the planning area for determining population viability is the Forest as a whole, the contribution of the project to sensitive species viability is disclosed (see effects determinations, Wildlife section,

Comment #	Concerns	Comment Response
	trends of old-growth MIS under the original forest plan, and still has insufficient monitoring data to assure that viable populations are being sustained. The forest plan does not disclose the amount, distribution, and quality of habitat needed to assure viability, and since old growth is deficient in the project area, the forest habitat that soonest will mature into old growth cannot be spared. The DEIS does not cite the results of monitoring or scientific studies that validate its assumptions that restoration treatments would promote conditions that would help wildlife that prefer old-forest habitat. Since there may be no habitat in the project area that meets the criteria of "old forest" and there have been no transects for white-headed and pileated woodpeckers, how can the analyses for these MIS demonstrate anything about insuring viable populations?	chapter 3, FEIS).
152	The DEIS analysis for Old-Forest Habitat states that "Over time, restoration treatments are expected to enhance stand conditions and allow medium trees to faster achieve, and large trees to maintain, large tree size class than if left untreated." (301) Please identify the best science that supports utilization of the proposed treatments for each of the MIS, Sensitive, Threatened, and focal wildlife species. The DEIS does not cite the results of any post-project monitoring that verifies habitat improvement—and therefore population increase—assumptions.	FEIS Chapter 3, Wildlife section and the wildlife specialist report in the project record analyze the effects of treatments for Forest Plan wildlife species. See response to comment #149.
153	The DEIS states, "this estimate may be slightly inaccurate, because the habitat model cannot account for microsite conditions important to the species or the influence of roads on habitat quality" (273) This illustrates the issue regarding reliability of models. There has been no independent scientific peer review of any of the wildlife models utilized by the DEIS, rendering their use of unknown validity for the DEIS's analyses. Regarding snag habitat, the DEIS (265) states: Across the west side of the Forest, where the project area is located, snag numbers are generally within the HRV, but in some areas, snags are lacking due to the influence of roads or previous harvest activities. Snag numbers are often found to be below historical or desired amounts in roaded areas managed for timber products or in areas accessible to firewood cutters. …Despite these concerns, assuming that the west-side inventory data	Refer to FEIS section 1.13.9, Appendix H and Table 2-6 of the FEIS for further information regarding snags and the retention of old trees and large trees.

Comment #	Concerns	Comment Response
	are applicable to the project area, the anticipated number of snags per acre at current condition is within, or above, the desired range in almost all snag size classes for all PVGs. PVGs 2 and 5 are the exceptions, which is not unexpected, because these forest types have been heavily managed in the past. We note that PVGs 2 and 5 have been assigned to at least a third of the Project Area, which pretty much blows holes in the claim that snags are within a rational "desired range." Furthermore, as the DEIS (129) admit, the Project Area has been heavily logged meaning "snags are lacking": The Lost Creek Boulder Creek Project area has been intensively managed for timber production. Available datasets indicate that timber harvest has occurred on approximately 34,700 acres within the project area. This is 54 percent of the forested area within the project area. This number is likely low because the data set utilized only records relatively intense treatments that occurred in the past 40 to 50 years. Furthermore, the DEIS indicates that of the stands not included in the 54 percent from the datasets, "evidence is present that scattered harvest (typically of the large diameter ponderosa pine, Douglas-fir and western larch) did occur…" (129) The scientific information from ICBEMP implicates such highgrade logging for the deep deficiency of the numbers of large, old trees. With the current absence of data on snag numbers in the project area, it would be much more logical to assume that snag habitat is severely deficient.	
154	Wuerthner, 2009 states: "Scientists are discovering that dead trees and downed wood play an important role in ecosystems by providing wildlife habitat, cycling nutrients, aiding plant regeneration, decreasing erosion and influencing drainage, soil moisture and carbon storage." Dead trees are crucial for every living thing in this forest ecosystem. The balance of soil moisture, the biological "engine" made up by soil microbes and invertebrates, all the plants that use the moisture and nutrients made available by soil microbes and invertebrates, every species of wildlife all the way up the food change—**every living thing.**	Refer to FEIS section 1.13.9, Appendix H and Table 2-6 of the FEIS for further information regarding snags and the retention of old trees and large trees.
155	The DEIS fails to disclose the best scientific information available that supports its assumptions concerning the quantity and quality of habitat	FEIS Chapter 3, Wildlife section and the wildlife specialist report analyzes the existing condition for species likely to inhabit the project area, including effects from various

Comment #	Concerns	Comment Response
	necessary for sustaining the MIS and TES wildlife species. Viability for the Sensitive flammulated owl, white-headed woodpecker, black-backed woodpecker, American three-toed woodpecker, boreal owl, fisher, great gray owl, northern goshawk, pileated woodpecker, Canada lynx, mountain quail, wolverine, gray wolf, Rocky Mountain bighorn sheep, Rocky Mountain elk, spotted bat, Townsend's big-eared bat, Northern Idaho ground squirrel, bald eagle, and Columbia spotted frog are not assured.	alternatives. As part of the WCS DEIS amendment process, habitat definitions specific to the Payette National Forest were developed for all ESA listed, sensitive, MIS, and identified midscale focal species. These definitions were developed using the best available science at the time. The draft amendments for the Forest Plan Appendix A and Appendix E provide in measurable terms habitat amounts, distribution, and connectivity and the natural processes that achieve desired habitat parameters important to contributing to sustainability of habitat for wildlife species known to occupy the planning unit.
156	Mills, 1994, states that certain "**population dynamics**" must be considered in making determinations about species viability: "Ecological theory, supported by laboratory experiments and field observations, has established several factors as critical to the consideration of long-term population persistence. Leading among these factors are three: the growth rate of the population, the size of the population, and the connectivity of the population with surrounding populations of the same species." The DEIS does not utilize population dynamics in its analyses for wildlife.	The best available science, as used to develop the WCS, suggests that the Forest Service should restore habitats that are departed from HRV. Over the long-term, improvements in habitat should lead to higher densities of Family 1 species and improved connectivity to habitat adjacent to the project area. See also response to comment #155.
157	The DEIS does not propose to manage consistent with the best science to protect alternate nest stands, post-fledging areas, and home ranges for the northern goshawk.	Goshawk nest sites and PFAs have been identified for the project and will be protected consistent with scientific recommendations. See FEIS Chapter 2, Table 2-6 PDF 59.
158	The DEIS does not demonstrate consistency with applicable Lynx Conservation Assessment and Strategy (LCAS) Standards and Guidelines. The DEIS fails to provide adequate maps of LAUs and habitat components along with areas of human activity as the LCAS requires, making it impossible for the public and decision maker to understand the impacts of motorized travel, as well as to understand impacts on habitat and connectivity of habitat. The DEIS lacks a genuine analysis of the full range of cumulative impacts of other activities, including the cumulative effects of livestock grazing and motorized recreation in the project area.	The 2003 Payette Forest Plan incorporated conservation measures as identified in the Lynx Conservation Strategy and Assessment (LCAS, Ruediger et al. 2000). The Lost Creek-Boulder Creek project complies with Forest Plan direction for Lynx, including standards TEST01, TEST06, TEST12, TEST14, and TEST15. The biological assessment of effects to lynx from the LCBC project determined the activities "may affect, but are not likely to adversely affect," this species.
159	We also question the adequacy of habitat standards and other direction set by the LCAS itself. The Forest Service would be hard-pressed to find many Lynx Analysis Unit in the Northern Rockies—heavily logged or	ESA Section 7 consultation with US Fish and Wildlife Service and National Marine Fisheries Service is in progress for this project. A project specific biological assessment (BA), including analysis of lynx, has been completed. The biological assessment of

Comment #	Concerns	Comment Response
	otherwise—that fall below LCAS habitat percentages. Management direction must go beyond validating the management status quo—the very situation that led to the listing of the lynx under the ESA.	effects to lynx from the LCBC project determined the activities "may affect, but are not likely to adversely affect," this species.
160	The DEIS says "No current or historical records indicate lynx use the project area." (285) Does this mean there never was a resident population? "Track surveys have not been conducted in existing Source habitat due to the inability of access during the winter. This portion of the Forest is not considered part of core lynx population, due to the lack of observations and the isolated, disjunct nature of the habitat." (285) Please undertake an updated scientifically sound survey for lynx.	See response to comment #40.
161	The Northern Rockies Lynx Management Direction (NRLMD) identifies the project area as a linkage zone. The NRLMD may also identify the project area as "secondary" habitat for which Terms and Conditions of the NRLMD Biological Opinion apply. The PNF also must manage consistently with the Amended Lynx Conservation Agreement between the Forest Service and the U.S. Fish & Wildlife Service.	ESA Section 7 consultation with US Fish and Wildlife Service and National Marine Fisheries Service is in progress for this project. A project specific biological assessment (BA), including analysis of lynx, has been completed. See response to comment #159.
162	The DEIS is not following the best available science for lynx. Squires et al. (2010) with additional research identified that older, multi-storied forests are essential as winter lynx habitat, and thus essential for the viability of lynx. The reduction of any of this key winter habitat may cause a risk to lynx viability, since lynx are already at a threshold level of survival in regards to winter hare populations; even minor reductions may result in winter starvations for lynx (Id.). It is currently recognized that there is a threshold of forest thinning and logging below which lynx may not persist (Squires et al. 2010; Squires 2010). The DEIS does not address the connection between the historic loss of lynx winter habitat and the population decline of lynx in the Northern Rockies. The proposed management of winter hare habitat will not ensure viability of the lynx. Lynx winter habitat is clearly limited in the LAUs that will be impacted by this project. The Forest Service believes that because no lynx have been found in the project area (even though no surveys for lynx were conducted because of "inability to access during winter" (285) that it is somehow justifies reductions of lynx winter habitat.	See response to comments 41 and 159.

Comment #	Concerns	Comment Response
163	The U.S. Fish & Wildlife Service found "substantial scientific or commercial information indicating that listing a [Distinct Population Segment] of fisher in the [Northern Rocky Mountains] of the United States [under the ESA] may be warranted." 75 Fed. Reg. 19925 – 19935 (April 16, 2010). In particular, USFWS found that listing the Northern Rockies fisher under the ESA may be warranted in primary part "due to the present and potential future modification and destruction of habitat from commercial timber harvest and commercial wood production by methods that may prevent succession to the mature forest stages preferred by fishers." The DEIS admits that the fisher and/or its habitat are present within the project area but contains no analysis of impacts by the project. The Forest Service should conduct ESA consultation for the Northern Rockies fisher.	In 2011, the US Fish and Wildlife Service announced a 12-month finding on the petition to list the list a distinct population segment (DPS) of the fisher (*Martes pennanti*) in its U.S Northern Rocky Mountain range, including portions of Montana, Idaho, and Wyoming. The US Fish and Wildlife Service concluded that list of Fisher in the Northern Rocky Mountains was not warranted (76 FR 38504, June 30, 2011). Fisher are analyzed in the FEIS, Chapter 3 and in the wildlife specialist report (project record).
164	The wolverine was recently determined to be "Warranted" for listing under the ESA. [75 Fed. Reg.78030 (Dec. 14, 2010).] It is currently a Candidate species, waiting for work to be completed on other species before it is officially listed. The U.S. Fish & Wildlife Service found that "Sources of human disturbance to wolverines include . . . road corridors, and extractive industry such as logging . . .." .The DEIS admits that the wolverine and/or its habitat are present within the project area but contains no analysis of impacts. The Forest Service must conduct ESA consultation for the wolverine for this project.	The wolverine is proposed for listing under the ESA. Project effects to wolverine are analyzed in the wildlife specialist report and biological assessment. Section 7 consultation with US Fish and Wildlife Service and National Marine Fisheries Service is in progress for this project. A project specific biological assessment (BA), including analysis of wolverine, has been completed. The BA determined the project was "not likely to jeopardize" wolverine. The Forest expects to receive a Letter of Concurrence on this determination.
165	"(T)he Forest management strategy for elk is less than desired for the Project Area" (291) and "restoration activities will decrease forest stand densities, creating more open habitat, which may lead to increased elk vulnerability to human hunters" (345). The elk need to get used to it, because the proposed vegetative conditions are "desired" according to the forest plan. "Within the project area, total road densities range from 1.0 in the Lower West Fork Weiser River to 8.5 in the Upper West Fork Weiser River (Table FH-7) with an overall road density of 5.2 miles per square mile across the entire project area." (222) The DEIS does not disclose total post-project road density, but on page 233 discloses that each subwatershed would remain above scientifically recommended levels The analysis doesn't really explain why reducing road densities from extremely high to very high tips the project's balance in favor of elk. The DEIS also discloses that the	The best available science suggests that the Forest move toward HRV and restore PVG's to more of their historic conditions for species described in the draft WCS. Although elk are an important game animal and species of local interest, they exist in much higher densities than they would have historically. This is likely at the expense of native species such as mule deer where there is competition for resources. Road management is enforced primarily by the Travel Plan and complimented by seasonal closures of roads during the bull elk rifle hunt. Law enforcement during this period is important to ensure compliance.

Comment #	Concerns	Comment Response
	agency is unable to effectively prevent illegal motorized access in the project area. That fairly well sums up future prospects for the big-game populations that would use the project area. "Unauthorized use of ATV/UTV use on non-system, closed roads will likely remain an issue for elk security. Reduction in funding for access management (e.g. gate maintenance) and law enforcement continue to exacerbate this ongoing problem." (354) Those cumulative effects are not analyzed for wildlife other than elk.	
166	**Whitebark Pine** The DEIS presents almost no analysis for the PNF Sensitive and federal Candidate species, whitebark pine. What surveys have been conducted to determine presence and abundance of whitebark pine and whitebark pine regeneration? If whitebark pine seedlings and saplings are present, what measures will be taken to protect them? Please include measures that exclude burning in the presence of whitebark pine regeneration (consider 'Daylighting' seedlings and saplings as an alternative restoration method). Will restoration efforts include planting whitebark pine? What is the severity of white pine blister rust in proposed action areas?	Whitebark Pine was not identified in any of the preliminary surveys of treatment units nor is it anticipated to occur in treatment units based on modeled habitat. Whitebark pine surveys were completed in the summer of 2012. The biological evaluation (project record) provides more information on the sensitive plant species within the project. Currently, no treatments are planned for whitebark pine populations or habitat.
167	**Cumulative Effects** The sections on cumulative effects in the DEIS are mostly just a listing or mentioning of past, ongoing, and reasonably foreseeable actions, and provide inadequate **analysis** of those impacts for just about every resource, in violation of NEPA. There isn't even a map of past, current, and reasonably foreseeable logging and other actions in the project area.	Cumulative effects are discussed under each resource section in FEIS Chapter 3. FEIS Appendix D provides a list of many past activities in the project area including but not limited to vegetation treatments, wildfire, prescribed burning, and grazing. Maps of these extensive past activities have been included in the project record.
168	It is important that the results of past monitoring be incorporated into cumulative effects analyses. The Forest Service must include the results of monitoring done in the project area as committed to in the NEPA documents of past projects or as a part of the Forest Plan monitoring and evaluation effort. Please disclose if the Forest Service has performed all of that monitoring and mitigation required or recommended in any NEPA documents. Please disclose the PNF's record of compliance with its monitoring requirements as set forth in its Forest Plan.	Where applicable, the results of monitoring from past projects within the Lost Creek-Boulder Creek project area have been referenced in the FEIS and specialist reports. These monitoring records have been incorporated into the project record. The Payette National Forest completes an annual Forest Plan monitoring report. These reports are incorporated into the project record and are available on the Forest website at: http://www.fs.usda.gov/main/payette/landmanagement/planning.

Comment #	Concerns	Comment Response
169	**Climate Change** The DEIS presents practically no analysis on the effects of climate change on the ecosystems of the project area. It also fails to disclose how management activities have or will affect the ability of the ecosystem to sequester carbon. Given the urgency of the likely climate change scenarios, carbon sequestration may be one of the most important ecosystem services provided by forests. The Committee of Scientists, 1999 recognized the importance of forests for their contribution to sustainability and contributing to global carbon cycles. And the 2011 draft NFMA regulations recognize that forests provide "Benefits… including… Regulating services, such as long term storage of carbon; climate regulation…." The Draft EIS for the revision of the Idaho Panhandle National Forests states: > Carbon sequestration is the process by which atmospheric carbon dioxide is taken up by vegetation through photosynthesis and stored as carbon in biomass (trunks, branches, foliage, and roots) and soils. … Sequestering carbon in forest ecosystems can help to offset sources of carbon dioxide to the atmosphere, such as deforestation, forest fires, and fossil fuel emissions. Interest in carbon sequestration has increased in an effort to explore opportunities for climate change mitigation.	The FEIS does discuss some of the effects that are expected as a result of climate change, including increasing temperatures, and associated changes in disturbance parameters such as insects, disease and wildfire. This project is designed to maintain and restore desired conditions as described in the 2003 Payette National Forest Land and Resource Management Plan (LRMP). These desired conditions are developed to lie within the historic range of variability for forest components. We use several references in the document that support the notion that managing for forests within historical reference conditions offer a resiliency and resistance to future climatic changes and its effects. This would include likely climate change scenarios that could result with effects such as increasing winter rainfall, increasing temperatures, and subsequent shifts in vegetative species and perhaps vegetative communities. This resiliency and resistance within historical ranges would also apply to carbon cycling in an ecosystem. As many of our ecosystems have deviated from historical ranges of conditions, so have their ecological processes and functions, which would include not only carbon cycling, but other nutrient cycling, fire regimes, invasion by non-native species etc. Our premise is to maintain and restore forests to the desired ranges, to restore ecosystem processes that may continue to function and evolve with future climatic perturbations. Although much literature points to the carbon sequestration functions of old-growth forests, there is an equal body of literature that points to not only slowing deforestation, but combining it with an increase in forestation and other management measures to improve forest ecosystem productivity and processes, which could conserve or sequester significant quantities of carbon (Millar et al. 2007, Keith et al. 2009, Van der Werf and Peterson, 2009, Malmsheimer et al. 2011).
170	The science on climate change supports the idea that forest policies must shift away from logging if carbon sequestration is indeed an emphasis. All old growth and previously unlogged forest areas should be preserved indefinitely for their carbon sequestration value. Forests that have been logged should be restored and allowed to convert to eventual old-growth condition. This type of management has the potential to double the current level of carbon sequestration in some regions. Keith et al., 2009 state: > Both net primary production and net ecosystem production in many old forest stands have been found to be positive; they were lower than the carbon fluxes in young and mature stands, but not significantly different from them. Northern Hemisphere forests up to 800 years old have been found to still function as a carbon sink.	The Keith et al. (2009) paper uses mechanisms to identify forest biome types important for carbon storage. Keith et al. (2009) refute the notion of equilibrium of carbon flux in old-growth forests that is held by some scientists, but they further add that large carbon stocks can develop in a particular forest as a result of a combination and interaction of environmental conditions, life history attributes, morphological characteristics of tree species, disturbance regimes, and land-use history. They add that conserving forests with large stocks of biomass from deforestation and degradation avoids significant carbon emissions to the atmosphere. This project would conserve forests from deforestation and degradation as this project is designed to maintain and restore desired conditions as described in the 2003 Payette National Forest Land and Resource Management Plan (LRMP). These desired conditions are developed to lie within the historic range of variability for forest components. We use several references in the document that support the notion that managing for forests within historical reference

Comment #	Concerns	Comment Response
	Carbon stocks can continue to accumulate in multi-aged and mixed species stands because stem respiration rates decrease with increasing tree size, and continual turnover of leaves, roots, and woody material contribute to stable components of soil organic matter. There is a growing body of evidence that forest ecosystems do not necessarily reach an equilibrium between assimilation and respiration, but can continue to accumulate carbon in living biomass, coarse woody debris, and soils, and therefore may act as net carbon sinks for long periods. Hence, process-based models of forest growth and carbon cycling based on an assumption that stands are even-aged and carbon exchange reaches an equilibrium may underestimate productivity and carbon accumulation in some forest types. Conserving forests with large stocks of biomass from deforestation and degradation avoids significant carbon emissions to the atmosphere, Our insights into forest types and forest conditions that result in high biomass carbon density can be used to help identify priority areas for conservation and restoration. The global synthesis of site data (Fig. 3 and Table 2) indicated that the high carbon densities of evergreen temperate forests in the northwestern United States, southern South America, New Zealand, and southeastern Australia should be recognized in forest biome classifications.	conditions offer a resiliency and resistance to future climatic changes and its effects. This resiliency and resistance within historical ranges would also apply to carbon cycling in an ecosystem. As many of our ecosystems have deviated from historical ranges of conditions, so have their ecological processes and functions, which would include not only carbon cycling, but other nutrient cycling, fire regimes, invasion by non-native species etc. Our premise is to maintain and restore forests to the desired ranges, to restore ecosystem processes that may continue to function and evolve with future climatic perturbations. Although much literature points to the carbon sequestration functions of old-growth forests, there is an equal body of literature that points to not only slowing deforestation, but combining it with an increase in forestation and other management measures to improve forest ecosystem productivity and processes, which could conserve or sequester significant quantities of carbon (Millar et al. 2007, Keith et al. 2009, Van der Werf and Peterson, 2009, Malmsheimer et al. 2011). More resilient ecosystems have a greater potential to withstand the ecological stresses associated with climate change, and help maintain long-term carbon sequestration capability in forests.
171	Harmon, 2009 reviews how the forest ecosystem sequesters carbon, the issues that must be addressed when assessing proposed management actions, and some common misconceptions to be avoided. He also reviews and evaluates some of the more common proposals as well as general scientific concerns about the forest ecosystem as a place for carbon sequestration. The DEIS does not disclose how likely climate change scenarios will change vegetation diversity and pattern in the Project Area. The DEIS does not disclose the impacts of climate change on the efficacy of the proposed treatments. The DEIS also does not disclose the impact of the proposed project on the carbon sequestration potential of the project area.	Mark E. Harmon had a number of publications in 2009 that discussed carbon sequestration. Without a complete reference, it is not possible for us to know exactly which article you are referencing. However, the FEIS does discuss some of the effects that are expected as a result of climate change, including increasing temperatures, and associated changes in disturbance parameters such as insects, disease and wildfire. This project is designed to maintain and restore desired conditions as described in the 2003 Payette National Forest Land and Resource Management Plan (LRMP). These desired conditions are developed to lie within the historic range of variability for forest components. We use several references in the document that support the notion that managing for forests within historical reference conditions offer a resiliency and resistance to future climatic changes and its effects. This would include likely climate change scenarios that could result with effects such as increasing winter rainfall, increasing temperatures, and subsequent shifts in vegetative species and perhaps vegetative communities. This resiliency and resistance within historical ranges would also apply to carbon cycling in an ecosystem. As many of our ecosystems have deviated from historical ranges of conditions, so have their ecological processes and functions,

Comment #	Concerns	Comment Response
		which would include not only carbon cycling, but other nutrient cycling, fire regimes, invasion by non-native species etc. Our premise is to maintain and restore forests to the desired ranges, to restore ecosystem processes that may continue to function and evolve with whatever future climatic perturbations could occur. More resilient ecosystems have a greater potential to withstand the ecological stresses associated with climate change, and help maintain long-term carbon sequestration capability in forests.
172	AH, 2010 states: Our forests are functioning as carbon sinks (net sequestration) where logging has been reduced or halted, and wildland fire helps maintain high productivity and carbon storage. Even large, intense fires consume less than 3% of the biomass in live trees, and carbon emissions from forest fires is only tiny fraction of the amount resulting from fossil fuel consumption (even these emissions are balanced by carbon uptake from forest growth and regeneration). "Thinning" operations for lumber or biofuels do not increase carbon storage but, rather, reduce it, and thinning designed to curb fires further threatens imperiled wildlife species that depend upon post-fire habitat.	We are unable to locate the paper you reference without a complete citation. However, this project is designed to maintain and restore desired conditions as described in the 2003 Payette National Forest Land and Resource Management Plan (LRMP). These desired conditions are developed to lie within the historic range of variability for forest components. We use several references in the document that support the notion that managing for forests within historical reference conditions offer a resiliency and resistance to future climatic changes and its effects. This resiliency and resistance within historical ranges would also apply to carbon cycling in an ecosystem. As many of our ecosystems have deviated from historical ranges of conditions, so have their ecological processes and functions, which would include not only carbon cycling, but other nutrient cycling, fire regimes, invasion by non-native species etc. Our premise is to maintain and restore forests to the desired ranges, to restore ecosystem processes that may continue to function and evolve with future climatic perturbations. More resilient ecosystems have a greater potential to withstand the ecological stresses associated with climate change, and help maintain long-term carbon sequestration capability in forests.
173	Campbell et al., 2011 refutes the notion that fuel-reduction treatments increase forest carbon sequestration in the western US: It has been suggested that thinning trees and other fuel-reduction practices aimed at reducing the probability of high-severity forest fire are consistent with efforts to keep carbon (C) sequestered in terrestrial pools, and that such practices should therefore be rewarded rather than penalized in C-accounting schemes. By evaluating how fuel treatments, wildfire, and their interactions affect forest C stocks across a wide range of spatial and temporal scales, we conclude that this is extremely unlikely. Our review reveals high C losses associated with fuel treatment, only modest differences in the combustive losses associated with high-severity fire and the low-severity fire that fuel treatment is meant to encourage, and a low	Campbell et al. (2011) discuss the unlikeliness that forest fuel-reduction treatments have the additional benefit of increasing terrestrial carbon storage simply by reducing future combustive losses and that, more often, treatment would result in a reduction in C stocks over space and time, as you have indicated. Campbell et al. (2011) also mention the strong consensus that large portions of forests in the western U.S. have suffered both structurally and compositionally from a century of fire exclusion and that certain fuel-reduction treatments, including the thinning of live trees and prescribed burning, can be effective tools for restoring historical functionality and fire resilience to these ecosystems (Hurteau et al. 2010; Meigs and Campbell 2010), with subsequent improvements to public safety and other threats to the resources provided by mature forests. Ryan et al. (2012) state that forest managers must recognize that carbon is only one of many ecosystem services that forests provide and that focusing solely on carbon could lead to non-optimal management decisions. Fuels treatments and forest restoration activities in frequent-fire forests will promote a more adaptable, sustainable

Comment #	Concerns	Comment Response
	likelihood that treated forests will be exposed to fire. Although fuel-reduction treatments may be necessary to restore historical functionality to fire-suppressed ecosystems, we found little credible evidence that such efforts have the added benefit of increasing terrestrial C stocks.	forest that tends to experience low intensity fires instead of crown fires, yet such treatments may move carbon from the forest to the atmosphere. Intensive biomass use could also move carbon from the forest to the atmosphere, at least in the short term. Carbon should be only one of the many factors considered when making forest management decisions. Campbell et al. (2011) further provide examples of alternate equilibrium states and carbon storage, dependent upon types of disturbance and condition at time of disturbance, which includes disturbance such as wildfire, suppression and fuels treatments. This project is designed to maintain and restore desired conditions as described in the 2003 Payette National Forest Land and Resource Management Plan (LRMP). These desired conditions are developed to lie within the historic range of variability for forest components. We use several references in the document that support the notion that managing for forests within historical reference conditions offer a resiliency and resistance to future climatic changes and its effects. This resiliency and resistance within historical ranges would also apply to carbon cycling in an ecosystem. As many of our ecosystems have deviated from historical ranges of conditions, so have their ecological processes and functions, which would include not only carbon cycling, but other nutrient cycling, fire regimes, invasion by non-native species etc. Our premise is to maintain and restore forests to the desired ranges, to restore ecosystem processes that may continue to function and evolve with future climatic perturbations. More resilient ecosystems have a greater potential to withstand the ecological stresses associated with climate change, and help maintain long-term carbon sequestration capability in forests.
174	Mitchell et al. (2009) also refute the assertion that logging to reduce fire hazard helps sequester carbon. Although thinning can affect fire, management activities are likely to remove more carbon by logging than will be saved by avoiding fire.	Alteration of carbon stores is not a part of the purpose of the Lost Creek-Boulder Creek project.
175	It is clear that the management of the Earth's forest is a nexus for addressing a huge crisis of our times, climate change. Yet the DEIS fails to utilize the best scientific information available to consider these facts in its analyses.	See responses to comment # 63.
176	"The frequency and effect of rain-on-snow events is a concern to land managers." (152) How is climate change expected to affect watershed hydrology in the project area?	Climate change for the interior Pacific Northwest may result in less snow at lower and mid-level elevations in addition to more frequent rain-on-snow events where snowpack exists (response to comments # 63).

Comment #	Concerns	Comment Response
177	What are the cumulative effects of National Forest management on U.S. carbon stores? How many acres of National Forest lands are logged every year? How much carbon is emitted by that logging?	The science on climate change and forest management is complex and there are many factors that influence how forests act as either carbon sinks or carbon sources. Turner et al. (1995) indicate that for more accurate measurements in the carbon flux associated with National Forest management, stand-level carbon budgets that account for both living and non-living components within an age-class based system would be necessary for modeling national carbon budgets. In their paper, they discuss how carbon fluxes change in forest ecosystems through succession with changes associated in both live and dead components. These components are found both above and below the ground, further complicating assessment. Approximately 33% (303 million hectares) of the U.S. land base is forested (Smith et al. 2009). This represents roughly 7.5% of the world's total forestland (FAO 2011). The Forest Service administers the largest portion that is within public ownership (147 million acres). The proportion of public ownership has remained stable for at least the past 50 years. (USDA Forest Service 2012). Total U.S. timber harvest has declined since the late 1980s, with less than 400 cubic meters per year (in millions) being harvested in 2010 (USDA Forest Service 2012). Breakdown of the proportion of this between total and National Forests was unavailable. In 2010, U.S. forests and long-lived wood products accounted for a net sink of 251 million metric tons of carbon (922 million metric tons CO_2) (U.S. EPA 2012). Forest growth and afforestation currently offset approximately 16% of U.S. emissions from burning fossil fuels (Vose et al. 2012). This is an enormous ecosystem service; Jackson and Schlesinger (2004) estimated that offsetting another 10 percent of emissions would require the conversion of one-third of our current U.S. cropland to forest plantations. While individual trees or tracts release some or all of their carbon if harvested, burned, or otherwise disturbed, subsequent forest regrowth will sequester carbon from the atmosphere. Forested landscapes tend to include a mix of disturbed and regrowing forest stands, and have a carbon balance of near zero over the medium and longer term. Our large carbon sink today is a legacy of harvesting and forest conversion that took place in the past. These disturbances released much carbon dioxide (CO_2) into the atmosphere decades ago, and the regrowing forest is recovering some of that released CO_2 on land that has not been permanently converted to non-forest cover (Birdsey et al. 2006). The persistence of the current U.S. forest carbon sink is uncertain because the effects of historic land use should taper off, while projected increases in the rates of natural disturbances such as fire may liberate current carbon stocks (Vose et al. 2012). Atmospheric factors may change forest growth rates, since increased nitrogen deposition and atmospheric CO_2 concentrations from fossil fuel emissions can enhance tree

Comment #	Concerns	Comment Response
		growth. These factors may also augment current rates of carbon sequestration by forests (Canadell et al. 2007). However, other global change factors, such as increased transpiration rates and atmospheric pollutants and the likelihood of increased drought, may offset potential increased sequestration rates (Felzer et al. 2005). In the decade since 2002, forest fires annually burned 0.9 percent of forested land in the United States, with the largest fire year (2006), burning 1.3 percent of forested land. This corresponds to an overall average return interval of 100 years for U.S. forest fires. Models run with downscaled climate data for the Greater Yellowstone Ecosystem predict substantial increases in fire in this region by mid-century, with fire rotation reduced to less than 30 years from the current 100-300 year return interval (Westerling et al. 2011). If fires become more severe, especially where ecosystems are not adapted to severe fire, the likelihood that fire will change forest to shrublands or grasslands may increase (Smithwick et al. 2007). Annual carbon emissions related to fire vary considerably depending upon the year. Circumstances that directly affect fire activity include atmospheric circulation, temperature, and moisture patterns (McKenzie et al. 2011). Estimates of fire-related emissions range from 22.6 million metric tons/year (2010) to 84.4 million metric tons (2006), compared to net forest sequestration of 251 million metric tons/year (U.S. EPA 2012). While individual disturbance events may result in carbon release to the atmosphere, generally these emissions will be matched over the long term by carbon uptake during recovery. The long-term net carbon flux from forests depends on changes in the rates of disturbance, such as changing rates of fire suppression, harvest, or insect outbreaks (Goward et al. 2008). Forest management and conversion also affect carbon cycling. The U.S. Forest Service has estimated that approximately 4.05 million hectares of forest lands are affected by harvest each year, corresponding to about 1.3% of the U.S. forest land base (Smith and Darr 2004). Timber harvest transfers aboveground biomass to wood products pools, which (if long lived) can be considered a type of carbon sink. Pacala et al. (2007) estimate that the United States and Canada sequester 0.06 and 0.01 petagrams of carbon per year, respectively, via the extraction of wood products. Therefore, the cumulative effects of forest management, whether for commercial purposes or forest restoration for improving ecological processes, are part of a complex nutrient cycling equation. More resilient ecosystems have a greater potential to withstand the ecological stresses associated with climate change, and help maintain long-term carbon sequestration capability in forests. The intent of this project is to move towards desired conditions which should move towards a more resilient ecosystem.

Comment #	Concerns	Comment Response
178	**Motorized Recreation and Road Access** The DEIS does not demonstrate that more opportunities are needed in the project area for motorized recreation activities.	The need to propose additional motorized recreation opportunities came from public comment during scoping for this project, and in part from recommendations provided by the Payette Forest Coalition. Currently, the Lost Creek subwatershed has no designated motorized trails, but motorized users have been able to use the existing open road system. Motorized trails were proposed under this project to develop trails off the open road system that would be potentially safer for riders wanting experience without the shared use with passenger cars, which tend to travel at higher speeds. See FEIS sections 2.3 (recreation) and 3.7.
179	The DEIS states, "System roads identified to remain on the landscape as part of the reduced MRS would be maintained and improved (see Figures 2-3 and 2-4)." Does this mean that Alternative B maps show THE Minimum Road System (MRS)? It makes no sense for the MRS to vary, depending upon Alternative chosen, since the MRS should be independent of any given project need. Development of the MRS should not take a back seat to logging. Will the Forest Service be changing the MRS every time a project is proposed for this project area in the future? The DEIS does not disclose if the MRS selected will receive proper annual maintenance and therefore be affordable with expected funding levels. This means the environmental and economic costs of the MRS go without analysis and disclosure in the DEIS. Since "This project level NEPA analysis is the final step required to identify the Minimum Road System within the project area" (16) then a full analysis of the environmental and economic impacts of the MRS should have been disclosed in the DEIS.	The MRS is the network of system roads left on the forest network after the project is complete. The MRS does vary by alternative, therefore different scenarios for the MRS are analyzed. Changes to the MRS may occur in the future, but must go through the NEPA decision making process. See FEIS section 3.8 of the MRS, expected maintenance costs, and if maintenance costs are within expected funding levels.
180	The DEIS states, "System roads currently in long-term closure may also be reconstructed and used for implementation of the project. Use of these roads may involve the installation of stream crossings that were removed as part of the long-term closure treatment." (36). This illustrates the fallacy of expecting stored roads to contribute to long-term watershed health. The plan is to eventually tear them open again, causing the same kind of impacts as new road construction. Either this would violate CFLRA mandates against new road construction, or reveals the CFLRA's failure to avoid road impacts. How many miles of roads currently in long-term closure would be "reconstructed" under each alternative?	While it is true that re-opening the road causes disturbance, research has shown that applying a LTC treatment to roads that are not needed until the next vegetation treatment cycle (15 years or more), substantially reduces the resource impacts as compared to leaving the road open. It also saves considerably on maintenance costs while the road is LTC status.

Comment #	Concerns	Comment Response
181	Similarly, the DEIS proposes "30 miles of planned temporary roads" and unspecified miles of "Incidental temporary roads …needed to complete vegetative treatments (not) yet …identified due to the level of site-specificity necessary." (Id.) What commitment exists for restoring these temporary road sites and leaving them to natural processes instead of reconstructing them for the next round of logging?	All temporary roads utilized in this project would be required to be fully obliterated per PDF 43. Future location and approval of temporary roads would be determined and approval required in future unplanned, unforeseeable NEPA decisions.
182	"Roads that are recommended to remain on the landscape as part of the Minimum Road System (MRS) would be maintained and improved to reduce sediment production (guided by recommendations from site-specific sediment modeling)." (38) Will every stretch of such roads be "maintained and improved" even if they are not used for project activities? (Roads labeled as "Existing Level 1" on maps such as Figure 2-3 stand in contrast to those labeled as "maintain" or "improve.") We also wonder how "sediment modeling" can really be "site specific."	All system roads are assigned a maintenance schedule based on their Maintenance Level (1-5). Making MRS that better reflects current funding levels is our goal. The BOISED sediment model is not site specific. The Disturbed WEPP is used in the analysis for site specific risk of erosion and sediment delivery.
183	"The exact locations of the unauthorized route treatments have not been determined at this time, but will be defined in the FEIS and Record of Decision." (39) This again illustrates the premature nature of this DEIS.	Unauthorized route treatments are presented in the FEIS, Appendix E, and a depicted in a map located in the project file.
184	Of the at least 77 miles of unauthorized roads not to be physically decommissioned (Table 2-1), how will the Forest Service determine that they won't have significant long-term hydrological impacts?	The unauthorized routes throughout the project area were analyzed in previous efforts and over the 2013 field season. They were prioritized for treatment, with the low priority routes being defined by not having erosion or other soil hydrological impacts. These roads may become a higher priority for treatment in the event they are affected by floods, fire, or other natural events, or they are utilized for management activities.
185	"Perform road to OHV trail conversion on 13 miles of closed roads and open seasonal roads. Identify an additional 7 miles of road to OHV trail conversion between draft and final EIS." (42) Again, the DEIS does not demonstrate a genuine need to increase the accommodation of OHV riders in this project area. "The OHV trails would be open to vehicles 72 inches – 84 inches in width and designed to meet Trail Class 2 standards … (which) have a design tread width of 72 inches – 84 inches, are on native material with limited grading, with structures minimum width being 96 inches." (42) Such "trails" would effectively be—roads.	The FEIS identifies 15 miles of UTV trails in Alternative B. The Forest did not identify the entire 7 miles of additional UTV trails as proposed in the DEIS; only 2 additional miles were determined to be feasible. See the FEIS "Changes from draft to Final" for additional details.

Comment #	Concerns	Comment Response
	"Users are riding on existing open roads, but have also created unauthorized routes that have been pioneered in by over-enthusiastic OHV users." (366) Does the Forest Service assume that project activities will curb "over-enthusiastic" (we call it lawless) behavior on the part of motorized recreators? If so, what is the basis for that assumption?	
186	We are also concerned that the environmental impacts of temporarily opening closed system roads for firewood access also results in cumulative effects on many resources that are not disclosed in this DEIS.	Temporarily opening closed system roads for firewood cutting access is not proposed in the Lost Creek-Boulder Creek project.
187	The DEIS does not contain a map showing the location or extent of authorized over-snow groomed routes.	The most current map of the authorized over-snow groomed routes is contained within the Recreation section of the project record. The FEIS describes in narrative the winter recreation opportunities in the project area, including the over-snow groomed routes. No new over-snow groomed routes are proposed as part of the Lost Creek-Boulder Creek project.
188	The DEIS does not provide an adequate analysis and disclosure of the cumulative effects of motorized recreation on vegetation, soils, fish, wildlife and water quality.	Cumulative effects are discussed in FEIS Chapter 3 under each resource section. See also FEIS Appendix D. Additional discussion of combined and cumulative effects to listed fish and wildlife species occurs in the project Biological Assessment (BA).
189	**Fire and Fuels** The analysis of fire effects in the DEIS reflects the Forest Service's continuing struggle to come to grips with this essential natural process. Although the agency admits that a significant cause of departures from "desired" conditions in the project area is fire suppression, there is no explicit plan to get fire back onto the landscape as a naturally functioning process. In fact, the effects of future fires are mostly characterized as something that would be catastrophic, uncharacteristic, or undesired. The DEIS largely downplays or ignores the benefits of mixed severity and high severity fire. Even if all the "treatments" now proposed were to closely mimic the effects of a "characteristic" fire, there is no other plan for these newly "resilient" landscapes other than full on fire suppression where natural ignitions occur. The RFP and DEIS entirely fail to disclose the long-term ecological and economic costs of this management regime.	Managing natural ignitions for resource objectives is not an option across the entire project area (Forest Plan Direction by MPCs associated with various Management Areas). Regarding proposed treatment areas, managing natural ignitions is only an option within in a portion of Boulder Creek drainage, MPC 5.1 within Management Areas 4 and 5. Fire-response decisions are outside the scope of the project. Prescribed fire is an option for restoring this natural process across, and consistent with the Forest Plan. We are limited in our ability to restore fire via prescribed fire across the entire landscape. Hence, the application of fire in this project is in the drier habitat types where fire is most needed in order to restore key ecosystem processes (system are most departed from historic conditions due to a lack of fire) and support efforts to enhance or maintain Northern Idaho ground squirrel habitat, a "threatened" species dependent on fire's role on the landscape.
190	Our groups would support proper fuel treatments located immediately	Only two areas within the 80,000-acre project area are considered to be within the WUI

Comment #	Concerns	Comment Response
	adjacent to structures along private land/national forest boundaries. Such treatments are supported by the scientific community as the most efficient and effective means to protect the values located on those private lands. However the DEIS's analysis does not support the proposition that the project activities would adequately and significantly reduce the risk of fire within the fire/fuels cumulative effects analysis area, as explained next. The DEIS's brief analysis discusses fuel conditions only in the areas proposed for treatment, yet wildland fire operates beyond artificial ownership or other boundaries. In regards to the proper cumulative effects analysis area for fire risk, Finney and Cohen (2003) discuss the concept of a "fireshed involving a wide area around the community (for many miles that include areas that fires can come from)." In other words, for any given entity that would apparently have its risk of fire reduced by the proposed project (or affected cumulatively from past, ongoing, or foreseeable actions on land of all ownerships within this "fireshed")—just how effective would fuel reduction be? The DEIS fails to include a thorough discussion and detailed disclosure of the current fuel situation within the fireshed within and outside the proposed treatment units, making it impossible to make scientifically supportable and reasonable conclusions about the manner and degree to which most fire behavior would be changed by the project. The DEIS doesn't even include analyses on how structures on private lands would be differentially at risk due to fire behavior under the alternatives' scenarios.	(one mile from Price Valley Guard Station and one mile from the private property in Lost Creek within the southern portion of the project boundary). The planned restoration treatments are expected to alter conditions to a state that would improve the probability of protecting values within the WUI. A majority of these acres have been treated in the last 10 years and/or are not forested. Treated areas will likely receive fire again in the next five years per authorization of past projects. Therefore, no WUI-focused treatments are planned within this restoration project.
191	Again, a major premise of the project is that the ecological impacts of fire suppression have been significant. The DEIS does not adequately consider the spatial and temporal ecological cumulative impacts of the PNF's fire suppression management regime for the area. Nor does the DEIS explore the economic implications of the FS's fire management.	Managing natural ignitions for resource objectives is not an option across the entire project area (Forest Plan Direction by MPCs associated with various Management Areas). Regarding proposed treatment areas, managing natural ignitions is only an option within in a portion of Boulder Creek drainage, MPC 5.1 within Management Areas 4 and 5. Fire-response decisions are outside the scope of the project. Prescribed fire is an option for restoring this natural process across, and consistent with the Forest Plan. See the Purpose and Need section from FEIS Chapter 1 and the direct and indirect effects analyses within Chapter 3 of the FEIS for a discussion on the impacts of suppression. Spatial pattern is evaluated in Section 3.1 of the FEIS. Additional language and

Comment #	Concerns	Comment Response
		clarification has been added to the FEIS. The economic analysis included in Chapter 4 examines how restoration activities proposed under the alternatives effect economic conditions within the planning area. Consequently the economic analysis examines economic implications of fire management relevant to restoration activities covered under this project. Other consequences of fire management (wildland fire use, fire plans, etc.) are not examined since they are outside the scope of this project.
192	"Uncharacteristic fire effects threaten desirable plant communities, ecological processes and the ability to protect life, investments, and other valuable resources." (DEIS at 6.) The DEIS also states: The Wesley Fire occurred in 2012 and grew to 16,405 acres; of which 5,522 acres are within the project area. The 2004 North Star Butte Fire grew to 1,330 acres, of which 1,030 acres were within the project area. Two other larger fires, the Rock Jack Fire in 1996 (117 acres), and Sale Fire in 1989 (28 acres) also occurred in the project area. Yet nowhere in the DEIS can one find any assertion that the effects of those recent fires were "uncharacteristic" because the cumulative effects of those fires went without analysis in this DEIS.	Both the Wesley Fire and the North Star Butte Fire occurred primarily within the Historic Lethal and Mixed-2 Fire Regimes and required very intense and costly suppression efforts that also exposed hundreds of firefighters to multiple hazards. Fire effects for both fires slightly exceeded historic conditions (mostly desirable). Patch sizes of both fires would likely have been significantly greater without the actions that were taken. Both fires were eventually extinguished by winter weather conditions in October. More than 75% of the Rock Jack Fire burn area is open grassland/scab. Fire effects were within the range of historic conditions (desirable). This human-caused fire was aggressively suppressed and fire spread contained on the ridgeline. The Sale Fire burned within a historically nonlethal fire regime and fire effects were within the range of historic conditions (desirable). More than 130 firefighters were involved in suppressing this 100 acres fire (28 acres within the project area boundary). Fire-response decisions are outside the scope of the project.
193	"Approximately 86 percent (68,105 acres) of the project area has missed two or more fire return intervals." (138) Does that include the acres previously logged, which the DEIS implies mimics the effects of wildland fire? And the DEIS does not cite the source of this number, or a statistically sound confidence interval.	The Lost Creek-Boulder Creek analysis does not assume that logging mimics wildland fire. Removal of commercial and non-commercial size trees is a method used to aid in the efforts to restore historic vegetative and fuel conditions.
194	Referring to Table FF-4, it fails to identify the percentage of Project Area **forested acres** with "Significant Movement toward Historic Fire Regimes" since it includes grasslands to be burned. It would be less than halfway towards "desired" at most.	Fire plays a significant role in fire dependent grasslands as well as forested lands.
195	The fire analysis lacks any temporal component, considering action	See FEIS, Chapter 3, section 3.2.5, Cumulative effects were assessed over the last

Comment #	Concerns	Comment Response
	alternative effects beyond immediate post-project. This makes no sense given the dynamic nature of forest ecosystems.	century and the next decade of activities.
196	The Fire and Fuels Cumulative effects discussion lists projects that have allegedly improved fire regime conditions or restored or improved fire regimes within the project area. If true, that would be a cumulative effect worth actually analyzing, instead of merely making broad-brush claims about.	See FEIS, Chapter 3, Fuels cumulative effects section and further detail in the Fire and Fuels Specialist Report in the project record.
197	**Economics** "Fires burning under historic conditions (wildfire or prescribed fire) produce behavior and effects that are low to moderate." (411) That is a gross over-generalization if there ever was one, and reveals the bias in the economics analysis. "Wildfire has the potential to reduce ecosystem service values through: (1) destruction of wildlife habitat, (2) water quality and watershed impacts, (3) damage to cultural and archaeological sites, and (4) soil erosion and impacts to water quality (Morton et al. 2003)." (412) The DEIS thus entirely ignores the ecosystem services provided by wildland fire.	More than 65,000 acres of this 80,000-acre project area are within historically Non-Lethal and Mixed-1 Fire Regimes and it can be assumed from our experiences in fire management on the Payette National Forest that any fire start within the drier habitat types that escapes suppression will likely exhibit uncharacteristic fire effects (much greater severities) due to significant increases in horizontal and vertical fuel loadings as well as increases in the composition of fire intolerant tree species. This is predominately a result of the exclusion of fire. Managing natural ignitions for resource objectives is not an option across the entire project area (Forest Plan Direction by MPCs associated with various Management Areas). Regarding proposed treatment areas, managing natural ignitions is only an option within in a portion of Boulder Creek drainage, MPC 5.1 within Management Areas 4 and 5. Fire-response decisions are outside the scope of the project. Examination of the benefits of wildland fire is outside the scope of management under this project. The economic analysis included in Chapter 3 of the FEIS examines existing conditions and how these conditions are anticipated to change as a result of restoration activities proposed under the alternatives.
198	"Restoration activities proposed … would include commercial and non-commercial vegetation treatments" (419 and elsewhere). This means that EC Tables 13-16 include the same logging activities within two different categories, distorting the analyses.	Thank you for your comment. This was an editorial error which has since been corrected. The economic impacts of activities associated with commercial forest products removal were modeled separately from restoration activities designed to meet desired resource conditions. Table EC13-16 reflects the impacts of modeling commercial forest products, restoration, recreation, and road work separately.
199	The DEIS does not indicate if project monitoring or subsequent stand tending treatments in plantations are included in project costs. Does the economics analysis include the costs of future non-commercial thinning of stands treated by this project?	The economic analysis examines all anticipated annual monitoring and treatment costs over the life of the Lost Creek-Boulder Creek Landscape Restoration Project.

Comment #	Concerns	Comment Response
200	**Vegetation** The DEIS states that "Proposed activities were developed utilizing a combination of data derived from aerial photo interpretation and field reconnaissance. Layout of exact boundaries and treatment types would be determined based upon additional on-the-ground surveys and vegetative conditions within each stand." (31) The DEIS doesn't say how many proposed treatment areas have yet to receive on-the-ground surveys for vegetative conditions, but it's likely to be quite substantial. So the premise of this project, which is largely that vegetative conditions in the project area vastly depart from desired or reference conditions, is actually not supported by much but speculation. And since wildlife habitat for the DEIS has been modeled based upon these insufficient vegetation condition surveys, the wildlife analysis is also quite suspect. How many acres of proposed treatment stands in the project area had been surveyed for departed vegetative conditions prior to DEIS analysis?	All stands receiving treatment would have silvicultural prescriptions developed prior to implementation to ensure compliance with decision and associated project design and Project Design Features. Disclosure of the methodology and data utilized in analysis can be located in Chapter 3 of the FEIS and in applicable Specialist Reports.
201	Does the PNF maintain an inventory of forest stands that meet the Forest Plan desired conditions for species composition, spatial patterns, tree size class distribution, canopy closure, and snag numbers?	The data utilized for analysis is disclosed in Chapter 3 and applicable specialist reports. Existing datasets include information about tree size class, canopy cover, species composition (USDA Forest Service and Photo Science, Inc. 2012. Existing Vegetation Mapping Summary: Payette National Forest Technical Report.
202	What is the scientific basis for assuming, as the DEIS does at p. 32, that so much of the project area shows "forest health" concerns because of "basal area density over 120 feet^2 per acre", which would justify removing trees $\geq$ 20" dbh? What is the scientific basis for a "non-seral" (e.g. grand fir or Douglas-fir) over 100 years old being a "forest health" concern? "(D) o not retain (large diameter western larch and ponderosa pine) trees if the basal area would be greater than 120 square feet per acre." (Id.) Again, what is the "forest health" concern here? Clumpiness is a natural characteristic of these forests, even including open ponderosa pine types.	The rationale for a basal area threshold of 120 feet^2 is supported by research regarding susceptibility of stands to insects in the project area as referenced in the Trip Report from the Forest Health Protection - Boise Field Office for the project (Jorgensen and Harris 2013). The intent of this statement was not to reduce all treated areas to basal areas of less than 120 feet^2. Additional work on the descriptions of alternatives has been included in the FEIS to clarify (see Chapter 2 of the FEIS). As stated in the descriptions of the action alternatives, following treatment, stands would be a mosaic of thinned areas, clumps of trees, and openings. Consideration of spatial patterns, including clumps, has been incorporated into project design. The intent of the proposed vegetative treatments is not to reduce spatial variability, which is consistent with recent recommendations based on research regarding restoration treatments in similar forest types with similar objectives as proposed in this project (Franklin et. al. 2008, Franklin et. al. 2013. Stine et al. 2013).

Comment #	Concerns	Comment Response
203	The DEIS states there is less aspen (seral species) and attributes this to fire exclusion and proposes, "Where aspen are present, conifers could be removed within the aspen stand to improve the integrity of these stands." (33) This is an example of the DEIS ignoring known effects of cattle grazing.	The DEIS did acknowledge that other factors (including "livestock grazing", "forest management", "recurrent commercial harvest", and "other factors") have led to a change in species composition (USDA Forest Service 2013 [DEIS] Section 1.5.1) including "less early seral species than desired". Early seral species in this project include aspen. The reference to page 33 does not provide a rationale as to why there is less aspen on the landscape. DEIS p. 33 is a description of proposed treatments to move from the current conditions toward the desired conditions. Improving the integrity of existing aspen stands is consistent with the purpose and need of the project and the Forest Plan.
204	The DEIS does not say how much draft WCS "unsuitable" would be logged with this project.	The draft WCS is not a decision document and although applicable science from the draft WCS has been utilized the current Forest Plan provides management direction for this project. Determinations of suitability are made through the NFMA criteria and have not changed.
205	**Commercial thin-free thin (CT-FT) - 12,200 acres.** "Trees greater than 20 inches DBH not meeting merchantability specifications due to damage, poor tree form or indicators of rot should generally be retained to meet wildlife objectives." (32) "Healthier trees are favored as leave trees over diseased trees." (33) These two statements cannot be reconciled; this shows the ultimate and eventual failure of the Forest Service's cloaking its tree farming paradigm as sustaining ecosystems.	The goal for the two types of leave trees is different. The FS does not expect regeneration that will be retained through the next rotation to come from the wildlife trees.
206	Were the stands proposed for this type of treatment previously logged? If so, what were the forest health objectives of the cutting, and were those outcomes as predicted or expected?	Previous vegetation management activities are disclosed in section 3.1.5 of the FEIS. Many of the stands proposed for treatment have been previously logged. Logging was completed based on a variety of previous NEPA decisions with objectives including items such as timber production, forest regulation, NIDGS habitat restoration, etc. In some of these instances, forest health objectives were included in the objectives. These forest health objectives have included mistletoe management, insect resistance, wildfire resilience, snag retention, coarse woody debris recruitment/retention, etc. The objectives of most of these past management activities in most of these stands were based on previous Forest Plans and management objectives and the measure of "success" would be based on those objectives. The outcomes of this past management are reflected in the current conditions and in the cumulative effects analysis (Section 3.1.5 of the FEIS).

Comment #	Concerns	Comment Response
		The objectives of the current proposals are to move from the current conditions toward the desired conditions (as defined in the FEIS). The effects of past management are reflected in the current conditions.
207	**Free Thin–Patch Cut (FT-PC) - 1,800 acres.** The description of this proposed prescription reveals that any sign of an early seral tree species will be used as justification to clearcut "relatively cool, moist grand fir forest types." (34) The DEIS isn't based upon enough historical data to support its premise that these stands have departed from reference conditions. Were the stands proposed for this type of treatment previously logged? If so, what were the forest health objectives of the cutting, and were those outcomes as predicted or expected?	As stated in the same paragraph referenced by the commenter on page 34 of the DEIS, the paragraph goes on to state, "The treatment would occur in stands that still have a component of early seral species (i.e. 25-75 percent of the desired amounts) but not enough to free thin throughout and still leave the desired species composition." The description of this treatment also explains that free thinning would be implemented in portion of the stands with desired species compositions. In addition this section goes on to state, "Portions of each stand not meeting the criteria for patch cuts or free thinning would not receive treatment during this entry." In other words, skips (or untreated areas) would be retained throughout the stand where evidence (i.e. stumps and snags) does not indicate that early seral species would have been present in abundance to meet desired species compositions as identified in Appendix B and/or the old-forest habitat criteria. Yes, many of these stands have been previously logged. The outcomes of this past management are reflected in the current conditions and in the cumulative effects analysis (Section 3.1.5 of the FEIS). The objectives of the current proposal are to move from the current conditions toward the desired conditions (as defined in the FEIS). The objectives of past management activities in most of these stands were based on previous plans and management objectives, and the measure of "success" would be based on those objectives.
208	**Commercial Thin / Mature Plantations (CT-MP) - 8,100 acres**. Since the stands proposed for this type of treatment were previously logged, what were the forest health objectives of the cutting, and were those outcomes as predicted or expected?	In many instances the objectives of this past management in these stands were timber production and/or forest regulation. More recent plantations (i.e. those established under the current Forest Plan) have had objectives consistent with the current Forest Plan desired conditions. The outcomes of these past treatments are reflected in the current condition and the cumulative effects analysis (Section 3.1.5 of the FEIS).
209	**Commercial Thin within RCAs.** How can "ground disturbing activities in RCAs …be avoided" where conducting commercial logging activities? Were the stands proposed for this type of treatment previously logged? If	A number of Project Design Features (see FEIS Chapter 2, Table 2-6 PDF #s 9 and 10) have been incorporated and the effects of proposed activities are disclosed in Sections 3.3 & 3.4 of the FEIS and the Watershed and Soils specialist reports. Some of these RCAs were managed in the past. These treatments areas were generally not considered RCAs based on past management direction. The treatment objectives

Comment #	Concerns	Comment Response
	so, what were the forest health objectives of the cutting, and were those outcomes as predicted or expected?	ranged from intermediate silvicultural treatments to regeneration treatments depending on the stand.
210	**Non-Commercial Thinning – 18,000 acres**. The DEIS does not disclose the short- to medium-term post-treatment effects on fire behavior in these stands. Since the stands proposed for this type of treatment were previously logged, what were the forest health objectives of the cutting, and were those outcomes as predicted or expected?	The effects on fire behavior of these non-commercial thinning treatments are lumped into the fire behavior analysis per applicable fire regime. Many of the stands proposed for non-commercial treatment have been previously logged and some have not. This treatment is proposed to be applied to plantations as well as mature stands. The outcomes of past treatments in these stands are reflected in the current condition and the cumulative effects analysis (Section 3.1 and 3.2 of the FEIS)
211	"Approximately 4,000 more acres of ladder fuel thinning have been proposed in Alternative C than in Alternative B." (50) Are those acres proposed for commercial treatment in Alt. B?	Yes, these additional ladder fuel treatments in Alt C are generally in areas proposed for commercial treatment in Alt B.
212	In the vegetation analysis, regarding spatial patterns the DEIS states: > Additional information and science is referenced in the draft WCS beyond that which is referenced in the Forest Plan. <u>No quantifiable metrics are identified in either document regarding spatial arrangement</u>, but as recommended in the draft WCS, an analysis of spatial arrangement that quantifies the proportion of different age classes or seral stages across the landscape and over time has been completed and provided in this document. (102, emphasis added.) The DEIS does not explain how departure from reference conditions can be adequately analyzed for spatial patterns, and as an indicator/measurement if there is no spatial analysis. Numbers alone, including "proportion," do not provide a spatial analysis. The DEIS thus fails to respond to the science it cites that states "management needs to consider the major disturbance processes, including variability and scale, that determine ecosystem components <u>and their spatial pattern</u>." (109, emphasis added.) The DEIS doesn't even really do its inadequate analysis of spatial pattern **"over time"** only numbers for "Desired" which based upon a non-peer review report prepared for Boise Cascade Corporation, "Existing" based upon largely aerial photography, immediately after treatment, and 25 years	Additional explanation has been included in Section 3.1 of the FEIS. In addition, further detail has been added to the description of the alternatives to clarify what considerations of spatial patterns have been incorporated into the design of the project. The methodology and assumptions utilized in the analysis are documented in section 3.1 of the FEIS and the forested vegetation specialist report. HRV analysis is based on the Forest Plan. The Forest Plan references 2001 research completed by Morgan and Parsons (2001).

Comment #	Concerns	Comment Response
	post-project. That hardly describes the naturally fluctuating characteristics of forest pattern.	
213	If the statistics on spatial pattern departure are taken seriously (Figures FV-2 and FV-3), then it's clear that desired spatial patterns are one more "desired condition" that will never be anywhere near achieved in the foreseeable future. Similar can be said of other forest vegetation indicators/measurements utilized by the DEIS—there is no plan to ever "get there." And since desired vegetative conditions (the Historic Range of Variability, or HRV) are the methodology utilized by the forest plan and draft WCS to assure viability of species, it is easy to see how nothing about the forest plan, the draft WCS, or this project insures viability as required by NFMA. The DEIS does not utilize data from the project area to identify "reference conditions" (and therefore accurately describe departures from said reference conditions) for the Indicators/Measurements listed on page 100. The DEIS further does not disclose statistically sound confidence intervals for any of the "desired" ranges for these parameters.	The effects of each alternative on forested vegetation are disclosed in section 3.1 of the FEIS with more information available in the applicable specialist report. Although this project does not move all attributes into the desired condition, the FEIS (and the Forest Plan) acknowledge that the "Desired conditions do not represent a static state; they are dynamic because the ecosystem is dynamic. Achievement of desired conditions well distributed across the planning unit, is a long term goal of Forest Management." As stated in the Forest Plan (see page A-12), "Many of our forested stands will not be able to meet desired conditions for many decades….Vegetation within landscapes is dynamic, and it is anticipated that desired conditions will be achieved in a dynamic fashion." As disclosed in the FEIS (see section 3.1.2) the reference conditions for this analysis are based on PVGs within the project area and are consistent with the Forest Plan which is based upon research by Morgan and Parsons (2001) regarding the HRV. The data utilized for analysis is disclosed in greater detail in the Forested Vegetation Specialist Report and is available in the project record.
214	Thank you for your attention to these concerns. It is our intention that the literature cited (below) be included in the project record. Please keep both organizations on the list to receive further notifications concerning the Lost Creek–Boulder Creek Landscape Restoration Project. Citations provided by commenter are reviewed in the project record.	Thank you for your comments. Please see the Lost Creek-Boulder Creek Response to Literature Cited/Submitted table located in the project record.
11. American Forest Resource Council, Irene Jerome		
215	Thank you for this opportunity to present scoping comments on the proposed Lost Creek- Boulder Creek Landscape Restoration Project (LCBC) Draft Environmental Impact Statement (DEIS). AFRC represents nearly 60 forest product businesses and forest landowners in five states. Our mission is to create a favorable operating environment for the forest products industry, to ensure a reliable timber supply from public and private lands, and to promote sustainable management of forests by improving federal laws, regulations, policies and decisions that determine	Thank you for your comment.

Comment #	Concerns	Comment Response
	or influence the management of all lands. AFRC fully supports the LCBC project and the landscape restoration concept. In these times of limited budgets and huge NEPA costs we must use "economies of scale" on these projects. We also appreciate the aggressive timeline on the environmental analysis of this project. The forest industry infrastructure is increasingly fragile due to the lack of a consistent and stable raw materials supply. I would like to offer the following comments on the LCBC DEIS:	
216	1. The fourth bullet point under the "Purpose" of the project **"Contribute to the economic vitality of the communities adjacent to the Payette National Forest"** is inadequate and needs to be expanded. The LCBC project is critical to the social and economic fabric of the region as well and to the maintenance and vitality of the forest products infrastructure.	Economics is an integral part of the Lost Creek-Boulder Creek project, and is a part of the purpose and need for the project. The topic of economics is further expanded in FEIS sections 1.8.6 and 3.9.
217	2. The DEIS refers to the land allocations in the forest plan and cites a page reference however I was not able to readily locate the information. A map of the LCBC project area with the land allocations from the Forest Plan displayed would be very helpful.	A map displaying the Forest Plan Management Areas and Prescriptions has been added to the FEIS (Figure 1-2.
218	3. Recent science in the forests of eastern Oregon indicates that many of the forests in the forest vegetation groups equivalent to PVG 5 and PVG 6 on the Payette National Forest are badly altered due to fire suppression and other external influences. These stands are losing early seral species such as western larch and western white pine and are also at risk to wildfire. The vegetation groups in the LCBC appear to be equally vulnerable and warrant more aggressive management. This science also indicates that diameter limits in eastern Oregon have been a failure and should be avoided. I have attached the most relevant pages from **Restoration of Dry Forests in Eastern Oregon** (Franklin, Johnson, Churchill, Hagmann, Johnson, and Johnston, July 2013) for the LCBC project. However, the following link also provides access to this entire document	Franklin et al. 2013 is reviewed in the Response to Literature Cited/Submitted table in the project record.

Comment #	Concerns	Comment Response
	http://nature.ly/dryforests	
219	4. The Wildlife Conservation Strategy indicates that only about 11 percent of the Payette National Forest is in a "commodity emphasis" land management allocation. For this reason it is imperative that the LCBC project treat the maximum number of acres possible. AFRC supports Alternative D as the Preferred Alternative. Perhaps there are additional restoration activities that can be added to make this alternative more palatable to conservation groups such as additional road closures (as appropriate) or additional stream and riparian improvements.	Thank you for your comment.
220	Thank you for the opportunity to comment on the Lost Creek Boulder Creek project.	Thank you for your comment.
12. Boise Cascade Corporation, Lindsay Warness		
221	Thank you for giving me the opportunity to provide comments on the Lost Creek-Boulder Creek Landscape Restoration Project on behalf of Boise Cascade Company. We are in general agreement with the project and am happy to see the Forest Service (USFS) producing more "landscape scale" projects and encourage the USFS to continue to do so in order to economize costs. Boise Cascade offers the following comments on the proposed project:	Thank you for your comment.
222	• As a member of the Payette Forest Coalition, Boise Cascade supports the recommendations from the Payette Forest Coalition to implement Alt. B with modifications outlined in the PFC letter.	Please see response to comments for the Payette Forest Coalition comment letter from Dennis Murphy.
223	• Boise Cascade supports a balanced approach that incorporates the ecological, social and economic needs. Sustainable outputs from the national forests are a key component to community health, Alternative C does not provide these outcomes to the level needed for true restoration.	Alternative C was developed to address concerns regarding soil, water, riparian and aquatic resources, and wildlife concerns, and is intended to be a more effective watershed restoration alternative. Economic outputs of Alternative C are analyzed in FEIS Chapter 3, Economics section.

Comment #	Concerns	Comment Response
224	• Please continue to focus on economics as a key issue for the project. The wood products industry is extremely important to the restoration of our national forest system. A suite of projects similar to this project are needed to provide sustainability and longevity of the industry and the local communities near this project.	Please see FEIS Chapter 3, Economics section for project economics analysis. Contributing to the economic vitality of local communities is part of the purpose and need.
225	• Per the PFC suggestions (Jan. 2013), the road work needs to be the "..least expensive, least intensive, least intrusive road treatments possible that will result in the most benefit to watershed health, i.e. a transition from Impaired Function to Functioning Properly." Alternative C is most intrusive and ultimately with result in more short-term damage than the other alternatives. It also does not fit the PFC recommendations for recreation needs.	Please see response to comments for the Payette Forest Coalition comment letter from Dennis Murphy.
226	• We support the implementation of restoration activities in moist, mixed conifer (MMC) forests (PVG 6) because a recent science synthesis produced by the Pacific Northwest Research Station indicates that the fire regimes are more frequent than once thought and that the forests "...today contain a significantly greater component of shade-tolerant species (e.g. white or grand fir or understory Douglas-fir) than occurred historically." (Stine et al, pg. 17). In the same synthesis it states that "...MMC forests experienced frequent to moderately frequent fires (<20-50 years) and fire severity was typically mixed, but patches of low and high-severity fire also occurred." (Stine et al, pg. 17). These MMC forests are in need of restoration and should be managed at a landscape scale to better emulate historic disturbances.	Citations presented by the commenter have been reviewed in the Response to Literature Cited/Submitted table located in the project record.
227	• On page 32 of the Draft EIS it states "Trees greater than 20 inches diameter breast height (DBH) would generally be given preference for retention unless there is a reason to remove these trees due to forest health, safety or operational concerns." We suggest that the Forest Service remove any mention of diameter limits for all alternatives as they are not scientifically based. In the recently science synthesis it states that" ....limits on removing any tree larger than -53 centimeters	The reference by the commenter to giving preference to retention of trees greater than 20 inches is intended to be a guideline for implementation in that large tree stands have been identified as deficient within the project area (especially in PVG 2). This specification was not intended to serve as a diameter limit for prescriptions but to alert silviculturists developing prescriptions within the proposed treatment unit as to the significance of trees larger than 20 inches, especially within large and medium tree size class stands. See section 2.8 of the FEIS.

Comment #	Concerns	Comment Response
	(21 inches) whatsoever regardless of geographic context, or age, or species or relative abundance or other considerations (e.g. forest health) within a patch can inhibit regeneration in some stands, lack any real landscape objectives and impede landscape-level management." (MMC Synthesis pg. 157-158). Prescribing activities within the NEPA document is a dangerous precedent. This type of guideline should be included in the actual prescriptions for implementation. Including this in a high level NEPA document could hinder the return of the early seral species when a white fir is kept due to its larger DBH. We suggest that the Forest Service monitor the recent Scriver Project on the Boise National Forest. They are working on a comparison stand treatments with diameter limits and other stand treatments with no diameter limit to monitor how well the diameter limits work in meeting their objectives.If diameter limits are truly needed, please place them in the prescriptions for the stands and not in the NEPA.	The Forest recognizes the limitations that diameter limits can cause in meeting objectives within stands (Triepke 2011, Stine et.al. 2013) but also acknowledges that there is a lack of clarity to draw the line in current research and a lack of trust that the Forest Service is able to follow guidelines (DellaSala et. al. 2013, Abella et. al. 2006, Coughlan 2003) and that a limit is necessary. Based on this and other comments on the DEIS, additional work to clarify the intent of the project in regards to retention/removal or large diameter trees has been completed between the draft and final EIS. Please refer to sections 1.13.9, 1.13.10, and 2.5 through 2.8 of the FEIS. Please see response to comments 24 and 25 and the forested vegetation specialist report (project record) for further information regarding this topic.
228	• We agree with the treatments in riparian areas. These areas are arguably the most sensitive in the National Forests and are sometimes left to carry the largest fuel loads. Passive management is a form of management and in many cases; it is not the best form of management for these areas.	Thank you for your comment.
229	• We are concerned that there is potential for 30-50% of the vegetative treatments to be dropped from the project. We encourage the Forest Service to maximize the acreage treated within the project. If the Forest Service does remove acreage, please explain why it is necessary in the NEPA document. Please always evaluate commercial treatments prior to prescribed burning in every case.	Implementation of the Project Design Features (FEIS Table 2-6) may reduce the total number of acres treated. These Project Design Features provide protections for wildlife, endangered and threatened species and their habitat, riparian areas, soil concerns, and archaeological and historic properties.
230	• Please review additional opportunities to create the grass/forbs/shrubs/seedlings (GFSS) structural acreage in the chosen alternative. Currently, PVGs 2, 5, and 6 are all below the desired range in the grass/forb/shrub/seedling and sapling tree size classes" (Lost/Boulder Creek DEIS, pg. 105). These are the major areas for ungulate forage activities and increasing forage in these areas should	While the action alternatives would not move stands into the GFSS tree size class, as defined in the Forest Plan, they would move toward the desired species compositions within the stands. Analysis completed at a Forestwide scale (see the draft WCS, 2011) indicates that the large tree size class is underrepresented. Based on research regarding retention of biological legacies and the abundance of the large tree size class in the project area, which has been found to be below or toward the lower end of the desired

Comment #	Concerns	Comment Response
	be a priority for the Forest Service in order to ensure that these activities are maintained on the federal forests and not on private landowners.	range within the project area moving stands into the GFSS stage during this entry/project was not felt to be an appropriate action. See Section 3.1 of the FEIS. The effects of the alternatives on elk are addressed in section 3.6 of the FEIS and more information can be found in the wildlife specialist report.
231	• Canopy Cover is also a concern. High canopy cover is associated with sustained crown fire potential. All of the alternatives leave excess acreage in the high canopy cover class. Please review any additional options to reduce the canopy cover to lessen the fire danger in the area and meet the purpose and need of the project. High Canopy closure also impacts elk nutrition availability, especially in the moist, mixed conifer areas.	Alternative D was developed, in part, to move further toward the desired conditions. Although this project does not move all attributes into the desired condition as specified in the Forest Plan, the FEIS (and the Forest Plan) acknowledge that the "Desired conditions do not represent a static state; they are dynamic because the ecosystem is dynamic. Achievement of desired conditions well distributed across the planning unit, is a long term goal of Forest Management." All of the action alternatives have been designed to move toward the desired vegetative conditions while balancing other resource objectives, standards and guidelines.
232	• Depending on the contract vehicle used, please consider using "designation by prescription" or "designation by description" in order to cut down on layout and implementation costs.	Although this is outside the scope of this decision, using these tools for implementation would be considered when appropriate.
233	Thank you again for the opportunity to comment. We look forward to seeing outcomes of this project.	Thank you for your comment.
13. Evergreen Forest, James D. Wassmuth		
234	Evergreen Forest vote for a preferred alternative will be made through the recommendation submitted by the Payette Forest Coalition. Evergreen will support the PFC's recommendation 100%. We would however, like to submit some general ideas that we would like you to consider when putting together a preferred alternative of LCBC. Evergreen Forest would support the following: 1. A GRAIP inventory to identify problem areas 2. Responsible use of all CFLRP money. 3. Replacement of undersized culverts and culverts which prevent fish passage. 4. Overall improvements in watershed conditions for both Lost	In the Record of Decision, the Responsible Official will document his/her rationale for the elements of the selected alternative. Effects to all resources, compliance with laws, regulations, and policies, tribal consultation, and public comments will be considered.

Comment #	Concerns	Comment Response
	Creek and Boulder Creek. 5. Pre-commercial thinning and commercial thinning of plantations. 6. Activities that provide employment for local residents. 7. Removal of biomass. 8. Improvements in campsites and sanitation around Lost Valley Reservoir. 9. Activities that lower the chance of wildfires. 10. Development of horse trails and ATV loop trails within the project area. 11. Retention of some seraI legacy trees and wildlife trees. 12. Retention of wildlife security, improvements in habitat. 13. Maintain firewood cutting areas.	
235	Evergreen is against: 1. Road obliteration, which limits future timber harvest. 2. Any type of WCS diameter limits. The products removed from this project are very important to Evergreen Forest. The decision you make will affect us and the local residents for many years. Evergreen hopes that you will keep these ideas in mind when making your decision on LCBC.	In the Record of Decision, the Responsible Official will document his/her rationale for the elements of the selected alternative. Effects to all resources, compliance with laws, regulations, and policies, tribal consultation, and public comments will be considered.
236	Once again, Evergreen Forest supports the PFC recommendation.	Thank you for your comment.
14. Idaho Conservation League, John Robison		
237	Note: Comments received from the Idaho Conservation League were identical to the Payette Forest Coalition comments, with the following exception italics: **Vegetation Restoration** • The action alternatives vary in the proposed acres of commercial thin/mature plantation (CT/MP) prescription. Although the CT/MP	Thank you for your comment. In the Record of the Decision, the Responsible Official will document his/her rationale for the elements of the selected alternative. Effects to all resources, compliance with laws, regulations, and policies, tribal consultation, and public comments will be considered.

Comment #	Concerns	Comment Response
	stands are of commercial size, they are not of commercial value in current markets. Treatment of these acres is a low restoration priority for the PFC. The 4,500 acres of small tree size class stands treated with a CT/MP prescription in Alternative E more closely matches Coalition objectives.	
15. Idaho Sporting Congress, Ron Mitchell		
238	These are the comments of the Idaho Sporting Congress, Inc., and Ron Mitchell, executive director, on this project. We incorporate by reference the comments of John Lewinski and Erik Ryberg.	Thank you for your comment. Please note that the Payette National Forest did not receive comments from Erik Ryberg regarding the Lost Creek-Boulder Creek project.
239	1. We're concerned you won't be able to conduct all the promised mitigations, monitoring, enforcement and everything else you propose. You have seldom done so in the past. To meet NEPA requirements, disclose and analyze from your monitoring reports your success and failures of the past. The public needs to know. Don't forget the cutting outside of cutting unit boundaries in the Lightning Creek Timber Sale in the South Fork Salmon River drainage.	The mitigations and monitoring identified in the FEIS (see sections 2.9 through 2.11) are designed to provide implementation personnel with the information that the decision-maker could include to ensure consistency with the Forest Plan and other applicable laws, regulations, etc. Please see section 1.10 of the FEIS for a description of the funds the Forest has to implement monitoring. The Forest strives to abide to decisions when implementing projects and conducts periodic reviews to identify items that need correction. Tools such as contract reviews, burn plan reviews, and post treatment monitoring are utilized on projects and Forest employees strive to learn from past projects.
240	2. Disclose the veracity of your claims and information regarding conditions on the forest. Particularly, disclose the "Dead Green Trees" debacle, where you declared trees were dying, sent out a news release telling media not to believe the Idaho Sporting Congress when we said it wasn't true, and then you admitted the trees were NOT dying, as you had said they were. Disclose how you hid this information from the public. Discuss how you will insure transparency and truthfulness in the development of this project. What has changed that will insure you won't hide information, and lie in all matters attendant with this project, including your monitoring results. Are you trustworthy to a judge, to the degree that a reasonable person could and would trust you? This is a NEPA consideration. Check NEXUS and the relevant citations.	Comment noted. The Lost Creek-Boulder Creek project interdisciplinary team and other current Payette National Forest personnel are not familiar with the situation referenced by the commenter. It is likely this did not take place on the Payette National Forest. The Lost Creek-Boulder Creek project proposal has been analyzed and data utilized for analysis is disclosed in Chapter 3 of the FEIS and in specialist report. This information and data is available in the project record.
241	3. Disclose, discuss and analyze where you have done a project like this before, and the results. What did the monitoring show?	Comment noted. Information about past projects and their associated monitoring is available on the PNF website.

Comment #	Concerns	Comment Response
242	4. Disclose how you, the Forest Service, performed the Boise River Wildfire Recovery Project, directly adjacent to the Payette, with shared management, including the Eco-group analysis and documents with the Payette, Boise and Sawtooth Forests co-joined at the legal and literary hip, and in the process, committed over 2,000 violations of federal law, regulation and policy, including but not limited to, cutting of green trees, cutting trees in riparian areas, failing to rehabilitate helicopter landings. Disclose the Inspector General's investigative report--which you refused to release even to a request from a Congressman-- of that project, so we may assess if you are qualified and reformed enough to undertake THIS project, which is about the same size: 40 MMBF. This is very important. We must be assured, and you must disclose your ability to actually accomplish your goals without violating the law. Also disclose, discuss, and analyze how you lied to the public in the Clear Creek Timber Sale debacle on the Boise National Forest, in the South Fork Payette and Deadwood River drainages. Dave Rittenhouse was the Supervisor, the Butcher of the Boise. Google it and you'll find court documents. Or just phone the Boise. You share literary, and therefore legal management with the Boise and Sawtooth Forests, so it is reasonable that that project's perfidy is relevant to the current proposed project. In that case, YOU, the Forest Service, claimed there was a beetle epidemic. The judge, Winmill, ruled you were lying. That, in fact, your own timber surveys showed that was false. And, he noted an email from your "bug biologist," affirming that any beetle threat was killed by cold weather, and that you'd better hurry up if you wanted to foist your scam on the public. The story of the judge's ruling was published in the Idaho Statesman newspaper. We request that you republish it in the FEIS if you carry this travesty that far. Just in case, we are sending a copy to your Supervisor with an explanatory note.	These comments refer to activities on Forests or lands outside of the Payette National Forest. The current proposal has been analyzed and found to be within all applicable Federal laws.
243	Tell us, how have you changed? This is why we want quantitative confirmation in monitoring. And, of course, even that is suspect, since you doctor results of wildlife surveys, and DD and TSRC data by changing survey methods. The list goes on. Have you no shame? Nope, says you.	Comment noted. Information about past projects and their associated monitoring is available on the PNF website.

Comment #	Concerns	Comment Response
244	5. Disclose, discuss, analyze the road closures and travel restrictions you propose as part of watershed protections in this project. Much of your claimed movement of streams from Impaired to Functioning At Risk categories depends on, generally, putting the roads to bed and reining in the scourge of trail bike and ATV abusers.	Research has shown that roads are the biggest contributors to sediment and detrimental watershed resource effects. Therefore, road decommissioning is the emphasis for the proposed watershed restoration treatments in these heavily roaded subwatersheds. The effects of roads and road decommissioning are analyzed in FEIS Chapter 3, Watershed.
245	It's irrefutable that ATV use on the Payette is uncontrolled and unenforced. I personally have seen it. The ISC's members have seen it. I reported it to Forest Supervisor Sonny LaSalle, complete with photographs of the a--holes on their 4-wheelers leaving the area behind the sign that said "Closed to ATV's" on the Hard Butte Trail. Sonny said there was nothing he could do. You have, I believe two enforcement people for the entire forest. Disclose, discuss and analyze how you will insure that off-road abuses will not occur on your "closed" and "decommissioned" and "obliterated" roads. Disclose your track record in enforcement, with monitoring results. If you don't have monitoring, we contend you can't go forward with this project, since you can't insure protection for watersheds and meeting TMDL's for the area streams. We checked, through two McCall members of The Idaho Conservation League, Dave Simmonds and Mike Medberry, the effectiveness of your road-closure system, by checking the status of YOUR TOP TEN ROAD CLOSURES opening day of hunting season. Eight were completely open, and the other two could be, and easily were, driven around. In other words, 100% failure, with zero enforcement. You've been put on notice: fess up, and cancel this project.	Travel Management regulations are enforced to the Forest's best ability. The Forest is committed to education and enforcement of the travel management plan using articles in the local papers, signing, extra on-site patrol, and by producing and making available maps of both summer and winter motorized designations. The Forest will also rely on continued cooperation with the Idaho Department of Fish and Game, the public, and local county law enforcement. There are two law enforcement officers currently working on the Forest along with several recreation technicians that do their best to patrol the area when possible and educate the public on Motor Vehicle Use regulations. The annual MVUM also strives to educate all uses on the Forest on Travel Regulations. The Forest has proposed several measures to help minimize unauthorized entry into closed roads, including installing gates and berms to effectively close roads (PDFs #42, 43 and table A-6, Appendix E address this concern. Also, providing new OHV trails specifically for ATVs and UTVs will encourage them to stay on these trails and prevent future development and use of unauthorized routes. The Forest does not keep specific records on who is using the trails correctly and who is driving off road.
246	6. Disclose and discuss and analyze the availability of mitigation funding. How often does it arrive? In what proportions? Give a monitoring report on mitigation funding, and requirements, i.e. what was promised, what actually occurred. It would be cheaper and easier if you -perused your records and produced this information, than if we FOIA-ed all your financial records to determine the facts, and then deposed your officials in Boise. Remember, we have won 20 of 23 lawsuits against the U.S. Forest Service and the EPA, and the reason you have to comply with the Clean Water Act (hereinafter "CWA") is because of three lawsuits titled "Idaho Sportsmen's Coalition v. Browner," and twice, "Idaho Sporting Congress v. Browner."	In 2012, the Secretary of the USDA announced the selection of the Payette National Forest's Weiser-Little Salmon Headwaters (WLSH) Collaborative Forest Landscape Restoration (CFLR) Project, encompassing almost 1 million acres of NFS lands on the McCall, Council, and New Meadows Ranger Districts in Adams and Valley Counties. The Lost Creek-Boulder Creek Landscape Restoration Project is part of the landscape within the Weiser-Little Salmon Headwaters CFLR Project, and is the second of five planned landscape restoration projects within the WLSH area. Through the year 2020, the Forest expects to receive approximately 3.5 million dollars annually through the CFLRP, and will match those funds dollar for dollar to implement restoration activities. Approximately 10 percent of the total funding will be used to implement monitoring associated with activities paid for with CFLRP funds.

Comment #	Concerns	Comment Response
	The short of it: You must insure to a reasonable person, and certainly a panel of three Ninth Circuit Judges (we nearly always lose with Idaho District rube-judges like Williams etc.) and have to de rigeur appeal to the Ninth Circuit) that you have a very reasonable likelihood of funding and accomplishing the mitigation that is extremely critical to what appears to be a rape-and-ruin-and-yodel-as-you-descend-into-hell scenario.	
247	Included in this discussion of mitigation, should be an analysis and discussion of why the watersheds of the west side, under your management, are so shitty! I mean half of their habitats capability destroyed! That's according to your own fisheries biologist Dave Burns, in the pre-2003 forest plan. Tell us what happened. What went wrong? What, exactly, is the habitat capability now, and how does this current management of log-like-hell-and-get-back-to-the-good-old-days, differ? And factor in the cows. The grazing impacts.	Existing conditions of the project area are discussed in FEIS Chapter 1, and under each resource section of Chapter 3. Cumulative effects are also discussed under each resource section, and in FEIS Appendix D.
248	We find none of this information in your DEIS. How old, anyway, is the person who wrote this? 18? Or was it done by a county commissioner and an Idaho Conversation League dupe?	Comment noted.
249	7. Include and disclose the Idaho Department of Transportation study, by Al Espinosa, of post-flood assessment of the Little Salmon River, in or about '96, 97, and impacts on salmon, steelhead and bull trout of bridge repair and replacement. There is much information on the perilous condition of the Little Salmon River, of which Boulder Creek is a tributary. Not only include that as disclosure under NEPA, but actually discuss its implications in text (don't just list it as a source in an index. If you do that, we are assured, with your limited motivation and pre-decision notice that you have already decided you're going to do this project come hell or high water--both of which we intend to bring to your doorstep).	This (referenced) Biological Assessment (Espinoza 1998) analyzes the effects of Emergency Road Repair Work on US Highway 95 to Chinook Salmon and Steelhead (and Bull trout which were a species proposed for listing at that time) after the 1996/1997 rain-on snow event. The summary on p. 51-52 of Espinoza 1998 states that “Considering the condition of the mainstem LSR, the viability of ESA-listed stocks of salmon, steelhead, and bull trout will depend upon the protection and maintenance of higher quality habitat in key tributaries like Rapid River, Boulder Creek, and Hazard/Hard Creeks-at least in the near term.” This statement, addressed by watershed restoration activities included in this project, such as a reduction in overall and RCA road densities, reductions in sediment production, and improvements in habitat connectivity will improve habitat conditions for listed fish in Boulder Creek (as described in Chapter 3 of the FEIS and the Fisheries Specialist Report).

Comment #	Concerns	Comment Response
250	8. Disclose and discuss to the general public the involvement of the Payette Forest Coalition, who they are, their charter, what influence they had, why or why not groups (such as the Idaho Sporting Congress) not included, what are the criterion for inclusion/exclusion, what influence did they have on restricting the scope of NEPA considerations. Disclose why a document like this project's DEIS would be their product, rather than that of the controlling agency. Please include all emails and written correspondence between the participants of the PFC, so that we do not have to FOIA them, then you have to withhold or deny their existence, and then, thanks to a "mole" in the PNF, we can prove you did so, and then you face federal charges, including perjury, which, as you might know, can occur outside the courtroom, i.e. when a Federal employee deliberately lies in regards to a federal matter, or fact. We are concerned that there may be several violations of FACA relative to this paragraph's contents. What do you think? Why not put your thoughts in the FEIS?	The Payette Coalition involvement is discussed in FEIS section 1.10. For more information on the PFC refer to their website at: http://www.spatialinterest.info/PayetteForward.html. Correspondence between the participants of the PFC is posted on their website in the forum dedicated to this project.
251	9. Since most of the West Side of the Payette (hereinafter "West Side,") is severely damaged by your mismanagement, it is more than critical that you thoroughly consider the effects of your repeating the mistakes of the past with this, yet another ridiculous assault on the watersheds. Be sure and disclose, discuss, analyze: a. the current condition of each stream affected by this project, from the mouth of the Little Salmon upstream, and Lost Creek and all tributaries downstream. Include the latest monitoring data, quantative data, including cobble embeddedness and percent fines measurements; b. population surveys of invertebrates and fish. c. If you don't have data five years or less in age, go out and collect it before you proceed. Legally, if you don't have valid data, you must get it if its scientific methodology is extant.	Current (baseline) conditions of WCIs of each of the 6th level subwatersheds within the project area is described in Chapter 3 of the FEIS and in the Fisheries Specialist Report (located in the project record) which was determined to be the appropriate scale of analysis and is consistent with the Forest Plan Direction. Baseline conditions for the Forest Plan (Appendix B) WCIs includes all pertinent field data collected in those areas up through 2012. Fish distribution data (located in the FEIS and in the Fisheries specialist report) includes all fish surveys conducted in the project area collected up through 2012.
252	10. Disclose the relationship between PACFISH and INFISH and the Planning Rule, and how fisheries and water quality assessments have changed since you adopted the PR. Tell the public if you are monitoring for population trends, and habitat trends. Again, are you collecting CE and PF's? Are you doing visual streamside habitat assessments?	The 2003 Forest Plan replaced PACFISH/INFISH requirements but adopted much of the direction through the Aquatic Conservation Strategy. The fisheries section (Chapter 3) of the FEIS discloses the effects to fish and fish habitat. Fish habitat data collection methods are described in Chapter 3 of the FEIS. Current stream surveys conducted on the Payette National Forest are based on the PIBO monitoring protocol (Archer et al. 2012).

Comment #	Concerns	Comment Response
253	11. Disclose the TMDLs for all involved streams, giving current habitat and population conditions, and trends, and whether or not you are meeting the TMDLs. Disclose whether each and all streams have TMDLs established for them, and when that will occur etc.	Please see response to comment #9. **Upper West Fork Weiser River (ID17050124SW017_03, Corral Creek to Mouth).** The West Fork Weiser River (WFWR) is fully supporting its beneficial uses. It does NOT have a TMDL, but has been assigned a potential natural vegetation target load allocation and requires a 27% reduction in solar loading (Comment from State of Idaho, Department of Environmental Quality, Josh Schultz).
254	12. In your discussion of the PFC collaborative cabal, disclose why Idaho Rivers United was expelled from the Clearwater NF collaborative group after they opposed the Megaload transportation scheme. Discuss the indications that process (the expulsion) has for the integrity of your collaboration cabals.	See response to comment #249. The Clearwater National Forest's collaborative process is outside the scope of the Lost Creek-Boulder Creek project.
255	13. Disclose, discuss and analyze how this project affects Lynx, and whether and how it meets the four criterion requiring compliance by law. We are worried this project will damage lynx and potential lynx habitat.	The 2003 Payette Forest Plan incorporated conservation measures as identified in the Lynx Conservation Strategy and Assessment (LCAS, Ruediger et al. 2000). The Lost Creek-Boulder Creek project complies with Forest Plan direction for lynx. The biological assessment of effects to lynx from the LCBC project determined the activities "may affect, but are not likely to adversely affect," this species. The Forest expects to receive a Letter of Concurrence on this determination.
256	14. Include all Consultation documents on bull trout, salmon, steelhead and lynx, and any other proposed or listed ESA species. Disclose affects to them.	A project specific biological assessment (BA) has been completed and consultation has occurred with the U.S. FWS and NOAA Fisheries. The BA is available in the project record. Requirements that result from consultation with the USFWS or NOAA Fisheries will be incorporated in the Record of Decision for the Project.
257	15. Disclose, discuss and analyze just how this project will improve the economy of surrounding communities. Where will you sell the timber? To which mills? What are the economic tradeoffs? Include an analysis of the economic loss of fisheries on the west side from your wholesale destruction of resident and anadromous fisheries on the West Side. Do a dollars-and-cents evaluation, as well as "highest good for the greatest number" pablum.	The economic analysis section in Chapter 3 examines how proposed activities under the alternatives will effect local employment and income. The analysis assumes that forest products removed from the project area will be harvested and processed consistent with other forest products in the economic study area Additional information on the assumptions used in the timber analysis have been added.
258	16. The DEIS doesn't include binding standards for fish and wildlife. See	The Lost Creek-Boulder Creek project is designed to comply with all applicable Payette

Comment #	Concerns	Comment Response
	our comments on the Forest Plan, incorporated by reference here, and included. Please disclose and discuss and analyze this lack, and our comments on the forest plan of 2003.	National Forest Plan standards and guidelines, which does include standards for management of fish and wildlife habitat. Comments submitted on the Forest Plan were responded to in Appendix A of the FEIS for the LRMP.
259	17. Disclose, discuss and analyze your cumulative effects analysis--and just do it! Because of the lack of quantitative standards against which activities will be measured, it is impossible for the analysis of cumulative effects to be meaningful. If the FS cannot state what the effects will be measured by, then it is impossible to determine the cumulative effects. "Indicators," the buzz word you use in your document, doesn't cut it. Give us data!	The cumulative effects analysis for each resource can be found in Chapter 3 of the EIS. The list of projects considered in the cumulative effects analysis is found in Appendix D of this document.
260	18. Lack of protection for elk is alarming. You have no IRA's and EHE's, and no EMU targets. Disclose this lack, discuss and analyze. You have dropped elk as a MIS because it interferes with your logging plans. Disclose the fate of elk hunting with this plan, the building of new roads, the failure to really close old roads to ATV traffic, the shortening of hunting seasons, which has already happened since the 1960's across the forest. Discuss why the former standards and guidelines for EHE's and EMU's and populations were dumped.	Elk are analyzed in Chapter 3, Wildlife section of the FEIS and wildlife specialist report. Standards and guidelines for elk management (including EHE's) in the 1988 Forest Plan were updated in the 2003 Forest Plan.
261	19. Disclose, discuss and analyze CE analysis of grazing effects on the project area and all connected area, of watershed, fish and elk habitat. What is its effect on ground squirrels?	The cumulative effects of grazing on fish, wildlife, and watershed resources are discussed in the FEIS, Chapter 3. The cumulative and combined effects of grazing on listed fish and wildlife species are discussed in the biological assessment
262	20. See our attached comments on the Payette Forest plan for ESA violations and CWA violations and South Fork Salmon River violations (as they apply cumulatively due to CE that extend beyond the project area. These comments are herein and hereafter incorporated by reference and attachment.	See response to comment #256. The cumulative effects analysis area for each resource is defined in the respective sections of FEIS Chapter 3.
263	21. Soils. Disclose the new standard, and explain it, how it eliminates a schedule and quantitative amount of sites monitored for monitoring sales and the monitoring provisions refer the public to the Regional Guides as to the method to be used. The method to be used should have been included in the DEIS. The public cannot be expected to travel to Ogden to find out.	The "Soil-Disturbance Field Guide" (Dumrose et al 2009) is the basis for DD surveys and is referenced in the Soils Specialist Report that details DD Methodology utilized on the Payette NF. These new descriptive classifications for disturbance do not change the DD or TSRC standards found in the Forest Plan Standard SWST03.

Comment #	Concerns	Comment Response
	Disclose how your monitoring has changed, and why, and how it is better (or worse) than that in the old plan. Specifically explain how TSRC and DD measurements have changed, to make it easier to increase both without seeming to damage soils.	
264	22. Both this document and the Forest Plan fail to provide standards for RCA's. This is even less protective than PACFISH and INFISH and in violation of the ESA. Disclose this, discuss it and how it meets the law, and analyze it in your conclusions of the effects this project will have on fish and water quality.	Guidance for delineation and management of RCAs is described in Appendix B of the Forest Plan, which includes consideration of Riparian Functions and Ecological Processes p. B-36). Effects of this project to watershed resources and fish and fish habitat are analyzed in the FEIS, respective specialist reports, and the project-specific Biological Assessment (located in the project record). A project specific biological assessment (BA) has been completed and submitted to the US Fish and Wildlife Service and the National Marine Fisheries Service for section 7 consultation (BA available in the project record). A biological opinion will be completed by USFWS and National Marine Fisheries Service prior to the final record of decision for the Lost Creek-Boulder Creek project.
265	23. The DEIS, as well as the Forest Plan, fail to analyze old growth species and habitat Forestwide. Six lawsuits have been filed by the ISC on the Payette NF, and three on the Boise Forest regarding the issue of the FS failing to provide insurance that habitat is being provided for old growth dependent species. The FS has lost every one of these lawsuits, and delegated the albatross of demonstrating that it is providing habitat for such species in every case, to the future Forest Plan and its tiered projects. Your project is here, and it fails. Your documents read as if old growth and the attendant issue don't exist. Instead, you refer to old trees, with no old growth standard. This flies in the face of science, accepted science. The FS has failed in the PNF Plan and DEIS to discuss old growth, to disclose its status, and to do a forest-wide, landscape-scale analysis for the Sawtooth, Payette and Boise Forests, and to demonstrate the viability of old growth-dependent species under its new plan and this DEIS. This violates NEPA, NFMA and the APA. No disclosure under NEPA, equals no insurance of biodiversity and protection under NFMA.	Refer to section 1.13 of the FEIS for further information regarding old forest / old growth.
266	24. What are the project's impacts on wolverine? Any ESA candidate species consultation?	A project specific biological assessment (BA) has been completed and submitted to the US Fish and Wildlife Service and the National Marine Fisheries Service for section 7

Comment #	Concerns	Comment Response
		consultation (BA available in the project record), and included analysis of wolverine. The BA determined the project was "not likely to jeopardize" wolverine. The Forest expects to receive a Letter of Concurrence on this determination.
267	What has been your research and monitoring? We know you've done some. Disclose, discuss and analyze.	Refer to FEIS and project record for information regarding monitoring.
16. Idaho Sporting Congress, Ron Mitchell- Letter #2		
268	1. No site-specific exemptions of standards for soil, fish, watersheds or wildlife should be allowed in your FEIS.	The Lost Creek-Boulder Creek project is consistent with all applicable Payette National Forest Plan standards and guidelines.
269	2. Your use of BOISED to predict what will happen to fish and watersheds is not scientifically valid. See Whiskey South litigation and court decision. You should use more advanced EEPP, which is much better. Disclose, discuss and analyze that BOISED is valid for coarse comparisons between alternatives, but cannot predict. Acknowledge this and make appropriate decisions to INSURE compliance with the CWA.	BOISED model assumptions and limitations are discussed in FEIS Appendix E and in the Watershed Effects Analysis. The WEPP Model was used to develop the Project Design Features for the treatments in RCAs. It is a site-specific model to estimate sediment delivery distances. No waterbodies are listed for sediment in the 2010 Integrated Report nor have they been previously. Compliance with BMPs insures compliance with the CWA.
270	3. Don't use 1984 EHE model. Better to use more up to date ones available from state agencies.	See response to comment #260. A promising elk habitat model from the PNW Starkey research station is in Beta testing and not yet deployable to habitat types on the Payette NF.
271	4. The Range of Alternatives for this project was too narrow. Every one except the No-Action alt. were for huge logging. Should have considered just cutting for ground squirrels etc.	The Lost Creek-Boulder Creek project is proposed as landscape scale restoration project. Across the 80,000 acre project area, needs for vegetation, watershed, and fish and wildlife habitat restoration were identified. These actions included modifications made to the current recreation infrastructure that would contribute to reducing resource damage. The IDT developed the proposed action (Alternative B) based on the purpose and need identified for the project area (FEIS section 1.7). Action alternatives C, D, and E were identified based on internal and external comments received during scoping. While each action alternative has a difference emphasis, alternatives are still developed to meet the purpose and need of the project. Because of the landscape scale of the project, an alternative with a single focus as suggested in this comment was not considered. See FEIS section 2.2.1 for alternatives considered but not developed.

Comment #	Concerns	Comment Response
17. Lost Valley Reservoir Company, David R. Tuthill		
272	Our concern is the Project fails to consider the potential to increase the size of Lost Valley Reservoir from its present capacity of about 10,000 acre-feet to an enlarged capacity of about 30,000 acre- feet. The proposed reservoir enlargement has been on record since 1993, and is reflected in an Application to Appropriate the Waters of the State of Idaho, No. 67-7938, a copy of which is attached. This application was filed with the Idaho Department of Water Resources (IDWR) on June 2, 1993, was subsequently advertised and was protested. The application has an extensive history and documentation in the files of IDWR regarding the application, available online, totals 167 pages. The application is still live and valid in the records of IDWR, and the effort to enlarge the reservoir consistent with the application was renewed this spring. The reason for this comment letter is some of the Project proposals are not compatible with enlargement of the reservoir. To this extent we request discussions to seek a way to meet the objectives of the Project while enabling better management of the water resources of Idaho by enlarging this valuable reservoir. We pledge our efforts in this regard.	This comment was received on 12/17/13 via comments in-box. Deadline for comments was 12/16/13. Because the application to increase the size of Lost Valley Reservoir has not been approved by the Idaho Department of Water Resources the Forest Service does not consider it to be a reasonably foreseeable action for the Lost Creek-Boulder Creek analysis.
18. Native Ecosystem Council, Sara Jane Johnson and Alliance for the Wild Rockies, Mike Garrity		
273	Native Ecosystems Council {NEC) and the Alliance for the Wild Rockies {AWR) would like to provide the following comments and questions regarding the proposed Lost Creek-Boulder Creek Landscape Restoration Project on the New Meadows Ranger District. At this time, NBC would like to request a "hard copy" of the- draft Record of Decision when it is released for public comment and review. We are-submitting a separate-Freedom of Information Act (FOIA) request for background information on this Project The lack of this background information on these 45-day comments, such as the Wildlife Specialists Report, and the draft 2011 Wildlife Conservation Strategy, is somewhat problematic for providing thorough input at this time.	FOIA was completed and transmitted on January 6, 2014. Request for hard copy of the ROD is noted.
274	1. Since we do not have a copy of the draft Wildlife Conservation Strategy (2011, Volumes 1 and 2), we are unsure as to the validity of these	Thank you for your comment. The draft Wildlife Conservation Strategy is available on

Comment #	Concerns	Comment Response
	strategies as being applied to the current project. We may subsequently challenge some aspects of this strategy with the FEIS is released, as we will then had a chance to review that document.	the Payette National Forest website.
275	2. We also do not have a copy of the Wildlife Specialists Report. The analysis of wildlife effects in the Lost Creek-Boulder Creek DEIS is based on information in that Report. Once we have had a chance to review this report, we may subsequently challenge some or more aspects of this report when the FEIS is released. For example, it is not clear why the Project Area would not provide habitat for the three-toed woodpecker, or the fisher.	Three-toed woodpecker and fisher are discussed in the wildlife specialist report (project record). Fisher was not included in the DEIS, but has been added to the FEIS, Chapter 3, Wildlife section.
276	3. The basis for this "restoration project" is invalid as defined in the DEIS. The ecosystem problem being addressed is supposedly the lack of fire in this landscape. However, why this is causing problems is never defined. There is some reference to the lack of white-headed woodpeckers due to a lack of fire, but no science was provided to back this up. It is not clear why a lack of fire, if this has indeed happened, is an ecosystem problem that needs treatment. What exactly are the ecosystem problems for wildlife that require logging? 4. The DEIS supposition that there is a lack of fire in this landscape is also seriously biased. The impact of fire control on fire cycles is a controversial topic, especially in the Rocky Mountains. The agency needs to provide both sides of this issue, including the science that reports that fire cycles are generally not out of their historical patterns. Please include a discussion of this science, including that provided by William Baker in his 2009 book on Fire Ecology in the Rocky Mountain Landscapes.	The purpose and need for the project are identified in section 1.7 of the FEIS. As stated in section 1.5.1 of the FEIS, the cause of the vegetation departure includes more than the “lack of fire”. The Forest Plan provides desired conditions for vegetation and habitat within the project area and this has been supplemented with more recent information including applicable science found in the draft WCS and additional applicable science. The basis for restoration is consistent with the Forest Plan. See FEIS section 3.6 for discussion on Family 1 species and specifically white-headed woodpecker habitat. Fire Ecology in the Rocky Mountain Landscapes by William Baker is reviewed in the Response to Literature Submitted/Cited table located in the project record.
277	5. The DEIS has identified a lack of fire in this landscape as an ecosystem problem, without even remotely discussing past logging and its effects on wildlife. This lack of cumulative effects analysis for wildlife makes the DEIS a violation of the NEPA. As just one example, please discuss what effects past logging has had on the white-headed woodpecker. What has logging done to goshawk, pileated woodpecker, great gray owl and flammulated owl habitat? 6. Please provide a map of past logging units, as well as a tabulation of	FEIS Appendix D contains a list of past activities in the project area and the dates when they occurred. The cumulative effects of past management (including logging) are captured in the current vegetative conditions and are discussed in Section 3.1.5 of the FEIS. See FEIS section 3.6 for discussion on Family 1 species and changes to white-headed woodpecker habitat from logging and fire exclusion. The existing condition of source habitats for Northern goshawk, pileated woodpecker, great gray owl and flammulated owls is also discussed in the Wildlife section of the FEIS and in the wildlife specialist

Comment #	Concerns	Comment Response
	when these acres were logged, in the FEIS; this map needs to show the location of past logging units and proposed logging units, and be at a scale the public can gain meaningful information.	report.
278	7. #6 above brings up a huge flaw of this DEIS, in that the Project Area is far too large to provide meaningful information to the public. The 80,000 acre project area maps are generally impossible to decipher as to content for all the various topics addressed. It is not clear that any inventory of old growth habitat has been done, as the DEIS claims there is no such habitat on over 60,000 acres of forest! There is almost no inventory work done on wildlife, so wildlife use, including nesting areas for sensitive species, does not exist. There is no information on snag habitat as well, including in past logging units, or within drainages. Averaging out snag habitat across 80,000 acres is not a valid proxy for cavity-nesting birds, as this approach requires that snags and wildlife have to be in places of the forest where no snags and no associated wildlife actually occur, something that is impossible to occur. This project, in order to meet the requirements of the NEPA, needs to be broken down into much smaller units where adequate information and analysis can be provided to the public.	Higher resolution maps are available in the project record. Refer to section 1.13 of the FEIS for further information regarding old forest / old growth and snags. Desired conditions for snags are not specified as an average across the entire project area but are considered at the activity area scale (Forest Plan, page A-9). For the purposes of this project, activity area could be considered synonymous with stand and/or treatment unit. The Forest also recognizes that attainment of desired conditions may not be possible in some areas within this planning cycle. As disclosed in the Forest Plan, (see page A-12), "Many of our forested stands will not be able to meet desired conditions for many decades….Vegetation within landscapes is dynamic, and it is anticipated that desired conditions will be achieved in a dynamic fashion."
279	8. A meaningful analysis of project impacts on snags requires that the cumulative effects of past logging be measured. What are the snag numbers in past logging units? How much of a drainage can lack forested snags and still provide adequate habitat to cavity-nesting birds? What cavity-nesting birds will continue to nest in thinned stands? How will the reduction of insects and disease, as well as snag recruitment, affect associated species in logging units? What is the expected reduction in snag recruitment levels, as well as foraging habitat for woodpeckers, and how much of a drainage can have compromised habitat without affecting local viability of cavity-nesting birds and woodpeckers? The current best science indicates that cavity-nesting wildlife need at least 4 snags per acre over 10 inches dbh for viability. Where is this requirement meet within drainages, and what does this level of habitat indicate about viability of local cavity-nesting populations? How will the proposed project affect this current viability for these species? How can fragmentation effects be measured as well	See Table WL-3 section 3.6.3 for snag data from the draft WCS. Where deficiencies exist (e.g. PVG 2) additional live trees would be retained for future snag recruitment. In addition snags are expected to be created from prescribed fire.

Comment #	Concerns	Comment Response
	from logging?	
280	9. In regards to cavity-nesting birds, the DEIS does not describe why the white-headed woodpecker needs forests to be logged for viability. If this is so, why is this species responding to all the past logging that has occurred in this landscape? 10. The DEIS implies that logging is a valid replacement process in the ecosystem for fire. However, logging removes biomass (snags and logs), and fire doesn't. How can logging be considered a natural process when it removes biomass, something that does not occur in natural ecosystems? 11. Please define why natural fire would not be a better option in this landscape rather than logging, with respect to # 10 above.	9. See FEIS section 3.6 for discussion on Family 1 species and changes to white-headed woodpecker habitat from logging and fire exclusion. 10-11. In many areas, current fuel loads are higher than expected under historical conditions and therefore any fire associated with these current vegetative conditions would likely be more severe than desired. The analysis does not contend that logging is a replacement for wildfire, and proposes to use thinning and harvest as tools, along with prescribed fire, to move the project area closer to HRV and historic fire regimes.
281	12. It is clear that there is an ecological problem with motorized access in this landscape. Why isn't there an alternative that just addresses this problem, without removing wildlife habitat (goshawks, flammulated owls, pileated woodpeckers, great gray owls, elk, etc)? 13. The Project will make the problem of extensive motorized access in this landscape much worse, by building yet more roads, and opening roads that have started to revegetate. In addition, unauthorized routes will also be used for logging. Getting rid of many of these roads clearly would benefit the ecosystem. This would actually be restoration, which more logging is not. Even if roads are decommissioned, they still remain as a travel route for the public, including hunters as possibly predators.	12. Effects of and from motorized use is documented in the Recreation, Fisheries, Soils and Watershed sections of Chapter 3 in the FEIS. The purpose and need for this project is wider in scope than just recreation, thus many resources and projects are combined into this one project. The analysis of multiple resources has been completed in the FEIS and the Responsible Official can choose which portions of the analysis he wants to implement. 13. The project proposes to decommission over 100 miles of unauthorized routes (see FEIS Chapter 2, Alternative C). These activities, combined with system road treatments, will reduce the overall road density in the project area. Where appropriate the goal of road decommissioning is full obliteration, which the best available science shows to be an effective method of restoration. Mitigation measures and Project Design Features are in place to minimize any unauthorized motorized access.
282	14. The problems caused by existing and proposed road management are poorly addressed in the DEIS. For example, there is no analysis of the impact of these roads on snag habitat. Loss of snags along roads, in addition to loss of snags in harvest units, likely represents a significant loss of habitat to wildlife, a loss that was ignored in the DEIS. There is also no analysis of road impacts in the summer on big game, or “habitat effectiveness," or on elk vulnerability in the fall. These impacts are brushed over, and not clearly defined to the public. If these roading effects had actually been analyzed, the agency may have come up with	See FEIS Chapter 3, Wildlife section for cumulative effects for snag dependent species. .Current LRMP direction and the best available science support the Forest in moving toward HRV. The FEIS section 3.6.4 discusses effects to elk habitat. Overall road densities under each of the action alternatives are reduced (these roads are primarily old road/skid trails, etc. and are not “open” roads currently classified as “open” under the MVUM). The decommissioning of unauthorized and closed system roads should be beneficial to many wildlife species. Alternative C proposes more road decommissioning than the other alternatives.

Comment #	Concerns	Comment Response
	different alternatives, ones that do not require increasing road access during the life of the project.	
283	15. The FEIS needs to discuss summer habitat effectiveness as well as big game vulnerability in this landscape, and how the current road system and hiding cover influence it, as well how the proposed project will affect these conditions.	Currently, there is no Forest Plan direction on summer habitat effectiveness. Reductions in overall road densities would likely reduce fragmentation and improve summer range.
284	16. The agency has misrepresented the Hillis methodology for evaluating elk vulnerability. The definition of security in the DEIS is nothing like what Hillis requires. The FEIS needs to clarify this, and identify that the Payette's method of analyzing big game security is not the Hillis method.	Elk are analyzed in Chapter 3, Wildlife section of the FEIS and the wildlife specialist report.
285	17. If roads are not open to the public, are they still considered as an open road for wildlife if motorized traffic is occurring?	Open roads are only those roads classified as “open” under the Payette National Forest Travel Plan. If a road is “closed” and still receives use by motorized vehicles, it is still analyzed as being closed, although the effects of unauthorized use are discussed if relevant to a specific resource (i.e., elk).
286	18. There are no elk wallows or licks mapped in the Project Area. How does the public know that these will be avoided by at least 400 feet?	During layout and prep of harvest units they will be inventoried, mapped and 400’ buffers placed on them. See FEIS Table 2-6, PDF 62.
287	19. There are no specific mitigation measures for the Forest Plan requirement to restrict activity in fawning and calving areas from May 1 to July 15. How will these restrictions be applied?	See FEIS Chapter 2, Table 2-6, PDF 61.
288	20. We could not find a definition of hiding cover in the DEIS. Please provide this in the FEIS. 21. Please provide maps of hiding cover within drainages of the Project Area, define how existing hiding cover is affecting wildlife. Does it meet the 40% level recommended in the literature currently, and after this project is implemented?	Hiding cover is discussed in the FEIS section 3.6.4, in Table WL-20, and is defined in the FEIS glossary.
289	22. Why is big game winter range and calving habitat being treated? What	The Forest received recommendations from the public to treat winter range and foraging areas near to potential calving habitat to improve forage production and nutritional

Comment #	Concerns	Comment Response
	monitoring data is available to indicate this will benefit big game?	value, respectively. The Forest used RMEF data for winter range and elevational models that include habitat types for calving habitat.
290	23. Why is this project considered important for ecosystem restoration when opening forests will increase big game vulnerability to predation by wolves, lions and humans? Why isn't there an alternative that addresses this problem, especially as restoration could lead to lower elk populations?	As documented in the LCBC FEIS and in the WCS DEIS, forests that have become more dense than under historic conditions (such as under a frequent fire regime) may provide hiding cover for elk, but at the "expense" of those wildlife species associated with more open forests, such as the white-headed woodpecker. Elk numbers are currently meeting IDFG objectives but if numbers were to decrease IDFG may need to alter their season or hunt structure. While hiding cover will be reduced under the action alternatives, the project proposes to improve elk security by placing effective barriers on closed and unauthorized roads or by removing closed and unauthorized roads from the landscape. Alternative C would treat fewer acres of forest towards the HRV and would close or remove more roads; hence it provides more security for elk than the other action alternatives.
291	24. There is no analysis in the DEIS as to the effect of prescribed burning on big game hiding cover.	The effects of burning would vary depending on weather and understory fuels. This topic is discussed in the FEIS section 3.6.4 under Family 5 rocky mountain elk.
292	25. There is also no analysis in the DEIS as to the effect of prescribed burning on wildlife associated with sage brush habitat. How much sagebrush habitat will be burned, why will this be done, and what wildlife species will it adversely affect? 26. Is sagebrush being burned on big game winter, fawning and calving range? If so, why, and what impact could this have on these species?	Due to concerns with greater sage grouse (listing under the ESA) and other sagebrush obligate species, we do not burn sagebrush. Additionally, the Payette National Forest is not considered within this species historic range. Primary sagebrush within the project area is Mountain Big Sagebrush. Sites are generally unsuited for commercial timber activities. In the last 5 years of prescribed fire on the District (broadcast more than 12,000 acres). We have kept direct ignitions outside of sagebrush and hence, we have observed insignificant impacts on this species. Sagebrush would not be targeted for burning in this project. "Pre-settlement fire return intervals in mountain big sagebrush communities varied from 15 to 25 years. For example, mountain big sagebrush sites in southwestern Idaho show evidence of about 3 to 5 fires per century prior to 1910. Very frequent fire suppresses mountain big sagebrush establishment, while long fire return intervals promote tree invasion into mountain big sagebrush communities. Arno and Gruell considered average fire intervals of about 20 years sufficient to control mountain big sagebrush invasion in southwestern Montana grasslands ((Fire Effects Information System website (http://www.feis-crs.org/). Mountain big sagebrush plants top-killed by fire will not resprout. Regeneration of mountain big sagebrush is from on-site or off-site seed. Depending on circumstances of

Comment #	Concerns	Comment Response
		the environment and seed source, mountain big sagebrush seeds may sprout profusely the spring after burning, or very sparsely. These relationships are not well understood. Seedlings can grow rapidly and may reach reproductive maturity within 3 to 5 years. Where mountain big sagebrush is dominant and persistent (climax or long-term seral), fire often reduces its dominance and alters species composition for the first few years. If exotic species have not altered successional pathways, vegetation eventually reverts to its previous composition". (Fire Effects Information System website (http://www.feis-crs.org/)
293	27. The DEIS does not define what the habitat objectives are for big game winter and fawning/calving range. How with the proposed treatments meet these objectives? 28. There is no discussion about the Forest Plan requirement for thermal cover on big game winter range. 29. It was not clear why logging and burning is planned in big game security areas, areas where hiding cover is already limited. 30. This project, while being claimed as "restoration," will clearly have a severe adverse impact on big game species. Please define why restoration efforts do not include management of big game habitat. Isn't this arbitrary?	Objectives are to move toward HRV while improving winter range forage and nutritional quality in areas likely to be used by calving/fawning big game. Thermal cover will be maintained as per WUGU14. Thinning will be conducted in a manner that moves the respective PVG's toward HRV consistent with the best available science. This is necessary to meet the purpose and need of the project. Under the action alternatives in the FEIS, mule deer may benefit as they are often displaced by elk, i.e. lower elk numbers may lead to improvements in mule deer populations. In addition, elk have benefited from fire suppression and a higher density closed canopy forest, and decades of wildlife management. Recent research suggests that many of the PVG's in the project area were more open and fire resilient. Wildlife species and populations that have adapted to these more "unnatural" conditions will likely be reduced under the action alternatives.
294	31. What are the criteria for "ecological health" for wildlife. 32. What are the criteria for forest stand health, and how do these relate to wildlife?	There are various definitions of forest health. Clarification between the FEIS and DEIS has been made and any references to forest health have been clarified as to what specifically is meant.
295	33. The overlap between this DEIS and the DEIS for the Forest Plan amendment is confusing. This project is being designed as per the amendment, but the amendment may be challenged once it is finalized. How would this affect this project?	See response to comment # 63.
296	34. There is no information as to how logging and burning will affect whitebark pine, a sensitive species.	Currently, no treatments are planned for whitebark pine populations or habitat. Project design features provide protection to threatened, endangered and sensitive species. Ground disturbing activities would be stopped in any areas where previously unknown

Comment #	Concerns	Comment Response
		listed or sensitive botanical species are discovered until a botanist reviews the affected area.
297	35. It is not clear that all the wildlife surveys required by the Forest Plan and noted in the DEIS, will be done "before" project activities occur will actually be done, or if the quality of surveys will be adequate. This is a violation of the NEPA to claims that surveys will be done in the future, as the public has no assurances this will actually occur, or to know the results and how detections will be dealt with in this project.	The analysis in Chapter 3 of the FEIS is based on the assumption that surveys such as those cited by the commenter will occur. Project design features in Table 2-6 also state that pre-implementation survey work and clearances will occur.
298	36. Although the DEIS claims there is no old growth in the 80,000 acre project area, a questionable claim, it is also noted that old growth can be logged as long as the number of large trees remains above the criteria. The agency needs to be able to provide the research and monitoring data to demonstrate that logged old growth still meets the criteria for wildlife, such as the goshawk, flammulated owl, great gray owl, pileated woodpecker, and the host of forest songbirds that require older, undisturbed forest habitat. The “man made" old growth definition has to be the same as the "wildlife" definition of old growth.	Refer to Section 1.13 of the FEIS for further information regarding old forest / old growth.
299	37. There appears to be no inventory data on the MIS pileated woodpecker for this project area, or possibly for the Forest. How can the agency claim that the project, which will remove large amounts of pileated woodpecker habitat, will not affect local viability? What are the criteria for insignificant effects on local woodpecker productivity? 38. If the agency is going to claim that viability of an MIS will not be affected at the Forest-wide level, the supporting data needs to be provided. What is the population trend of the pileated woodpecker on the Forest? 39. The analysis of pileated woodpecker habitat is invalid as per number of pairs that can be supported in this project area. Habitat cannot be “averaged out" across a landscape. It has to be adequate within individual pileated woodpecker territories, which are estimated to be 1000 acres. Please evaluate habitat conditions currently and as planned within individual 1000 acre potential pileated woodpecker territories. Habitat objectives are available in the current literature, including a number of articles by Dr. Bull cited in the bibliography of the DEIS.	The pileated woodpecker and white-headed woodpecker are MIS on the Forest. Surveys are conducted Forest-wide, with an emphasis on areas on the west side of Forest where the LCBC project is located. Survey reports are located in the Wildlife Specialist Report and in the Forest Plan monitoring reports. P.269 of the draft WCS describes the existing condition for representative PVG’s in the project area for pileated woodpecker and the need for restoration. Figure 3-51 of the draft WCS on p. 270 shows the historic change in Source Habitat for the watershed(s). Historically, source habitat for pileated woodpecker was less abundant on the Lost Creek side of the project, where a greater percentage of PVG 2 and PVG 5 occur. Under historical conditions with a more frequent fire regime, these PVGs did not provide suitable habitat for pileated woodpeckers. Habitat has increased for this species on the Lost Creek side of the project due to the ability of this species to take advantage of departed conditions (i.e., more dense forests). Under the action alternatives canopy closure will be reduced more on the Lost Creek side of the project, as it was historically more open. Canopy cover in the moderate and high class on the Boulder Creek side is expected to be sufficient to provide for 10+ pairs of pileated woodpeckers depending on

Comment #	Concerns	Comment Response
	How many of the current potential territories meet the minimum criteria of habitat for this species both now and after project implementation. 40. It is not clear why this "habitat restoration" project requires significant habitat loss for a Forest MIS, the pileated woodpecker. Isn't this illogical?	the Alternative chosen. More discussion on the trade-off to species that inhabit denser forest conditions when restoring Forests to a more open condition is provided in the Wildlife section, Chapter 3, FEIS.
300	41. It is not clear that the white-headed woodpecker requires logging for viability. Opening a stand may reduce canopy closure to more open conditions preferred by this species, but it will reduce all the other habitat features important to this species, such as dead/dying trees, and conifer seed sources. Please provide the research that demonstrates that logging resulted in an increased population of white-headed woodpeckers, and will also have similar results for this project. 42. There are apparently only 731 acres of white-headed woodpecker habitat in the 80,000 acre project area. How much habitat has already been removed due to logging? 43. There is no information as to what existing canopy cover is in areas that are to be “restored” to white-headed woodpecker habitat. They use canopy covers from 20-56%, which seems like a wide range. Also, if stands with dense canopies are supposedly being logged to create white-headed woodpecker habitat, how long will it be before these naturally dense habitats return to their natural density levels? Isn't it illogical to try to change naturally dense habitat to more open habitat for one wildlife species? Could it be that the real reason for logging is for timber production, not the white-headed woodpecker?	See section 3.6 for analysis on white-headed woodpecker. Current conditions (higher canopy, smaller diameter trees) are departed from what they were historically (open canopy, larger diameter trees). . Maintenance of habitat would occur through prescribed fire and creation of snags used for nesting and foraging.
301	44. There is no information in the DEIS as to how the tradeoffs between supposedly creating white-headed woodpecker habitat, a species that may not even be present in the project area, with removing large amounts of habitat for many other species, including elk, goshawks, pileated woodpeckers, flammulated owls, and great gray owls, for a start. The loss of forest songbird habitat will also be very high. We could not find any where in the DEIS as to how this huge lack of balance between what will be gained and what will be lost was made, or how it affected alternatives. All alternatives emphasize this imbalance	Alternative C would mechanically treat fewer forested stands and proposes the most decommissioning of closed and unauthorized roads. For these reasons, it provides for greater security and more habitat for species that use denser, mixed conifer forests, such as pileated woodpeckers, and may be the best alternative in general for wildlife. All alternatives include Project Design Features to ensure protection of nest sites, conservation of goshawk post-fledging areas, maintenance of nesting and rearing areas for great gray owls and other design criteria (see chapter 2). The WCS is based on the “Best Available Science” p.404 Volume 1. Also, see Appendix 1 p. 1-6 of the WCS for “Conservation Concepts” that apply to wildlife

Comment #	Concerns	Comment Response
	between wildlife species emphasized, although to varying degrees. Why isn't there an alternative that emphasizes the vast majority of MIS and sensitive species, as well as songbirds, in the Project Area? 45. There are easily 50 plus songbird species, likely more, that breed in the Project Area. Why aren't these species considered important for an analysis of project impacts, as well cumulative effects? The project will remove large amounts of habitat for almost all these species, from the dense overstories they require for shade, hiding and thermal cover, to the dense understories that provide cover and foraging sites, to dead trees that provide nesting cavities for over 25% of these birds, to the huge loss of conifer seed sources that will result from overstory thinning. The agency clearly has not taken a "hard look" at project impacts by ignoring this huge suite of vulnerable species.	habitat management. Miscellaneous Partners in Flight birds and migratory birds are covered in the Wildlife Specialist Report.
302	46. There should be an appendix to the DEIS that defines the habitat models used for species evaluated in that document. The public has no information as to habitat for wildlife is being measures/defined.	Modeling is based on data in the draft WCS (USFS 2011). Each species has “Site Scale Modeling Parameters for Source Habitat. See Section 3.6 of the FEIS and also the wildlife specialist report for more detailed information on which PVG’s are habitat for each analyzed species.
303	47. The Project Area appears to be relatively high quality habitat for the flammulated owl, with so many locations obtained during surveys. Isn't it a violation of the Forest Plan to destroy so much of their habitat in this Project? 48. The Targhee Forest Plan has protective measures for flammulated owl habitats that cannot be treated, in 30 acres. This should also be done for the Payette, since logging will destroy habitat for this species, as will underburning. 49. There will basically be no protection or mitigation for this sensitive species in the Project Area, since nest sites are not currently known, nor will they be known for project implementation. The current population of flammulated owls will likely be severely reduced by this project. How can this be consistent with a "restoration project?"	The science incorporated in the draft WCS and in the current LRMP encourages the Forest to restore habitats for Forest species by moving toward HRV. Habitat will not be destroyed but may be arranged differently post treatment to mimic what may have been there historically. PDF 63 provides for additional surveys prior to implementation. Flammulated owls have adapted to the existing conditions and are likely occurring at higher densities than they did historically. The science used to develop the draft WCS encourages us to restore habitat for Family 1 species while maintaining habitat for Family 2. See p. 202 of the draft WCS. We are still managing for flammulated owls. This species will still be well represented but its habitat will be distributed differently in the project area and should be more resilient to uncharacteristic fire.
304	50. The analysis of flammulated owls was the first place we noted the description of “short term” impacts, many of which are stated to result from logging and burning. Please define what short term means. Is this	The Payette National Forest Plan defines the following parameters (p. III-4): 0-3 years = Temporary

Comment #	Concerns	Comment Response
	30 years? Short term as per NEPA is about 5 years. Why would 30 years be short term? 51. As with the flammulated owl, the analyses of many other wildlife species for the project notes that effects will only be "short term." However, it was never clear exactly why conditions would return quickly to logged/burned areas, to pretreatment levels. How is this being measured as per basal area, average dbh, understory levels, and overstory canopy cover?	Short Term = > 3 -15 years Long Term = >15 years Treatments (e.g. prescribed fire, commercial thin, pre-commercial thin, etc.) in respective PVG's will vary depending on their degree of departure from HRV. See Appendix A-17 of Payette National Forest Plan and Morgan and Parsons 2001.
305	52. There have been no surveys for the great gray owl, so impacts of this project are unknown. However, due to the expansive nature of the treatments, almost any nesting great gray owl will be adversely affected. Again, why does this constitute a "restoration project? 53. The great gray owl is clearly an old growth species, as it requires decadent old growth for nesting. The claim that logging, including in Alternatives B and C, will maintain great gray owl habitat (old growth) is clearly in error for this species. What science has reported that logging maintains the quality of great gray owl nesting habitat? 54. The DEIS notes that if great gray owls are found in treatment areas (it is not clear how they will be found) that there are design features for mitigation. These features, and their effectiveness, are not defined, however. What are they, and how do you know they will work?	Great gray owls are analyzed in the wildlife section, Chapter 3, FEIS. We have surveyed and documented great gray owl in the project area but no nests were found. PDF 60 requires protected activity centers (PAC's) when nests are located. Nesting habitat near meadow complexes would be retained. PDF 60 requires nest stands within 300ft. of meadows to be retained. We have identified three meadow complexes that may provide nesting habitat. During spring surveys the Lost Valley area did produce at least one sighting, but no nest has been identified. Surveys will be continue to be accomplished annually as part of implementation.
306	55. There is no analysis in the DEIS as to how forest thinning will affect prey species for the great gray owl, such as red-backed voles who like dense forests with lots of downfall, or how it will affect the ability of these owls to snow-plunge in the winter, due to hardening of snow due to forest thinning.	Meadow complexes are used by Great Gray Owl to hunt. Downed wood adjacent to meadows would be maintained or improved where necessary to provide for cover for prey.
307	56. The DEIS claims that historically there were no dense forests in most of the Project Area. Please provide the habitat types that occur in all of these forest stands and identify the typical basal area and canopy-cover for these stands, to support the claim that these forests were never dense until fire control started.	The desired conditions for vegetation are based on the Forest Plan. Additional considerations regarding the desired conditions are based upon the best available science (i.e. Hann et. al. 1997, Wisdom et. al. 2000, Stine et. al. 2013, Franklin et. al. 2013) as discussed in section 3.1.2 of the FEIS. Further information can be found in Section 3.1 of the FEIS and in the forested

Comment #	Concerns	Comment Response
		vegetation specialist report and project record.
308	57. The DEIS claims there is habitat for 6-7 goshawk territories. Please provide the potential territories for these pairs on a map, and include the PFAs as well. Also, please define the habitat within each of these territories as per the Southwest Guidelines, both currently and what they will be after project implementation. What is the status of current and projected conditions in these territories as per quality as breeding habitat as per the Southwest Guidelines? How will this quality change with the Project? 58. Please define the expected impact of forest thinning (both commercial and precommercial) and burning on goshawk prey species including the red squirrel and snowshoe hare. What will be the project impacts on foraging habitat within each of the potential territories? 59. Please define how the PFAs will be managed for this project. 60. The Southwest Guidelines do not recommend treatment of existing nest stands, only for nest stand recruitment. Exactly what type of treatments will be done for goshawk nest stands in this Project? 61. The DEIS claims that understory thinning benefits goshawk foraging. This is outdated science. There is more prey in dense understories for goshawks; the reduce prey in more open stands compensates for goshawk foraging somewhat, however, because prey is more easily obtained. These factors balance each other out, so there is no reason to burn the understory for goshawks. 62. As with the other impacted species, a reduction of goshawk habitat by at least 13-41% does not constitute "restoration," but a habitat removal project. 63. The goshawk section notes that no action will not meet the Wildlife Conservation Strategy!!! Where is the science that logging is required for goshawks? What is missing that logging/burning will create? 64. Please address the impacts of past logging on goshawk habitat. This habitat appears to be in short supply in this landscape, with only 34,729 acres claims as goshawk habitat. This would be only 54% of the forested habitat in this landscape, and only 44% of the habitat in the total project area. Why is this so low?	57. Goshawk are analyzed in the wildlife section, Chapter 3, FEIS and in the Wildlife Specialist Report. Maps of PFA's that include alternate and replacement nests are included in the report. The "Southwest Guidelines" (Reynolds et al. were used to define and conserve nest sites and PFAs. Goshawk home ranges are roughly 6,000 acres (see Reynolds et al p. 3) and can be defended up to this scale. As noted in Reynolds et al. (1992) "Forests within goshawk nesting home ranges should be an interspersed mosaic of structural stages …" These structural stages also vary in amount of cover. The goshawk habitat model used in the LCBC analysis (medium and large trees and moderate to high canopy cover) focuses on habitat that would be suitable for nesting and PFAs, and thus is more conservative than models derived from the Reynolds et al. report. The Forest identified 7 PFAs based on the location of known goshawk nest sites, but the associated home ranges are generally denser, with larger trees than expected based on the Reynolds et al. data. 58. Foraging habitat should be enhanced. 59. PFA's will be managed based on GTR217 (Reynolds et al. 1992). 60. The characteristics of the nest stand will be maintained per the direction in Reynolds et al. 1992 61. Rx fire will be applied in a mosaic that emulates HRV for the associated PVG. Where fire is not necessary to achieve objectives, it may not be used. 62. Northern goshawk are a generalist species that have benefited from fire suppression and past forest management. They will use habitat departed from HRV but the habitat is not sustainable in the long-term. Although habitat will be reduced for northern goshawk, other species such as white-headed woodpeckers should benefit. See also response to 308-57 (above). 63. The Forest Plan (Appendix A-1-A25) states the PVG's are departed from HRV and that our desired condition will not be achieved unless we do restoration. The Purpose and Need of draft WCS p. 6 also compliment this approach. 64. See wildlife specialist report for more information.

Comment #	Concerns	Comment Response
309	65. The lynx analysis claims that the LCAS is the guiding document for lynx management. The DEIS notes there is a Forest Plan standard that requires that lynx habitat not be degraded or impeded (retard) progress to attain desirable habitat. Lynx habitat will be burned in this project, which is a violation of this direction, since removal of forest understory habitat degrades lynx habitat. 66. Lynx are not known to be present in the Project Area in recent times, although it is not clear how this could be determined, as the National Lynx Surveys were very limited surveys. The DEIS also notes that there have been no winter surveys in much of the areas that is inaccessible in the winter. There is no discussion as to the effect of past logging on lynx habitat, especially key lynx winter habitat as multi-storied older forest habitat. Is this loss of habitat from logging a factor in the possible lack of lynx in this historical habitat? 67. Consultation is required with the U.S. Fish and Wildlife Service on the Forest Plan level as well as the site-specific level. There was no mention that the agency has an incidental take statement for lynx on the Payette Forest.	Understory burning would be conducted in the fall when conditions are such that fuel moistures do not allow for high intensity fire. Many shrubs, grasses and forbs that serve as habitat for lynx prey items respond favorably to this type of fire. All Forest Standards and Guidelines would be met. The FEIS, Chapter 3, Wildlife section and Biological Assessment (project record) analyze the effects to lynx.
310	68. Please discuss the possible impact of recreation shooting on the threatened ground squirrel.	NIDGS are susceptible to mortality by plinking (small caliber shooting/target practice) in occupied habitat. Enhancing their habitat and population over their probable historic distribution may reduce this susceptibility.
311	69. What monitoring data is available to indicate that actions planned in the occupied ground squirrel habitat in the project area (1190 acres) will benefit this species?	Opening the canopy to allow more light to reach the forest floor when complimented with low intensity fire has been shown to promote the forage that NIDGS prefer (forbs and grasses). The NIDGS colony at Lost Valley Reservoir is an example where populations have expanded. To validate assumptions on the benefits of forest treatments for NIDGS, the Forest has partnered with the USGS and University of Idaho to monitor effects to NIDGS.
312	70. The status of old growth in the project area is unclear. The DEIS first claims there is none there, yet it is noted that each stand will be reviewed to determine if it provided old forest habitat. Please summarize what the old growth inventory entailed, and provide these results in the FEIS.	Refer to Section 1.13 of the FEIS for further information regarding old forest / old growth. Additional information can be found in section 3.6 of the FEIS and the wildlife specialist report (project record) contains more information regarding old forest habitat

Comment #	Concerns	Comment Response
		Data utilized in the analysis is disclosed in Chapter 3 of the FEIS and more information is available in the project record. Refer to the project record for information on old forest in lieu of old growth, consistent with the current LRMP.
313	71. Please discuss past impacts on old growth from logging and firewood cutting along the high number of authorized and unauthorized roads in this landscape (473 miles of drivable roads). 72. The impact of roads on old growth, as well as snags, is clearly not being managed by the Payette Forest. The DEIS at 302 notes that the Forest will continue to open roads for firewood harvest, even though there is no information on snag habitat in this landscape.	Refer to Section 1.13 of the FEIS for further information regarding old forest / old growth. Additional information can be found in section 3.6 of the FEIS and the wildlife specialist report contains more information regarding old forest habitat
314	73. The DEIS claims that burning will increase snags. Yet burning destroys large snags, and creates high numbers of very small snags, which are not useful to wildlife. This needs to be clarified in the FEIS. 74. The expected loss of large snags from the prescribed burning program was never evaluated. 75. The DEIS notes that logging will reduce snags. Snags are key to at least 25% of forest birds. It is not clear why a reduction of snags is thus considered habitat restoration.	Prescribed fires have and would continue to be applied in a very mosaic pattern and not all burned snags will immediately fall. Past prescribed fires have increased total snags across a burn block and this has occurred in all tree species and size classes. Snag recruitment is essential to cavity nesting species and is often a goal for wildlife. This cycle is part of the natural processes that we intend to maintain and/or restore. Snags would not be felled unless they are a hazard to personnel during treatments.
315	76. It is not clear why fisher and three-toed woodpeckers would not have habitat in this project area.	Initially, both these species were analyzed in the wildlife specialist report but were not discussed in the EIS, because the majority of habitats used by these species occur at elevations above where most of the proposed treatments would occur. In addition, the project designated the pileated woodpecker as a “focal species” (also a Forest Plan MIS) to represent the needs of other species in Family 2 (such as the three-toed woodpecker and fisher). Effects to fisher are now disclosed in the FEIS, in part due to recent sightings of a fisher in the project area.
316	77. The DEIS provides terminology for forests that is difficult to grasp for the public. It is unduly complicated as per terminology, as well as the various (many) categories of forests and tree sizes. Maybe this is being done to try to convince the public that the agency has done the analysis necessary to plan such a huge project. This is very misleading, as there is almost no wildlife survey work that has been done. The public does	Thank you for your comment. We are always striving to use plain language and avoid jargon, although we cannot avoid use of technical terms. The many categories of forest and tree sizes are necessary to describe management of the forest. Map packets distributed with DEIS on 11X17 inch paper were intended to give readers a

Comment #	Concerns	Comment Response
	not need this type of confusing information. It could be greatly simplified. Even the maps are difficult to understand or compare, because they are of such a small scale. A huge document may look impressive, but it is totally unnecessary for a clear, definitive analysis of a project that the public would actually read.	better perspective. Map packets are also included with the FEIS. Higher resolution maps are available in the project record and online.
19. Payette Forest Coalition, Dennis Murphy		
317	I am writing on behalf of the Payette Forest Coalition (PFC). The purpose of this letter is to provide comments regarding the draft environmental impact statement (DEIS) for the Lost Creek-Boulder Creek Landscape Restoration Project. The Coalition reviewed the DEIS documents and supporting maps at their meetings held on November 6 and December 5, 2013. The PFC compared the DEIS resource objectives and environmental indicators to the goals and objectives contained in the Coalition's Recommendations Report adopted by consensus on January 25, 2013. In addition, the review referenced the PFC letter submitted to the Forest Service during the scoping period; the letter identified factors for the Forest Service to address regarding the scale of restoration actions, duration of vegetation treatment benefit, and economic viability of the project. The Coalition thanks the ID Team for the effective design of alternatives to address issues raised during scoping of the proposed action. Based on the review, the PFC recommends that the outcomes of the preferred Alternative B can be enhanced with respect to the Coalition goals and objectives.	Thank you for your comment.
318	**Vegetation Restoration** • The action alternatives vary in the proposed acres of commercial thin/mature plantation (CT/MP) prescription. Although the CT/MP stands are of commercial size, they are not of commercial value in current markets. Treatment of these acres is a low restoration priority for the PFC.	While stands proposed for commercial thin/mature plantation (CT/MP) may not be commercially valuable at this time, the Forest believes these acres should be analyzed and considered for treatment to promote the growth of leave trees in these plantations, which are predominantly ponderosa pine, Douglas-fir and western larch. Thinning in plantations, as in any stands, is an important consideration for restoring historic conditions at various scales. Ignoring restoration needs within plantations (more than 25,000 acres of plantations within the project area) significantly limits restoration efforts

Comment #	Concerns	Comment Response
		and ability to meet project objectives. While very few markets currently exist for small diameter material, Alternative E was created to address the concerns regarding the cost of these treatments, as identified in the PFCs earlier comments, while attempting to achieve other objectives and issues of the project as defined in Chapter 1 of the FEIS. Chapter 3 of the FEIS analyzes the effects and tradeoffs of including/excluding these units from treatment.
319	The PFC's highest priority for vegetation restoration are treatments that retain or enhance the large tree size class, low canopy density stands in PVGs 1,2, 5 and portions of 6. We prefer Alternative D's proposed treatment of 9,900 acres and the intensity of thinning for large tree size class stands contrasted with Alternative B's plan for 7,800 acres and less intense thinning. However, we also conclude that treatments in PVG 6 merit additional consideration due to the potential reduction of habitat for elk and other species that need similar conditions: • The DEIS documents a deficit of moderate canopy cover class in PVG 6. • We prefer to have the thinning of large tree size class, high canopy cover class stands in PVG 6 shift stands to the medium rather than the low canopy cover class. • We request the Forest Service confirm that the additional acres and intensity proposed in PVG 6 still meet the vegetation objective that seral species are present and will be retained in the stand post treatment.	The effects to elk habitat and vegetation from the alternatives are disclosed in sections 3.1 and 3.6 of the FEIS. Alternatives C and E were created to address concerns regarding elk habitat. While retaining moderate canopy cover levels in all PVG 6 stands to retain additional elk security could be considered, this is less intensive treatment than any of the action alternatives. The IDT has not evaluated an alternative that proposes such low intensity treatments. The Lost Creek-Boulder Creek alternatives propose to retain clumps of trees, both commercial and non-commercial size, for wildlife and visual objectives. Black et al. (1976) proposes that cover and forage habitat be maintained in a 40%-60% mix.
320	Two additional habitat considerations should be incorporated: • Elk: Because the vegetation treatments adopted in the project reduce stand density, they should be combined with an effective road management component, including seasonal road closures, that provides for protection of the elk resource.	This analysis is built upon current MVUM designations. Implementing seasonal closures vs. long term closures would require moving roads identified as no open to the public on the MVUM to a seasonally open status, which is beyond the scope of this project. Long-term closures, decommissioning of unauthorized routes, and effective closures are expected to contribute to protection of the elk resource and reducing bull elk vulnerability during the rifle hunt.
321	• NIDGS: Intensive treatments to benefit NIDGS should be focused in Priority 1 areas where squirrels have a moderate or high probability of utilizing them. Priority 2 areas should still be treated at intensity comparable to the surrounding area.	See section 3.6 of the FEIS.

Comment #	Concerns	Comment Response
322	The Coalition does not have a consensus opinion of support for shelterwood regeneration methods included in Alternative D.	Thank you for your comment.
323	**Watershed Restoration** • The Coalition recommends that the project should include watershed restoration actions greater than those proposed in Alternative B. We support additional watershed restoration to mitigate the short-term impacts of the increase in mechanical harvest recommended above, compared to the Preferred Alternative. We also acknowledge that project implementation depends on the available budget as well as operational feasibility. We anticipate that a decrease in CT/MP acres and an increase in acres of large tree size class stands treated, coupled with an increase in the intensity of thinning, will result in both lower costs and increased stumpage receipts for this project. The improvement in the revenue-to-cost ratio should allow the Payette NF to accomplish watershed restoration over and above what is outlined in the Preferred Alternative. We encourage implementation of a suite of watershed restoration actions, including but not limited to road treatments. At the same time, we cannot predict the exact amount of restoration activity that is operationally feasible. We ask the Line Officer to consider the PFC's highest priorities for additional watershed restoration:	Thank you for your comment.
324	**Subwatershed Priorities** • Boulder Creek. The highest Coalition priority for watershed condition improvement is the Boulder Creek subwatershed. The subwatershed has a listed species, includes designated critical habitat, is an ACS priority, and also a national priority (the Watershed Condition Framework). We support additional road restoration actions as well as stream crossing removals which would improve the watershed indicators further towards a Class 1 watershed condition. In order to ensure efficient allocation of funds within the watershed, we continue to support the application of the GRAIP road inventory and modeling process for Boulder Creek prior to contracting for road restoration tasks. We also want to ensure that road obliteration decisions will be made based on the comprehensive benefit/risk assessment of the Travel Analysis Process in order to balance watershed condition	Alternative C proposes more road restoration miles within Boulder Creek and throughout the project area. The GRAIP model data for Boulder was collected in 2013 and was used to develop priorities for unauthorized routes. It will further be consulted to target maintenance needs on system roads. The Travel Analysis Process utilized a comprehensive benefit/risk assessment to develop recommendations for system roads. The range of recommendations was then analyzed through the NEPA process.

Comment #	Concerns	Comment Response
	improvements with the need for future forest management and public access (see Road Improvement Guidelines). Within those sideboards, we recommend that the Line Officer consider increasing the miles of system road decommissioning in Boulder Creek.	
325	• Lower West Fork Weiser River. The DEIS indicates in Alternative C that the watershed condition can transition from a Class 2 to a Class 1 (proper function) by reducing road density in the subwatershed. We believe that improving the condition class of a second watershed within the project area will be a significant restoration achievement and contribute to CFLRP performance	The Lower West Fork Weiser River is a small interfluvial area along the mainstem of the WFWR below the confluence with Lost Creek and the Forest Boundary. It is not a true watershed with one pour point for which effects can be analyzed. It is sparsely forested with few roads because not much logging occurred. The decommissioning of one half mile of road would move the road density to 1.0 miles/sq. mi, which maintains this subwatershed in the Class 2 Category. The DEIS incorrectly omitted the county section of 50127 which resulted in an incorrect calculation for road density. Additionally, considering that much of the main road 50127 still is within the RCA of the West Fork Weiser River, the transition from Class 2 to Class 1 would not be achieved.
326	**Project Wide Priorities** • The PFC recommends that the Line Officer consider restoring additional miles of unauthorized roads within the entire project area, with highest priority in Boulder Creek. Based on the DEIS summary tables, there are 27 miles more than what is proposed in the Preferred Alternative that should be considered for restoration. • Excluding Boulder Creek, we recommend further evaluation of roads identified for long-term closure. Instead of a long-term closure, we recommend that you identify roads that could be seasonally closed. The objective of this request is to maintain public access for firewood and recreation while providing elk security and other wildlife habitat benefits. Road improvements will likely be necessary to ensure watershed health is not compromised. The implementation of this approach also requires effective and enforceable methods of closure. • The increase in both the acres treated and thinning intensity caused discussion of potential negative impacts on watershed condition. We request that the Forest Service affirm or confirm in the FEIS the following statement from the DEIS: With implementation of all project design features and BMPs as described in this DEIS, the action would meet all Forest Plan standard and guidelines for water and riparian resources. WCIs are maintained or improved. The Coalition places a high priority on	The 27 miles of additional unauthorized routes proposed in Alternative C represent the unauthorized routes in the moderate priority category, and would provide for additional watershed restoration. This analysis is built upon current MVUM designations. Implementing seasonal closures vs. long term closures would require moving roads identified as not open to the public on the MVUM to a seasonally open status, which is beyond the scope of this project. The FEIS has been corrected to state "For the action alternatives, consistency with the Forest Plan is proposed to be achieved with the implementation of Project Design Features and BMPs." All action alternatives result in a degrade for the disturbance history WCI in Upper Weiser River, Lost Creek, and Upper West Fork Weiser River (see FEIS Table WS-13). However, the project However, these drainages also have proposed road obliteration which is expected to offset the effects of increased ECA due to eventual reduction in drainage network and flow routing during high flow events. Based on this, the project alternatives are consistent with Forest Plan standard SWST04. See FEIS section 3.3.4.2.

Comment #	Concerns	Comment Response
	effectiveness monitoring of watershed restoration actions documented in Appendix E of the DEIS.	
327	**Recreation** • The PFC recommends including the horse trails from Alternative C in the project. • We support the designated campsites planned for the Lost Valley Reservoir area. However, we do not support the change in the MVUM proposed in Alternative C that would allow dispersed camping only in designated sites across the entire project area. • We support reducing the miles of new OHV trail south of Lost Valley Reservoir compared to the Preferred Alternative as necessary to ensure the trails are appropriately located and sustainable. We request that additional opportunities to convert closed roads to OHV trails be identified within the project area and outside the Boulder Creek subwatershed.	Including the non-motorized trails for future use by equestrians and other non-motorized users would add to a more diversified recreation experience in the Lost Creek area. Additional opportunities (2 miles) over and above the 13 miles proposed in Alternative B in the DEIS were identified using unauthorized routes to be developed into OHV trail and added to Alternative B in the FEIS. This brings the total new OHV trail in Alternative B to 15 miles.
328	**Road Improvements** • The range of options for road decommissioning has been discussed frequently within the PFC. • We believe the attached road improvement guidelines will address issues raised, and recommend that the line officer include the guidelines in the project. • In addition, the risk factors contained in the Road Improvement Guidelines should also be incorporated in the review of road closures and the determination of the appropriate closure methods (long term or seasonal).	The Travel Analysis Process (see D3 Travel Analysis Report, 2013, project record) utilized very similar comprehensive benefit/risk assessment to develop recommendations for system roads. The range of recommendations were then analyzed through the NEPA process in the Lost Creek-Boulder Creek project. This analysis is built upon current MVUM designations. Implementing seasonal closures vs. long term closures would require moving roads identified as not open to the public on the MVUM to a seasonally open status, which is beyond the scope of this project.
329	**Legacy Trees and Large Tree Retention** • We encourage the Forest Service to provide details in the FEIS as to how individual large tree retention and large tree structure will be addressed at a stand- specific level (i.e., keeping the largest of the large). This includes large-diameter trees of species other than the targeted seral species.	Additional details regarding large tree and legacy tree retention/removal have been incorporated into the FEIS.

Comment #	Concerns	Comment Response
330	**Road Improvement Guidelines** **Decommissioning** Only decommission roads that have been through the TAP and have been determined to not be needed for management in the intermediate future (next 30 years). If the TAP did not include the road segment in question, use other methods to improve road condition and reduce offsite impacts to water quality and fisheries habitat. The range of road decommissioning intensity runs from blocking access, outsloping and pulling pipes to full road prism recontouring. The decision regarding the intensity of road treatment should depend upon a site level review of conditions rather than defaulting to full recontouring. The decision maker should select the restoration action that is the least intrusive and least costly method required to significantly reduce the road segment impact upon watershed condition. Relevant site factors include: time of road construction and the elements of recovery that have occurred, trees, grass, and adequacy of control structures. Consider also slope position, geomorphology, cut/fill slope depth, slope dissection, existing use patterns (cattle, wildlife, camping/parking) and potential recreational use. The PFC requests that the Forest Service include in the site review an evaluation of any existing spur road's potential with respect to the potential for dispersed camping. On appropriate site conditions, retention of these roads may compensate for a decrease in campsites elsewhere in the project. To reduce subjectivity, improve the probability that road decommissioning will do more good than harm to achieving watershed goals (short term impacts weighed against long term benefits), and to improve decisions concerning the use of scarce restoration funding, the PFC supports the use of the GRAIP road inventory and analysis method in the Boulder Creek subwatershed. The inventory and related analytical model incorporate relevant physical and vegetative risk factors of sediment delivery. It is anticipated, based on operational application of GRAIP in other watersheds, that the GRAIP process will improve the allocation of funds for road restoration actions, including decommissioning. **Risk Factors** If funds are not available to apply GRAIP in a subwatershed, the PFC proposes the following risk factors and criteria be considered by FS staff	All system and unauthorized routes within the project area were evaluated in 2012 in the TAP process using very similar criteria to the Road Improvement Guidelines found in the comment letter from the PFC. (see D3 Travel Analysis Report, 2013 in the project record). The objective for FS system road decommissioning and unauthorized route treatments is the restoration of hillslope hydrologic processes and long-term soil productivity. Treatments include the re-contour of the road prism where practicable to match the natural slope contour, restoration of stream crossings to match natural channel dimensions, placement of natural woody debris as represented in the adjacent forest, and the establishment of native vegetative ground cover. In some cases, full obliteration of a road may be unattainable under various conditions found during the implementation process. These conditions may include excessive cuts and fills, (*i.e.* 25 feet of cut), rock cuts, excessive rock in the treadway (*i.e.* bedrock), wetlands, lack of fill material, or through cuts (a cut slope on both sides of road, without a fill slope). Where full re-contour is not attainable, sufficient outsloping and revegetation will occur to best achieve objectives. It is anticipated that the majority of roads and routes identified for restoration treatments will be fully obliterated to accomplish the watershed restoration objectives of the project. If the potential exists, a dispersed site may be left at the beginning of the road decommissioning adjacent to an open FS system road. The Travel Analysis Process (see D3 Travel Analysis Report, 2013, project record) utilized very similar comprehensive benefit/risk assessment to develop recommendations for system roads. The range of recommendations was then analyzed through the NEPA process in the Lost Creek-Boulder Creek project.

Comment #	Concerns	Comment Response
	when determining the best means of decommissioning: 1. Watershed status and condition - listed fish habitat (high risk), 303d listed stream(s) (medium risk), no listings or special designations (low risk) 2. Road location within watershed - within the RCA (high risk), mid-slope (medium risk), upper- slope/ridgetop (low risk). 3. Topography/Geology - steep slope w/ erosive or unstable soils (high risk), moderate slope w/ erosive or unstable soils (medium risk), moderate to low slope with stable soils (low risk). 4. Existing vegetation - grass or bare ground in roadbed as well as on cut and fill slopes (high risk), saplings and shrubs on cut and fill slopes but grass and bare ground in roadbed (medium risk), saplings and shrubs in roadbed and on cut and fill slopes (low risk). Recognize that in some situations full recontouring will be the most effective means of preventing motorized vehicle access. Where this is the primary reason for recontouring, only recontour that road segment necessary to achieve this objective unless other criteria, such as those listed above, would warrant additional recontouring. Expert judgment should ultimately be used in determining the best means of decommissioning roads to achieve objectives. However, using these risk factors and criteria should reduce subjectivity and improve the probability that road decommissioning will do more good than harm and allocate scarce restoration funds wisely – an objective of the PFC's economic goal.	
331	**Road Closures** Road closures are another type of improvement to the road system. When evaluating road segments that are candidates for closure, the Forest Service should consider seasonal instead of long-term in order to maintain public access (including firewood retrieval and recreation) while providing elk security and other habitat benefits. Some locations may have inherent risks that would compromise watershed health objectives. For this reason, the evaluation of the road segment should	No specific needs were identified internally and externally for additional open / seasonal road. LTCs are proposed on currently closed (to the public) Level 2 System Roads. These roads were not analyzed to open as seasonal roads because that is a travel planning decision outside the scope of this decision. Inherent risk of roads and potential improvements to watershed condition were analyzed in the FEIS, Chapter 3, Watershed Resources Effects Analysis.

Comment #	Concerns	Comment Response
	include the assessment of the risk factors listed above in order to determine the appropriate type of closure given the physical conditions. Seasonal closures need to use effective methods and be enforceable by the Forest Service.	
20. Dick Artley		
332	Dear Lannom, My comments on your proposed Lost Creek-Boulder Creek Landscape Restoration project pre-decisional EA are shown below. In spite of the fact you have no intention of considering my comments that oppose your tragic timber sale, thanks for pretending to allow me to influence your final Decision that was made before the public was asked to submit scoping comments. After 31 years with the USFS I know too well how some line-officers will backhand the public to assure they will sell timber to provide the natural resource extraction corporations with profit opportunities at the expense of the public.	Comment noted.
333	**Comment #1:** Lannom, most members of the public who read the Lost Creek-Boulder Creek Landscape Restoration DEIS will quickly conclude that you don't care about the countless natural resources in the forest that will sustain major damage as a result of this sale. There are countless more important natural resources in the forest besides merchantable trees. It's sad that some USFS line-officers are unaware that these other resources must be protected because they mean more to the public than volume. It's sad that some USFS line-officers are unaware that there are other resources that must be protected. Clearly, they revert to a mode of repeatedly genuflecting to the CEOs of the natural resource extraction corporations while lying to the public in the NEPA documents to assure maximum volume. Your non-timber IDT members know this. Someday, their building guilt will override their fear of you. **The biologists, soil scientists and recreation specialists obediently play their roles in the USFS scheme to trick and deceive the public**	Section 102(2)(A) of the National Environmental Policy Act requires all agencies to use an interdisciplinary approach to analysis which will ensure the integrated use of the natural and social sciences and the environmental design arts in planning and decision making which may have an impact on the human environment (42 U.S.C. 4332(2)(A)). The CEQ regulations at 40 CFR 1502.6 require that the disciplines of the preparers shall be appropriate to the scope and issues identified in the scoping process (§1501.7). Members of Lost Creek-Boulder Creek interdisciplinary team (IDT) and other preparers are listed in FEIS Chapter 4. FEIS Chapter 3 contains the effects analysis prepared for each resource area. Resource specialists used the best available science in these analyses. The project record contains specialist reports and other supporting information on the effects to resources. The Payette National Forest worked with a collaborative group, the Payette Forest Coalition, on the development of the Lost Creek-Boulder Creek project. Scoping letters to more than 300 Federal and state agencies, groups, and individuals were sent out in March of 2013. A 45-day comment period took place in November and December of

Comment #	Concerns	Comment Response
	The American public depends on USFS biologists and recreation specialist to use their influence to protect and preserve the natural resources in America's national forest. These Americans know these folks are their last line of defense against line-officers like Lannom who will stop at nothing in their mindless quest for volume. Many members of the public will be interested to know the chronological events that lead the USFS to log and road-up (and simultaneously abusing) national forest land that rightfully belongs to future generations. The USFS motivation? Spend timber money and provide opportunities for short term corporate profit: **Step #1**—The Regional Office allocates money to each national forest to plan and prepare timber sales without any knowledge of whether there is a need for logging on that forest. **Step #2**—Forest supervisors who receive the timber funding know it must all be spent each fiscal year to assure equivalent funding next year. **Step #3**—Silviculturists, TMAs, and other timber employees begin their search for volume. Knowing they will need to write their excuse to log in the NEPA Purpose & Need statement they first look for areas where they can stop beneficial natural disturbance events. If this doesn't work they cite the need to manipulate the trees in some way (always using logging) to create industrial tree farm conditions which destroys the biological diversity of the area. **Step #4**—Biologists and recreation specialists are then expected to come up with believable "ecosystem friendly" reasons to log and road-up the area which are then described in the NEPA Purpose & Need. **Step #5**—Now its time to name the proposed timber sale. The Responsible Official knows "timber sale" must never be used in documents for public consumption so the sale becomes a "restoration project" or simply a project. **Observation:** Responsible Officials know the public will not accept referring to a timber sale that does nothing but log and remove trees as a "restoration" project. So what do they do? The Responsible Official always adds a few things to the timber sale proposal that will really restore the natural resources in the forest. Unfortunately, the Responsible Officials allowed the damage to	2013, and several public meetings were held (see project record for dates and times). Legal Notices and multiple press releases appeared regarding the Lost Creek-Boulder Creek project in the Idaho Statesman, the McCall Star News and the Adams County Record. The following statement from the commenter is inaccurate: "You all know Lannom proposes to log 37 square miles and build 30 miles of logging road." The Lost Creek-Boulder Creek project area is 80,000 acres in size, however, a maximum of 25,000 acres of commercial treatments are proposed, as described in Alternative D. Approximately 31 miles of planned temporary roads would be used in Alternative D, all which would be decommissioned after project implementation. It is also important to note that existing roadbeds (unauthorized routes) would be used as temporary roads wherever possible. Alternative C proposes the use of only 11 miles of temporary road.

Comment #	Concerns	Comment Response
	occur for many years while waiting for the next timber sale in the area to propose real restoration actions that should have been implemented independently when the resource damage was first discovered. **Step #6**—Now its time for the IDT to write the text for the EA or EIS. They know there are USFS code words that must be used to deceive the public: • They don't log trees, they "treat" trees, or "mechanically treat" the trees. **Observation:** Up till now, biologists and recreation specialists who knew they were part of this USFS deception scheme sadly choose to look the other way and ignore the fact the IDT is tricking the people they supposedly serve. **Step #7**—The 2 most important parts of any NEPA document are 1) the Purpose & Need, and 2) the environmental effects of project implementation. Without exception the employees paid to protect public land from logging and roading damage strive to minimize the effects by writing unsubstantiated statements in Chapter 3 telling the public the impacts will be "short term" and temporary … knowing that major damage is possible when a short term adverse event occurs. So here we have it. You all know Lannom proposes to log 37 square miles and build 30 miles of logging road. When faced with such an atrocity any professional, competent, caring biologist and recreation specialist would demand major changes to the sale or remove their name from the list of IDT members who are OK with the sale. Unfortunately, the biologists and recreation specialist on the IDT for the Lost Creek-Boulder Creek timber sale ignore and pretend not to notice the certain resource damage that the sale will inflict on the resources for which they are responsible for. **Please Blow the Whistle on these USFS Schemes to Trick the Public into Accepting the Agency's Obsessive Mania to Produce Volume at any Cost to the Ecosystem**	
334	**The DEIS indicates there will be clearcutting associated with the proposed action yet you try to hide it.** Not only do you fail to include information about your clearcuts, you try to	The "Free Thin/Patch Cut" prescription would incorporate patch cuts with reserves. Patch cuts are defined by Helms (1998) as clearcuts where "cutting may be done in groups or patches (group or patch clearcutting)". Not the entire stand would be

Comment #	Concerns	Comment Response
	hide the fact that clearcutting is part of your timber sale. In the final EIS please discuss: 1) how aquatic resources will be protected, 2) how the sale is designed to blend in with the natural terrain, and 3) how recreation opportunities, soil, fish, water quality and wildlife will be protected from the clear adverse effects of stripping the trees from my land. **Comment #2:** Survey after survey indicates the public does not want their land clearcut. The USFS is supposed to serve the public. The USFS prescribes clearcuts because it reduces the costs to the corporation that logs the area. The final EIS MUST contain a trade off analysis that weighs 1) public acceptance, 2) logging costs and 3) regeneration success between clearcut, seed tree and shelterwood. This analysis MUST contain reference material citations for all conclusions rather than spoon-feeding the public unsubstantiated statements that support the Proposed Action as written. **Comment #3:** Most importantly, the final EIS must remove the ambiguous statements and be clear. Replace "patch cut with reserves" (EIS at page 34) with "clearcut with reserves." Deceiving the public isn't the same as serving the public.	regenerated as disclosed in Chapter 2 of the FEIS. Shelterwoods are defined by Helms (1998) as disclosed in the FEIS, "the cutting of most trees, leaving those needed to produce sufficient shade to produce a new age class in a moderated microenvironment…" Both the proposed regeneration treatments (shelterwoods and patch cuts) are designed to retain reserve trees to meet wildlife, visual, soils and vegetation management objectives. Reserve trees are defined by Helms (1998) as "a tree, pole-sized or larger, retained in either a dispersed or aggregated manner after the regeneration period under the clearcutting, seed tree, shelterwood, group selection, or coppice methods" Management Requirements and Project Design Features are identified in Chapter 2 and effects to the listed resources are disclosed in Chapter 3. While some of the alternatives do propose regeneration of early seral tree species, which requires sunlight to reach the forest floor to be successful, the proposed regeneration methods have been designed to retain canopy layers, structure and biological legacies that do not meet the intent or definition of a clearcut.
335	**The EIS fails to describe the timber sale effects to important resources in Chapter 3.** The EIS fails to describe the timber sale effects to cultural resources and air quality in Chapter 3 In addition, the economic analysis is flawed because it does not address the certain after project costs of actions that need to be taken to clean-up the ecological mess created by this so-called "restoration" project. If you would like to know read **Attachment #1**.	Thank you for your comment. The economic analysis in Chapter 4 (pages 405 - 422) includes costs associated with reforestation and rehabilitation of areas after a timber sale. The Opposing Views in the commenter's Attachment #1 are reviewed and addressed in the Response to Literature Cited/Submitted table in the project record.
336	**Please assure that the Responsible Official's responses to public comments are posted online as well as maintaining a hardcopy in the Project File** **Comment #4:** If it's not possible to post the Responsible Official's	This table constitutes the responses to public comments. It will be posted on the posted on the project website at: http://www.fs.usda.gov/wps/portal/fsinternet/!ut/p/c5/04_SB8K8xLLM9MSSzPy8xBz9CP0os3gDfxMDT8MwRydLA1cj72BTUwMTAwgAykeaxRtBeY4WBv4eHmF-

Comment #	Concerns	Comment Response
	responses to public comments online, then consider this a FOIA (per 36 CFR 200.6) for these responses to be mailed to me hardcopy on the day when the 45-day appeal period on the final EIS begins.	YT4GMHkidBvgAI6EdIeDXIvfdrAJuM3388jPTdUvyA2NMMgyUQQAyrgQmg!!/dl3/d3/L2dJQSEvUUt3QS9ZQnZ3LzZfS000MjZOMDcxT1RVODBJN0o2MTJQRDMwODQ!/?project=33830.
337	**The DEIS does not analyze an alternative in detail that does not construct any new roads (temp or system)** The Responsible Official could analyze an infinite number of alternatives by simply adjusting the acres harvested up or down. If adjusted upwards, the harvest goals will be achieved sooner. If adjusted down, it will take longer to achieve the harvest goals. Of course the law does not require this, nor should it. It would waste taxpayer's money to analyze an alternative simply because it exists. United States law codifies this: Question and answer 1b in the **Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations** responds to this situation: 1b. **How many alternatives** have to be discussed when there is an infinite number of possible alternatives? A. For some proposals there may exist a very large or even an infinite number of possible reasonable alternatives. For example, a proposal to designate wilderness areas within a National Forest could be said to involve an infinite number of alternatives from 0 to 100 percent of the forest. When there are potentially a very large number of alternatives, only a reasonable number of examples, covering the full spectrum of alternatives, must be analyzed and compared in the EIS. An appropriate series of alternatives might include dedicating 0, 10, 30, 50, 70, 90, or 100 percent of the Forest to wilderness. What constitutes a reasonable range of alternatives depends on the nature of the proposal and the facts in each case.	While an alternative that does not construct any new roads was not considered, this is an option that the decision-maker could select based on the current analysis (i.e. a portion of Alternative A and one of the action alternatives). Alternative C proposes considerably less temporary roads (11 miles) than the maximum miles of temporary roads proposed in Alternative D (31). All temporary roads used for implementation of the project will be decommissioned after use. Additionally, the proposed road closures and decommissioning would reduce overall project road density considerably.
338	**Comment #5:** A no new roads alternative stands out among the infinite number of alternatives because it reduces the adverse environmental effects of the proposed action while still meeting the purpose and need for the	See response to comment #337. The effects of use of roads and temporary roads are disclosed in Chapter 3 of the FEIS.

Comment #	Concerns	Comment Response
	project. New road construction is an activity that causes damage to some important natural resources in the sale area. This activity is particularly detrimental to aquatic and wildlife resources. Chief Dombeck's statement below supports this fact. "Roads often cause serious ecological impacts. There are few more irreparable marks we can leave on the land than to build a road." Dr. Mike Dombeck, Chief, US Forest Service Remarks to Forest Service employees and retirees at the University of Montana February 1998 Link to statement: https://www.uwsp.edu/cnr/gem/Dombeck/MDSpeeches/CD%20COPY/Chief%20Mike%20Dombeck%27s%20Remarks%20to%20Forest%20Service%20Employees%20and%20.htm **Comment #6:** Since best science and Chief Dombeck agree that ""There are few more irreparable marks we can leave on the land than to build a road," this is a valid reason to analyze a no new temporary or system road alternative in detail. The acres harvested might be reduced slightly, but the alternative would still be responsive to the Purpose & Need.	
339	**Comment #7:** Dr. Bunnell concludes from his research on logging roads that: "Sediment input to freshwater is due to either the slower, large-scale process of soil erosion, or to rapid, localized "mass movements," such as landslides. Forest practices can increase the rate at which both processes occur. Most sediment from forestry arises from landslides from roads and clearcuts on steep slopes, stream bank collapse after riparian harvesting, and soil erosion from logging roads and harvested areas. Roads, particularly those that are active for long periods of time, are likely the largest contributor of forestry-induced sediment (Furniss et al. 1991)." "Sediment can increase even when roads comprise just 3% of a basin (Cederholm et al. 1981).	The effects of the proposed actions sedimentation are addressed in FEIS Chapter 3 Watershed Resources section (BOISED modeling) and in the Fisheries section.

Comment #	Concerns	Comment Response
	"More than half the species present in the study area will likely be negatively impacted by sedimentation from logging roads." Source: http://warehouse.pfc.forestry.ca/pfc/25154.pdf In the final EIS please tell the public why such natural resource damage is acceptable.	
340	**Comment #8:** Dr. Dombeck concludes from his experience as USFS Chief that: "Roads often cause serious ecological impacts. There are few more irreparable marks we can leave on the land than to build a road." Source: https://www.uwsp.edu/cnr/gem/Dombeck/MDSpeeches/CD%20COPY/Chief%20Mike%20Dombeck%27s%20Remarks%20to%20Forest%20Service%20Employees%20and%20.htm In the final EIS please tell the public why such natural resource damage is acceptable. Please analyze a no new road alternative in detail in the final EIS. There is no legitimate reason to rathole this request in the list of alternatives considered but not analyzed in detail. See **Attachment #4**.	See response to comment #337. The effects of roads are disclosed in Chapter 3 of the FEIS. Alternative C proposes considerably less temporary roads (11 miles) than the maximum miles of temporary roads proposed in Alternative D (31). All temporary roads used for implementation of the project will be decommissioned after use. Additionally, the proposed road closures and decommissioning would reduce overall project road density considerably. The Opposing Views in the commenter's Attachment #4 are reviewed and addressed in the Response to Literature Cited/Submitted table in the project record.
341	**There is only 1 place in the national forest where action should be taken to improve vegetative resilience to disturbance agents such as insects, disease, and fire: close to the WUI.** It's very important that Natural disturbance events be allowed to occur in the forest if the events do not occur close to the WUI where the risk of fire severity might be increased which would put homes at risk. Here it is: "The purpose of the Lost Creek-Boulder Creek Restoration Project is to: 1) Move vegetation toward the desired conditions defined in the Forest Plan and consistent with the science in the Forest's draft Wildlife Conservation Strategy (WCS), with an emphasis on:	Thank you for your comment. The Opposing Views in the commenter's Attachment #5 and #8 are reviewed and addressed in the Response to Literature Cited/Submitted table in the project record.

Comment #	Concerns	Comment Response
	"c) Reducing the risk of uncharacteristic and undesirable wildland fire, with an emphasis on restoring and maintaining desirable plant community attributes including fuel levels, fire regimes, and other ecological processes." (page 10) "The Lost Creek Boulder-Creek Project is designed to enhance resiliency to climate-related stressors such as drought, wildfire, insects, and disease." (page 25) **Comment #9:** Failing to tell the public that many natural resources not only benefit from tree mortality caused by natural disturbance events, but depend on these natural disturbance events occurring to function properly is a lie by omission. Please assure that this information is discussed in the final EIS. **Comment #10:** USFS Responsible Officials who choose to eliminate tree mortality caused by natural disturbance events clearly believe merchantable volume is more important to the general public than the natural resources that depend on dead and dying trees for their survival. **Comment #11:** The forest is infinitely more than conifer trees. A properly functioning forest is dependent on decadent, dying, unhealthy trees. A harvested forest differs dramatically from a natural forest. A healthy, natural forest has an abundance of dead trees. All healthy groups have unhealthy and dying individuals. Removing certain trees from the forest to increase vigor and diameter growth harms the biodiversity of the area. Taking action to increase vigor and diameter growth is the goal of private industrial tree farm managers … not national forest managers. Lannom, it's clear you need a course in basic forest ecology. See **Attachments #5 and #8**.	
342	**The fisheries values of streams are not adequately disclosed or considered** The DEIS evaluates fisheries and watershed impacts on watersheds and subwatersheds without making any real effort to consider the particular fisheries values of these areas. Forest Service biologists are more than capable of identifying and planning around high-value fishery areas.	Fish distribution in the project area is described in Chapter 3 of the FEIS, which identifies distributions native as well as ESA listed Chinook Salmon, Steelhead, bull trout and their respective Critical Habitat. The Boulder Creek subwatershed is identified in Chapter 1 as a high priority for restoration with the Forest Plan's Aquatic Conservation Strategy, which in part, considers ESA listed fishes and their respective Critical Habitat. Effects to fish and fish habitat that includes sediment and LWD are described in Chapter 3 of the FEIS as well as in the Fisheries Specialist Report (located in the project record).

Comment #	Concerns	Comment Response
	Comment #12: A meaningful analysis of fisheries and watershed values specific to watersheds and subwatersheds would have considered the significance of foreseeable effects on a site-specific level, with reference to both the intensity of the cumulative watershed effects (ie. sedimentation, LWD deficiencies, problems with channel erosion, etc.), as well as the importance of the affected reaches for fisheries. The DEIS does not contain this analysis and disclosure. Please assure that the final NEPA document does!	Channel condition risk is analyzed in the Watershed Resources section of the FEIS.
343	**The DEIS entirely fails to consider the effects of landings, skid-trails and temporary roads that have not been obliterated on watersheds and aquatic habitat** **Comment #13:** The DEIS appears to have entirely forgotten to factor in past and proposed landings, skid-trails and temporary roads that still have a running surface in its consideration of watershed and fishery impacts. A glance at a Google Earth photo of the area reveals that past timber sales have left a large number of landings, skid-trails and so-called temporary roads in place. Obviously, the proposed harvest units will require more landings and skid-trails. These landings, skid-trails and "temporary" roads are a permanent and irreversible imposition on the landscape unless action is taken to eliminate the ecosystem damage. **Comment #14:** In the final EIS please include several google earth photos of the sale area and immediate surrounding area at a scale small enough to show exiting landings, skid-trails and temporary roads with the approximate location of proposed new landings, skid-trails, and temporary roads shown. It's important for the public to know where major ground disturbance has (and will) occur. Also, please include a landing, skid-trail and temporary roads restoration and rehabilitation schedule for these scars on the landscape with approximate costs.	Existing landings and skid trails are included in the soils effects analysis for TSRC. All new skid trails and landings are to be obliterated as part of this project (FEIS section 3.4. Temporary roads were modeled in BOISED to assess effects to percent over natural sediment for their construction, estimated time on the landscape, and obliteration. An attempt to map all unauthorized routes within the project area was made using the NAIP photography and field surveys. These routes combined with the Forest System roads are used to analyze existing ECA, sediment rates (BOISED), and TSRC. See FEIS, Chapter 2, section 2.5 "associated actions" and PDF 25 Table 2-6). Photos of the project area are included in the project record. New landing and skid trail locations would be determined during implementation. Maps of proposed temporary roads are located in the project record.
344	**The DEIS does not discuss the following items required by law:** • Energy requirements and conservation potential of various alternatives	See FEIS Appendix G, Legal and Regulatory Requirements.

Comment #	Concerns	Comment Response
	and mitigation measures. • Natural or depletable resource requirements and conservation potential of various alternatives and mitigation measures. • Urban quality, historic and cultural resources, and the design of the built environment, including the reuse and conservation potential of various alternatives and mitigation measures. **Comment #15:** The Responsible Official provides no explanation why this NEPA requirement was ignored. Please address these requirements in the final EIS.	
345	**The DEIS fails to consider road-stream connectivity** One of the most important factors in assessing cumulative, direct and indirect impacts to watersheds and fisheries is the degree of road-stream connectivity. The DEIS entirely fails to consider this factor in its analysis. This is a fatal flaw that must be corrected before this timber sale could move forward. **Comment #16:** Roads in close proximity to streams are widely recognized as a highly significant factor in sediment, peak flow, LWD and other effects to aquatic habitat. The analysis simply considers the total amount of road in the project area, without regard to its placement in riparian areas or wetlands. No effort is made to consider the amount of road in close proximity (e.g. 300 ft.) of streams. Under NEPA and APA caselaw, a decision will be found deficient where it entirely fails to consider an important factor. While a NEPA analysis does not need to exhaustively evaluate every aspect of every issue, it does need to contain a "reasonably thorough discussion of the significant aspects of the probable environmental consequences." NRDC v. USFS 421 F.3d 797, 810 (9th Cir. 2005). The standard for whether a given scientific analysis must occur in a NEPA document is whether that analysis is "reasonably possible" to perform. Pacific Rivers Council v. US Forest Service, 668 F. 3d 609, 624 (9th Cir. 2012). In Pacific Rivers, the court found the NEPA analysis of a 2004 EIS deficient by comparing with a 2001 EIS for an earlier version of the same management framework had included detailed consideration of effects to	Total road density, RCA road density and total road miles (FS System roads and unauthorized routes) within RCAs are indicators used in the Fisheries and Watershed Resources effects analyses (FEIS Chapter 3, Section 3.3 and 3.5). Road-stream connectivity is an integral part of all the road field surveys conducted within the project area. (Gabica and Kennell 2013, Upper WFWR and Lost Creek TAP 2005?, McMahon 2013 field data, and WIN spatial layer, and all rip inventory reports). Stream crossing inventories and road inventories identified undersized culverts and crossings that are blocked or with erosion concerns. Culvert replacements and removals as well as RCA road decommissioning are proposed in all action alternatives to reduce road-stream connectivity. It is true that roads increase drainage network. This is analyzed under the WCI Drainage Network Increase and the indicator is total road miles by subwatershed and total road miles within RCAs by subwatershed (FEIS, Watershed Effect Analysis,) Alternative C proposes relocating Forest Road 50127 outside the RCA for the mainstem of the WFWR to increase shade along this waterbody has been assigned a potential natural vegetation target load allocation and requires a 27% reduction in solar loading. See FEIS section 2.3 for the amount of miles of FS System road and UR is proposed for decommissioning and restoration treatments within RCAs to increase shading and LWD recruitment and to reduce concentrated runoff and sediment to streams.

Comment #	Concerns	Comment Response
	specific fish species, whereas the newer version merely tiered. Because the earlier EIS showed the analysis was "reasonably possible" to have conducted, the newer EIS was found deficient. The court went on to explain why the "reasonably possible" standard is effective at avoiding the "shell game" of agencies hiding analyses behind one another with programmatic and site-specific NEPA documents. Pacific Rivers at 626. A common theme in the caselaw are deficiencies where the agency fails to actually, directly observe and test field conditions, relying instead on vague metrics. See Ecology Center, Inc. v. Austin, 430 F.3d 1057, 1068-71 (9th Cir. 2005) (failure to observe soil conditions); Lands Council v. USFS, 395 F.3d 1019, 1032 – 35 (9th Cir. 2004) (holding failure in watershed restoration plan to ground-check soil disturbance was fatal). This requirement is applied to environmental baselines, not just direct effects of a proposed action. See Ctr. For Biol. Diversity v. Bureau of Land Mgmt., 422 F.Supp.2d 1115, 1163 (N.D. Cal. 2006); Or. Natural Desert Ass'n v. Rasmussen, 451 F.Supp.2d. 1202, 1212-13 (D. Or. 2006); Am. Rivers v. Fed. Energy Regulatory Comm'n, 201 F.3d 1186, 1195 & n. 15 (9th Cir. 2000). **1. Divulging road-stream connectivity is a critical factor in any aquatics analysis** **Comment #17:** Road-stream connectivity is an essential and significant part of the analysis, and the DEIS failure to consider it is a fatal flaw. Assessing road-stream connectivity is critical to evaluating cumulative watershed and fisheries effects in terms of peak flow and sediment—the DEIS for this timber sale just ignores it for the streams in and downstream from the sale area. Road-stream connectivity is a critical factor in considering sedimentation impacts of timber harvest projects that propose new road construction. Roadside ditches collect and concentrate runoff, discharging to streams and increasing the length of road that delivers sediment-laden runoff. Discharge of sediment to streams is a particular problem where roads are relatively close to streams. These issues are unique problems of this project due to the high density of roads, a high fraction of which appear to be in close proximity to roads on this timber sale. Data reflecting road-stream connectivity is essential to evaluating the cumulative and direct effects of road reconstruction and construction.	

Comment #	Concerns	Comment Response
	These problems, and methods to discover and address them, are also discussed in Croke et al. (2005) where they found direct connectivity occurs primarily due to gully development at culverts, with average sediment transport 89 meters downstream. It should be considered here that all roads within 300-feet of any stream likely road-stream connectivity where the roads adversely affect aquatic resources. Frequently, these effects are long-term and persistent difficulties. **Comment #18:** It is well-established in the scientific literature that road-stream connectivity is an essential factor to be considered with reference to stream flow. Roads tend to concentrate and channelize runoff, increasing peak flows to downslope streams. The DEIS for the Lost Creek-Boulder Creek timber sale totally fails to consider this factor, which is a fatal flaw in its analysis of project impacts on stream flow. Additionally, road-stream connectivity is important to evaluating potential effects on stream temperature and sediment increases. Stream crossings and riparian roads have been shown to significantly elevate water temperature. See: Nelitz et al., "A Science-Based Approach for Identifying Temperature-Sensitive Streams for Rainbow Trout" Link to the research conclusions: http://essa.com/wp-content/uploads/2011/06/Nelitz_et_al_2007.pdf **Comment #19:** The DEIS doesn't analyze the issue so information is not available, but road-stream connectivity appears to be extensive in the project area. Review of the map for the project shows that some proposed roads are in close proximity to streams. Best science indicates these roads could be expected to increase sediment and peak flows. Road-stream connectivity is particularly critical in a situation like this one, with so many decommissioned and stored roads criss-crossing the landscape. The DEIS and resource reports make no effort to assess or consider road-stream connectivity. Even the resource reports entirely fail to assess this factor. Yet, road-stream connectivity surveys are "straightforward and relatively easy to do and analyze." Source: Wemple et al., "CHANNEL NETWORK EXTENSION BY LOGGING ROADS IN TWO BASINS, WESTERN CASCADES, OREGON" 1996.	

Comment #	Concerns	Comment Response
	Link to the research conclusions: http://academic.research.microsoft.com/Paper/10050243.aspx Please conduct road-stream connectivity surveys and display the analysis results in Chapter 3 of the final EIS.	
346	**The DEIS maps do not show the proposed cutting units and roads on a large enough scale to be meaningful to the public** **Comment #20:** In the final EIS please enlarge all maps so they are meaningful to the public and include a legend.	A map packet is provided to the public as an attachment to the FEIS (as it was for the DEIS) to provide the public with a larger scale map. Maps are also included with the FEIS in electronic (CD) format, allowing the user to zoom in or print the maps at an appropriate scale. Larger scale maps can also be requested by contacting the New Meadows Ranger District.
347	**Lannon, you know the Public does not want their Land Clearcut for any Reason at any Location yet you Propose it Anyway … and try to hide it** **Comment #21:** Lannom, sadly you attempt to hide the fact that you Intend to clearcut my land. Where does the USFS Manual or Handbook instruct USFS line-officers to deceive the public to satisfy the agency timber agenda?	The purpose and need of the project is disclosed in Chapter 1. Vegetation treatments have been proposed to move the project area toward the desired conditions disclosed in the FEIS.
348	**The Lost Creek-Boulder Creek timber sale is inconsistent with best science** I have included **attachments** to these comments. The attachments contain statements about natural resource degradation that result from timber harvest and road construction activities. In total, the attachments contain conclusions and recommendations of over 400 biological scientists who hold Ph.D.s in their fields. The scientists provide the land manager with recommendations on how to avoid natural resource damage. **Attachment #15** speaks to how the USFS is required to base all of their projects on best science. **Comment #22:** Please follow the advice of these scientists as you reconsider the Lost Creek-Boulder Creek timber sale. Ninety-six percent of these scientists conclude that actions similar to those being proposed here should only be considered on private industrial tree farms. Many indicate that the national forests still in the wild state are precious and must be handed down to future generations intact. Without question, their judgment represents best science. If the Responsible Official believes there is better	The Opposing Views in the commenter's Attachment #15 are reviewed and addressed in the Response to Literature Cited/Submitted table in the project record. The best available science was used in the development and analysis of the Lost Creek-Boulder Creek project (see FEIS section 3.0).

Comment #	Concerns	Comment Response
	science available elsewhere, please describe it in the final EIS. **Comment #23:** Please do not dismiss this best science because it originates from literature that's not site-specific to this timber sale. Indeed, the literature contained in the References section of this EIS is not site-specific to this timber sale either. The public expects consistency.	
349	**The Forest Service fails to explain how the DEIS complies with the 1982 NFMA Planning Regulations on species viability, which are incorporated into the Payette National Forest Land Management Plan.** **Comment #24:** The 1982 NFMA planning regulations require the Forest Service to: Provide for adequate fish and wildlife habitat to maintain viable populations of existing native vertebrate species and provide that habitat for species chosen under Sec. 219.19 is maintained and improved to the degree consistent with multiple-use objectives established in the plan. The DEIS fails to divulge this information. The new planning regulations apply only to forest plans that were approved or revised within the last 3 years.	The Lost Creek-Boulder Creek project is tiered to the 2003 Payette National Forest Land and Resources Management Plan. A Forest Plan consistency checklist is located in the project record.
350	**The DEIS for the Lost Creek-Boulder Creek timber sale does not "identify methods and procedures required by section 102(2)(B) to "Identify methods and procedures required by section 102(2)(B) to insure that presently unquantified environmental amenities and values may be given appropriate consideration"** **Comment #25:** Simply stating that amenity resource values have been considered in the NEPA document is not enough. The Responsible Official must "identify the methods and procedures used to assure appropriate consideration."	Thank you for your comment. Section 102 refers to NEPA; the FEIS was prepared to comply with this section.
351	**The DEIS does not discuss how the timber sale's harvest and slash/RX burning activities will affect protected bird species or if there will be adverse effects how they will be eliminated.** Chapter 3 indicates: • **The timber sale activities will adversely affect White-headed**	Species that are part of the Forest Plan and draft WCS are discussed in Chapter 3. The remaining bird species are addressed in the wildlife specialist report and is in the project record.

Comment #	Concerns	Comment Response
	Woodpecker habitat • **The timber sale activities will adversely affect Pileated Woodpecker habitat** • **The timber sale activities will adversely affect Flammulated owl habitat** • **The timber sale activities will adversely affect Great Gray owl habitat** • **The timber sale activities will adversely affect ESA listed Northern Goshawk habitat** • **The timber sale activities will adversely affect Bald Eagle habitat** Lannom, there are scores of smaller birds with habitat in the timber sale area. You have conveniently chosen to ignore them in Chapter 3. I will expect to see an analysis of effects to these birds in Chapter 3 of the final EIS. Do I need to tutor you about the laws you violate with these omissions? Logging 34.5 square miles and burning 53.3 square miles will: • not protect "the birds against pollution, detrimental alterations, and other environmental degradations." (16 USC Section 703) • kill bird chicks by "destroying their nests or eggs." (16 USC Section 703) Claming its OK to destroy bird habitat because it will not lead to ESA listing is a hollow excuse to continue with the known habitat destruction.	
352	**Herbicides Containing Glyphosate must Never be used on Public Land for Any Reason** The DEIS at page 92 states: "Annually assess all known and new invasive weed sites associated with this project for five years. Prioritize the sites where treatment will occur." The reasons herbicides containing glyphosate are described below. Please	The Forest uses direction outlined in the Payette National Forest Noxious Weed and Poisonous Plant EA. The Forest only uses herbicides which have been approved by the US Fish and Wildlife Service and the National Marine Fisheries Service for use on National Forest System lands. The Opposing Views in the commenter's Attachment #9 and #18 are addressed in the Response to Literature Cited/Submitted table in the project record.

Comment #	Concerns	Comment Response
	assure that the ROD specifically indicates that "treatment" will include glyphosate-containing herbicides. Glyphosate kills aquatic life even if the concentrations of the chemical in water are very low. The fish deaths will occur in the streams in the project area and a few miles downstream. Herbicide mist should never be allowed to contact water … even when using so-called aquatic-safe herbicides. Mammals that eat contaminated foliage and humans that might brush against contaminated foliage or eat contaminated berries have been known to suffer from the following as a result of glyphosate contact: birth defects, non-Hodgkin's lymphoma, mitochondrial damage, cell asphyxia, miscarriages, attention deficit disorder endocrine disruption, DNA damage, skin tumors, thyroid damage, hairy cell leukemia, Parkinson disease, premature births, decrease in the sperm count, severe reproductive system disruptions and chromosomal damage. Glyphosate is persistent and remains active after being applied. Please disclose this information in Chapter 3 of the final EIS. There are thousands of sources that elaborate on and support the information above. Some of them can be read in Attachment 9a. I have included 2 below that are recent: **Excerpt below is from:** Research Reveals Previously Unknown Pathway by which Glyphosate Wrecks Health By Dr. Mercola Mercola.com, May 14, 2013 http://articles.mercola.com/sites/articles/archive/2013/05/14/glyphosate.aspx#! "While Monsanto insists that Roundup is safe and "minimally toxic" to humans, Samsel and Seneff's research tells a different story altogether. Their report, published in the journal **Entropy**,[1] argues that glyphosate residues, found in most commonly consumed foods in the Western diet courtesy of GE sugar, corn, soy and wheat, "enhance the damaging effects of other food-borne chemical residues and toxins in the environment to disrupt normal body functions and induce disease." According to the	

Comment #	Concerns	Comment Response
	authors: **"Negative impact on the body is insidious and manifests slowly over time as inflammation damages cellular systems throughout the body."** The main finding of the report is that glyphosate inhibits cytochrome P450 (CYP) enzymes, a large and diverse group of **enzymes** that catalyze the oxidation of organic substances. This, the authors state, is "an overlooked component of its toxicity to mammals." One of the functions of CYP enzymes is to detoxify xenobiotics—chemical compounds found in a living organism that are not normally produced or consumed by the organism in question. By limiting the ability of these enzymes to detoxify foreign chemical compounds, glyphosate **enhances** the damaging effects of those chemicals and environmental toxins you may be exposed to." **Excerpt below is from:** **Herbicide Used in Argentina Could Cause Birth Defects** Reported in the Latin American Herald Tribune, November 17, 2013 Describing research by the National Council for Scientific and Technical Research, Molecular Embryology Laboratory http://www.laht.com/article.asp?ArticleId=331718&CategoryId=14093 "Although the study "used amphibian embryos," the results "are completely comparable to what would happen in the development of a human embryo," embryology professor Andres Carrasco, one of the study's authors, told Efe. "The noteworthy thing is that there are no studies of embryos on the world level and none where glyphosate is injected into embryos," said the researcher with the National Council for Scientific and Technical Research and director of the Molecular Embryology Laboratory. The doses of herbicide used in the study "were much lower than the levels used in the fumigations," and so the situation "is much more serious" that the study suggests because "glyphosate does not degrade," Carrasco warned. In Argentina, farmers each year use between 180 and 200 million liters of glyphosate, which was developed by the multinational Monsanto and sold in	

Comment #	Concerns	Comment Response
	the United States under the brand name Roundup. Carrasco said that the research found that "pure glyphosate, in doses lower than those used in fumigation, causes defects ... (and) could be interfering in some normal embryonic development mechanism having to do with the way in which cells divide and die." " Lannom, of course you will tell the public anything to justify your denial of independent glyphosate safety research conclusions. Sadly, you will cite studies that were done by labs that were paid by Monsanto to conduct the research. As you already know, some corporations will do anything for profit, including misrepresenting the safety of a toxic chemical they manufacture. Herbicides containing glyphosate were banned in Denmark 10 years ago because of its lethal effects? See http://www.twnside.org.sg/title/service76.htm **T**he Institute of Science in Society based in London England calls for banning herbicides containing glyphosate in England? See: http://www.i-sis.org.uk/about.php and http://www.i-sis.org.uk/Ban_Glyphosate_Herbicides_Now.php The following links provide scientific proof that glyphosate-containing herbicides are also likely to cause bee Colony collapse disorder (CCD) that's currently driving bees extinct. http://www.petitiononline.com/Bees/petition.html http://www.organicconsumers.org/articles/article_4557.cfm http://www.i-sis.org.uk/SmartStaxCornCorporateWarOnBees.php http://pmep.cce.cornell.edu/profiles/extoxnet/dienochlor-glyphosate/glyphosate-ext.html http://www.k12science.missouristate.edu/Junior_Academy/MJAS%20Docs/State%202009/Papers%202009/HS_ENV/Foulk_Kayla_HS.pdf http://www.saynotogmos.org/ud2010/umar10a.php http://npic.orst.edu/factsheets/glyphotech.html	

Comment #	Concerns	Comment Response
	http://www.pacificfreepress.com/news/1/11161-monsantos-butterfly-effect-roundup-wiping-out-pollinator-insect.html http://beesafelawns.com/Facts.aspx?lnkID=service3 http://natureinstitute.org/nontarget/reports/sugarbeet_001.php http://articles.mercola.com/sites/articles/archive/2012/04/21/vanishing-bees-film.aspx http://thewatchers.adorraeli.com/2012/05/24/colony-collapse-disorder-i-keep-finding-dead-bees-everywhere/ http://foodfreedomgroup.com/2012/06/29/monsanto-expose-from-agent-orange-to-colony-collapse-disorder/ http://www.stonyfield.com/blog/2012/09/06/colony-collapse-disorder/ http://www.r8ny.com/blog/vincent_nunes/monsantos_roundup_causing_colony_collapse_disorder_in_bees_four_years_after_the_bees_are_gone_were_next.html http://www.naturalnews.com/035688_Monsanto_honey_bees_colony_collapse.html http://articles.mercola.com/sites/articles/archive/2012/05/08/what-biotech-company-blamed-for-bee-collapse-just-bought-leading-bee-research-firm.aspx http://www.infowars.com/monsanto-buys-top-bee-research-firm-after-being-implicated-in-colony-collapse/ http://readersupportednews.org/opinion2/271-38/11296-the-fox-monsanto-buys-the-chicken-coop-beeologics http://aristonicobelargios.wordpress.com/2012/10/03/monsanto-buys-leading-bee-research-firm-after-being-implicated-in-bee-colony-collapse-banoosh-world/ http://www.thrivemovement.com/Monsanto-Buys-Leading-Bee-Research-Firm The invasion of non-native vegetation is a major problem in America. There are several methods of eradication and control that do not use chemicals. The American people support spending more of their tax dollars to deal with this problem safely. Please specify that non-chemical	

Comment #	Concerns	Comment Response
	treatments will be used in the final EIS. See **Attachment #9a and #18**.	
353	**Lannom, if you are Really Concerned about Aquatic Species' Health the Final EIS MUST Indicate that All Temporary Roads will be Obliterated after Use and the Responsible Official Must do it** The DEIS at page 36 indicates 30 miles of temporary road construction will occur as part of this timber sale. It also states these roads will be decommissioned after use. Please obliterate all temporary roads after use and tell the public this will be done in the final EIS. An obliterated road contains no running surface, because the natural sideslope that existed before the road was constructed is reestablished. Not obliterating a road because the line-officer will use it again to haul logs from the area means the road is not temporary! Road that will be used again in the future should be constructed to system road standards, or not at all. **Comment #27:** Since temporary roads are outsloped with no ditch, sediment that is generated during precipitation events, find its way to streams and harms the aquatic resources for decades until the next timber sale reconstructs the so-called "temporary" road. Then the riparian resource cycle of destruction begins again. The final EIS should clearly state these roads will be obliterated after use such that the sideslopes are as they were before construction. The CMPs will be removed and a running surface does not exist. Failure to take this protective action will create 30 miles of a linear sediment source. Incredibly the P&N at page 11 states: "2) Move all subwatersheds within the project area toward the desired condition for soil, water, riparian, and aquatic resources and improve the Boulder Creek subwatershed from the "Impaired" category to the "Functioning at Risk" category as described in the Watershed Condition Framework, with an emphasis on: a) Restoring habitat connectivity, especially in streams occupied by Endangered Species Act (ESA) - Listed fishes (Chinook salmon,	All temporary roads will be decommissioned, achieving full recontour where practicable, with all crossings removed and stream channel restoration performed after use. The DEIS stated this on page 36, and the FEIS in section 2.5.1 (associated actions) and other places Table 2-1. Miles of temp road proposed for obliteration under the different alternatives are listed in FEIS tables 2-1. 2-2, etc.

Comment #	Concerns	Comment Response
	steelhead and bull trout) and in their respective Designated Critical Habitat; b) Reducing road-related accelerated sediment and other road related impacts;" Lannom, if you really believed that road-related accelerated sediment needs to be reduced you would never even consider constructing 30 miles of new road. After reading your DEIS its clear to me you should never have been promoted to a position with decision-making authority in an agency the public believes is committed to protecting and conserving their natural resources.	
354	**The Opposing Views Attached to these Comments Describe the Resource Degradation and Destruction of Conditions Necessary for Proper Natural Resource Functioning that will Occur when the Timber Sale is Implemented** The attachments to these comments present the "responsible" opposing views of hundreds of independent, unbiased Ph.D. biological scientists who describe the resource damage caused by the majority of commercial timber and road construction sale activities taken at any location, on any topography, at any elevation, at any time. **Comment #28:** The Responsible Official's response to each of these opposing views is governed by 40 C.F.R. § 1502.9(a) and 1502.9(b) which mandate a response to each opposing view. Please note that these laws do not allow the Responsible Official to **NOT** provide the public with meaningful responses to opposing views: 1) because they are opinions. Indeed, viewpoints and opinion are synonyms, 2) because of their source (e.g. newspapers, professional journals, scientific literature etc.), 3) because their source has not been peer reviewed, 4) because the opposing views are not site-specific to this timber sale	The Opposing Views in the commenter's Attachments are reviewed and addressed in the Response to Literature Cited/Submitted table in the project record.
355	**The Lost Creek-Boulder Creek timber sale proposal is the antithesis of what the American public wants to occur in their national forests**	Thank you for your comment. Scoping and a 45-day comment period were conducted as required by NEPA for the Lost Creek-Boulder Creek project. Three public meetings

Comment #	Concerns	Comment Response
	The following quote comes from forest service publication that describes what the public wants from their national forests: "The public sees the restriction of mineral development and of timber harvest and grazing as being more important than the provision of natural resources to dependent communities (although this is still seen as somewhat important)." (Pg. 28) **Source:** "Survey results of the American public's values, objectives, beliefs, and attitudes regarding forests and grasslands: A technical document supporting the 2000 USDA Forest Service RPA Assessment". Gen. Tech. Rep. RMRS-GTR-95. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 111 p. Link to Complete Report: http://www.fs.fed.us/rm/pubs/rmrs_gtr095.pdf **Comment #29:** Lannom, there is no "timber famine" as the USFS has been so fond of predicting for many decades. There is no shortage of raw materials for paper and wood products in the United States otherwise the owners of private timberland would not be exporting their lumber. Any national or regional poll or survey indicates the vast majority of the public doesn't want their public land harvested for any reason. In the final EA EIS please tell the public why the Lost Creek-Boulder Creek timber sale is an exception	were held during the scoping phase and comment period for the project. Public involvement is discussed in FEIS section 1.10.
356	Sincerely, **Dick Artley's scanned signature is contained in the "signature" attachment.** Dick Artley [retired USFS forest planner and a person who believes the availability of undeveloped public land for his grandchildren is more important than short-term corporate profit) 415 NE 2nd Street Grangeville, Idaho 83530 208-983-0181 da99333@gmail.com **Comment #30:** Lannom, if you hired a company to care for your yard	Thank you for your comment.

Comment #	Concerns	Comment Response
	while you were on vacation and they cut & logged your shade trees, how would you react when the corporation approached you for payment after you returned? Your proposed timber sale is doing exactly the same thing to the land I own! Please comply with the will of the public and serve these Americans before you serve the corporations.	
21. Albert Becker		
357	I want to first comment regarding the Purpose and Need, 1.4 Summary of Proposed Action. Landscape restoration treatments should include; improve and restore identified National Forest trail related watershed improvements. I am aware of additional trail improvement projects beyond those listed in the Proposed Action. I will list these later in my comments. Also on page 24, coordination of grazing pre-burn should be recognized for fine fuel needs.	Thank you for your comment. Please see Purpose and Need, section 1.7 of the FEIS. Developing new trail opportunities is a part of the purpose and need. Project Design Features #70, 71, and 72 (Table 2-6) are designed to address project implementation coordination with livestock management.
358	I do not agree with exclusion of vegetation treatment in Boulder Creek watershed RCAs (Appendix A). This watershed has decades of forest management, excluding riparian areas. Mature, overmature, diseased, insect infected, and, healthy "stringers of timber' are evident in this watershed. Riparian areas didn't evolve in a disturbance free environment. Riparian areas are also the most productive and highest resilient value. I favor some CT and FT to be done in Boulder Creek RCAs, the most productive timber growth drainage in R-4. They should not be RPAs (Riparian Preservation Areas).	Thank you for your comment. Due to watershed concerns and critical habitat for ESA-listed fishes (which includes the stream and the adjacent riparian zone for Chinook Salmon), the Boulder Creek watershed was not determined to be appropriate for riparian vegetation treatments.
359	The current trail condition in the LC-BC LRA leaves much to be desired. Few trails were maintained in FY-13. Heaven's Gate Outfitter did some low standard maintenance on some trails that may cross into LC-BC and made some preferred areas accessible. However, their maintenance efforts actually impairs long term maintenance of system trails, e.g. clearing 3 logs cutting a switch back versus 10 logs on the system trail location. They did make some areas accessible, which is more than the FS did in this area!	Thank you for your comment. Funding through the CFLRP (see FEIS, Chapter 1 section 1.10) will accomplish some of the trail maintenance backlog for trails in the project area.
360	Overall, I favor the Proposed Action, Alternative B. It best provides a more diverse and significant economic benefit to the surrounding rural communities. It best meets the intent of the CFLRA and the	Thank you for your comment.

Comment #	Concerns	Comment Response
	recommendation of the PFC. It also has the best likelihood of implementation funding. It takes a more pro-active role in maintaining a healthy forest ecosystem.	
361	I desire to include some additional watershed restoration projects; Pg. 41, Boulder Creek, add to 1a); restore trail gully between Cold Springs and Cold Springs Saddle, repair/replace misplaced road waterbar on 2nd road crossing of Trail #179 (waterbar diverts water down trail). 1c) switchbacks are above Chokecherry Flat Road. 1d) Restore 1/8 mile of a straight trail gully on Trail #178 between Trail #179 & Trail#329 jtc. Alternative B Watershed Restoration Road Treatments (page 45) Road #158 (Chokecherry Flat Road) should be converted to an ATV/trail (open to 2-wheeled, horse, foot, etc.). This road is no longer needed for Forest Vegetation Mgt. and it has 16 restricted or impaired stream crossings in the Boulder Creek High Priority Watershed on the Payette National Forest. These crossings could be much more cost effectively improved if the road was converted to an ATV trail. The road has had a seasonal hunting season closure for about the past 30 years, it currently has poor road surfacing. It is prescribed for an upgrade, as recently done to the Ant Basin Road. It would be much more effective, recreation user-wise and natural resource benefits to convert this road to an ATV route. It would still provide access for an increasing cadre of recreationists, both young and old. Incidentally, my spouse, Holly Becker, found remnants of beaver activity near the Bull Horn culvert outlet at Chokecherry Flat Road crossing in 2013. The absence of beaver activity nowadays is a significant, but relatively recent change. The 2013 improved and adjacent Ant Basin Road provides full-size vehicle access to this general area.	All existing trails in the Boulder Creek portion of the project are proposed for trail maintenance to bring them up to Forest Service Trail standards. This work will include restoring trail tread and improving erosion control along the trails. ATV opportunities were emphasized in the Lost Creek area Creek area, where over 15 miles of ATV/UTV trails are proposed. They are not an emphasis in the Boulder Creek area. Alternatives A, B, D, and E all have the Chokecherry Flat road as being maintained, while Alternative C has recommended it for decommissioning.
362	In summary, I favor Alternative B, including the ATV/Horse trail recommended by the PFC and identified in Alternative C. I request you add the additional trail watershed improvements I've identified. I strongly support improving the BC watershed out of the impaired category. I urge your strong consideration of re-evaluating the status of the Chokecherry Flat	Thank you for your comment.

Comment #	Concerns	Comment Response
	Road #158 as a roadway to maintain and improve. I feel it would be much more effective from a recreation ATV use and watershed/aquatic improvement opportunity to change it to an ATV Trail, closed to motorized use during the hunting season. I appreciate the opportunity to provide comments on this DEIS.	
22. Helen Glidden		
363	As a horse woman and a member of Heartland Back Country Horsemen of Idaho, a chapter of Back Country Horsemen of America, the work you have done with the Lost Creek- Boulder Creek Landscape Restoration Project, specifically Alternative C is of interest to me. I appreciate the work the Forest Service has done delineating non-motorized trails that will be open to Pack and Saddle Stock, in other words to horsemen and packers. Specifically, I support the non-motorized, Alternative C Recreation Improvements. I support the proposal in the Lost Creek - Boulder Creek Project area to include the consideration of trails that can be used by Pack and Saddle Stock. As a horse woman I look to find trails that are appropriate for travel by horseback. I also support the proposal to install vaulted toilets in this area and any road improvements that make travel with a Pickup Truck and Horse Trailer easier. I had a meeting with Jane JC in which we marked on a map of this area, places identified as additional routes of potential trails for use by Pack and Saddle Stock. I support additional analysis of these potential trails that were identified in that meeting. I also support the new Ant Basin trail head that accommodates Pack and Saddle Stock travel and also provides sufficient room for Truck and Horse trailer parking. Plus the addition of a vaulted toilet and hitch rails.	Up to 20 miles of road to non-motorized trail development is proposed in the recreation portion of Alternative C. The actual number of miles of trail that could be developed would depend on the alternative selected for mechanical treatments and road development, maintained or decommissioned in the future. In addition, there are over 32 miles of existing motorized and non-motorized trail open to equestrians in the Boulder Creek are of the project. The development of the Ant Basin trailhead at the end of Forest Road 519 would indeed help to support horse and trailer parking in the future.
23. Ron Hamilton		
364	Thank you, for providing me the opportunity to comment on the Draft Environmental Impact Statement for the Lost Creek-Boulder Creek Landscape Restoration project. Having been involved with the Payette Forest Coalition and our interaction with the Forest Service personnel I appreciate the work that has gone into getting to this stage in the projects	Thank you for your comment.

Comment #	Concerns	Comment Response
	development.	
365	While your choice of alternative B as the preferred alternative may fit the coalition's suggestions for management there is an alternative or combination of alternatives that I believe is better for the project, provides a much greater help to the local economy, while meeting many resource management objectives. I believe it is possible to utilize alternative B management proposals for the watershed-fisheries management proposals for the Boulder Creek watershed, the recreation trail and road enhancement proposals for the trailhead access to Ant Basin, and use the vegetation treatment goals of alternative D including prescribe fire in Boulder Creek. In the remainder of the project area apply alternative D goals and proposals. It is important to fully implement the recreational enhancement on the Lost Valley Reservoir recreation facilities while enhancing the area and providing roads open to off highway vehicles using the adjacent closed and unauthorized road network. It is important to create ATV trail facilities to accommodate this large group of users.	Thank you for your comment.
366	Economic value is a very important consideration for me while minimizing the loss of roads allowing access to the forest. Also very important is the implementation of management strategy that supports the economy of Adams and adjacent Valley County. That relates to jobs that are not service or government related. The land base on the National Forest that produces jobs with a real multiplier effect has shrunk significantly during the last two decades as has management of the vegetation resource by the agency. The only growth industry has been in wildfire support however that has a really unpredictable element to it unless you're a government employee. This project is a significant step to assure that vegetation management is occurring but so are actions that reduce the dramatic influence of extreme wildfire.	Thank you for your comment.
367	An element that was not addressed in the document but a previous Forest Supervisor assured local people that it would be is firewood availability and access to it. People have heard that conditions have changed so meeting firewood demands is not as possible as the previous Forest Supervisor expressly promised. Why is this not dealt with in some way in this	Firewood availability was not identified as a part of the purpose and need for this project. However, the project has been designed so that biomass not needed to be retained for other resource objectives could be utilized. Although roads closed to public use (per the MVUM) are not proposed to be opened to the public for firewood utilization, the proposed action alternatives would allow for utilization of material as

Comment #	Concerns	Comment Response
	document? Closing so many miles of potential access roads simply exacerbates the availability problem as was discussed during Travel Management Planning meetings. It appears that the agency will be prescribed burning and based on history these fires often creates dead trees potentially useful as firewood. Will this be part of the supply and will there be an effort to assure that road access is present so the product can be utilized? It would be a nice touch if this document at least dealt with this element so that a firewood supply might be made available. It is interesting that this element is discussed in the economic assessment in the document as a community dependence element. This is your chance to meet some demands by the public on their lands, possibly without driving many miles.	firewood. All action alternatives include the following statement: "After thinning, slash reduction would include…removal. … Opportunities would be sought for removing and utilizing the biomass for energy production or other uses when practical."
368	Through out this document there are references to the DRAFT Payette Forest Wildlife Conservation Strategy or as it is often referred to by the acronym WCS as being the supporting document for the science that is supposedly implemented with procedures set forth in this draft document. In most places the reference is only to the draft WCS document not the literature that contains the supporting science. In reviewing that WCS document there are a myriad of references that cover a host of areas. Why is it that this document which also is making a large number of management decisions is being used without proper referencing of the various science items that are purported to support the actions of management that are proposed. It really appears that this draft document is being implemented without the appropriate procedural steps required by the National Environmental Policy Act (NEPA). The Draft WCS has several decision changes that would influence the Payette Forest Land Management Plan direction, specifically the focus of vegetation management. The WCS has been in draft without action for nearly two years but has been being implemented in various projects, I believe this is violation of the law. The usual litigants will not say much about this because it once again reduces the harvest level, even eliminating it in some areas. This is not the first time I have raised this concern to the leadership of the Payette Forest.	Please see response to comment #72.
369	In the discussions of prescribed fire there is no discussion of the effects of burns conducted at various times of the year that would allow the fuel risk reduction prescription to be met. The difference in plant physiologic responses relating to spring versus fall burning vary substantially in relation to growth response, reproduction success and even survival. Also because	Spring burns are accomplished during the dormant season, following snow melt and have resulted in less than 3% tree mortality for trees greater than 6 inches in DBH. Primary carriers of fire in the spring are ponderosa pine needles and dead grasses and forbs in unthinned areas and slash in thinned areas. Generally, fire will not carry outside of stands dominated by ponderosa pine. Spring burning timeframes are dependent on

Comment #	Concerns	Comment Response
	of the large component of tall brush species in some of these drainages it is very important to point out how or with kind of mechanical device the brush might be treated in order to meet prescribe fire management goals. Mechanical pretreatments such as roller choppers need evaluation for other resource implications	site specific conditions, but typically happen in April and May, prior to green-up (dormant season). Once an area has been treated in the spring, then maintenance burning in the fall would be planned within the next 5 years. First-entry fall burning under very cool conditions has resulted in much greater disturbance in many situations due to the significantly greater quantities of available fuel related to drier live and dead fuels in the fall. Greater residence times equates to more heat into the soil and into the canopy. Spring burns are cool to the touch in one hour, first-entry fall burns smolder for weeks. Summer-season burns are more representative and have produced very desirable fire effects but fire suppression/response needs oftentimes limit these efforts.
370	Throughout the document there are discussions of immediate vegetative treatments aimed toward achieving some management objective meeting some particular structure, composition or function. There are even inferences about variable time responses of treatments. What is not clearly expressed are the relative time frames to reach a specific goals or status, exceed or bypass it, and then express what would be the expected response to that changed or undesirable condition. This is an element that should be monitored, and evaluated for the outcomes success. In silvicultural terms there is no prescription with expected responses and a prognosis over time of possible retreatment types. If a treatment prescription sets up a less than desired long term management situation it should be dealt with or its implications discussed. For example some prescription call for leaving trees simply because of size but the species is undesired and very incapable of withstanding any fire application, how will that influence longer term management and will it adversely influence other goal oriented prescriptive treatments causing increased costs with less desired outcomes. Does that really provide the desired wildlife habitat outcome or does it simply placate a desire to maintain large sized trees?	The implementation monitoring will be necessary to determine if canopy cover and species composition requirements are being achieved for the respective PVG's. The purpose and need for the project is located in FEIS Chapter 1 and describes the difference between the existing and desired condition. Site specific silvicultural prescriptions would be developed for treatment units prior to implementation. The effects of the alternatives on vegetative attributes are disclosed in Section 3.1 of the FEIS. The specifications referred to by the commenter are from Chapter 2 of the DEIS. Additional work and clarification has been done to clarify retention/removal criteria for large diameter trees. See response to comments #24, 25. Additional information can be found in the project record.
371	The discussion in the Water Resource areas of the document refers to some metric forms of assessment that are elements that are attached to various requirements in the Payette Forest Plan. These are equivalent clearcut acres (ECA) and miles per square miles of roads. Each of these elements are significantly dated, even arcane and have either been replaced or have become part of a much more appropriate set of metrics that perform	The WCIs for Disturbance History and Road Density/Location includes ECA levels and road density levels and those differentiate the categories Functioning Appropriately, Functioning At Risk, and Functioning at Unacceptable Risk. Assessment of these WCIs is required by the Payette National Forest Plan (LRMP Appendix B, p. B-19).

Comment #	Concerns	Comment Response
	evaluation functions in the water resources area. I can not find where the agency has re- evaluated these metrics or identified a potential need to apply a newer and more rigorous method of measure that accounts for a host of variables that make the new measures much more rigorous. I know some newer standards were issued and the problem with the older metric discussed but there is no assessment or re-evaluation need expressed in this document. At one time this was some of the rationale for a Forest Plan amendment.	
372	Treatment of roads for watershed and fishery enhancement is very expensive and in all probability can not be paid for with the timber resources harvested on this or adjacent projects using the stewardship contract authority. For that reason it seems extremely important to decide that ALL road decommissioning would utilize principles developed through research and its application of the GRAIP model or other researched elements to develop priorities and application techniques. The highest priority for treatments should be in the riparian areas and in the fisheries affected areas. That seems to be the emphasis in most of the alternatives but in many cases an absolute decision is to obliterate unauthorized roads without evaluating or considering other forms of decommissioning. Rightfully some have been considered for ATV or livestock use but many of these roads have been in place with erosion structures installed and vegetation growing in them to the point that the use of equipment to obliterate the road would require substantial construction activity. If road mileage did not over drive your watershed assessment such alternative decommission actions, even not treatment, would probably be considered as a matter of course. Unfortunately elimination of road miles and road maintenance costs is a political issue where compromise does not come easily.	The Travel Analysis Process used road location with respect to several factors including wildlife, RCAs and LSP areas. The need for each road was reviewed spatially and in context with other system roads that were very close and accessed the same area. The Lost Creek-Boulder Creek NEPA analysis further prioritized system roads and additionally unauthorized roads (UR) using field surveys, raw GRAIP data, and location with respect to streams, springs, and wetlands, The highest priority for treatment was given to roads with existing erosion problems in the priority subwatershed of Boulder Creek. Law and regulation, including CFLRA, direct the FS to use the best available science when making natural resource decisions all indicate that full recontour of abandoned road beds is the most effective restoration technique. Monitoring of past decommissioning on the New Meadows Ranger District has also shown that erosion issues, concentrated flow, and motorized use is occurring where incomplete road obliteration occurred in the past. All mapped unauthorized routes in the project area that were determined to be low priority (approx. 68 miles or 35 percent) are not proposed for restoration treatments under this project.
373	There are some delegations of authority made in this and other recent Forest Service documents that move away from the normal supervising line officer to a particular specialist. That re-delegation seems entirely inappropriate. I believe the line officer (Chief, Regional Forester, Forest Supervisor and Ranger) are responsible officials for the management direction and actions that occur on the National Forests administered by the Forest Service. It seems entirely inappropriate for this or any other documents that decide on management activities to assign these decisions to a resource specialist or	The Forest Supervisor is the Responsible Official for the Lost Creek-Boulder Creek project. The specialists assigned to the interdisciplinary team are responsible for developing an analysis of the effects to their respective resource based on the best available scientific information. The Responsible Official uses the information provided by the resource specialists to inform the decision.

Comment #	Concerns	Comment Response
	biologist. Obviously part of the reason for employing this group of "experts" is to deal with the normal "advice and consent" form of management. It would seem appropriate to make the appropriate changes in the document. It may be appropriate to identify what area of expertise should be used but the decision maker is the line officer.	
374	It is very important to explain in the document how or why research cited fits or supports the statements made. For me a glaring example of such a problem occurs at page 156 of chapter 3 dealing with Peak Flows and Channel Condition. Literature cited is Jones and Grant 1996, which deals with the western Cascades of Oregon and Washington. Why and how this research fits in the discussion is lost somewhere. Having worked in some of the forested areas in that country it is hard to believe how there is any equivocation between the seasonal distribution and amount of rainfall, soil and geomorphology, vegetation and harvest practices of that area and the much drier inland forest situation being discussed. NEPA asks for a test of equivalence or why-it might apply but this seems like a quantum stretch. There are other situations but this was obvious based on my experience and education.	Jones and Grant 1996 is one of 7 references used is the discussion that correlates the removal of crown cover and changes to magnitude and timing of peak flows. The Horse Creek Study is also referenced (King 1998) occurred on the Nez Perce National Forest which is closer to the project area. Research from Colorado, eastern forests, and even internationally, have all shown various increases in water yield after reductions in crown cover removed (summarized in Stendick 1996). Since the scientific correlation of approximately 20 percent ECA to potential changes in peak flows was established in many studies (Stednick 1996), current research is not repeating the same studies. The Lost Creek-Boulder Creek IDT used the best available science in discussions of effects of the proposed actions on the various resources. See FEIS, Chapter 3, section 3.0.
375	The draft at pages 209 and 210 provides for me a real dilemma about efficiency of expenditures as it relates to Endangered Species Act fisheries. The upper portion of Boulder Creek and its several tributaries has been identified as habitat for several species of fish. Two of them Chinook Salmon and Steelhead Trout are listed under the Endangered Species Act. These two species are believed to use Boulder and tributary creeks as spawning and early rearing habitat. An apparent natural major barrier exists in lower Boulder Creek that apparently acts as an impediment, a waterfall. Apparently only a few steelheads actually utilize the habitat in upper Boulder and tributaries. It would seem appropriate to more fully assess if the natural falls impediment controls the amount and type listed fishery that utilizes the habitat and if additional modification such as a ladder would help to increase number of fish utilizing the up stream habitat. Instead there is a significant effort to enhance the up stream habitat with fish barrier removals and habitat enhancement while not knowing if more than one or two steelhead will use Boulder Creek while not even considering its tributaries. While by law the federal agency is bound to do some of this	The falls on the lower portion of Boulder Creek is described in Chapter 3 of the FEIS (and in the fisheries specialist report), which, after modification in the mid-1980s, was considered a partial barrier to chinook salmon, and allowed steelhead to pass. Distribution of Chinook salmon and steelhead (and their respective critical habitat) within the Boulder Creek subwatershed are described in Chapter 3 of the FEIS. Bull trout, another species which is listed as threatened under the ESA, as well as their Critical Habitat are also found in streams in the Boulder Creek subwatershed (as described in Chapter 3 of the FEIS). The Boulder Creek subwatershed is identified as an ACS priority in the Forest Plan for watershed restoration and to benefit listed fish species and their habitat.

Comment #	Concerns	Comment Response
	enhancement activity there is no questioning by the agency if the federal money would be better spent at another location or activities? There are other federal monies and other members in the coalition that could work toward making it available. The important item is the economic efficiency of expenditures or dollars per mile of fish habitat enhanced and used based on per fish use. While part of this is outside the scope of the project the evaluation when made speaks to actual importance of the habitat improvement being made in relation to other expenditures.	
376	At page 264 Chapter 3 the term "old growth" is used in a heading. The Forest Plan and numerous other documents have discussed the problems associated with this highly politicized and polarizing term because of the highly variable, contextual use relationship. Use of the term as cited in the document stands on its own. Based on the work I was involved in with the agency's national committee effort to define the term I find it best if not used because it always lacks a consist definition or application. Legacy tree has a much more consistent form of application.	This section of the DEIS was disclosing old growth as identified by Mehl and Haufler (2004). Further information/clarification has been included in the FEIS. Refer to section 1.13 of the FEIS for further information regarding old forest / old growth.
377	In the wildlife section of chapter 3 Hillis, et al 1991 is cited but it could not be found in the reference section in the appendix. There may be other oversights but this caught my eye when I was looking to see how much of the wildlife research that has come from the Starkey project was actually used by the team. I would hope this more recent research which is evaluating other earlier Delphi technique study results is being utilized or applied.	Pacific Northwest Research Station at Starkey Experimental Forest is developing newer modeling methods. Once fully developed, the model will need to be modified for the Payette National Forest, because the component of the model that deals with forage in the habitat effectiveness calculation is based upon habitat typing specific to the Blue Mountains of eastern Oregon and Washington. When and if it becomes available to the Payette, we will coordinate with IDFG on its implementation.
378	A statement at page 151 of chapter 3 dealing with roads to trail conversions raised several questions for me concerning when a road is no longer counted as a road in water resources and other analysis. The last paragraph of the topic area refers to a converted trail as a road yet all the previous discussion was changing this situation to a trail. Do these roads to trails conversion still enter into the road mileage when miles per square of road to evaluate density is considered? This seems to run counter to the agency direction about decommissioning and the intent of Congress in FRRPA (16U.S.C.1608) in road restoration. It seems that every two track is counted as a road when a measure of road density is made. Restoration seems to be a variably applied term as is the definition of a road. That seems to cast a	In Alternative B the OHV trails proposed are 72-84 inches in width to accommodate the UTVs. The difference from an open road is that the trail maintenance standards do not require it to be suitable for passenger car use, thus likely reducing the number of vehicles that will use the route. The new ATV and UTV trail proposals are mostly located on top of FS System roads. For the purposes of the wildlife effects analysis, these trails would be considered the same as open roads. These roads (converted to motorized trails) stay on the Forest System and are counted toward road density.

Comment #	Concerns	Comment Response
	doubt of the credibility of the Watershed Condition Classification process and ratings made.	
379	Thank you again for considering my comments. Executing one of the alternatives discussed is very vital to our local community and economy. My hope is that the process can proceed through to implementation.	Thank you for your comment.
24. Glenn Jacobson		
380	Thank you for the opportunity to comment on your Draft Environmental Impact Statement (EIS) for the Lost Creek-Boulder Creek Landscape Restoration Project.	Thank you for your comment.
381	With my previous comments on your scoping document for the project, I expressed concern with the need for sunlight to enhance seral species such as ponderosa pine and western larch. I still believe Alternative B will not allow you to meet your objective 1, Forest Vegetation. There are stand conditions that need regeneration treatments in order to improve seral species development. Canopies need to be opened more than allowed in your Forest Plan in order to get sunlight on the ground.	Based on comments received during scoping, Alternatives D, and E were developed, in part, to address these and other concerns. The effects of the alternatives are disclosed in Chapter 3.
382	After reviewing the Summary for your draft EIS, I got the feeling your project proposals are a "wish list" at+/- 12 million dollars. Revenue expected from the sale of timber in your restoration treatments may be around +/- 3 million dollars. Where are the additional funds coming from to implement your planned projects? You should at least develop a priority list for projects based on funding needs so that not only you and your staff know the costs and priorities, the taxpayers are also aware of your project funding.	Please see FEIS Chapter 1, section 1.10 Collaborative Forest Restoration Program.
383	I recommend you select Alternative D which allows more volume to be removed, some regeneration harvest treatments to enhance seral species plus provides more revenue for you to complete restoration projects.	Thank you for your comment.

Comment #	Concerns	Comment Response
25. Becky Johnstone		
384	I believe that converting redundant roads to UTV trails is a good idea. If the roads are needed to logging they can be temporarily closed to motorized recreation and open for necessary logging operations. I think easements should be pursued as well as funding from multiple sources to improve/maintain the motorized trails in this area. Non-motorized groups and funding should also be pursued to improve/maintain the non-motorized trails in the project area.	Thank you for your comment. The Forest plans to apply for multiple grants to help fund trail improvements when the NEPA process for this project is complete.
385	Plans to improve the campground area in the Lost Valley area are good, but could be improved if more camp sites were created rather than lost. There is great demand for dispersed camping in this area and too few sites to accommodate the people wanting to recreate in the area. Improving the restroom facilities is a good step, but increasing the number of sites is also important.	Proposing to improve and designate a finite amount of developed recreation camping sites was done to take multiple resource issues into effect, not just recreation demands. The resulting number of identified dispersed campsites strikes a balance between providing recreation opportunities and protecting soils, wildlife, fisheries and watershed areas. There continue to be abundant dispersed recreation opportunities available throughout the remaining portion of the project area outside the Lost Valley Reservoir perimeter, where in Alternative B the dispersed would be limited by designation.
386	Many of the roads that will be decommissioned could provide opportunities for designated dispersed camping. All roads, either currently closed or those being considered for decommissioning should be evaluated before gating or obliterating to determine whether or not they could be used as dispersed camp sites or off road parking. Once they are obliterated, it will be cost prohibitive to resurface them to provide camping opportunities. There is one spot we looked at on our PFC field trips in the project area that would have been a perfect dispersed camp site but the approach was obliterated and made into a bed of Canada thistles. It would have allowed camping of the road and above a stream that the people camping in that spot would have been able to enjoy without being able to cross. We saw another site on the Mill Creek project area that would have been an ideal site, separate from the RCA by a road in a beautiful aspen grove that was obliterated. The Payette National Forest is responsible for providing recreational opportunities for the public. As a growing population is being crowded into a smaller area with ongoing road obliterations, it is important to provide sites that will allow people to spend time in the Forest but reduce the impact on the environment. This can be accomplished by leaving hardened road beds in place that provide camping opportunities and keep	Numerous opportunities for dispersed camping using a motorized vehicle are provided for throughout the project area under Alternatives A, B and C. While some sites were closed due to resource concerns in Alternatives B and C, over 68 sites remain open around Lost Valley Reservoir, each providing for several family camping opportunities. Alternative B continued to allow abundant dispersed camping along the majority of the open roads throughout the remaining project area, while Alternative C did restrict dispersed camping to designated sites only (using a motorized vehicle) throughout the project area. Alternative C was more restrictive to dispersed camping opportunities but continued to offer a good recreation experience. On a crowded weekend or holiday there could be sites that would fill up and the recreational camper would need to move to an open location away from water, but sites would continue to be available for camping.

Comment #	Concerns	Comment Response
	people from having to drive off the established road system. Having a party camped in a site will probably deter others from driving past that spot. Log landings should also be considered for retention as designated dispersed camp sites.	
387	I do not support Alternative C's suggestion to reduced dispersed camping in the project area. It calls for a major change in the existing Travel Plan that went through exhaustive public comment. Increasing the number of desirable sites will reduce the pressure on visitors using less desirable sites. Most people don't want to run the risk of getting stuck or damaging the environment. We are not recreating in the Forest because we want to destroy the environment. Some are careless and overuse does pose some risk. Leave as many already hardened road beds as is reasonable to accommodate more dispersed camping. Eliminating portions of roads should provide more camp sites. Many of us travel with RV's that are self-contained and bathrooms, power and water are not an issue. Somewhat level parking spots are. Moving roads to Maintenance Level 1 allows for rerouting during future management.	Alternative A does not change the existing dispersed recreation opportunities and provides the most dispersed camping opportunities, but also does not repair access problems into the dispersed sites. Alternative B provides abundant dispersed camping opportunities throughout the project area while also improving access into dispersed camping sites open to vehicles. Alternative C was developed as a more comprehensive watershed restoration effort.
388	Removing a road from the system condemns management in the most biologically productive portion of the Payette National Forest into economic unfeasibility. Vegetation will continue to grow without management and fires will ensue. Waiting too long to thin a stand dramatically reduces its productivity, increases the risk of loss to fire and with reduced sunlight on the forest floor, and increases erosion. Grasses are your most effective sediment traps. If there isn't enough sunlight reaching the forest floor there will be no grasses.	Thank you for your comment. The Lost Creek-Boulder Creek project action alternatives generally propose to complete thinning and harvest operations prior to road decommissioning.
389	Analysis should have been done to look at the effects of prescribed burning on recreation. How many days will roads be closed to accommodate prescribed burning? How many days will air quality be such that people with compromised systems will need to stay out of the area? How many days would healthy people be advised to avoid the area based on air quality?	The FEIS does address effects to recreation from prescribed burning on (section 3.7. We do not plan to close roads or trails due to prescribed fires and we have not done so in the last 5 years of applying more than 12,000 acres of fire to various projects on the District. Notifications of planned prescribed fire operations are published in the local paper seasonally and posted in the generally affected areas. It is very difficult to determine how many acres of fire will be applied in any given season. All prescribed burning is subject to approval from the Montana/Idaho State Airshed Group. All burning will be in compliance with national and state air quality

Comment #	Concerns	Comment Response
		regulations. The public would not likely be advised to avoid a burn area based on air quality. We work very closely with MT/ID Airshed Group and the National Weather Service to determine best airshed conditions for a given burn.
390	I realize that there are limited numbers of days suitable for burning both in the spring and fall. Fall burning is preferable as the native species evolved with mostly fall burning and the Native Americans burned in the fall, not spring. Since one of the projects' objectives is to return the area to a condition more similar to its pre European settlement condition, burning in the fall would be the most desirable.	It is unclear the extent to which early people used fire within this specific landscape, what time of year, and what they used it for. As Williams (2000) states, "Fire was the most powerful tool Indians could use to create landscapes capable of sustaining thriving, growing societies (Trudel 1985; Whitney 1994). Indian-set fires differed from natural fires in their seasonality, frequency, and intensity (Lewis 1985; McClain and Elzinga 1994; Pyne 1995). Reasons for burning were many; they varied from tribe to tribe and region to region. Most accounts indicate that Indians used fire to achieve "mosaics, resource diversity, environmental stability, predictability, and the maintenance of ecotones" (Lewis 1985). Within the project area, most ignitions from lightning occur in July, August, and early September. During these months fire personnel and resources are often unavailable for prescribed burns, therefore, fall burning (September and October) has become the standard across the Forest and most agencies in central Idaho. Regarding spring burning, please see response #369.
391	I support Alternative D. It moves the area closer to HRV than any other alternative at less cost. More patch ad relatively open shelterwood cuts should be used to open the forests, reduce risk from uncharacteristic fires and provide the habitat needed for larch. This will help reach HRV faster and more effectively than minimal thinning. Make sure thinning you are doing moves the stands towards a more historic fire risk.	Thank you for your comment.
392	Too much emphasis has been put on improving the water quality in the project area and too little on risk to fire. Water quality is only impaired in this area when you look at the artificial index of roads per square mile. Water temperature, presence of micro and macro invertebrates, cold water fish, sediment, large woody debris and actual water quality are not impaired. Eliminating all off designated route travel was supposed to improve sediment delivery to streams. How much has this improved conditions within the project area?	WCIs located in Appendix B of the Forest Plan were assessed (in the FEIS and in the Fisheries Specialist Report, located in the project record) and given a functional rating as described in the Forest Plan. Sediment production from off-road and native surface road use has been well documented (Luce et al. 2001). The amount of illegal motorized use on the Payette National Forest is not known. Decreases in ground disturbance as a result of decreased off-route travel results in less soil disturbance and, eventually, less erosion as vegetation recovers. Sediment is delivered to streams in many ways and at many locations in any given watershed, so quantifying a reduction as the result of prohibiting off-road use in a watershed is difficult and has not been done for this project area.

Comment #	Concerns	Comment Response
393	Plantations represent a large investment. They need to be thinned in a timely manner. Waiting to thin will make thinning more economically feasible but only so long as the road system remains intact. Delaying thinning will change your TAP analysis of this area. Not thinning will require that more roads be left on the landscape so that the plantations can be thinned at a later date. Taking roads off the landscape before the plantations are thinned will increase the cost and reduce the viability of thinning in the futures. Doing nothing will increase the incidence of insect and disease problems in the area and will increase the risk of uncharacteristic wildfire.	Each action alternative proposes between 5,400 and 8,100 acres of commercial thinning in mature plantations. Additionally, each alternative takes into consideration future forest management needs regarding the minimum road system and decommissioning of unauthorized routes.
394	Moving Boulder Creek from impaired to functioning at risk involves decommissioning roads merely for the sake of decommissioning roads. This is a huge mistake. The largest costs to any logging project is road construction If roads can be put in long term closure so that adverse ecological risks can be minimized but the access is retained for future management needs you will reduce costs on future projects and also the sediment releases that come from road construction and obliteration. Bank road miles when appropriate so that roads can be relocated where appropriate during future projects. Reducing road mileage simply to move from one condition class to another is more damaging to the environment than leaving needed mileage in place, at least in the inventory, so that the long term goal of forest management can be accomplished. You can continue to keep road miles in the inventory even when the road is all but impossible to locate on the ground. This will allow you to relocate the road if the current location is less than ideal without condemning the Forest Service to having to build a temporary road and obliterate it following each needed entry to that part of the forest.	There is a large body of scientific literature that supports decommissioning roads to reduce impacts to watersheds (see FEIS section 3.3.3, Sediment). At a national level, the Forest Service is striving to find the balance between the benefits of access to the national forests and the costs of road-associated effects to ecosystem values (see page 9, Travel Analysis Report, D3 Coalition Planning Area, 1/08/13 available in the project record). Forest Service regulations at 36 CFR 212.5(b) (1) require the identification of the minimum road system needed for safe and efficient travel and administration, utilization and protection of National Forest System lands. In determining the minimum road system, the responsible official must consider a science-based roads analysis. The Travel Analysis Process completed by the New Meadows Ranger District in 2013 (available in the project record) was a key step to meeting this national objective.
395	What is the actual annual cost of maintaining Maintenance Level 1 roads? What is the cost in this district over 30 years? What is the cost of building and then obliterating the same mileage? I think that your assumption of maintenance cost on roads that will see no maintenance once culverts are pulled is a gross overestimation.	The estimated cost for annual maintenance for a Level 1 road is an average of $75 per year per mile. The estimated cost is $20,000 to build a temp road, and then decommission it following use (see Economics and Transportation sections in Chapter 3 of the FEIS and project record). The Travel Analysis Report for the D3 Coalition Planning Area (project record) rated every road in the project area based on a risk/benefit criteria for various resources,

Comment #	Concerns	Comment Response
		including vegetation management (see Appendix 1 of the Travel Analysis Report, page 66).
396	Are you sure that the proposed treatments will be adequate for at least 30 years? The reentry time on the Council District is 20 years. The trees grow more quickly after they are thinned. With the additional rainfall you have in the New Meadows District, I would expect faster growth.	The determination as to the next entry would be evaluated in future analysis and decisions based upon management direction at that point in time. The effects of the proposed treatments are disclosed in Chapter 3 of the FEIS. Section 3.1 acknowledges that providing trees with more resources by thinning has been found to increase growth rates and this was factored into the effects.
26. Kenneth Krone		
397	I have just learned that you are giving thought to destroying a special place. I come from California to hunt deer and elk in the area that you are proposing to close from most means of travel. I have hunted this area for almost 30 years, and I enjoyed that you close the gate on or about September 30 until elk season has concluded. I have for a number of years been using the road to Choke Cherry Flat to take in my camp prior to the gate being closed. The road has been getting worse through the years and has become overgrown and pot holed yet I can get to my camp area on an ATV. And after the season I use the road to go back in to remove my camp leaving little or no evidence that I was even there. In recent years I have been taking my grandchildren into this same area to pick mushrooms and to show them where I hunt elk and how I camp. If you close this area to all but foot traffic my family will not be able to see this part of our family's history. My hunting of this area will be destroyed as I do not have a horse and will not be able to pack in my camp. I would urge you to let nature take its course as the road will be un-passable in a few years. I think that our National Forest Service could better spend our tax dollars on other projects that would help people see what Mother Nature has given us. I hope that you will reconsider your plan to destroy the only way that I have to enjoy this area of our National Forest with my family.	Thank you for your comment. The Chokecherry Flat road would remain closed to motorized use seasonally, and open to motorized use seasonally, as it is now, in Alternatives A, B, D and E. Alternative C proposes to decommission 3.8 miles of the road and convert it to non-motorized use. Alternative C recreation proposals were developed in response to comments received from non-motorized user groups during the scoping period for this project.

Comment #	Concerns	Comment Response
27. John Lewinski		
398	I would like to make a few comments on the Lost Creek-Boulder Creek project. First, there is the sheer volume of timber taken out of an area that has already been heavily cut over the last 50 years. There is simply not going to be any elk cover left. There is none on and Potlatch and State ground below it and after this cut the elk will have no choice but to stay in Rapid River.	Effects to elk are analyzed in Chapter 3 of the FEIS.
399	This plan promises to decommission the roads but that promise is meaningless unless they contour all of them and make them impassable to motorized use by active shaping back to natural slope and putting stumps and boulders in the way over the entire old road bed. Putting a gate up or a few boulders in front of a still flat roadway is useless. The road problem appears in all alternatives to be better than existing conditions but if the USFS doesn't fully obliterate roads the final condition will actually be much worse.	The project is proposing that road decommissioning will include full recontour of system roads and unauthorized routes where practicable. From CR #371: The FS and the CFLRP project is directed to use the best available science when making natural resource decisions (ref CFLRP Title IV letter). (Lloyd 2013, Mirus 2006, more…) all indicate that full recontour of abandoned road beds is the most effective restoration technique. Monitoring of past decommissioning on the New Meadows Ranger District has also shown that erosion issues, concentrated flow, and motorized use is occurring where incomplete road obliteration occurred in the past.
400	The Council-New Meadows area is notorious for not respecting closed roads. I hunted between Lost Valley and Boulder Creek one day two years ago. I deliberately chose a place that ATVs were not allowed and in one day ran into them on four different occasions—and now there will be more decommissioned roads. There are only two law enforcement officers on the whole forest and the punishment is a tiny fine. The plan looks good, reality will be a disaster.	Thank you for your comment.
401	One of the treatments to be used is this plan is the "shelterwood." This is probably the most dishonest terms ever invented by the Forest Service. A "shelterwood" is just a clearcut with a few big trees left in it that will blow down in a hard windstorm. My firewood, for years, came from "shelterwoods" near Brundage when I tried to be the first one in every year in the Spring so I could cut up the Doug Fir "shelterwood" trees that blew over during the Winter. I have even heard a Boise-Cascade call "shelterwoods" clearcuts in politically acceptable language.	See response to comment #333. Considerations for wind firmness would be considered in site specific silvicultural prescriptions. Some considerations that would be included in these prescriptions include the species being retained, stand history, topography and weather patterns.

Comment #	Concerns	Comment Response
402	These trees are to be cut in order to provide jobs but the mills that are in operation now cut three times the volume using one third the labor and no longer pay a decent wage. They have followed the trend of the manufacturing sector throughout the country during the last thirty years. Hauling our trees away will not bring back family-supporting jobs to rural Idaho.	Please refer to the Economics analysis in Chapter 3 of the FEIS information regarding the contributions of this project to local economies.
403	There are some good things in the plan with watershed improvements but mostly it is just one huge timber sale with the residue of an ATV race track system left in the wake. If this plan goes through as designed it ten years it will be indistinguishable from state and Potlatch land below it; dusty ATV trails and mud holes with beer cans strewn like tinsel and even a squirrel track being a rarity. The USFS could have at least chosen alternative C for some mitigation but it seems to have gone with the worst it thought it could get away with	While Alternative B was identified as the preferred alternative, the responsible official is not precluded from choosing another alternative, or aspects of another alternative in the record of decision.
404	The most disturbing aspect of this project was the three people who showed up at the presentation representing local interests. There was a retired timber chief from the forest whose legacy was building every possible road to remove every possible stick, a motorized recreation specialist who in the past had lobbied hard to keep open ATV trails in salmon spawning areas that had been off limits, and an official from Adams County who I fear is deluded into thinking that we can bring back 'the good old days" if we could only get the cut out. This group represents a coalition of the worst excesses of the past and if they are happy with this plan one's initial instinct is the sense that is indeed a terrible plan for the wildlife and terrain of the area.	Forest Service public meetings are open to all members of the public and all views expressed are required to be considered by the responsible official.
28. Mike Medberry		
405	Please accept these comments from me as a representative of the Central Idaho Recreation Coalition and SWC on the Draft Lost Creek-Boulder Creek Timber Sale and Landscape Restoration Project.	Thank you for your comment.
406	While Alt B incorporates the comments of PFC advocates and includes my comments on many key issues, it fails to improve the benign neglect that is	The effects of RCA treatments are disclosed in Chapter 3 of the FEIS. Alternative C was developed in part to address these concerns. Project Design Features (9-11)

Comment #	Concerns	Comment Response
	reflected in the No Action Alternative on at least one concern: logging (commercial thinning) and burning within Riparian Conservation Areas. Neither the PFC nor the Forest Service has made a convincing case for proceeding with logging nor burning within the RCAs. The RCAs are typically not burned in most fires except in the most severe conditions and those conditions will be dealt with in logging and burning outside and adjacent to the RCAs. Retaining the existing condition of RCAs will maintain the low sediment delivery, the lower instream temperatures, and substantial downed woody material. These three conditions (sediment, temperature, and LWD) are set by the USFS and are required in the Forest Plan, regional, and national guides. They shouldn't be ignored or assumed away as they are important to many wildlife species (eg. grouse, elk, wolverine. some raptors, lynx, snowshoe hare, and some fish). At what point is the RCA above the moist and truly riparian region? Are there other regions where the RCA should be expanded? This is the one issue that the PFC should address.	(located in Chapter 2 of the FEIS) will be implemented to maintain RCA functions which include, but are not limited to, sediment, temperature, and LWD. Alternative A, the no action alternative would retain the existing condition of RCAs, maintain the existing ground cover and sediment delivery, maintain instream temperatures, and CWD. The riparian vegetation and soils that are to be protected in RCAs vary in width by Rosgen stream type, stream size, geomorphology, and Flood prone width (FPW). Generally, the 240/120 foot buffer associated with two site-potential tree heights encompasses the moist and truly riparian region. FWP must also be accommodated within the RCA and should be verified not to be greater than two site-potential tree heights upon implementation by the layout crew. The RCA should be expanded where FPW is found to be greater. A map of Rosgen type, showing where Rosgen channel types E and C, may have wider FPWs can be found in the Watershed Specialist Report...
407	In addition, 29 miles of temporary road construction seems rather extravagant in a plan that is called a landscape restoration project. How will these roads be eliminated when you are finished using them? Is there certain funding for their permanent closure? Will the gravel pits be reclaimed? Is the planting of trees within what used to be called the timber base? Are there maps of the timber base, as the timber base was looked at and discussed more than 20 years ago; how has it changed over the years? Please provide a map of the timber base in the FEIS.	Temporary roads would be required to be obliterated after use (PDF Table 2-6). Many of these temporary roads are proposed on existing unauthorized routes that are not a part of the NFS road network. These existing unauthorized routes would be obliterated after use. Lands suited for timber production were determined during the Forest Plan process and are available as a part of the project record. No changes to the suited base are proposed as a part of this project and changes to the suited base are outside the scope of this project. A map of PNF management prescription categories is included in chapter 1 (Figure 1-2).
408	While CIRC appreciates all of the efforts that have been put into maintaining recreation activities, little has been done to assure that hiking or skiing are considered valuable activities in contrast to ORV use. Given that few CIRC members hike or ski in this beautiful but impaired area, it is understandable that the Forest Service is not going to look at our concerns as crucial to decisions that are being made.	Hiking and other non-motorized uses are being considered and enhanced with the trail maintenance being proposed on the existing 18 miles of non-motorized trail in the Boulder Creek area in both Alternatives B and C. In addition, in Alternative C, 20 miles of road to non-motorized trail conversion is proposed for both Boulder and Lost Creek. While the area is not known to provide exceptional skiing opportunities these activities have not been restricted in any alternative.
409	In addition, I greatly appreciate the commitment of the Forest Service to maintain the biological integrity of the Boulder Creek drainage and to	Thank you for your comment.

Comment #	Concerns	Comment Response
	maintain or improve the habitat for northern Idaho ground squirrel. These are the great victories of your work on this project, despite having to give on many other provisions.	
29. Karla Miller		
410	I am writing to express my support of Alternative C, as described in the summary of the Restoration Project. As a fourth-generation resident of this part of Idaho, I have watched the changes occur that accompany large timber-sale projects, and am concerned for the well-being of the land and watershed that we call home. I am against increased ATV use in general, and hope that Alternative C would reduce illegal ATV use in this area. My understanding is that a trail already exists, which could be improved for this recreational use. I encourage (and enjoy myself) non-motorized trails, which result in less damage to land, watershed and wildlife. I also support the plan with the highest priority placed on watershed restoration in Boulder Creek, for the benefit of the fish population. As I read in the Land Management Act, Title IV, section 4001, the purpose of the project is "to encourage the collaborative, science-based ecosystem restoration of priority forest landscapes." I hope for nothing less and encourage the choice of Alternative C.	Thank you for your comment. The intent of all proposed alternatives is to discourage illegal ATV use by providing new, legal motorized trail opportunities, and decommissioning unauthorized routes that are currently being used illegally.
30. Rodger Nelson		
411	The Payette National Forest is to be commended for recognizing the disturbed nature of the Weiser River and Boulder Creek watersheds and wanting to rehabilitate these harvest- and road-ravaged landscapes. Since the project must occur within the constraints of Forest Service Manual direction and the Payette's own Land and Resource Management Plan (LRMP) and involves the intersection of several complex environmental laws, as well as the budgetary Omnibus Public Land Management Act of 2009, which basically subsidizes industries in local communities and enables the Forest Service to devote more resources than it might otherwise to landscape-scale rehabilitation efforts. In the case of this project and this environmental framework, it seems to me that the Forest is missing some important opportunities to remedy landscape-scale abuses it has committed in the past and is making some fundamental mistakes	Thank you for your comment.

Comment #	Concerns	Comment Response
	with respects to the alternatives proposed and evaluated in the Draft Environmental Impact Statement (DEIS).	
412	**Vegetation and Fuels Issues** 1. Since the principal goal of this project is somehow supposed to "fix" or restore "health" to the forest in these watersheds, I thought I'd start here. I've always been suspicious of both "vegetation treatments" and "fuels projects" because they both serve to promote the Forest Service industrial (or commodity-driven) agenda while providing few obvious benefits. The concept of an Historical Range of Variability (HRV) that should guide management is appealing but, I think, misleading and misused: • First and foremost, most of the publications and research touting vegetation management and fuels treatments to restore forest health seem to me to come from the Forest service or vested interests like Forestry schools and state management agencies. • The Forest's Potential Vegetation Groups (PVGs) are based on modeling that presumes to determine what the Forest would have been like prior to European settlement; the modeling seems to be based on some questionable assumptions, including: o Indigenous (aboriginal) inhabitants of the area had no or minimal effect on pre- settlement conditions. I don't think there are many studies from the project area, but Indians have been shown to have significantly altered pre-settlement environmental conditions in California and Appalachia. Indian fires, whether set to maintain certain environmental characteristics, for warfare, or simply from accidental escape unlikely affected this area as well. o Stand replacement fires in the dry forest types were mainly rare and natural fires were mainly low intensity, not lethal, and patchy leading to a predominance of open park-like stands of timber. There is evidence from these western dry forests that this assumption is	Thank you for your comment.

Comment #	Concerns	Comment Response
	likely false. o The past is the key to the present and the future. This one is clearly false, because the most common period used includes the coldest parts of the Little Ice Age, including the Maunder Minimum and the Dalton Minimum. If the climate is warming as the Forest Service seems to believe, the presumption that modern or future forests should resemble those is, frankly, preposterous. o I've never seen this stated, but there seems to be an explicit assumption that riparian forests have the same HRV conditions as adjacent upland forests. This seems unlikely, but there seem to be few studies documenting fire regimes in HRV. o The data used to determine HRV is valid. There is clearly a "missing data" issue in studies of old fires and scarred trees where a true stand replacing fire occurred.	
413	2. There is little empirical evidence that fuels projects actually have environmental benefits and some evidence to the contrary. Again, the analysis is based on modeled benefits as reduction in fire hazard, as if a large fire would be "uncharacteristic" and necessarily a "bad" thing environmentally. There is considerable concern that these actions are an actual detriment to the environment because (a) they may actually drive forests outside HRV, (b) fuels reduction benefits are transient and areas burned are not necessarily likely to experience large fire or reduction in severity, and (c) potential impacts from treatments can further degrade watershed conditions. Point to consider: • The Rapid River watershed has been repeatedly treated for fuels yet the Wesley Fire was presumably unusually large. What evidence suggests it would have been larger without treatment? • The South Fork Salmon River (SFSR) and East Fork SFSR were consistently treated for many years yet still largely burned over in 2007.	This is not a fuels project or a fuels reduction project; however a reduction in fuels would occur as a result of the planned restoration treatments. The intent of the project is to restore conditions to within the HRV, consistent with Appendix A of the Forest Plan. The analysis does not presume that the final burn area of the Wesley Fire was uncharacteristically large. The overall fire effects in relation to tree mortality and consumption of CWD were viewed to be slightly greater than historical conditions would have perpetuated, but considered to be within or near the HRV. The Wesley Fire grew to 16,405 acres over a 35-day period (Sept 9th through Oct 13th). This fire was the result of two lightning-caused fires that quickly grew together on the morning of the September 9th. The Wesley and the Aspen Fire spread to more than 4,000 acres in the first 48 hours fanned by sustained 20+ mph winds and fire behavior indices above the 90th percentile conditions (i.e., upper extremes). Initially, fire spread was primarily to the north and northeast. Upon spreading into three previously burned areas (North Fry Pan Prescribed Fire in 2001; South Fry Pan Prescribed Fire in 2002; and North Star Butte Wildland Fire in 2005) fire progression to the northeast and east were halted on Sept 13. Fire spread continued along the western flank for another month, but severities decreased greatly. Eventually, the fire progressed to the north along the western flank, but spread was halted at the Curren Mountain Wildland Fire of 1989 and eventually ceased by winter weather conditions. Past prescribed and wildland fires played a significant role in minimizing fire spread, fire severities, and potential costs associated with protecting values beyond the east flank of the fire.

Comment #	Concerns	Comment Response
		The South Fork of the Salmon River was consistently treated with spring burns over many years; the last burn was conducted in the Spring of 2005. These applications of fire did not cover the entire extent of the wildfires that occurred in these drainages in 2007. Field observations have shown that past prescribed fire treatments minimized fire severities to overstory and soil conditions in many locations along the South Fork of the Salmon River. Fire resiliency is not intended to stop fire spread but mitigate uncharacteristic fire effects/severities. 2007 was a record drought year that exhibited very extreme fire and fuel conditions. When these extreme conditions persist, effectiveness of any treatment is compromised.
414	3. It strains credulity to consider that anything resembling HRV is likely to be restored with this project. Most of these subwatersheds have been over-harvested (as attested to by the high Equivalent Clearcut Area [ECA] values) and "forests" are now predominantly plantations. I accept the fact that plantations are overstocked initially and need thinning, but even a thinned plantation will not resemble a forest from pre-settlement times. The disturbing thing here is that the only thing resembling natural forest in most of the project area is within the Riparian Conservation Areas (RCAs), which the Forest now proposes to cut and sell in the glorious name of HRV. This is troublesome because: • While there are exceptions, most of my experience in BAER has shown that stream corridors and riparian corridors typically act as natural fuel breaks. • High intensity fires in riparian corridors on the Forest have typically been low severity and the fire recovery sequences I developed on Trail Creek (Corral Fire, 1994) and Sand Creek (Burgdorf Junction Fire, 2000) show rapid recovery of riparian understory, terrific wood recruitment to the streams, and increase in habitat structure. • The LRMP discourages (in fact largely prohibits) harvest and wood removal from RCAs. This is most obvious by the fact that	Thank you for your comment.

Comment #	Concerns	Comment Response
	RCAs are not considered part of the suited timber base, followed by the Aquatic Conservation Strategy (ACS) goals, objectives, standards, guidlelines and delineation procedures designed to protect riparian ecosystem processes and functions.	
415	**RCA Issues** 1. The Forest has violated the RCA delineation criteria provide in Appendix B of the LRMP, which does not provide for determining RCA widths from PVG alone. Here are two examples of RCA definition from the DEIS: • Page 7, Chapter 1: "Field reconnaissance and stand exam data has indicated that PVG 2, 5, and 6 are the dominant PVGs in forested areas within the proposed activity units in the project area. RCA widths in forested areas will be based on the PVG 2 and PVG 6 site-potential tree height of 120 feet (Forest Plan page B-36)." • Page 208, Chapter 3: "The Forest Plan (Appendix B) outlines criteria to aid delineation of RCAs for perennial and intermittent streams, ponds, lakes, reservoirs, and wetlands (USDA 2003a). The RCAs within the project area have been identified utilizing the Option 2 (USDA 2003a page B-34) delineation method based on site potential tree height. Option 2 provides a more specific delineation of an RCA boundary using site potential tree heights (when compared to Option 1). Field reconnaissance and stand exam data has indicated that PVG 2, 5, and 6 are the dominant PVGs in forested areas within the proposed activity units in the project area. RCA widths in forested areas will be based on the more conservative PVG 2 and 6 potential tree heights (USDA 2003a, page B-36), which are displayed in Table FH-2 below. This inappropriate delineation was also used in the Mill Creek-Council Mountain Project but no commenter (other than myself as Forest Fisheries Biologist) or appellant caught it at the time. This is how Appendix B of the LRMP defines Option 2: • Forested perennial or fish bearing intermittent streams: "Flood-prone width or two site-potential tree heights, whichever is greatest" (emphasis added).	Project Design Feature # 8 (FEIS, Chapter 2, Table 2-6) has been amended to clarify this. Generally, the two site potential tree heights has been greater than the flood prone width although site specific verification is required to be completed as noted by the commenter. The RCA width determination may be adjusted especially where Rosgen stream types such as C and E have any potential to have wider Flood Prone Widths. This method of ground verification has not been found to be cost prohibitive as it is incorporated into layout. Acres of RCA vegetation treatments are disclosed for each of the action alternatives in Chapter 3 of the FEIS (Table FH-19), which range from 0-1,990 acres. RCA delineation, including incorporation of flood-prone width, is described in the FEIS in Chapter 1, PDFs in Chapter 2 Table 2-6, and Chapter 3 (Watershed Resources) and in the Watershed Resources Specialist Report (located in the project record). The largest of the site potential tree heights (from Table B-5 of the Forest Plan) for PVGs 2, 5 and 6 is 120 feet, will be used throughout the project area, which provides the largest of the RCA distances described in Option 2 in Appendix B of the Forest Plan.

Comment #	Concerns	Comment Response
	• Forested intermittent streams: "Flood-prone width or one site-potential tree height, **whichever is greatest"** (emphasis added). • Determination criteria: "Defined based on a site-specific analysis by a qualified specialist with expertise in the field of riparian function and ecological processes." • Definition of flood prone width: "To measure the width of the flood-prone area, select the elevation that corresponds to twice the maximum bankfull channel depth as determined by the vertical distance between bankfull stage and the thalweg of a riffle." Despite the improper grammar, it is clear that two site potential tree heights can only be used to define RCA widths if it is greater than the flood prone width as determined by a watershed specialist (hydrologist) and/or a fisheries biologist; silviculturists and fire specialists typically do not have sufficient expertise. During my tenure on the Forest as a Fisheries Biologist, I have never seen flood prone width measured for a project, though it could readily be incorporated in the fish habitat assessment protocol we developed while I was there. The RCA widths should therefore be determined at each potential cutting unit with site- specific determination of flood prone widths. Such effort might be prohibitively expensive, but something must be done to avoid this arbitrary and capricious misinterpretation of Option 2. I had suggested at least developing a model by randomly selecting PVG groups and determining, on average, whether two site potential tree heights could be expected to exceed flood prone width; to the best of my knowledge, nothing has been done other than arbitrarily misapplying Option 2.	
416	2. In addition to the above and directly related to it, the NMFS Biological Opinion (BO) on the Forest Plan requires in Term and Condition 1A has this requirement (page 89): Assess the effectiveness of floodprone widths in protecting riparian functions and processes (identified in LRMP Appendix B, page B-37) from the effects of different types of activities along forested and unforested streams, and confined and unconfined channel types. This assessment can be included as a portion of the existing	A project specific biological assessment (BA) has been completed and consultation is in progress with the US Fish and Wildlife Service and National Marine Fisheries Service. The BA includes a description of RCA delineation and is identical to FEIS location reference.

Comment #	Concerns	Comment Response
	"Riparian Condition" monitoring element. When did the Forest do this and how was the information used to inform the development of suitable RCA delineation for this project?	
417	3. Forest Plan guidelines prohibit prescribed fire ignition in RCAs without specific agreement to the action with the USFWS and/or the NMFS, depending on drainage basin. This is the SWRA Guideline: **FMGU06:** Direct ignition of prescribed fire in RCAs should not be used unless site/project scale effects analysis demonstrates that it would not degrade or retard attainment of soil, water, riparian, and aquatic desired conditions. Refer to SWRA Standard 4 for exceptions. The DEIS uses this definition of a guideline: As Forest Plan management direction, a guideline is a preferred or advisable course of action generally expected to be carried out. Deviation from compliance does not require a Forest Plan amendment (as with a standard), but rationale for deviation must be documented in the project decision document. Under normal NEPA process rules, this would be correct. However, both the USFWS and the NMFS BOs on the revised Forest Plan require more than simple provision of rationale for violating the guideline. Specifically, Term and Condition 1E in the NMFS BO (page 90) on the Forest Plan says this: For projects that may affect ESA-listed anadromous fish species or their habitat, identify variance from a guideline that pertains to avoiding or minimizing adverse effects on these species or their habitat, and provide rationale for deviation from that guideline to NOAA Fisheries during project-level ESA consultation. This requirement was acknowledged on page 238 of the Brundage-Bear Basin EA as a mitigation but it is not clear that either the NMFS or the USFWS agreed that such actions should be performed in the future. In fact, the DEIS suggests that the NMFS was not particularly pleased (or will not likely be pleased or has not approved this time) RCA ignitions because they are not proposed in the Boulder Creek watershed. Why is it therefore OK in the non-anadromous areas, did the USFWS approve?	A project specific biological assessment (BA) has been completed and consultation is in progress with the US Fish and Wildlife Service and National Marine Fisheries Service, including a description of ignition in RCAs.

Comment #	Concerns	Comment Response
418	4. There is evidence that prescribed fire has different effects on aquatic ecosystems than wildfire because of reduced severity [Arkle and Pilliod 2010] and that wildfire may have beneficial effects to fish [Malison and Baxter 2010]; why are these issues ignored in the DEIS?	Wildfire is not proposed as part of the project, therefore direct effects of wildfire are not analyzed. The Arkle and Pilliod study from 2010 did not find significant, immediate or delayed effects from prescribed fires to biotic or abiotic characteristics of study streams on the Payette National Forest. The Malison and Baxter study from 2010 did find significant correlations between high intensity wildfire and a mid-term (5 years post wildfire) increase in aquatic productivity at multiple trophic levels. In a general sense, the results of Malison and Baxter 2010 could be used to infer that these pulses of productivity could be beneficial as food sources would be more abundant for fish. However, the authors of this study acknowledge that future investigations are needed to support their findings in a land use context, as their study sites were located in a wilderness area that has been less impacted than managed areas, including the Lost-Creek Boulder Creek project area. When compared, the two cited studies show that less intense prescribed fire produces different results in aquatic habitats than intense, unmanaged wildfire in a wilderness area. The purpose of proposed prescribed fire in the Lost Creek-Boulder Creek project area is to move vegetative conditions towards their historic conditions. The assumption is that by shifting the composition and structure of vegetation, conditions will be more resilient if a high-intensity or uncharacteristic wildfire should occur. The project does not propose or assume that treatments will preclude wildfire from occurring, and acknowledges that there are numerous beneficial effects from wildfire.
419	Appendix 4: What does "[o]nly upland vegetation in the outer portion of the RCA would be treated" mean? Is this an admission that there was no proper delineation of RCA widths assuming no riparian vegetation outside 120 feet? I realize that this will presumably be verified on the ground prior to implementation, but what specialist will determine whether vegetation is riparian or upland? What criteria are used to define riparian and upland vegetation? Will the Appendix discussion of how to evaluate riparian function be used?	RCA treatments are described in Chapter 2 and in Appendix B of the FEIS. PDFs require that a SWRA specialist would review and approve site-specific plans for RCA treatment prior to implementation, using the Forest Plan Appendix B guidance.
420	**Fish Populations and Habitat** 1. This statement on page 211: Five patches of habitat capable of supporting bull trout were	Bull trout distribution in the project area is described in Chapter 3 of the FEIS and in the Fisheries Specialist Report (located in the project record). A project specific biological assessment (BA) has been completed and contains the rationale of a "No Effect" for bull trout and critical habitat outside of the Boulder Creek subwatershed.

Comment #	Concerns	Comment Response
	delineated by RMRS in the Weiser River subbasin portion of the project area including Corral Creek (West Fork Weiser River tributary), upper Lost Creek, Butter Gulch (East Fork Lost Creek tributary), East Fork Lost Creek, and the upper West Branch of the Weiser River) (Figure FH-4). It is believed, however, that bull trout do not exist in those areas (see description below). is indefensible for a description of fish distributions for a project of this magnitude. It indicates that the Forest was derelict in not conducting sufficient fish distribution surveys to support any credible effects analysis of alternative development in the Weiser River portion of the project area. Since the modeling, which was specifically constructed by RMRS from Forest data and funded by the Forest, exists to suggest that bull trout could occur, it is clearly a dereliction of duty not to check areas where the model says conditions are likely suitable and arbitrary to assume absence because of a "belief" with no supporting evidence. This clearly violates the need for a "hard look" pursuant to NEPA requirements. • The discussion on page 212 suggests that almost no new information on bull trout distributions has been obtained since I produced the latest viability assessment12. Even though that assessment attempted to follow the modeling being done by RMRS, it was relatively crude and produced prior to release of the RMRS model, a much more refined approach. A reasonable person would expect some improvement in knowledge for a long-term project that proposes to treat 40,000 acres including commercial harvest of 22,000 acres. Again, this fails to rise to the level of a "hard look" under NEPA. • The Forest should refer to FSM 4672 Exhibit 01. This flow chart shows that field reconnaissance for ESA-listed species or habitat is required if there is evidence that species or habitat exist. The Forest developed the RMRS habitat suitability model to provide this sort of evidence, so it is reasonable to assume that the suitable patches it identifies present evidence that the species may exist in them. Previously, all evidence for bull trout occurrence in these areas suggested that the species were not present, as described in the Forest's viability and habitat assessments13; that situation has changed with development of newer tools. • I have no trouble believing this statement on page 212:	

Comment #	Concerns	Comment Response
	From 1989 to 2012, 220 fish surveys (electrofishing and snorkel) have been conducted in the Upper Weiser River, Lost Creek, Upper West Fork Weiser River and Lower West Fork Weiser River subwatersheds and all have failed to detect bull trout (USDA 2013, Fish Inventory Database, Unpublished Data). However, it is not clear whether this presents a "hard look" as required by NEPA. It is not uncommon for cursory surveys to fail to detect bull trout, which is why the Forest Service developed probabilistic survey methods for establish the likelihood that no detection is statistically and indication of absence and the patch modeling described above. At the very least, the types of methods used, the intensity with which surveys were conducted, whether snorkeling was during day or night, and whether surveys were conducted in the identified suitable patches should be disclosed. This is also why specialist reports should be made available to reviewers without requiring a FOIA request. • The Forest should also note Forest Plan guidelines TEGU02 and SWGU12: TEGU02: For proposed actions that may affect potential habitat of TEPC species, identify potential habitat and determine species presence within or near the project area. Document the rationale for not identifying potential habitat and determining species presence for TEPC species in the project record. SWGU12: During site/project-scale analyses, habitat should be determined for sensitive aquatic species within or near the project area. Surveys to determine presence should be conducted for those species with suitable habitat. Document the rationale for not conducting surveys for other species in the project record. These effectively demand surveys for bull trout in west zone patches modeled as potentially suitable and should push the Forest to determine fish populations in seasonally fish bearing intermittent streams. Again, implementation of the Forest Plan should be fact-based not "belief" based. • The need to take a harder look at bull trout distributions where they are modelled to have suitable habitat conditions is underscored by the fact that Yellowjacket Creek, designated by the USFWS as bull trout critical habitat, does not fall within a modeled patch, suggesting that	

Comment #	Concerns	Comment Response
	bull trout might be more widespread than the Forest "believes." In fact, we found this to be true in and around 1998 when we first began consulting on bull trout. A preliminary version of this suitability model that I developed14 led to the discovery of bull trout in Bear Creek on the Council Ranger District.	
421	2. Bull trout occur throughout Boulder Creek all the way to and above Railroad Saddle. In 1993, RMRS published the results pilot paired watershed study using the R1/R4 protocol; I was a coauthor. While this report does not document fish distributions, I know that bull trout were common in Boulder Creek and that fish of sufficient length to be probable fluvial migrants were observed by crews. This is highly significant for two reasons: • Fish biologists have long recognized a fundamental predator-prey relationship between adult bull trout and Chinook salmon, to the point where declines in bull trout abundance have been thought to be related to declines in Chinook salmon. They have been known to follow Chinook salmon during the salmon spawning runs and devour eggs of spawning Chinook. Both species spawn in the fall and bull trout are certainly less well known for jumping ability than salmon; if the falls is a real barrier, both species must be able to ascend it. • Since salmon must historically have been able to colonize Boulder Creek, all tributaries, at the very least near their mouths, must be Chinook designated critical habitat. The true efficacy of the falls, especially historically when runs were not depleted and the climate was possibly cooler and moister consistent with the Little Ice Age, cannot adequately be estimated; therefore, it should be assumed that Chinook are an important component of the aquatic ecosystem throughout Boulder Creek.	Thank you for your comment.
422	3. Implementation monitoring on page: Field verify that buffers are appropriate widths and RCA treatments (thinning and prescribed fire) follow the required mitigations and project design features. Fish surveys (either electrofishing surveys or visual surveys) will be conducted on intermittent streams to determine fish presence if no previous surveys have been conducted. RCA	Project Design Features located in Chapter 2 of the FEIS (Table 2-6) would be implemented to address site-specific resource concerns that are not sufficiently addressed by existing management requirements.

Comment #	Concerns	Comment Response
	widths will be adjusted if necessary prior to implementation. This should be pre-project analysis not mitigation or monitoring. In addition, "electrofishing or visual" is too vague. Probabilistic rather than casual surveys should be done to avoid "false negatives." This approach suggests that stream status and fish presence is being assumed pre-decisionally on the promise that the Forest will look if it feels it needs to. I find it highly unlikely that all this work (surveying all potentially affected intermittent streams and RCA widths using flood prone widths) will be rigorously performed after a Record of Decision (ROD) is signed and before the project begins if the Forest has been unable to fit it in during the project development process.	
423	4. The estimates for Large Woody Debris (LWD) in the Boulder Creek watershed are strikingly different than those reported in Overton et al. (1993), where the authors found that Boulder Creek "B" channels averaged 7.1m width and about 5 pieces per 100m depending on how wads and aggregates are included; that is, about half the Idaho Natural Conditions Database value for volcanic channels. Why the discrepancy? Are there newer, better data now? Is it because tributaries are included? I am inclined to question the FA rating without more explanation of how it was derived; professional judgment is acceptable, but the rationale should be clear. This paired watershed survey covered essentially all of Boulder Creek on the Forest, approximately 23,000m or about 2½ times the length of survey reported for your DEIS analysis.	The analysis of LWD in the FEIS (and DEIS) uses the criterion of LWD described in Appendix B of the Forest Plan which differs from that used in the Overton et al. 1993 Paired Watershed Study. The LWD estimates used all surveys that collected LWD data within this criterion, including not only surveys on Boulder Creek but also tributaries of Boulder Creek. All LWD data (collected up through 2012) were compiled to develop the estimates and ratings for the Boulder Creek subwatershed.
424	5. I don't think enough attention is being paid to the potential for this project to increase stream temperatures, especially if, as the Forest seems to think, air temperatures are warming. Stream temperatures are affected by air temperature, so warming could occur naturally; however, shading extremely important. Here are the issues as I see them: • Vegetation treatments to change resiliency have effectively no capacity to improve fish habitat. I suppose you could argue that the effects of an "uncharacteristic" wildfire would increase temperatures and therefore be worse, but that is a hypothetical effect, not a direct consequence of a federal action.	Effects of this project to stream temperatures are discussed in Chapter 3 of the FEIS. Within the project area where RCA treatments are proposed, PDFs (Chapter 2 of the FEIS) as well as no-treatment areas within RCAs are expected to maintain stream shading (described by Brazier and Brown, 1977, DeWalle 2010, and FEMAT 1993). Stream temperature monitoring is included in Chapter 2 of the FEIS. The West Fork Weiser River (WFWR) is fully supporting its beneficial uses. It does NOT have a TMDL, but has been assigned a potential natural vegetation target load allocation and requires a 27% reduction in solar loading.

Comment #	Concerns	Comment Response
	• However, vegetation treatments could degrade fish habitat, even if there are no RCA treatments. There is effectively no analysis of the potential for this project to increase stream temperatures either alone or synergistically with supposed climate change. This is the closest to an effects analysis I found (page 17): Proposed project activities that could include the removal of streamside and overhanging vegetation, including the forest canopy, can increase insolation during summer months, resulting in elevated water temperatures. Conversely, the removal of insulating vegetation can result in colder winter temperatures in the winter. A TMDL (Total Maximum Daily Load) for temperature was approved by the EPA in 2007 for the West Fork of the Weiser River. Although shade is generally adequate for the on-forest portion of this waterbody, retaining existing shade for perennial streams in this watershed is a high priority to achieve the water quality goals. Table WS-8 (page 168) does acknowledge that temperature could be affected, and the Fisheries section does a decent job of describing the importance of shading, but there is no analysis. Before I retired, I prepared a shading analysis for a planned WUI project that demonstrated one approach to analyze shade from vegetation and topographic features. In addition, we developed habitat inventory procedures for at least identifying existing shade and were working with technological solutions for modeling changes in shade by vegetation removal Solar Pathfinder® and Access® camera imaging). Is the Forest too lazy to actually do this analysis? With the CFLRP subsidies, real habitat evaluation and analysis, as required by manual direction, should be possible; it is insufficient (and arbitrary) to just "believe" that there will be no adverse effects from opening vegetative canopy.	
425	• So if the project should help increase stream temperatures, one effect in bull trout waters is likely to be expansion of brook trout because they are more competitive in warmer water (their temperatures preferences are similar to redband trout) and may well be, as the DEIS admits, the biggest threat to bull trout viability on the Forest. Here are problems with the analysis: o The area of overlap between bull trout and brook trout are not described in detail, and there is no description of fish populations	Stream temperatures are expected to be maintained at the subwatershed scale across the project area (as descried in Chapter 3 of the FEIS. Brook trout distribution is described in Chapter 3 of the FEIS and in the Fisheries specialist report (located in the project record). Brook trout distribution overlaps known bull trout distribution throughout the project area, including tributaries of Boulder Creek where stream crossing improvements are proposed. Since the two species already coincide throughout the watershed, there is no overriding management concern that any pure strain populations of bull trout would be protected by not providing fish passage.

Comment #	Concerns	Comment Response
	in many streams where crossing upgrades are proposed (many had no fish presence surveys when I was there). How certain is the Forest that opening these culverts would not violate Forest Plan standard **SWST08** ("Fish passage shall be provided at all proposed and reconstructed stream crossings of existing and potential fish- bearing streams unless protection of pure-strain native fish enclaves from competition, genetic contamination, or predation by exotic fishes is determined to be an overriding management concern.")? Where is the analysis to support compliance or was it an arbitrary "belief?"	
426	o The Idaho water quality criterion for bull trout established by the EPA is 10°C in June, July, August, and September (40 CFR 131.33 Subpart D). Most Forest streams cannot meet this criterion naturally but that does not give the Forest license to increase temperatures so that streams are farther from compliance with standards.	Stream temperatures are expected to be maintained at the subwatershed scale across the project area (as described in Chapter 3 of the FEIS.
427	6. This statement in the DEIS (page 252): Adverse effects to listed fishes and DCH from culvert activities are analyzed in the Programmatic Stream Crossing BA (Scaife and Hoefer 2010). reflects procedurally invalid analysis with respect to ESA consultation and insufficient site-specific detail for this analysis. The Forest was not permitted to do this in the Mill Creek-Council Mountain project because it doesn't provide enough site specific detail and because it is inappropriate to tier to the programmatic consultation for an independent action carrying a Likely to Adversely Affect determination for listed species (page 251). From page 6 of the NMFS BO: Coverage of project activities as components of larger projects is warranted only if consultations for the remaining components of larger projects have "Not Likely to Adversely Affect" determinations for listed species and/or critical habitat. Should a larger scope project have a "Likely to Adversely Affect" determination, the culvert replacement component would be addressed in the BA for the larger	A project specific biological assessment (BA) has been completed and consultation has occurred with the U.S. FWS and NOAA Fisheries. This consultation adopted the requirements from The Programmatic Stream Crossing BA (Scaife and Hoefer 2010). Additionally PDFs listed in Table 2-6 require US Fish and Wildlife Service and NOAA approval prior to implementation. Brook trout distribution and consistency with SWST08 is discussed in Chapter 3 of the FEIS, sections 3.3 and 3.5. PDFs that address culvert replacements (Table 2-6) will be applied to the entire project area.

Comment #	Concerns	Comment Response
	action. This caveat is reiterated under "Excluded Actions" (pages 11 and 12), the first bullet of which includes the caution about enhancing the potential for brook trout invasion into bull trout populations (which would also violate **SWST08**). As used here, it simply seems to be a dodge to avoid sit-specific analysis and disclosure of culvert design features, installation procedures, mitigations, and likely effects on sediment delivery and fish disturbance. For example: o Will brook trout be able to invade bull trout populations? o How many culvert replacements are within 600 feet of Boulder Creek? o Will the same procedures be used in the Lost Creek part of the watershed?	
428	7. The WCF is a lower resolution management framework than WARS and the ACS as discussed in the Forest Plan (cf. page 207); it should be secondary in discussions of measuring improvement in conditions to the matrix in Appendix B, the Forest's actual management direction. Proper application of the required Framework process would be ideal, but the Forest has avoided this process as well as appropriate Forest Plan monitoring.	Effects of this project are analyzed according to the Matrix in Appendix B of the Forest Plan (Chapter 3 of the FEIS and in the Fisheries specialist report). A crosswalk that compares the Forest Plan WCIs to the WCF indicators is located in the Watershed Specialist Report (located in the project record). This cross walk correlates WCIs between Appendix B of the Forest Plan and the WCF and ties them to an indicator used in the SWRA analyses for the project. The Payette National Forest prepared a Midscale Analysis Summary for the Little Salmon River subbasin to address the intent of the Framework process, which was agreed upon by the National Marine Fisheries Service and US Fish and Wildlife Service in January, 2014 (see project file).
429	8. The DEIS has several references to livestock use having contributed to the degradation of streams and wetlands, but doesn't specifically discuss how grazing may continue to affect fish habitat. There is an applicable standard that should be addressed (TEST25): Mitigate, through avoidance, the adverse effects of livestock access or activities that may result in trampling of redds or disturbance of spawning or reproductive staging of ESA listed fish species. How will this project comply with this standard? Does the Forest even	Alterations to livestock grazing are not within the scope of this project. Compliance with Forest Plan standards is addressed throughout the FEIS and in the Forest Plan Consistency checklist located in the project record.

Comment #	Concerns	Comment Response
	know where spawning and staging areas are? The project is not a grazing proposal, but it seeks to benefit permitees; how does it propose to avoid these potential conflicts?	
430	**Watershed Issues** 1. I don't believe this statement (page 7) is correct: The Watershed Condition Framework (WCF) (detailed in section 1.6.4) identifies the desired condition for Watershed Condition Indicators (WCIs) at the subwatershed scale. Specifically, the WCF incorporates only a subset of the Forest Plan WCIs, and unless it's been radically revised from the initial iterations I was involved with and from what the guidance document says, it is not intended to replace the Appendix B matrix or WARS. To compound the problem, the DEIS seems to imply that simply reducing road densities will "fix" watersheds, which may work in the WCF spreadsheet but is really bad ecological thinking. I realize that the matrix is difficult to interpret, but its 28 indicators in it better describe ecosystem components than the 12 WCF indicators, and its final metric ("Integration of Pathways and Indicators") provides some guidance for interpretation. Integration of the matrix and WARS, especially if the Forest would do Framework or watershed analysis as it should, provides a fuller picture of how the Forest has changed through past management, climate change, species extinctions, recent attempts to repair ecosystem damage, etc. than just saying you can change road density to get a Class I rating and everything's fixed now, especially if you leave grazing on the landscape and brook trout in the streams; the system will never be good for aquatic resources if cattle can reach the streams and brook trout are an invasive species.	Both the 28 indicators of the Appendix B matrix and the 12 WCF indicators, are analyzed in the Watershed and Fisheries effects analyses in the FEIS, Chapter 3, Sections 3.3.4 and 3.5.4. Select WCIs from the Forest Plan Appendix B are presented in the Fisheries effects analysis in the FEIS. All WCIs are analyzed in the Fisheries specialist report (project record). A crosswalk that compares the Forest Plan WCIs to the WCF indicators is located in the Watershed Specialist Report (located in the project record). This cross walk correlates WCI between Appendix B of the Forest Plan and the WCF and ties them to an indicator used in the SWRA analyses for the project. Specifically, the Fisheries effects section used the Forest Plan Appendix B Effects matrix to analyze the restoration actions, road improvements and effects of this project (Chapter 3 of the FEIS and in the Fisheries Specialist Report, located in the project record). Alternative C moves Boulder Creek further toward a "Class 1" when compared to the other action alternatives but a Class 1 rating would not be achieved. Watershed improvements do occur throughout the project area that includes road decommissioning, crossing replacements/removals and improvements to system roads (described in Chapter 3 of the FEIS).
431	2. The ECA ratings in tables in the watershed section seem correct, but why aren't Appendix B ratings used? The Forest Plan anticipates using SWRA indicators not made- up ratings unless there's been a procedural effort based on other analysis (such is not documented in the DEIS) change in values or name. For example, the Forest Plan does not include a rating of "very high" as anything above 15% is considered to be outside	The Forest Plan Appendix B WCI for Disturbance History specifies that greater than 15% ECA and disturbance concentrated in landslide or LSP areas, and/or refugia, and/or RCAs is considered to be FUR. However, the Forest Plan FEIS also used the same High, Moderate and Low categories for ECA for categorization of geomorphic integrity within the WARS database. Since the scientific correlation of approximately 20 percent ECA to potential changes in

Comment #	Concerns	Comment Response
	the range of desirable conditions.	peak flows is established in the scientific literature (Stednick 1996), the vulnerability of certain stream types and their current stability condition is correlated to the ECA level to determine if increases in peak flows would, in fact, cause erosion of stream banks (FEIS, Watershed Effects Analysis, Section 3.3.4). The WCI is rated from the fisheries regulatory perspective in the table, but is further analyzed in the watershed effects section to determine where effects might occur at the drainage level given existing and potential ECA values correlating the two additional factors of Sensitivity to Disturbance (Rosgen Stream Type) (Rosgen 1996) and field documented channel stability ratings ((Bailey 2004) The rating of very high for the ECA levels over 40% at the drainage level was applied to identify ECA values that were in far in exceedence of 20%.
432	3. I found the temperature discussion to be quite obscure; in fact, I didn't understand what the point was. That said, the temperature analysis should be connected in some way to fish habitat conditions and effects analyses. The Fisheries section shows that virtually all subwatersheds are functioning at risk for temperature, and I searched in vain for any reference to the Idaho State temperature criterion for bull trout established by the Environmental Protection Agency. I realize that IDEQ has tried to work around this issue, but FA in Appendix B is more generous than this value (10°C MWMT in June, July, August, and September [40 CFR 131.33 Subpart D])	The temperature analysis is located in Chapter 3 of the FEIS and concluded that stream temperatures would be maintained with implementation of this project, which would in turn, not have an effect on a stream's meeting the IDEQ bull trout temperature criterion.
433	4. I don't quite understand the incorporation of the "Watershed Condition Framework" as a primary source of guidance for this project. I helped the Forest classify the Forest's subwatersheds, but this framework is a lower resolution "matrix" for defining subwatershed condition than either WARS or the Appendix B matrix developed for the Forest Plan. Has the WCI been incorporated as guidance through a Forest Plan amendment? No such amendment seems to be proposed in the DEIS.	The WCF has not been incorporated as guidance through a Forest Plan amendment. Effects of and progress towards restoration actions included in this project are analyzed according to the Matrix in Appendix B of the Forest Plan (Chapter 3 of the FEIS and in the Fisheries specialist report, located in the project record). WCIs (Forest Plan Appendix B) are used in the fisheries specialist report to assess effects and progress towards restoration actions of this project.
434	5. The proposed action seeks to increase ECA in several subwatersheds, including part of Boulder Creek. As shown in Table WS-10 (page 170), all areas are currently "functioning at unacceptable risk" with respect to ECA (>15%). It is a violation of SWRA standard SWST04 to further degrade hydrologic function, which increasing ECA would do,	ECA levels at the subwatershed scale were included as an indicator for the watershed analysis and are discussed in section 3.3.4 of the FEIS. Further analysis is conducted which evaluates changes in peak flows and their potential to impact channel stability based on field observations of channel bank condition and inherent sensitivity to disturbance based on Rosgen Channel type. The analysis also looks at smaller scale

Comment #	Concerns	Comment Response
	particularly absent substantial mitigating efforts (e.g., RCA road relocation and additional road obliteration). At the very least, to justify degrading hydrologic conditions, the Forest should: • Explain the justification for not using the Appendix B matrix and its condition ratings for ECA in the "Disturbance History" indicator. (In fact, this is a serious problem for this analysis generally: these are highly disturbed subwatersheds, so the disturbance history indicator would seem to be a relevant indicator that integrates several specialties to describe the true flavor of how far outside desired conditions the watershed is and particularly respecting the cumulative disruption of hydrologic, aquatic, and fisheries conditions.) • Identify whether the ECA values used differ from those in WARS and if so why (and has WARS been updated by this procedure). This would be an appropriate part of the Framework analysis. • Better explain how ECA is calculated. Even using the specialist report, without having source references the methodology is opaque. • Explain how increases or even no change helps make progress toward achieving Forest Plan Objective 0522.	drainages to specifically identify where within the analysis area issues exist for the Disturbance History indicator. FS System road decommissioning and unauthorized route treatments occur within these subwatersheds and drainages, many within RCAs, and do constitute mitigating efforts to increases in ECA. The Objective 0522: "Restore ECA values toward the range of desired resource conditions." The timeframe for to achieve an objective is considered to be the planning period, or the 10 or 15 years following publication of the Forest Plan (2003)", is not achieved and a degraded condition for Disturbance History WCI is justified by the tradeoff to achieve vegetation objectives described in Appendix A of the Forest Plan.
435	6. On page 184, the DEIS says: Road decommissioning to reduce the road density to Functioning at Risk levels as defined for Road Density/Location WCI under the PNF LRMP Appendix B. (0.7 to 1.7 miles per square mile). In fact, this is not the functioning at risk condition, which is: Total road density 0.7-1.7 miles/square mile of subwatershed**, few roads within RCAs** (emphasis added). The proposed action will retain a significant amount of RCA road in all subwatersheds. Generally speaking, the Forest has done very little on the west side of the Forest to resolve the significant problem of road location even when it addresses road density.	Noted; roads in RCAs, which is also analyzed as an indicator, will be presented more clearly with respect to ECA levels.
436	7. Does the Forest intend to apply **SWGU03**? It says this:	

Comment #	Concerns	Comment Response
	Where proposed management actions may alter soil-hydrologic processes, representative sample of landslides and landslide-prone areas should be field-verified to identify and interpret controlling and contributing factors of slope stability. Integrate the resulting information with supporting data to provide a final stability assessment and identification of appropriate land management actions in landslide and landslide-prone areas. Refer to the Implementation Guide for Management on Landslide and Landslide Prone Areas, located in Appendix B. If not, what is the rationale and have the NMFS and the USFWS agreed to waive the requirement? If the Forest had been proceeding with the Framework Process or watershed analysis, this would be important ground-truth information.	To apply the Guideline SWGUO3, the locally calibrated SINMAP procedure is consulted. In 1997 a rain-on-snow event resulted in numerous failures within and in the vicinity of the project area. These slides were utilized to calibrate the SINMAP model which identifies potential landslide prone areas within the project area (Wasniewski and Dixon 1997). Because many of the calibration points are located in the project area, the SINMAP runs used for the Forest Planning effort are of the best available accuracy. Site-specific ground-truthing of LSP areas identified by SINMAP would occur upon implementation (Management Requirements Table 2-5).
437	8. Why is the watershed riparian analysis so old? This is a project analysis, not a programmatic watershed analysis and should be based on current and even new information; lots of things could have changed since the 1990s or even early 2000s.	Riparian inventories documenting bank stability and Rosgen type used for this analysis are dated from 1992 to 2003 (PNF 1992-2003).
438	**Climate Change** 1. This statement is based on a false premise: Recent rapid climate change has raised concern over the ability of some species to adapt to landscape changes associated with this phenomenon. There has been no recent rapid climate change near the project area. For some reason, the Forest uses unsubstantiated and/or potential global concern for this project, which is simply false. Specifically important in this context are: • The National Weather Service maintains a USHCN weather station at the District headquarters in New Meadows that has been operating since about 1905. I provided a graphic of these data with my scoping comments, but, simply put, a simple linear regression that did not account for serial autocorrelation suggested at most about 0.5°F increase in 100 years; this is not catastrophic.	See response to comments #168-176 and FEIS Chapter 1.

Comment #	Concerns	Comment Response
	o I thought I had lost track of that data since I retired, so I downloaded a new set, both raw and adjusted, from the USHCN web site. Interestingly, the data record is now apparently less complete than what I used in the scoping comments document, with many missing raw data points; only adjusted data have a complete or nearly complete record. Adjusting data is a neat trick used by climatologists that believe in catastrophic climate change to either fill in missing data or "correct" it (so-called "skeptics" note that corrections almost always result in warmer temperatures and more positive trends than raw data). There could be valid reasons for adjustments, but the metadata for the New Meadows site is non-existent at USHCN. I do know that the station was moved when the new station was built, but do not know whether that had any great effect. o Computing simple linear trends of the data show exactly what a so-called "skeptic" would expect: the raw data series suggest a slight cooling over the entire record of about 1.5°F per century, whereas the adjusted values suggest a slight warming of about 1.6°F per century. Obviously, neither of these suggest any catastrophic change or any change likely to affect fire frequency or forest conditions and are likely near the precision of the instrumentation. o Even using adjusted data, recent trends (from 1998-2012) suggest a cooling of about 0.3°F per decade; how is this recent rapid climate change?	
439	• I know that the Forest uses the Remote Automated Weather Station (RAWS) system at least for fire fighting. There are at least two stations in the general vicinity of the project, at Teapot Dome on the Krassel District and in the Weiser River drainage on the Council District. These data are somewhat incomplete and I have not inspected any metadata for the data or the sites, but both appear to show declining average temperature trends since 1985 of 2.6°F per decade and 6.0°F per decade, respectively. Where is the recent rapid	See response to comments #168-176, and FEIS Chapter 1.

Comment #	Concerns	Comment Response
	climate change? • In 1974, Time magazine published an article on the of another ice age because of global cooling. A cooling trend since the 1940s had been observed and the earth was thought to have cooled by about 2.7°F. This is probably the best known example of global cooling panic, but a larger summary indicating its reality can be found at the Real Science website. Now, of course, the panic is over global warming, which can be modeled but not proved. In fact, the flat line (minimal net temperature change) period has now reached 17 years, approximately the same length as the supposed "rapid recent climate change" period the DEIS mentions and that began in approximately the late-1970s to early 1980s. How does zero warming for 17 years result in recent rapid climate change? • The principal point of these discussion items is that NEPA procedures, confirmed by case law, require consideration of climate change. Ideally, this would include the effects of the project on climate change and the potential effects of climate change on the success of the project. Most of that is beyond the capabilities of agency specialists and bureaucrats, but something related to local conditions should be included, not simply inane and irrelevant comments based on cherry picked publications.	
440	2. I have mentioned the bull trout suitability modeling RMRS did for the Payette, but one product was also an estimate of the decline in suitable habitat with anticipated climate change. If the Forest is sincere about believing in climate change and protecting bull trout, those patches shown on the 2056 scenario should be singled out for special protections or improvements, For example: • They probably should see no fuels or vegetation treatments to ensure that stream temperatures are maintained. • There should be additional consideration given to decommissioning the Chokecherry Flat road because many of these are upstream of that road and its many barriers, and these patches may be the only available refugia by 2056.	Project design features and the use of riparian buffers are expected to maintain current stream temperatures as described in Chapter 3 of the FEIS. Alternative C considers decommissioning a portion of the Chokecherry Flat Road that would include removal of the potential fish passage barriers referenced in the Comment. Additional information regarding stream crossings on the Chokecherry Flat road is available in the Fisheries Specialist Report (located in the project record).
441	**Roads, Facilities, and Recreation Issues**	In addition to the Aquatic Conservation Strategy described in the Forest Plan, which categorized subwatersheds by restoration type and restoration priority across the forest,

Comment #	Concerns	Comment Response
	1. What is the "impaired" condition class? The project uses the WCF but the Forest Plan is the Forest's guidance document, and it doesn't have an "impaired" category for WCIs. Forest plan direction does not include changing WCF condition class; it directs the Forest to move toward "Functioning Appropriately" in all watersheds. Some specific questions:	the Watershed Condition Framework (WCF) national effort was also incorporated into the effects analysis for this project. In 2011, the WCF defined a categorization process that was completed on the Payette National Forest (Potyondy and Geir 2010). The WCF evaluates each subwatershed through the use of its own set of Watershed Condition Indicators (WCIs) that are very similar to those used in the matrix in Appendix B of the forest plan. In addition to rating each individual indicator, the WCF also assigned a functional class to each subwatershed. Three watershed condition classes were recognized directly related to the degree or level of watershed functionality or integrity: Class 1 = Functioning Properly; Class 2 = Functioning at Risk; and Class 3 = Impaired Function. A Class 1 watershed has minimal undesirable human impact on natural, physical, or biological processes and is resilient and able to recover to the desired condition when disturbed by large natural disturbances or land management activities (Potyondy and Geier 2010). Conversely, a Class 3 watershed has exceeded some physical, hydrological, or biological threshold. Substantial changes to the factors that caused the degraded state are commonly needed to set them on a trend or trajectory of improving conditions that sustains physical, hydrological, and biological integrity.
442	• Is the Forest Plan being amended to substitute WCF ratings for Appendix B ratings or are they being revised using some other appropriate process described in the Plan? • Have the NMFS and the USFWS approved use of WCF and TAP in lieu of the Framework Process as described in their BOs on the Forest Plan?	The WCF has not been incorporated as guidance through a Forest Plan amendment. Effects of and progress towards restoration actions included in this project are analyzed according to the Matrix in Appendix B of the Forest Plan (Chapter 3 of the FEIS and in the Fisheries Specialist Report, located in the project record). See also response to Comments #430 and #441. The Payette National Forest prepared a Midscale Analysis Summary for the Little Salmon River subbasin to address the intent of the Framework process, which was agreed upon by the National Marine Fisheries Service and US Fish and Wildlife Service.
443	• What watershed-scale analysis (e.g., Framework or EAWS) is being used to guide management in the Boulder Creek watershed? Note that the NMFS BO on the Forest Plan requires completion of the Framework Process prior to consultation on actions that are likely to adversely affect listed anadromous species in the Little Salmon River subbasin (Term and Condition 2B, page 90). The Forest has been derelict in this responsibility for over 10 years now.	The Payette National Forest prepared a Midscale Analysis Summary for the Little Salmon River Subbasin (located in the project record) to address the intent of the Framework process, which was agreed upon by the National Marine Fisheries Service and US Fish and Wildlife Service.

Comment #	Concerns	Comment Response
444	• At any rate, the intent of WCF is not to provide guidance for changing condition class by subwatershed. As I understand it, simply creating a subwatershed action plan and implementing said plan can change the subwatershed condition class irrespective of the final metric (e.g., road density).	Thank you for your comment.
445	2. This project is way off the mark with respect to implementing the Forest Plan as regards road densities. While it may improve conditions and reduce impacts in the Boulder Creek watershed, the Forest Plan directs the Forest to improve road densities elsewhere also: • **MA3 Objective 0318:** Improve water quality and assist in de-listing 303(d) water bodies by reducing road-related accelerated sediment through a combination of road decommissioning, relocation, reconstruction, and maintenance in the Mann Creek, Pine Creek, West Fork Weiser River, East Branch Weiser River, East Fork Weiser River, Middle Fork Weiser River, and Little Weiser River drainages. The Little Weiser River drainage includes the Upper Little Weiser and Anderson Creek subwatersheds. • **MA3 Objective 0319:** Restore riparian vegetation and floodplain function throughout the management area by reducing road-related impacts through relocation, reconstruction, or obliteration. • **MA3 Objective 0322:** Reduce riparian road density and stream crossings in all drainages, with emphasis on those with bull trout populations or suitable habitat. Removal of barriers alone cannot meet these objectives. There is some proposed decommissioning, but more long term closure; the latter reduces but does not remove hydrologic effects. In addition, there is very little road relocation and almost none directed at moving routes away from streams.	Improvements (reductions) in road density are described in Chapter 3 of the FEIS. In general, total and RCA road densities are improved across the project area (little improvement to this WCI would occur in the Lower West Fork Weiser River due to existing low road densities). Road improvements are also expected to improve road-related sediment production across the project area (Table FH-18 and FH-19 in the FEIS). Results of sediment modeling indicate that long-term sediment production will decrease as a result of road decommissioning across the project area (described in Chapter 3 of the FEIS). Twenty-four stream crossings are proposed for removal or replacement in the Weiser River subbasin to improve fish habitat connectivity (as described in table FH-16 in Chapter 3 of the FEIS) which will benefit native fish species in those subwatersheds (redband trout). The West Fork Weiser River (WFWR) is fully supporting its beneficial uses. It does NOT have a TMDL, but has been assigned a potential natural vegetation target load allocation and requires a 27% reduction in solar loading. Alternative C proposes to relocate road 50127 outside the RCA of the West Fork Weiser River. This would result in a beneficial effect as it would allow more overstory to grow within the RCA over the long-term for this reach of the West Fork Weiser River. Additional system roads and UR located within RCAs, are proposed for decommissioning and restoration treatments within Lost Creek and the WFWR subwatersheds.
446	3. It is unclear what the crossing is at the end of Road 51247 that is proposed for opening; if this road is to be used for vegetation "treatments," it should be brought up to standard (i.e., AOP compliant if brook trout invasion is not an issue).	Maps included in the DEIS did not depict a crossing at the end of FS 51247. There is, however, a Priority 1 crossing depicted at the end of FS 51257. This crossing consists of a log culvert (on Yellowjacket Creek, which is bull trout and steelhead Critical Habitat) that would be removed when the road is decommissioned. PDFs requiring fish passage at all reconstructed stream crossings would apply, although that crossing is not proposed for reconstruction for vegetation treatments.

Comment #	Concerns	Comment Response
		Brook trout occur concurrently with bull trout in the Boulder Creek sub watershed, their distribution is described in Chapter 3 of the FEIS.
447	4. The above highlights an important problem with the analysis respecting road crossings and fish: The prioritization of crossings is opaque and probably incomplete. It is perfectly acceptable for specialists to develop a priority list based upon professional judgment to some extent, but there should be a healthy dose of rating based on objective criteria. These criteria are not disclosed, suggesting a preponderance of "professional judgment," but even if this is so, the rationale should be disclosed. Areas where other professionals may disagree with the disclosed prioritization include:	Prioritization of culvert replacements including criteria and rationale is described in Chapter 3 of the FEIS and in the Fisheries specialist report (located in the project record).
448	• There should be some Priority 1 culverts in the Weiser River watershed. The road density is so high that the viability of inland native fish (e.g., redband trout) is likely to be compromised. There is insufficient fish population data to rule out the possibility of bull trout presence, but improving the viability of non-listed fish species is a stated goal of the Forest Plan (SWGO10) and the plan has an objective to improve connectivity generally (SWOB12).	Prioritization of culvert replacements is described in Chapter 2 of the FEIS and in the Fisheries specialist report. Replacement of the identified culverts in the Weiser River watershed will address SWGO10 and SWOB12 by improving habitat connectivity in streams occupied by non-listed native fish species (redband trout) in the Weiser River subbasin. Improvements to habitat connectivity are described in Chapter 3 of the FEIS.
449	• Without adequate fish distribution data and documentation of stream status (i.e., perennial or intermittent), it is impossible to determine whether crossings on Road 50083, 51365 (this number is difficult to read on the maps, but it's the one across Boulder Creek from Smoky-Boulder Road), and probably some others on the east side of Boulder Creek.	No mapped stream crossings are present on FS 51365. On tributaries south and east of the Boulder Creek, crossings near Boulder Creek that may be accessible to, and provide rearing habitat for listed fishes were not Prioritized for replacement because fish distribution data does not depict fish presence, and proposed road treatments (on FS 50080, FS 51366, and FS 51367) would remove those crossings through decommissioning or long-term closure, which would address any fish barriers (by removal) near the mouths of these small tributaries.
450	• It looks like there must be several culverts on the Chokecherry Flat road that impair fish passage and that have not been prioritized; these could be the most significant passage barriers.	Crossings proposed for removal or replacement are described in Chapter 2 of the FEIS. Additional information regarding stream crossings on the Chokecherry Flat road is available in the Fisheries Specialist Report (located in the project record). Many stream crossings on the Chokecherry Flat road are addressed in Alternative C, which proposes decommissioning the portion of the road that contains the majority of those stream crossings.

Comment #	Concerns	Comment Response
451	5. This statement on page 38 is odd: Approximately 60 miles of Forest system road would be placed in Long Term Closure status (Maintenance Level 1) and approximately 70 miles of Forest system roads would be decommissioned (Figures 2-3 and 2-4). Most of the system roads proposed for treatment are not currently open to the public. Currently 265 miles of road are open to motorized use within the project area; the proposed action would not appreciably change motorized access. The problem for me is that you cannot move these watersheds toward proper function for fish without some reduction in access to RCAs and streams. While I realize that the TMP closed a lot of routes to easy access, many still impact RCAs and DCH for listed fishes. This reflects a fundamental flaw with either how the TAP was produced or interpreted: The original pilot TAP included access to fish habitat and RCAs as principal components leading to a high risk rating for fish and suggested weighting ESA issues higher than some discretionary wants; however, the interpretation has apparently been to not balance risk to endangered species with other non-essential conveniences.	All of the system roads were analyzed in the D3 Coalition Planning Area TA, January 2013 (see project record). Risk ratings for fisheries included broad and fine scale criteria, and of the fine-scale criteria, access impacts were considered. All of the action alternatives reduce RCA roads and substantially reduce RCA road density in the Boulder Creek subwatershed (Chapter 3 of the FEIS).
452	6. In the Boulder Creek watershed, how many miles of road put into Level 1 maintenance from previous projects (e.g., Brush Mountain) will be decommissioned and is there any "double counting" here with this project proposing LTC for roads already supposed to be in LTC status?	There is no double-counting. Only roads now identified as Maintenance Level 2 are identified as "new" LTC.
453	7. Thorough description of road maintenance practices is reasonably excluded from the DEIS. However, it should be made clear to the public that all road maintenance actions will adhere to the Forest's programmatic road maintenance consultation. These requirements most importantly include: • A journey level soil scientist must be part of the maintenance crew. • Not operating when eggs and embryos are in the gravel nearby and could be affected by sediment delivery. • No widening roads. • No sidecasting fine sediment from roads. • No application of erosion control chemicals within 25 feet of live	Programmatic consultation was not used for the road maintenance portion of this project. The requirements from the Forest's programmatic consultation (Olson and Burns 2007) were, however, included in the project BA and included (by reference) to the description of road maintenance and use in Chapter 2 (PDFs) of the FEIS.

Comment #	Concerns	Comment Response
	water. • No undercutting of cutslopes. • Large rocks are removed but LWD is deposited in the floodplain or active channel. • Mechanized equipment operation is restricted to streambanks or the road prism; not entering streams or other waterways during culvert repair and cleaning actions. • Visual turbidity monitoring will be completed during project implementation activities by observing any sediment plumes that might be caused by project activities. If the sediment plumes are visible more than 300 feet downstream, the PNF shall immediately notify NMFS to determine if reinitiation of consultation is necessary.	
454	Note that this precludes use of the rock crushing approach to road maintenance that should have promise but led to serious issues when attempted in 2012 and should be avoided unless and until the issues are satisfactorily resolved.	Programmatic consultation was not used for the road maintenance portion of this project. Use of the mobile rock crusher is included in the project-specific consultation for this project (included in the project record).
455	8. It is unclear from the DEIS how the recreation and motorized access interfaces with the Travel Management Plan (TMP) of 2008. The TMP closed many motorized routes to public access via motor vehicle and, pursuant to consultation, roads not identified on the MVUM produced from that consultation were generally regarded as no longer available for use and should be scheduled for decommissioning, presumably following a credible TAP for system (i.e., Level 1) roads that may be needed for Forest management. Some specific questions:	In regards to recreation, Alternative B would slightly change the 2013 Motor Vehicle Use Map (based on the 2009 Council and New Meadows ROD for Travel Planning). Alternative B would restrict dispersed camping using a motorized vehicle on FR 089 surrounding the Lost Valley Reservoir. Any currently open roads that would be closed in the selected alternative would eliminate the ability to drive on those roads and also travel up to 300 feet of the road for the purposes of dispersed camping using a motorized vehicle. Once the 2009 travel planning was completed it was expected that new projects (such as this one) would recommend some changes to the 2009 decision. The Travel Plan decision in 2009 expected changes to happen in the future. Alternative C would more drastically change the 2013 MVUM decision with the requirement to allow dispersed camping using a motorized vehicle in designated sites only. Maintenance Level 1 Forest System roads, although closed to the public and presumably in a LTC status, are still a part of the Forest Road System and are not considered decommissioned.
456	• Have previously non-system roads been added to the system to	Yes, previously non-system routes have been proposed to be added to the system in all

Comment #	Concerns	Comment Response
	advance the vegetation and fuels treatment objectives? This would constitute "New Road Construction" as defined in the LRMP and would violate the prohibition against "new permanent road[s]" under Title IV of the omnibus bill (16 USC 7303[b][1][F][i]).	of the action alternatives. Most of these are considered reroutes to relocate roads out of sensitive areas (i.e. RCAs), however some short segments of unauthorized routes that access existing and/or proposed gravel sources have also been proposed (less than one half mile total across the project area). The Forest is aware of the prohibition of utilizing CFLRP funds on new permanent roads, as referenced by the commenter. Analyzing these routes in NEPA documents and authorizing in a NEPA decision would not violate the CFLRP. While the Forest recognizes that no CFLRP funds or matching funds could be utilized to implement a project that would construct a "new permanent road". No CFLRP funds have been utilized in the planning of this project therefore, there is no violation of the CFLRP.
457	• Will all Level 1 roads be rendered completely unusable, precluding the possibility that they will be temporarily reopened for fuelwood cutting at the expense of fish, wildlife, and RCA protection? o Note that fuelwood harvest in in RCAs in the Wesier watershed uphill from roads is actually a violation of Forest Plan standard **SWST10** and should be prohibited Forest-wide. o In the Boulder Creek subwatershed, consultation on fuelwood harvest requires that only open roads be used; open roads should be interpreted to mean those roads not declared open during the concurrent TMP consultation. o Opening these roads would be especially egregious if users are allowed to ford at locations where culverts have removed as is typical for Level 1 roads. When I left the Forest, the Forest was out of compliance with the TMP consultation with respect to identification and monitoring of fords (see page 43 of the BO).	Level 1 Forest System Roads are not available for motorized use.
458	• The Forest is also presently out of compliance with the TMP consultation, particularly, with respect to this project, with Term and Condition (TC) 1c: Immediately begin implementation of the "Framework" process, which will include a strategy to address resource issues related to road management and implementation of the Travel Plan.	The Payette National Forest prepared a Midscale Analysis Summary for the Little Salmon River subbasin to address the intent of the Framework Process, which was agreed upon by the National Marine Fisheries Service and US Fish and Wildlife Service (See project record).
459	At the very least, it seems like the first component of this TC should be	Surveys of unauthorized routes were completed in 2013 and that information was used

Comment #	Concerns	Comment Response
	part of the analysis and disclosure for this project: Implement LRMP objective **REOB18** by summarizing the results of the PNF's trail and non-system road inventories and identifying road and trail fords that are likely to occur in spawning habitat for ESA-listed salmonids, and establish a prioritization process to guide implementation of remedial efforts. Use LRMP standard REST05 to promote immediate closures where adverse effects to ESA-listed salmonids (e.g., fords in spawning areas, damage to designated critical habitat) are indicated.	to prioritize route treatments where deleterious effects were occurring.
460	**Economic Analysis** 1. One can find an example of bad ecological thinking in the discussion of ecosystem services. As an ecologist (did I mention that my graduate major was ecology?) it's an offensive notion rooted in anthropocentrism. I am not opposed to some anthropocentrism, but ecosystem are not there to provide services for people and the notion that they can be reduced to accounting units is nonsense. For example, how valuable is timber compared to salmon or bull trout? Answer: the question is invalid because the Supreme Court has ruled (TVA v. Hill) that the value of endangered species is "incalculable." But the problem is not so much that supposed ecosystem services cannot be objectively valued, it's more that they can't all be accounted for. Like most economic theory, the concept of ecosystem services is "fuzzy," but more importantly, economic systems are simple compared to ecosystems. The result of this here, is that the author of the economics section in the DEIS cannot seem to imagine benefits to ecosystem services from wildfire; I suggest he or she talk to a fisheries biologist because there are benefits that don't factor into the analysis: • Recruitment of large wood to streams can increase; this is probably especially beneficial to bull trout. • Debris torrents can also add large sediment to streams (this occurred in the 2008 EFSFSR failures and I documented it). Nutrient delivery to streams can also increase and there is evidence that native fishes may congregate at the mouths of burned streams, particularly small "feeder" streams to larger systems. The Forest Fisheries Program	The economic analysis assesses existing conditions within the impact area and how these conditions are anticipated to change as a result of management activities proposed under the alternatives. Other benefits of wildland fire are not examined since they are outside the scope of this project.

Comment #	Concerns	Comment Response
	was actually trying to study this with Idaho State University and the USGS Fire Effects Lab and has on file at least preliminary results	
461	Some questions for consideration spring to mind: • What is an "unnaturally large" wildfire? Were the fires of 1910 unnatural? • Have we seen any fires on the Forest that were demonstrably "unnatural?" If so, did any occur in such high-ECA watersheds with immature forests?	The text of the FEIS has been revised to provide greater clarification and now reads "high severity or crown fires". The author acknowledges that "large" wildfires occur naturally and coincide with the region's fire regimes, like the 20,000 acre blaze which fire passed through the Rapid River drainage in 1910 and caused very minimal tree mortality. Unlike the 1910 fire, high-severity (or sometimes referred to as stand-replacement or crown) fires cause widespread mortality of existing vegetation and result in a forest structure no longer dominated by live trees but by herbs, shrubs, and dead trees or snags (Smith 2000, Saab and Powell 2005).
462	• Wouldn't the local economic stimulus associated with battling an "unnaturally large" fire constitute a beneficial ecosystem service?	Ecosystem services are the conditions and processes through which natural ecosystems and the species that make them up, sustain and fulfil life (Daily, 1997), while economic impacts are the net change in economic activity within a geographic area as a result of a decision, event, or policy (Watson et al., 2007). While fire suppression costs have the potential to make short-term labor and employment contributions to local communities, the local economic impacts associated with suppression services or other support activities tend to be minor since the large majority of crews, equipment, and supplies used in firefighting efforts are brought in from outside the localized economy. Regardless, benefits of wildland fire are not examined since they are outside the scope of this project.
463	• How do you compare the value of the ecosystem services of a functioning natural forest to the value of the ecosystem services in overharvested and overroaded forest typical of this project area (since these are industrial forests and no effort will be made to get them to FA with respect to WCIs it seems reasonable to assume that the goal is not a natural forest)? • Why would you ever expect anything resembling a "natural" fire in such an unnatural forest as comprises the project area? Isn't it unreasonable to expect to get there if it's maintained in an unnatural state?	Thank you for your comment.
464	• How can you justify the false comparison of wildfire vs. restoration on page 412 (I call it false because it's simply based on a short-term effort vs. a natural restoration)? Specifically, nature has managed	

Comment #	Concerns	Comment Response
	forests with wildfire foe eons (the literature is full of palynological and other studies showing forest ecosystem changes due to fire as a natural process). While I approve of the notion of restoring watersheds, particularly since the Forest Service is the one that damaged them, it's much less clear that the agency truly seeks restoration and not merely to protect their timber from fire. Clearly, if you want to improve timber in the short run, you do it, but if you want ecosystems to return to their natural condition, nature can do it better.	Thank you for your comment.
465	• Why do you cite Morton et al. (2003) when talking about specific ecosystem services when that paper nowhere mentions ecosystem services?	While Morton et al. (2003) does not reference ecosystem services explicitly, the case studies outlined in this report document the adverse effects wildfires have had on wildlife habitat, water quality and watersheds, cultural and archaeological sites, and soil. Since there are provisioning, regulating, cultural, and supporting services associated with these natural resources, adverse effect on these resources have the potential to effect the ecosystem services which they provide.
466	• If you accept the premise of climate change, how do you know that the treatments proposed will make the timber more resilient? It seems to me that if the climate is getting warmer and drier, these efforts will likely be ineffective at best because you're trying to maintain vegetation that is becoming unsuitable to the conditions. Mind you, I don't believe that at all, but neither do I believe in the HRV theory. • Even if there's no climate change per se, it's well known that fire frequency can vary with periods of drought or relatively wetter periods. There is a lot of evidence that the Pacific Decadal Oscillation (PDO) and the El-Niño-Southern Oscillation (ENSO) patterns affect these; which controls "natural" fire?	See response to comments # 63 and 168-176.
467	• Are the suppression costs of potential escaped treatment fires included? These have occurred on the Forest in the past.	Emergency fire suppression costs are not included in the analysis.
468	Frankly, I'm in favor of industrial forests (to a point), prescribed fire (to a point), and fire suppression (to a point), but I weary of seeing it all mixed up in pseudo-scientific "it's good for the ecosystem" mumbo jumbo. The Forest Service has been responsible for a lot of environmental damage and	Thank you for your comment.

Comment #	Concerns	Comment Response
	should be honor bound to clean up its mess; officially, that's management direction from FSM to the LRMP. This project uses taxpayer funds to benefit people, local people in particular, and a good balance between maintaining timber stand quality and improving watershed conditions is a worthwhile goal. But to assume that an agency that has gotten it wrong so many times in the past now knows how to fix the ecosystems in ludicrous.	
469	2. The economic analysis relies on sources that are not particularly credible because they are reports of special interest groups and not even cited properly. For example: • The WFLC is a partisan policy group comprising "23 State and Pacific Island Foresters of the West and the 7 western Regional Foresters, 3 western Research Station Directors, and Forest Products Lab Director of the USDA Forest Service"; hardly surprising that it promotes a USFS agenda.	The economic analysis draws primarily from peer reviewed scientific journals. While the FEIS cites estimates of federal suppression costs from a WFLC report, coalition members work closely with those in the academic field on this report to promote science based forest management that serves the values of society and ensures the health and sustainability of western forests.
470	• The statement in the DEIS that "[F]uel reduction projects can significantly reduce the risk of catastrophic wildfire (WFLC 2010)" is a second-hand quote; investigation of the primary document indicates that the study was based not on scientific data analysis but on modeling results using a model that assumed fuels reduction reduced the severity of wildfire. • That fuels reduction leads to lesser risk of wildfire is a reasonable assumption, but there is little tangible proof of either its effectiveness or how much reduction leads to how much less fire, so comparing the cost of treatment to the savings in suppression costs (which should be the metric) is impossible.	The IDT agrees that comparing the cost of treatment to the savings in suppression costs would be the ideal, but future suppression costs are unknown and may be affected by factors outside the control of the Forest Service (e.g., precise time and location of wildfire, growth in the wildland-urban interface). The economic analysis uses the best available information to assess the economic costs and benefits of fuels reduction.
471	• The Payette Fisheries program was working with both ISU and the USGS Fire Ecology Lab to get a better handle on this, and there is some empirical evidence that fire suppression of the EFSFSR reduced fire intensity in the 2007 East Zone Complex; however, several streams in the area, even where prescribed burned, "blew out" with high road repair costs anyway. The point is, real science should be used, not unsupported or model based pronouncements from special interest policy groups.	Thank you for your comment.

Comment #	Concerns	Comment Response
472	3. I think a weakness of the regional economic analysis is that it serves to emphasize the desires of locals versus the American public. I realize that the CFLRP is basically a subsidy to local communities, but its intent is to improve degraded watershed conditions. This project does that, but it emphasizes theoretical benefits over known benefits and deemphasizes the true values of ESA-listed species, which cannot be quantified. The Supreme Court decision in TVA v. Hill had these statements: • The plain intent of Congress in enacting this statute [ESA] was to halt and reverse the trend toward species extinction, whatever the cost. • In addition, the legislative history undergirding § 7 reveals an explicit congressional decision to require agencies to afford first priority to the declared national policy of saving endangered species. The pointed omission of the type of qualifying language previously included in endangered species legislation reveals a conscious decision by Congress to give endangered species priority over the "primary missions" of federal agencies. This proposed project does not really reflect this spirit, which the Supreme Court determined to reflect the values of Americans as a whole. The vegetation and fuels treatments are likely to have minimal beneficial effects to listed fishes and possibly detrimental effects in the long term, though neither are well quantified in the DEIS.	Thank you for your comment. The purpose of the Collaborative Forest Landscape Restoration Program (CFLRP) is to encourage the collaborative, science-based ecosystem restoration of priority forest landscapes. In the spirit of CFLRP, the Lost Creek Boulder Creek Restoration Project was collaboratively designed to improve ecological conditions of priority forest landscapes. Special considerations were given to designated critical aquatic and terrestrial habitats for ESA- listed species, including: fishes, the northern Idaho ground squirrel (NIDGS) and Family 1 wildlife species. Impacts to these species from vegetation and fuels treatments are discussed in FEIS Chapter 3, sections 3.5 Fisheries Resources and 3.6 Wildlife.
473	**Miscellaneous** 1. The definition of “endemic” in the Glossary is incorrect; it is actually the definition of “indigenous.” The term “endemic” implies that the organism’s range is restricted to the area discussed.	The glossary in the FEIS has been updated and corrected.
474	**Wrap-Up** 1. To me, the most significant issue to me is that there is really no “hard look” at environmental conditions or effects of the proposed action. There are promises to take a closer look. For example, on page 199 I read this: The project area was also analyzed for mass stability hazards using the landslide predictive model SINMAP (Pack et al. 1998) with calibration parameters developed from the 1997 landslide inventory	Thank you for your comment. Management Requirements (section 2.9 Table 2-5) states that site-specific ground truthing of LSP areas identified by SINMAP would occur prior to implementation. Due to the shortened time-frame for this project and use of mostly existing field data, Project Design Features to minimize effects are utilized in many instances to constrain activities to defined levels.

Comment #	Concerns	Comment Response
	(Dixon and Wasniewski 1998). The analysis identifies potentially hazardous areas for debris slides. The model does not address the potential for large structural failures. Approximately 2355 acres (3.7 percent) of the project area has been identified with moderate-to-high potential for shallow debris slides (potential landslide prone areas). Within the analysis area there is a concentration of moderate to high potential for slope failure in the north end of the project area in the headwaters of Boulder Creek, and in the southern half of the project area in the upper portion of the West Fork Weiser River subwatershed. These areas have not been ground-truthed but where landslide-prone areas are modeled as falling within the boundaries of proposed harvest units, they will be visited by a specialist trained in field identification of slope stability to determine if site-specific measures need to be taken to maintain the stability of the slope. I think the model is a good place to start, but models need to be verified. In fact, validation is a standard (SWST12): Site-specific analysis or field verification of broad-scale landslide-prone models shall be conducted in representative areas that are identified as landslide prone during site/project-scale analysis involving proposed management actions that may alter soil-hydrologic processes. Based on the analysis findings, design management actions to avoid the potential for triggering landslides. Refer to the Implementation Guide for Management on Landslide and Landslide Prone Areas, located in Appendix B to help determine compliance with this standard. In this case, at least there is a commitment to validate the projection, unlike for bull trout where the Forest seems unwilling to check suitable patches. Thankfully, the author didn't blame fire for the failure in Figure SP-4; building and leaving roads on unstable ground with oversteepened cuts causes failures, while failures degrade fish habitat.	
475	2. This is an important point: The Forest has avoided comprehensive Forest Plan monitoring and performed very little analysis of progress toward meeting the goals and objectives of the Forest Plan. The Forest made a commitment with the public and with the NMFS and the USFWS to meet these objectives within the life of the Forest Plan. Both this project and the Mill Creek-Council Mountain project proposed very little	Thank you for your comment.

Comment #	Concerns	Comment Response
	progress toward meeting objectives and are such long-term projects that they will likely be incomplete during the next round of Forest Plan revision. • Therefore, generally speaking, the Forest is not properly implementing the Forest Plan.	
476	• Consultation on the Forest Plan led to imposition of the Framework Process to further track progress in proper implementation and to substitute for watershed analysis as required under PACFISH and INFISH. With this process and the matrix, the SWIE Forests were expected to have the most prescriptive guidance for project development. Instead, the Forest has weakened its Forest Plan and reduced environmental protections by eschewing this process.	The Forest completed a Mid-Scale Assessment document that was agreed upon by the US Fish and Wildlife Service and the National Marine Fisheries Service in January, 2014. This document is located in the project record.
477	• Note **TEOB10:** Over the planning period, initiate habitat restoration for at least two subpopulations of anadromous fish and two populations of resident fish in each subbasin where these species occur. Use the current Watershed and Aquatic Recovery Strategy (i.e., WARS), or Forest Service approved portions of recovery plans, to assist in determining watershed priorities for habitat restoration within a subbasin. There are now three proposed west-zone projects deemed as "restoration" projects that will outlive the Forest Plan timeframe. Has the Forest made progress toward meeting this objective? Without watershed analysis/Framework, there's little documentation that the Forest has even made an effort here. I will grant that the Mill Creek Council Mountain project proposed considerable headway toward meeting a definition of a habitat restoration project for bull trout, but, except for basic passage upgrades, there's little of substance that directly benefits or would demonstrably benefit fish habitat in this project. In addition, by my count, this 10- year project identifies fewer culverts as priority 1 for upgrade than the Forest was doing on an annual basis with no massive project implementation.	Watershed restoration treatments are proposed in each subwatershed in the project area. Restoration activities (road decommissioning and culvert removal/replacement) were prioritized in the Boulder Creek subwatershed because it is an ACS priority subwatershed and contains three listed fish species. Benefits to fish and fish habitat are described in Chapter 3 of the FEIS.
478	Some things that could be considered include:	Fish stocking is not within the scope of this project.

Comment #	Concerns	Comment Response
	o Implement **SWOB11:** Coordinate with state and local agencies and tribal governments annually to limit or reduce degrading effects from stocking programs on native and desired non-native fish and aquatic species.	
479	o Consider relocating (obliterating) Smoky-Boulder road in favor of the 50083 route (I think) on the other side of Boulder Creek. Some recreational access could be retained at designated recreation sites, but it would be desirable from a TEPC perspective to reduce access to the stream.	A large capital investment in recreation facilities has been made along the Smokey Boulder Road 074 in the past five years, including installation of new restrooms, hardening of dispersed camp sites, installation of fire rings and hitch rails and fish passage improvements on tributaries of Boulder Creek. All of these improvements were made to both improve the watershed condition and to improve the recreation experience. The Smokey Boulder Road decision imposed dispersed camping restrictions using a motorized vehicle to designated sites only along a portion of the 079 road. All of these improvements have helped to contain and improve the recreational use along this 074 road.
480	o It looks like there might be numerous opportunities to obliterate stream bottom routes and redirect use to more upland routes in the Weiser River watershed portion of the project area. Obviously, these need to be compared with vegetation treatment needs, but real benefits (e.g., road density reduction, reduction in angling pressure, livestock access, etc.) to native species and riparian function could outweigh the theoretical benefits of the vegetation treatments and should be weighed carefully.	All system roads in the project area were evaluated using the TAP criteria and ratings developed for the Payette National Forest, which included watershed risks and benefits to current and future vegetation management. Road relocations and re-routes included in this project are described in Chapter 2 of the FEIS.
481	As a corollary to the preceding point, ACS Component 8 anticipates effectiveness monitoring of projects designed to improve SWRA WCIs. The Forest typically does some implementation monitoring but has generally been quite lax in determining whether actions have improved WCIs. These are sometimes updated in BAs because the entire matrix needs to be addressed in consultation on listed species. This project proposes some of what it calls effectiveness monitoring, but they are primarily just repetitive implementation monitoring (more precisely, they are monitoring of the effectiveness of the treatment at determining whether certain intermediate outcomes are attained [e.g., whether riparian conditions have been maintained in the short term] but not of achievement of actual restoration outcomes).	Monitoring proposed with this project is described in Chapter 2, Section 2.1.1 and Appendix F of the FEIS.

Comment #	Concerns	Comment Response
482	• Some effectiveness questions: o Have bull trout populations responded to culvert upgrades by increasing in population size upstream of previously impassable culverts? o Have "missing" populations (i.e., no fish above barriers where they might be expected) been observed?	Monitoring proposed with this project is described in Chapter 2, Section 2.1.1 and Appendix F of the FEIS.
483	o Has LWD recruitment changed or are numbers different after RCA treatments?	Monitoring proposed with this project is described in Chapter 2, Section 2.11 and Appendix F of the FEIS.
484	o Has road decommissioning, relocation, etc. in fact led to decreases in sediment?	Monitoring proposed with this project is described in Chapter 2, Section 2.11 and Appendix F of the FEIS.
485	o How do the RCA components identified on page B-37 of the LRMP respond over time to RCA treatments?	Monitoring proposed with this project is described in Chapter 2, Section 2.11 and Appendix F of the FEIS.
486	These require actual commitments of time and effort, but they are important and they need to be longer term than any proposed in the DEIS. Ecosystems don't necessarily respond to perturbations or restoration actions immediately; for example, BOISED models sediment increasing in the short term and decreasing over the long term, so how can one expect immediate answers to whether the treatments were effective? Unfortunately the Forest has not proceeded with any watershed analysis or Framework that would compile monitoring data, direct projects to incorporate more long term monitoring, and document updates and progress toward meeting objectives and implementing the ACS.	Monitoring proposed with this project is described in Chapter 2, Section 2.11 and Appendix F of the FEIS. The Payette National Forest prepared a Midscale Analysis Summary for the Little Salmon River subbasin to address the intent of the Framework Process, which was agreed upon by the National Marine Fisheries Service and US Fish and Wildlife Service.
487	From the perspective of a person who studied ecology and was initially involved some in the environmental movement, who saw the development of environmental protection laws, and wanted to work for the Forest Service (quite possibly the premier land management agency in the world at one time), it's very dispiriting to see the ongoing erosion of environmental responsibility in the agency, and the substitution of process	Thank you for your comment.

Comment #	Concerns	Comment Response
	for progress.	
488	3. With respect to passage improvements, it seems that the Forest is simply going after "low hanging fruit" without any in-depth analysis of which barriers have the greatest effect on maintaining fish population viability or supporting re-founding of potentially extirpated population subsets.	Rationale for prioritizing fish passage barriers is described in the FEIS (Chapter 2, section 2.5.3). Comparisons to known fish populations were used to select barriers for removal/replacements that would directly benefit fish populations and allow areas for expansion.
489	4. I understand the desire to incorporate the latest trend in management direction by incorporating the WCF, but I believe it is consistently misused. In the first place, the intent of the WCF is to provide …a nationally consistent reconnaissance-level approach for classifying watershed condition, using a comprehensive set of 12 indicators that are surrogate variables representing the underlying ecological, hydrological, and geomorphic functions and processes that affect watershed condition. As an agency-wide approach to assessing watershed condition relatively uniformly and develop agency-wide prioritization for restoration, that is a reasonable approach. However, the Payette's Forest Plan was one of the first revisions of Forest Plans nationally and basically used the approach canonized in the WCF but incorporated more refined and detailed tools for determining watershed condition: The Appendix B matrix and WARS. I have always believed that a failing of WARS was that ESA-listings dominated prioritization of watersheds for restoration actions, and the first iterations of the WCF for the Forest were intended to ameliorate some of this bias so that directing restoration into really degraded watersheds (like much of the Weiser River subbasin) would be more likely. Nonetheless, I don't think the Forest Plan has been amended to replace the Appendix B matrix and WARS with the WCF, so watershed improvements should be measured against matrix indicator classes and WARS should be updated as required (SWOB17 and Framework). Note that the requirement to use the Appendix B matrix is also explicitly stated in SWGU02: When doing fine-scale assessments, the MATRIX in Appendix B should be used to assist in establishing reference and current conditions. Based on a comparison of current and desired conditions, identify management opportunities for watershed and aquatic	The WCF has not been incorporated as guidance through a Forest Plan amendment. Effects of and progress towards restoration actions included in this project are analyzed according to the Matrix in Appendix B of the Forest Plan (Chapter 3 of the FEIS and in the Fisheries Specialist Report, located in the project record). The Payette National Forest prepared a Midscale Analysis Summary for the Little Salmon River subbasin to address the intent of the Framework Process, which was agreed upon by the National Marine Fisheries Service and US Fish and Wildlife Service. A crosswalk that compares the Forest Plan WCIs to the WCF indicators is located in the Watershed Specialist Report (located in the project record). This cross walk correlates WCI between Appendix B of the Forest Plan and the WCF and ties them to an indicator used in the SWRA analyses for the project.

Comment #	Concerns	Comment Response
	restoration.	
490	5. The DEIS is a good example of how the IDT approach leads to inadequate ecological analysis, which is perhaps exacerbated by the collaborative approach. The Forest Plan attempts to model watershed and aquatic ecology with a matrix, and by so doing it simplifies the complexities inherent in ecosystems; that's unfortunate, but it's reasonable given that ecosystems are too complex and intractable to model comprehensively. However, by diluting analysis to a handful of "specialists" who see their specialty largely as a unique piece of the puzzle and who often don't have ecological training and communicate relatively poorly with each other, any ecological synthesis of the effects of the proposed project beyond simple widget counting is lost.	Section 102(2)(A) of the National Environmental Policy Act requires all agencies to use an interdisciplinary approach to analysis which will ensure the integrated use of the natural and social sciences and the environmental design arts in planning and decision making which may have an impact on the human environment (42 U.S.C. 4332(2)(A)). The CEQ regulations at 40 CFR 1502.6 require that the disciplines of the preparers shall be appropriate to the scope and issues identified in the scoping process (§1501.7).
491	6. It's frustrating how opaque the analysis process is. I understand the efficiency of tiering to other documents, but tiering presumes that readers have access to the referenced materials. Most of these, like specialist reports, specialized methodology manuals (e.g., Forest Hydrology – II), the TAP product, draft Bas, etc. the Forest makes difficult to obtain for reference. This effectively precludes some more thorough understanding for the rationale underlying the decision making process and makes it more difficult to pinpoint analytical errors. Members of the PFC may have had direct access to some of these, but I had to obtain some via FOIA request, which I might not be able to afford if I wanted all relevant documents. It would not be difficult to make these materials available for reviewers, so the clear appearance that the lack of transparency is perceived as useful to the Forest. Obviously, some internal discussions and disagreements need to be kept confidential, but most objective analyses and so forth do not, or at least should not, be that sensitive; if they are, some sanitized versions could be available to fill in some of the background.	Thank you for your comment. The project website http://www.fs.usda.gov/wps/portal/fsinternet/!ut/p/c5/04_SB8K8xLLM9MSSzPy8xBz9CP0os3gDfxMDT8MwRydLA1cj72BTUwMTAwgAykeaxRtBeY4WBv4eHmF-YT4GMHkidBvgAI6EdIeDXIvfdrAJuM3388jPTdUvyA2NMMgyUQQAyrgQmg!!/dl3/d3/L2dJQSEvUUt3QS9ZQnZ3LzZfS000MjZOMDcxT1RVODBJN0o2MTJQRDMwODQ!/?project=33830 has been updated with some supporting documentation, though it is not possible to post all project record related documents.
492	7. It seems disingenuous to me that the Forest seeks to, at great taxpayer expense, concentrate on "restoration" treatments with, at best, primarily theoretical benefits and significant potential for watershed damage while eschewing a larger effort to restore watershed function using established	Comment noted.

Comment #	Concerns	Comment Response
	actions, like more road decommissioning, that have known, well documented watershed benefits. It is also unfortunate that the Forest sees little benefit in collecting fresh data up front to help determine where treatments would be most useful for restoration and maintenance of aquatic ecosystems and where the proposed treatments might well be counterproductive. For example:	
493	o Potential for anadromous or resident fish habitat and recovery actions (**SWOB16**), like for the highly exposed stream reach near (I think) Ant Basin road that was logged and then a microburst occurred some decades ago that needs shade and instream cover.	Specific restoration actions for the aforementioned stream reach are not proposed with this project. This does not preclude future restoration actions in this stream reach. Restoration actions that will occur in the Boulder Creek subwatershed as a result of this project are described in Chapter 2 and Chapter 3 of the FEIS.
494	o Cost-benefit analysis of TAP recommendations such that the resource costs of recommendations can be properly evaluated.	See FEIS Chapter 3, section 3.8 for analysis of Minimum Road System.
495	o Incorporate comprehensive effectiveness monitoring to determine whether there are real improvements to wildlife and fish. All listed fish, for example, are at risk from a variety of stressors, so some thought and effort should go to determining whether the actions improve their viability as opposed to simply assuming that "restoration" is a benefit.	Effectiveness monitoring proposed with this project is described in Chapter 2, Section 2.11 and Appendix F of the FEIS. Effectiveness monitoring at the Forest level is ongoing as funding allows.
496	o If RCA fire is used, continue the effects monitoring research the Forest began with USGS and ISU to evaluate relative benefits or detriments of prescribed fire and wildfire on aquatic ecosystems.	Thank you for your comment.
497	o Expand the concept of adaptive management with "lessons-learned" from Mill Creek-Council Mountain actions and actions in this project as it proceeds.	Thank you for your comment.
498	8. Finally, it's really dispiriting that the Forest is apparently lowering its professional scientific standards. For years, back to the 1970s before there was a Forest Fisheries Biologist, the Payette was really a leader in developing assessment and monitoring methods and evaluating conditions indicative of the quality of fish habitat. These include core sampling after the SFSR floods of the 1960s, adoption and refinement of the cobble embeddedness measurement technique, development of habitat indicators	Comment noted.

Comment #	Concerns	Comment Response
	(sediment and temperature), thermograph deployment and long-term temperature monitoring, development and testing of the R1/R4 methodology, adaptation of the PIBO methods to local needs, developing bulltrout habitat suitability models, fire effects to aquatic ecosystems, etc. But for this project, a 10-year projects, the Forest uses mainly stale data, eschews the bull trout sampling and habitat understanding improvements in favor of assessments made prior to that development, seems uninterested in true effectiveness monitoring, and basically seems baffled by the need for the scientific excellence that should undergird any major effort like this.	
31. Mike Paradis		
499	Thank you for the opportunity to comment on the Boulder Creek-Lost Creek project. I support the following activities listed by the available alternatives: • Commercial Thin-Free Thin Alt. D • Free Thin-Patch Cut Alt. B • Commercial Thin-Mature Plantation Alt. D • Shelterwood Cuts Alt. D • Commercial Treatment-RCA's Alt. D • Non-Commercial Thinning Alt. C • Temp. Road Construction Alt. D • Prescribed Burning Alt. D (If excessive mortality of commercial timber occurs, then allowances for salvage sales should be incorporated into the ROD.) • Fish Passage Improvements Alt. D • System Road Decommissioning Alt. E (Higher priorities should be made in RCA's for decommissioning. Mid and high slope roads should be analyzed to be converted to Seasonal Closures, with restoration activities taking place on environmental problems.) • Unauthorized Road Obliterations Alt. D (PFC	Thank you for your comments. The responsible official will document his/her rationale for the selected alternative in the record of decision for this project. Effects to resources, tribal consultation, and public scoping will be considered. Please note that salvage logging follows an authority separate from this project.

Comment #	Concerns	Comment Response
	recommendations should be followed, see Road Treatment Guidelines) • New Long-Term Closures Alt D. (Higher priorities should be made in RCA's for Long-Term Closures. Mid and high slope roads should be analyzed to be converted to Seasonal Closures, with restoration activities taking place on environmental problems.) • Conversion of open roads to ATV trail Alt. D. • Road Relocations Alt. D. • All Recreation Improvements Alt. D. • Fuel load reductions to reduce the risk of catastrophic wildfire should have the highest priority throughout the entire project area. • No roads should be decommissioned until the areas that the roads access has had the suitable vegetative management completed. • Revenue and job creation within the project area should have a very high priority. • If Forest Service rules inhibit the hiring of seasonal employees to accomplish work on the ground, then you should seriously consider contracting private experts instead. Thank you for your consideration.	
32. Jean Public		
500	I OPPOSE OHV DEVELOPMENT. THE NUMBERS OF RIDERS WHO KILL THEMSELVES ON THESE VEHICLES IS ENORMOUS. THE TAXPAYERS HAVE TO PAY FOR TRYING TO SAVE THEIR LIVES. THEY WOULD BE BETTER OFF PHYSICALLY TO USE THEIR LEGS TO WALK AND HIKE. I DO NOT SUPPORT THIS IN ANY WAY. IN ADDITION, THE NOISE FROM THESE VEHICLES CAN BLOW YOUR MIND. IT IS MIND NUMBING. THE NOISE SCARES ANIMALS AND BIRDS TO DEATH AND CAUSES THEM TO LEAVE AREAS, EVEN WHEN THEY NEED THE FOOD IN THE AREA THEY ARE IN. IT IS STUPID TO ALLOW THIS MONSTER TO ENTER PAYETTE. IDIOTS RIDE THEM.	Thank you for your comment.

Comment #	Concerns	Comment Response
501	YOU HAVE HAD MGT OF THIS AREA FOR THE LAST 50 YEARS SO WHY DID YOU LET IT FALL INTO SUCH DISREPAIR THAT IT NEEDS "RESTORATION". PLEASE EXPLAIN WHAT YOU WERE DOING THAT YOU DIDNT TAKE CARE OF THIS NATIONAL SITE PAID FOR BY NATIONAL TAXPAYERS. THIS IS NOT LOCALLY OWNED. IT IS NATIONALLYH OWNED SO YOUR REACH OUT SHOULD BE TO NATIONAL TAXPAYERS, NOT JUST LOCAL PROFITEERS WHO WANT TO COME IN AND RAPE THE PLACE FOR THEIR ENRICHMENT. THE SITE SHOULD BE FOR THE ECONOMIC VITALITY OF THE ENTIRE NATION, WHICH OWNS THE SITE, NOT JUST LOCAL PROFITEERS WHO ARE LUCKY TO HAVE THIS SITE BY THEM. THEY ARE LUCKY. THEY SHOULD BE PAYHING EXTRA FOR HAVING SUCH A NICE SITE BY THEM.	Please see FEIS Appendix D for a list of past activities within the project area.
502	THE PLAN MAKES NO SENSE AND IS AN ATTACK ON TREES, BIRDS, ANIMALS, ETC. ALL OF THEM WILL BE DESTROYED WITH THIS LOGGING PLAN. I AM PETITIONING FOR THIS SITE TO BE DECLARED WILDERNESS AND LET NATURE TAKE COURSE, NOT MGT ALWAYS LOOKING FOR AN IN FOR THEMSELVES AND THEIR OWN WALLETS. LET NATURE BE THE BOSS OF THIS SITE. THERE IS NO "NEED" MGT MAKES UP "NEEDS". THERE IS NO "NEED" FOR THIS PLAN AT ALL. IT IS MADE UP AND DESTRUCTIVE AND GREED IS BEHIND IT. THIS SITE WAS NEVER PLANNED TO BE A LUMBERYARD FOR THE LOGGERS.	Thank you for your comment.
503	THIS PLAN DOES NOT TAKE CLIMATE CHANGE INTO ACCOUNT.	Climate change is discussed in the FEIS in section 1.13.7. Forest Service reviews on climate change science can also be found in response to comments # 63, 168-176...
504	NO $500,000 BATHROOMS SHUOLD BE BUILT HERE LIKE IN MANASSAS WHERE THE PARK SERVICE BUILT BATHROOMS THAT COST AS MUCH AS A MANSION.	Proposed vault toilets are expected to cost approximately $18,000 each (see economics section, project record).
505	THE OHV TRAILS WILL HURT THE SQURREL AND WOODPECKER. BOTH SPECIES HATE ORVS.	Effects of proposed OHV trails to wildlife species are analyzed in Chapter 3, Wildlife section.

Comment #	Concerns	Comment Response
506	THE ALLEGED "VEGETATION TREATMENTS" ARE NOT SPECIFIC ENOUGH. WHAT ARE THE VEGETRATION TREATMENTS. THE PUBLIC WANTS TO KNOW AND THEY WANT DETAIL, NOT FAKE ENGLISH. THAT IS NOT PLAIN ENGLISH TO USE THE WORDS "VEGETATION TREATMENTS" BECAUSE IT DOES NOT EXPLAIN WHAT THEY ARE AND WHERE THEY WILL BE DONE.	FEIS Chapter 2 describes the components of each action alternative in detail, including the various types of vegetation treatments. Maps of each alternative are included in Section 2.3.
507	ARE THEY SPRAHYING TOXIC CHEMICALS ON THE SITE? THEY ALWASYS TRY TO DO THAT. GLYPHOSATE IS A TOXIC CHEMICAL THAT HURTS LIFE.	See response to comment # 352.
508	I NOTE YOU SEEM TO HAVE FORGOTTEN TO LET 325 MILLIOJN PEOPLE KNOW WHAT YOU ARE DOIN GWITH THEIR LAND AND THEIR MONEY. THIS SITE IS NOT JUST FOR 7 COUNCIL MEMBERS ON THE PAYETTE FRIENDS TOUR. WHERE IS THE COLLABORATION WITH THIS NATIONS CITIZENS? YOU HJAVE SENT THIS PLAN TO ZERO ANIMAL PROTECTION GROUPS WHICH IS NOT BROAD OUTREACH.	Scoping letters for the Lost Creek-Boulder Creek project were sent to more than 300 individuals, organizations and agencies. The project manager used the Payette National Forest mailing list for this outreach effort. Multiple legal notices, press releases, and public meetings took place over the course of the planning process for this project.
509	IT MAKES NO SENSE TO HURT THE PILEATED WOODPECKER FOR BENEFIT OF THE WHITE HEADED WOODPECKER TO ME. IN ADDITION YOU PLAN TO HURT THE NORTHERN GOSHAWK, ELK AND LYNX - THAT IS A SICK PLAN. YHOU ALSO PLAN TO HURT THE GROUND SQUIRREL AND LYNX.	Effects to wildlife species are discussed in FEIS Chapter 3, Wildlife section.
510	I AM OPPOSED TO ALL PRESCRIBED BURNING BECAUSE OF THE NEGATIVE IMPACTS OF AIR POLLUTION. WHENYOU BURN MICROSCOPIC PARTICLATES ARE RELEASED WHEN YOU CANNOT SEE. IT IS NOT "SMOKE". SUCH PARTICLES ENTER THE HUMAN BODY AND CAUSE LUNG CANCER, HEART ATTACKS, STROKES, ASTHMA, ALLERGIES,PNEUMONIA AND MANY OTHER HEALTH ISSUES. PEOPLE DIE FROM THIS, PARTICULARLY BABIES AND SENIOR CITIZENS. CLEAN AIR IS VITAL TO HEALTH.	All prescribed burning is subject to approval from the Montana/Idaho State Airshed Group. All burning will be in compliance with national and state air quality regulations. See FEIS, Section 1.13.4 Air Quality.
511	THIS PLAN IS A TOTAL LOSS FOR THE USA NATION. THE BEST	Comment noted.

Comment #	Concerns	Comment Response
	PLAN IS NO ACTION. NO MAJOR BUILDING. NO MAJOR LGGING. YOU WANT TO LOG SLASH WHEN SLASH MUST BE LEFT IN A SITE. SLASH IS NECESSAY FOR HOMES FOR MANY MANY SPECIES. 200 SCIENTISTS JUST WROTE IN TO USFWS TO TELL THEM SO IN YELLOWSTONE FIRE.	
512	I THINK THIS PLAN IS DESIGNED TO MAKE MONEY FOR FOREST FIRE EMPLOYHEES AND THAT IS WHY IT IS INSERTED. THERE ARE MANY NEGATIVES TO THIS PLAN WHICH RESPONDS TO LOCAL PROFITEERS AND SENDS THE BILLS TO NATIONAL TAXPAEYRS. THESE GOVT AGENCIES ALWAYS CHOOSE THEIR OWN PLANS. THEY NEVER LISTEN TO THE ORDINARY PUBLIC. THESE AGENCIES JUST SEND THE BILLS TO THE ORDINARY PUBLIC AND DO WHAT THEY WANT AS IF THEY ARE GOD. THIS IS COMPLETE DISRESPECT FOR THE PHILOSOPHY OF GOVT BY THE PEOPLE FOR THE PEOPLE. IT HAS BECOME GOVT BY THE GOVT FOR THE GOVT. FS IS A RUNAWAY ROGUE AGENCY. THIS COMMENT IS FOR THEPUBLIC RECORD. JEAN PUBLIC PLEASE ACKNOWLEDGE RECEIPT.	Comment noted.
33. Peter Walker		
513	I am pleased that you are planning some management of these areas, however it is disappointing that project is leaning so much toward protection rather than taking the middle road between protection and commodity use. More specifically Objective 1 page S-2 ...emphasis on promoting large tree forest structure... and "Acres treated to promote or maintain the large tree size class". It doesn't seem that maintaining a sustainable harvest for the timber industry, who also are part of the public you are working for, is an objective. The objective appears to imply you just want "large", whatever that is, trees and not harvestable size trees. Thanks for the opportunity to comment	Thank you for your comment. Contributing to the vitality of local economies is part of the purpose and need for this project. FEIS Chapter 3, Economics section provides a discussion and estimates of the economic benefits of this project.

Comment #	Concerns	Comment Response
34. Leonard Wallace		
514	I am for alternate A, which is doing nothing especially in regards to roads. In 11-6-13 issue of the record I saw that anything over 1 mile of drivable road per square mile of land is considered detrimental to elk herds, somebody is a little short on common sense because a mile of road won-t reach across a mile of forest land , figuring a mile of road with 300 feet on each side or 600 feet wide figures out to be less than 100 acres out of the 640 acres in that square mile, which in turn leaves about 500 plus acres for what wilderness, and I have seen what fire fighters do to wilderness and it is not pretty, any land that does not have access for people who cannot walk is wilderness. TO me 2or 3 month elk season should have a detrimental effect on elk herds say nothing of killing pregnant cows. Plus the wolves that the Washington establishment had to bring back. Closing roads denies access, which in turn denies fire fighters access to fires in a timely manner to make a point if the road to Lick Creek lookout had not been closed fire fighters could have gotten to the Wesley Fire quicker and maybe put it out instead of burning over 16,000 acre still mother nature put it out. One thing for sure the blacker the forest the greener the pay check for forest service personnel.	Thank you for your comment. Effects to elk are discussed in FEIS Chapter 3, Wildlife section. The Lost Creek-Boulder Creek project proposes to designate new OHV trails in the Lost Creek area to provide motorized recreation opportunities.

STATE OF IDAHO
DEPARTMENT OF ENVIRONMENTAL QUALITY
BOISE REGIONAL OFFICE
1445 North Orchard Street•Boise, ID 83706-2239•(208) 373-0550

DEQ Response to Request for Environmental Comment

Date:	*11/25/2013*
Agency Requesting Comments:	*USDA Payette National Forest*
Date Request Received:	*11/18/2013*
Applicant/Description:	*Lost Creek-Boulder Creek Landscape Restoration*

Thank you for the opportunity to respond to your request for comment. While DEQ does not review projects on a project-specific basis, we attempt to provide the best review of the information provided. DEQ encourages agencies to review and utilize the Idaho Environmental Guide to assist in addressing project-specific conditions that may apply. This guide can be found at http://www.deq.idaho.gov/ieg/.

The following information does not cover every aspect of this project; however, we have the following general comments to use as appropriate:

1. Air Quality

- *Please review IDAPA 58.01.01 for all rules on Air Quality, especially those regarding fugitive dust (58.01.01.651), trade waste burning (58.01.01.600-617), and odor control plans (58.01.01.776).*

  For questions, contact David Luft, Air Quality Manager, at 373-0550.

- *IDAPA 58.01.01.201 requires an owner or operator of a facility to obtain an air quality permit to construct prior to the commencement of construction or modification of any facility that will be a source of air pollution in quantities above established levels. DEQ asks that cities and counties require a proposed facility to contact DEQ for an applicability determination on their proposal to ensure they remain in compliance with the rules.*

  IDAPA 58.01.01.614 sets out the rules for prescribed burning in Idaho. Please ensure all prescribed burning is done in compliance with the rules, and in compliance with the 2010 Operations Guide of the Montana/Idaho Airshed Group.

  For questions, contact the DEQ Air Quality Permitting Hotline at 1-877-573-7648.

2. Wastewater and Recycled Water

- *DEQ recommends verifying that there is adequate sewer to serve this project prior to approval. Please contact the sewer provider for a capacity statement, declining balance report, and willingness to serve this project.*

- *IDAPA 58.01.16 and IDAPA 58.01.17 are the sections of Idaho rules regarding wastewater and recycled water. Please review these rules to determine whether this or future projects will require DEQ approval. IDAPA 58.01.03 is the section of Idaho rules regarding subsurface disposal of wastewater. Please review this rule to determine whether this or future projects will require permitting by the district health department.*

  All projects for construction or modification of wastewater systems require preconstruction approval. Recycled water projects and subsurface disposal projects require separate permits as well.

- *DEQ recommends that projects be served by existing approved wastewater collection systems or a centralized community wastewater system whenever possible. Please contact DEQ to discuss potential for development of a community treatment system along with best management practices for communities to protect ground water.*

- *DEQ recommends that cities and counties develop and use a comprehensive land use management plan, which includes the impacts of present and future wastewater management in this area. Please schedule a meeting with DEQ for further discussion and recommendations for plan development and implementation.*

  For questions, contact Todd Crutcher, Engineering Manager, at 373-0550.

3. ***Drinking Water***
   - *DEQ recommends verifying that there is adequate water to serve this project prior to approval. Please contact the water provider for a capacity statement, declining balance report, and willingness to serve this project.*

   - *IDAPA 58.01.08 is the section of Idaho rules regarding public drinking water systems. Please review these rules to determine whether this or future projects will require DEQ approval.*

     All projects for construction or modification of public drinking water systems require preconstruction approval.

   - *DEQ recommends verifying if the current and/or proposed drinking water system is a regulated public drinking water system (refer to the DEQ website at http://www.deq.idaho.gov/water-quality/drinking-water.aspx). For non-regulated systems, DEQ recommends annual testing for total coliform bacteria, nitrate, and nitrite.*

   - *If any private wells will be included in this project, we recommend that they be tested for total coliform bacteria, nitrate, and nitrite prior to use and retested annually thereafter.*

   - *DEQ recommends using an existing drinking water system whenever possible or construction of a new community drinking water system. Please contact DEQ to discuss this project and to explore options to both best serve the future residents of this development and provide for protection of ground water resources.*

- *DEQ recommends cities and counties develop and use a comprehensive land use management plan which addresses the present and future needs of this area for adequate, safe, and sustainable drinking water. Please schedule a meeting with DEQ for further discussion and recommendations for plan development and implementation.*

  For questions, contact Todd Crutcher, Engineering Manager at 373-0550.

4. Surface Water

- *A DEQ short-term activity exemption (STAE) from this office is required if the project will involve de-watering of ground water during excavation and discharge back into surface water, including a description of the water treatment from this process to prevent excessive sediment and turbidity from entering surface water.*
- *Please contact DEQ to determine whether this project will require a National Pollution Discharge Elimination System (NPDES) Permit. If this project disturbs more than one acre, a stormwater permit from EPA may be required.*
- *If this project is near a source of surface water, DEQ requests that projects incorporate construction best management practices (BMPs) to assist in the protection of Idaho's water resources. Additionally, please contact DEQ to identify BMP alternatives and to determine whether this project is in an area with Total Maximum Daily Load stormwater permit conditions.*
- *The Idaho Stream Channel Protection Act requires a permit for most stream channel alterations. Please contact the Idaho Department of Water Resources (IDWR), Western Regional Office, at 2735 Airport Way, Boise, or call 208-334-2190 for more information. Information is also available on the IDWR website at:* http://www.idwr.idaho.gov/WaterManagement/StreamsDams/Streams/AlterationPermit/AlterationPermit.htm
- *The Federal Clean Water Act requires a permit for filling or dredging in waters of the United States. Please contact the US Army Corps of Engineers, Boise Field Office, at 10095 Emerald Street, Boise, or call 208-345-2155 for more information regarding permits.*

  For questions, contact Lance Holloway, Surface Water Manager, at 373-0550.

5. Hazardous Waste And Ground Water Contamination

- ***Hazardous Waste.*** *The types and number of requirements that must be complied with under the federal Resource Conservations and Recovery Act (RCRA) and the Idaho Rules and Standards for Hazardous Waste (IDAPA 58.01.05) are based on the quantity and type of waste generated. Every business in Idaho is required to track the volume of waste generated, determine whether each type of waste is hazardous, and ensure that all wastes are properly disposed of according to federal, state, and local requirements.*
- *No trash or other solid waste shall be buried, burned, or otherwise disposed of at the project site. These disposal methods are regulated by various state regulations including Idaho's Solid Waste Management Regulations and Standards, Rules and Regulations for Hazardous Waste, and Rules and Regulations for the Prevention of Air Pollution.*

- ***Water Quality Standards.*** *Site activities must comply with the Idaho Water Quality Standards (IDAPA 58.01.02) regarding hazardous and deleterious-materials storage, disposal, or accumulation adjacent to or in the immediate vicinity of state waters (IDAPA 58.01.02.800); and the cleanup and reporting of oil-filled electrical equipment (IDAPA 58.01.02.849); hazardous materials (IDAPA 58.01.02.850); and used-oil and petroleum releases (IDAPA 58.01.02.851 and 852).*

  Petroleum releases must be reported to DEQ in accordance with IDAPA 58.01.02.851.01 and 04. Hazardous material releases to state waters, or to land such that there is likelihood that it will enter state waters, must be reported to DEQ in accordance with IDAPA 58.01.02.850.

- ***Ground Water Contamination.*** *DEQ requests that this project comply with Idaho's Ground Water Quality Rules (IDAPA 58.01.11), which states that "No person shall cause or allow the release, spilling, leaking, emission, discharge, escape, leaching, or disposal of a contaminant into the environment in a manner that causes a ground water quality standard to be exceeded, injures a beneficial use of ground water, or is not in accordance with a permit, consent order or applicable best management practice, best available method or best practical method."*

  For questions, contact Aaron Scheff, Waste & Remediation Manager, at 373-0550.

6. ***Additional Notes***
   - *If an underground storage tank (UST) or an aboveground storage tank (AST) is identified at the site, the site should be evaluated to determine whether the UST is regulated by DEQ. EPA regulates ASTs. UST and AST sites should be assessed to determine whether there is potential soil and ground water contamination. Please call DEQ at 373-0550, or visit the DEQ website (http://www.deq.idaho.gov/waste-mgmt-remediation/storage-tanks.aspx) for assistance.*

   - *If applicable to this project, DEQ recommends that BMPs be implemented for any of the following conditions: wash water from cleaning vehicles, fertilizers and pesticides, animal facilities, composted waste, and ponds. Please contact DEQ for more information on any of these conditions.*

We look forward to working with you in a proactive manner to address potential environmental impacts that may be within our regulatory authority. If you have any questions, please contact me, or any our technical staff at 208-373-0550.

Sincerely,

Danielle Robbins

Danielle Robbins
danielle.robbins@deq.idaho.gov
Boise Regional Office
Idaho Department of Environmental Quality

C: File # 1916

STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

1445 North Orchard • Boise, Idaho 83706 • (208) 373-0550
www.deq.idaho.gov

C.L. "Butch" Otter, Governor
Curt Fransen, Director

December 16, 2013

Ken Meyers
USFS
800 West Lakeside Ave
McCall, ID 83638-3602

Subject: Lost Creek/Boulder Creek Landscape Restoration Project #33830

Mr. Ken Meyers:

The Idaho Department of Environmental Quality would like to provide the following comments on the status of waterbodies contained in the Lost Creek/Boulder Creek Landscape Restoration Project #33830 area. The status of the following waterbodies is based on the 2010 Integrated Report.

Upper West Fork Weiser River (ID17050124SW017_03, Corral Creek to Mouth). The West Fork Weiser River (WFWR) is fully supporting its beneficial uses. It does **NOT** have a TMDL, but has been assigned a potential natural vegetation target load allocation and requires a 27% reduction in solar loading. Any activities in this watershed should be consistent with meeting this load allocation. Downstream water quality is dependent upon this stream obtaining this target. Any activities that affect solar loading to WFWR should be carefully considered as they may affect the ability of the WFWR to meet this allocation.

Upper Lost Creek (ID17050124SW020_02, source to Lost Valley Reservoir). Upper Lost Creek is fully supporting its beneficial uses. Any activities in this watershed should be consistent with maintaining water quality at or above its current condition.

Lower Lost Creek (ID17050124SW018_02, Lost Valley Dam to Mouth). Lower Lost Creek is fully supporting its beneficial uses. Any activities in this watershed should be consistent with maintaining water quality at or above its current condition.

Upper Weiser River (ID17050124SW007_02, East and West Branches) This AU contains all 1st and 2nd order streams upstream of Keithly Creek. Both the West Branch and the East Branch are fully supporting beneficial uses. Any activities in this watershed should be consistent with maintaining water quality at or above its current condition.

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Upper Boulder Creek (ID17060210SL005_02, All 1st and 2nd order tributaries of Boulder Creek; including Boulder Creek to Star Creek). Upper Boulder Creek is fully supporting its beneficial uses. Any activities in this watershed should be consistent with maintaining water quality at or above its current condition.

Lower Boulder Creek (ID17060210SL005_03, Boulder Creek from Star Creek to confluence with Little Salmon River), Lower Boulder Creek is Fully Supporting its beneficial uses. Any activities in this watershed should be consistent with maintaining water quality at or above its current condition.

All of the waterbodies in the proposed project area are fully supporting beneficial uses. Only one of the waterbodies has a TMDL allocation: the West Fork Weiser River. While the WFWR is fully meeting its beneficial uses, it requires a 27% reduction in solar loading to meet downstream water quality targets. Any actives in this watershed should be carefully considered and performed in a way to enhance the riparian zone and subsequent shading to the stream. The shade table for the WFWR may be found on page 17 of the Weiser Subbasin Temperature TMDL (http://www.deq.idaho.gov/media/450157-weiser_river_addendum_entire.pdf).

If you would like to discuss the status of any of these streams and or the impact of the proposed project in greater detail please contact Josh Schultz at 208-373-0407 or josh.schultz@deq.idaho.gov.

Sincerely,

Josh Schultz
Watershed Coordinator

IDAHO DEPARTMENT OF FISH AND GAME
SOUTHWEST REGION
MCCALL OFFICE
555 Deinhard Lane
McCall, Idaho 83638

C.L. "Butch" Otter / Governor
Virgil Moore / Director

December 16, 2013

Keith Lannom, Forest Supervisor
Payette National Forest
800 West Lakeside Avenue
McCall, ID 83638

Re: Lost Creek-Boulder Creek Landscape Restoration Project DEIS

Dear Keith:

Our Department has reviewed the DEIS for the proposed Lost Creek-Boulder Creek Landscape Restoration Project. This project is based, in part, on recommendations provided by the Payette Forest Coalition (PFC) to the Payette National Forest. Our Department participated in the PFC process and we agree that the PFC recommendations are a good foundation from which to build the proposed project. We offer the following comments for consideration prior to completion of the FEIS and Decision Notice.

Restoration of habitat in the Lost Creek-Boulder Creek area is important to our agency; however, maintenance of effective elk habitat is equally important. Elk habitat effectiveness and security is influenced by amount and proximity of forage and cover components, adequacy of hiding and thermal cover, and open road densities. As hiding cover dissipates the influence of open roads on elk habitat effectiveness is magnified. Implementation of the proposed vegetation treatments will result in a much more open forest condition, and dramatically so from the perspective of an elk living in the area. Tables WL-19 and WL-20 indicate that all of the action alternatives will erode elk security areas.

It may be difficult to achieve the elk security guidelines in their strictest sense and maintain a viable restoration project. In this case, suggested ways to mitigate this impact to elk, short of severely reducing vegetation treatments in areas that already provide security habitat, could consist of decommissioning or creating more effective closures on unauthorized roads; placing system roads into long-term closures; closing more system roads seasonally; or a combination of all of these. The road management/improvement package identified in Alternative C provides the best mitigation for elk security.

Keith Lannom
December 16, 2013
Page 2

We recommend that the thinning of large tree size class, high canopy cover class stands in PVG 6 shift stands to the medium rather than the low canopy cover class to lessen impacts to elk and other wildlife habitat.

We also recommend that any intensive treatments to benefit the northern Idaho ground squirrel should be focused in Priority 1 areas where squirrels have a moderate or high probability of utilizing them. Priority 2 areas should still be treated, but at intensity comparable to the surrounding area.

Thank you for this opportunity to comment on this project. If you have any questions regarding the Department's concerns please contact Jeff Rohlman at our McCall office (208-634-8137).

Sincerely,

Scott Reinecker
Southwest Regional Supervisor

SR:jr
C: IDFG McCall Office (J. Rohlman); Nampa Office (R.Ward)

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Nez Perce

TRIBAL EXECUTIVE COMMITTEE
P.O. BOX 305 • LAPWAI, IDAHO 83540 • (208) 843-2253

December 11, 2013

Sent via email to klannom@fs.fed.us

Keith Lannom, Forest Supervisor
Payette National Forest
800 W. Lakeside Avenue
McCall, Idaho 83638

RE: Nez Perce Tribe's comments on the Lost Creek-Boulder Creek Landscape Restoration Project Draft Environmental Impact Statement

Dear Mr. Lannom,

On behalf of the Nez Perce Tribe (Tribe), thank you for the opportunity to comment on the Payette National Forest (Forest)'s Draft Environmental Impact Statement (DEIS) for the Lost Creek – Boulder Creek Landscape Restoration Project. The project is one of the Collaborative Forest Landscape Restoration Projects (CLFRP) produced by the Payette Forest Coalition in partnership with the Payette National Forest.

As described in the DEIS, the project area comprises approximately 80,000 acres of National Forest System Lands in the Lost Creek and Boulder Creek Drainages. The Forest is proposing a combination of commercial thinning, pre-commercial thinning, prescribed fire, and reforestation to improve habitat for specific wildlife species, maintain and promote large tree forest structure, reduce the risk of uncharacteristic and undesirable wildland fire, and contribute to the economic vitality of local communities. Road decommissioning, culvert replacements, and road improvements are proposed to restore habitat connectivity, reduce road related sediment, and restore riparian vegetation and floodplain function. Recreation improvements including trail maintenance, trail relocation, and installation of informational signage and restroom facilities are proposed to improve watershed conditions across portions of the Lost Creek and Boulder Creek drainages.

The Forest has selected Alternative B as the proposed action for this project. Alternative B responded to recommendations from the Payette Forest Coalition and public concerns regarding recreation access. The Nez Perce Tribe would like to see Alternative C as the alternative adopted by the Forest Service. Alternative C provides more watershed restoration efforts, fewer temporary roads, and encompasses more protection for Treaty Resources (including elk and salmonids) than any of the other proposals.

Keith Lannom, Forest Supervisor
December 10, 2013
Page 2

As the Forest is aware, the project is located entirely within the Tribe's aboriginal territory subject to the rights the Tribe reserved, and the United States secured, in the Treat of 1855. The Project is also located within the Tribe's area of exclusive use and occupancy as adjudicated by the Indian Claims Commission. The Tribe's paramount goal is to protect and advance its treaty-reserved and cultural interests in its aboriginal territory. The Forest Service has a trust responsibility to ensure that its actions, including the project, are fully constituent with the 1855 Treaty, executive orders, departmental regulation and other federal laws implicating the United States' unique relationship with the Tribe.

Following a careful review of the DEIS, the Tribe has identified several issues and concerns with the project that it requests be addressed through additional information and analysis prior to the Forest Service issuing a final decision. The Tribe requests formal consultation with the Forest Service regarding the project, and stands ready to assist the agency in addressing the Tribe's comments.

Thank you again for the opportunity to comment on the project. Please contact Mike Lopez if you have questions.

Sincerely,

Silas C. Whitman
Chairman

There are no defined criteria for determining when previous inventory is inadequate, and the Payette NF and the Idaho SHPO have formally agreed that the Nez Perce Tribe has no role in the discussion.

4. **Traditional Cultural Properties**

The Payette NF has made no effort to identify sacred sites, traditional cultural properties, or historic properties of religious and cultural significance to Indian Tribes for this undertaking, beyond expecting that Tribal staff will identify sensitive areas and resources in technical meetings. This level of effort is insufficient to meet the minimum requirements of Section 106 or National Register of Historic Places (NRHP) and Advisory Council on Historic Preservation (ACHP) guidance.

5. **Technical Concerns with the DEIS**

Appendix F, ARPA (page 50): Incorrectly states that cultural resource surveys for the project have been completed, and misstates the number of NRHP eligible cultural resources to be avoided.

Appendix F, National Historic Preservation Act of 1966, as Amended (page 54): Incorrectly states that cultural resource surveys for the project have been completed, and that all cultural resources would be avoided during project implementation.

Appendix H (page 85): This "cultural resource" definition excludes modern Nez Perce people and their continuing use and occupation of their homeland.

NEZ PERCE TRIBE'S COMMENTS ON THE LOST CREEK-BOULDER CREEK LANDSCAPE RESTORATION PROJECT DRAFT ENVIRONMENTAL IMPACT STATEMENT

DECEMBER 15, 2013

I. GENERAL COMMENTS

a. The Nez Perce Tribe's Interest in the Lost Creek-Boulder Creek Landscape Restoration Project

Since time immemorial, the Tribe has occupied and used over 13 million acres of lands now comprising north-central Idaho, southeast Washington, northeast Oregon, and parts of western Montana. Tribal members engaged in fishing, hunting, gathering, and pasturing livestock across their vast aboriginal territory, and these activities still play a major role in the culture, religion, subsistence, and commerce of the Tribe.

In 1855, the United State entered into a treaty with the Nez Perce Tribe. *Treaty of June 9, 1855 with the Nez Perces*, 12 Stat. 957 (1859). In this treaty the Nez Perce Tribe explicitly reserved, "the right to fish at all usual and accustomed places in common with citizens of the Territory; and of erecting temporary buildings for curing, together with the privilege of hunting, gathering roots and berries, and pasturing their horses and cattle upon open and unclaimed lands." *Id.*

The lands and waters of the Payette National Forest are part of the vast territory ceded by the Tribe, over which the Tribe has treaty reserved rights. The Project is located on the New Meadows District and entirely within the Tribes ceded territory as well as within the area determined by the Indians Claims Commission to be the exclusive use and occupancy of the Tribe.

These NFS lands and waters provide irreplaceable habitat for tribal resources, including Chinook salmon, steelhead and bull trout. These and other aquatic resources are subject to the exercise of the Tribe's treaty reserved rights. *See e.g., Sohappy v. Smith, 302 F. Supp. 899 (D.Or.1969), aff'd, United States v. Oregon, 529 F. 2d 570 (9th Cir. 1976); Washington v Washington State Commercial Passenger Fishing Vessel Ass', 443 U.S. 658 (1979) (Fishing Vessel).*

The treaty-reserved right to take fish and other resources reserved by the Tribe presumed the continued existence of those biological conditions necessary for the resources that area the subject of the treaties. *See Kittitas Reclamation District v. Sunnyside Valley Irrigation District, 763 F.2d 1394 (9th Cir. 1985), cert. denied, Sunnyside Valley Irrigation District v. United States, 474 U.S. 1032 (1985).* Harm to these resources and their habitat will harm the Tribe and its members.

Unfortunately, many of the resources sacred to the Tribe are at risk of disappearing. Snake River Spring/Summer Chinook salmon were listed as threatened under the Endangered Species Act in 1992, and bighorn sheep populations continue to struggle in the face of introduced diseases and trophy hunting. The decimation of big game herds and salmon runs has seriously impacted the tribal economy. Today, tribal members face a poverty rate of almost 30% and winter unemployment rates of 62%.

Treaty tribes, such as the Nez Perce, have been recognized as managers of their treaty-reserved resources. *U.S. v. Washington, 684 F. Supp. 312, 339-40, 403 (W.D. Wash. 1974)*. As manager, the Tribe has devoted substantial time, effort and resources to the recovery and co-management of treaty-reserved resources within its treaty territory.

SPECIFIC COMMENTS

a. **The Forest needs to determine the best means of protecting Legacy Trees and maximizing retention of large diameter trees consistent with the goals of the CFLRP**

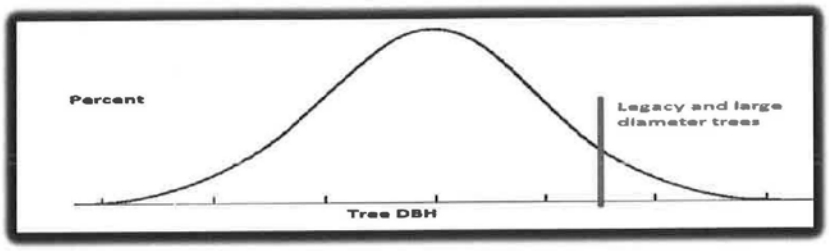
Legacy Trees have survived stand replacing natural disturbances and represent some of the best genetics for future seed source. Research has shown that Legacy Trees provide important habitat elements for many species of wildlife and have a higher level of diversity and richness than control trees (Mazurek 2003). http://www.fs.fed.us/psw/publications/4251/mazurek2.pdf

The goal of protecting Legacy Trees and maximizing retention of large diameter trees is outlined in the Collaborative Forest Landscape Restoration Program; *Sec. 4003(D) fully maintains, or contributes toward the restoration of, the structure and composition of old growth stands according to the pre-fire suppression old growth conditions characteristic of the forest type, taking into account the contribution of the stand to landscape fire adaptation and watershed health and retaining the large trees contributing to old growth structure; (E) would carry out any forest restoration treatments that reduce hazardous fuels by-- (i) focusing on small diameter trees, thinning, strategic fuel breaks, and fire use to modify fire behavior, as measured by the projected reduction of uncharacteristically severe wildfire effects for the forest type (such as adverse soil impacts, tree mortality or other impacts); and (ii) maximizing the retention of large trees, as appropriate for the forest type, to the extent that the trees promote fire-resilient stands.* The Forest Service purpose for this project and the goals of the Payette Forest Coalition similarly highlight an increase in large tree class size, decreased canopy cover and increase in the number of early seral species. With the goals clearly outlined, it is imperative to find the best means of protecting Legacy Trees and maximizing the retention of large diameter trees that will be the next round of Legacy Trees in our lifetime.

The issue of the best way to protect Legacy Trees and the retention of large diameter trees has been raised in several Payette Forest Coalition meetings. On a September 24th PFC field trip, a location in harvest unit 84 was chosen to highlight how the current marking procedures protect Legacy Tree and other large diameter ponderosa pines. During the discussion it was noted that a Legacy Tree was marked for removal. The Forest Service marking crew leader was there and noted that it was a mistake made by a less experienced crew member. This highlights the concern that handing this guideline to a contractor's marking crew with varied levels of experience might produce less than desired results for Legacy Tree protection in the Lost Creek-Boulder Creek Project. After reviewing the Legacy Tree guideline, it is clear that it is a well written, well thought out document; however, implementation of the guidelines can be confusing and subjective, leaving open the possibility that the Forest may not meet their desired objectives.

Proposed Idea for Legacy Tree and large diameter tree retention:

The Nez Perce Tribe would like to see an established diameter at breast height (DBH) (with appropriate exceptions for safety and operability issues) for individual stands within this project. This would ensure that there are easy to implement, transparent, quantifiable metrics to protect Legacy trees and the "largest of the large" diameter trees in accordance with the written goals of this project. An established DBH would remove ambiguity from large diameter tree harvest. This DBH could be species specific and calculated using stand data. A suggestion would be to graph stand DBH data to produce a bell shaped curve. Find a logical place on the curve where the majority of Legacy tree and the "largest of the large" diameter trees fall, and establish a DBH for retention. This approach may be able to get down to the unit level should the data be available.



The current Legacy Tree guideline only addresses two species of tree (ponderosa pine and western larch). It is understood that the Forest is promoting early seral species, however, it would be beneficial to have some protection for the "largest of the large" Grand and Douglas fir. If the Forest is trying to promote historic conditions, these larger older trees represent just that. Because the mature tree component is underrepresented across the majority of the area, large trees, regardless of species, need to be protected for both wildlife and as part of the forest's natural heritage. In addition, the Forest Plan and Wildlife Conservation Strategy highlight the value of these mature trees for wildlife. Legacy trees with mistletoe (regardless of mistletoe rating) should be protected using this same DBH for wildlife habitat.

We are also willing to discuss a design feature based on a diameter limit that might offer additional flexibility in limited circumstances. For example, the Soda Bear Project on the Malheur National Forest added a design feature to address the circumstance when a large diameter tree is competing with an even larger, more desirable tree. From the center of the larger, more desirable tree, the Forest Service established a circle equivalent to two times the diameter of the drip line. Should a less desirable tree occur within this area, it could be considered for removal.

In addition to existing legacy trees, there needs to be provisions in the silvicultural prescriptions to retain "replacement" legacy trees within each stand. A desirable age structure should be developed to provide the next generation of legacy trees to replace existing ones that will be lost from the stand over time. Retaining the largest of the large while removing the majority of commercial trees in the 16-20" DBH class is counter-productive to the long-term goal of promoting sustainable old growth stand conditions.

It is in the best interest of the Forest Service to address this topic as it will be highly scrutinized by outside groups during the NEPA process. These additional protections of Legacy Trees and large diameter trees will highlight to outside groups that this project has the restoration goals outlined by the CFLRP truly in mind.

b. Proposed Riparian Conservation Area (RCA) treatments.

The Forest Plan (Appendix B-36) identifies several important considerations when appropriately delineating and designing management activities within or affecting RCAs. These are as follows:

a) *A stream requires predictable and near natural energy and nutrient inputs.*
b) *Many plant and animal communities rely on streamside or wetland forests and vegetation for migratory or dispersion habitat.*
c) *Small streams are generally more affected by hillslope activities than are larger streams.*
d) *As adjacent slopes become steeper, the likelihood of disturbance resulting in discernible instream affects increase.*
e) *Riparian vegetation 1) provides shade to streams channels; 2) contributes large woody debris 3) adds small organic matter; 4) controls sediment inputs from surface erosion; 6) and regulates nutrient and pollutant inputs to streams.*

Searching the available scientific literature, it becomes apparent that RCA treatments are generally new, understudied, and has varied biological effects (some positive and some negative). In the alternatives contemplated in the draft EIS, RCA treatments may involve up to 2,000 acres. Because none of these treatments occur in the Boulder Creek watershed this would mean heavy treatment in the Lost Creek watershed RCA. RCA's are often referred to as buffer zones because they reduce sediment and pollutants from entering water bodies.

For this project the Forest Service has proposed to treat within RCA buffer zones using commercial thinning, non-commercial thinning and burning. Compared to Payette Forest Plan guidelines, this is a reduced buffer zone for RCA protection. The proposed treatments have the ability to impact Large Woody Debris (LWD) recruitment, water temperatures through reduced canopy cover shading, stream bank stability through the removal of upland trees just outside of the no cut zone, fine organic litter from entering streams, riparian microclimate and productivity, wildlife habitat, and sediment and pollutants entering water bodies.

In the Forest Plan under the Management Direction for Soil, Water, Riparian, and Aquatic Resources SWST10 states; *Trees or snags that are felled within RCAs must be left unless determined not to be necessary for achieving soil, water, riparian, and aquatic desired conditions. Felled trees or snags left in RCAs shall be left intact unless resource protection (e.g., the risk of insect infestation is unacceptable) or public safety requires bucking them into smaller pieces.*

Riparian Management Objectives for this project need to be clearly defined and specifically linked to improving riparian function. This criterion should be more specific than the blanket statement aimed at reducing large scale fires in RCA's. Riparian areas should only be treated if the treatment will clearly and positively meet Riparian Management Objectives and create positive biological effects. RCA treatments should be light in nature, non-mechanical, non-commercial and reduced in acreage as they are still experimental. Ideally RCA treatments should be covered by burning and non-commercial hand lines. Removal of wood in RCA's should only occur when streams have adequate LWD as defined by your Watershed Condition Indicators (>20 pieces per mile,>12 inches in diameter,>35 feet length) and directed by SWST10.

c. Full hillslope recontour of roads (decommissioning) should be elevated in all alternatives

Amongst the alternatives there is a range in the number of miles for full recontouring (51-132). Road densities in these watersheds are some of the highest in all of the Payette National Forest. High road densities have been documented to have deleterious effects on watershed ecosystem health. One method for reducing these road densities is through road recontouring. Studies have shown that road recontouring had a significant positive correlation on the reduction of fine sediments in stream substrate cores (McCafferty et al. 2007). On the Payette National Forest, a direct correlation was found between road densities and degraded streambed conditions (fines, median particle size (D50) and geometric mean particle diameter (Dg) (Nelson et al. 2004). Higher road densities and the resulting sediment have been correlated to lower abundance of Chinook and steelhead parr (Thompson and Lee, 2000).

In some of the alternatives there is the management prescription to abandon roads (long term closure) instead of fully recontouring (decommissioning). In a recent study published in Frontiers of Ecology, two road treatment prescriptions: fully recontoured (decommissioned) versus roads that were simply abandoned (gated), were compared for belowground recovery of soil and hydrologic characteristics. http://www.esajournals.org/doi/abs/10.1890/120116 After 10 years, recontoured roads had carbon storage, nutrient cycling rates, and organic matter quantities similar to never-roaded areas, while abandoned roads, after 30-50 years of recovery and revegetation showed very little carbon storage, soil organic matter, and nitrogen. Results from this paper suggested abandoned roads are strongly nutrient limited. Recontouring roads increases infiltration capacity, water storage, and decreases time to runoff in storm event over abandoned roads. Active road recontouring can dramatically accelerate (by 100-1000's of years) the recovery of aboveground and belowground properties towards that of a never roaded reference reach (Lloyd et al. 2013).

Proposed Idea for when full road recontouring should be prioritized:

Because GRAIP data is being collected on the roads in the project area numerous metrics will be available to aid in road recontouring prioritization, we would recommend focusing on the following metrics; tons of sediment delivered to streams, %of road in riparian areas and the number of stream crossings as the primary metrics used for the recontouring prioritization. Given the documented

benefits of full road recontouring where funds are available this should be the preferred method of road closure. If funds are not available to fund full recontour of a road slated for decommissioning we would suggest the following priorities in the order they are listed below.

- Roads that show the highest sediment delivery to streams should take the highest prioritization for full road recontour. Roads in watersheds where ESA listed species are present should take priority over watersheds without ESA listed species.
- Roads in RCA's should have high priority for full road recontour. Roads often wind in and out of RCA's. We recommend that when a management prescription is given to a road it encompasses the entire road.
- Roads with high numbers of stream crossings should rank higher for full road recontour than roads with lower number of stream crossings.
- Roads with a well-defined road prism should rank higher for recontouring than roads with minimal road compaction.
- Roads where sensitive wildlife species will be negatively impacted should rank higher for recontouring than roads where sensitive species are not present.

Due to the numerous benefits of fully recontouring roads such as; reduced in-stream sediment delivery, fish and wildlife concerns, stopping the spread of weeds and overall forest health, it should be the preferred method of decommissioning. Roads in long term closure do not bring the benefits seen in recontoured roads. Ripping of roads could be effective on flat, low gradient roads. Where funds will not allow full recontour of roads the list above could be a starting point for prioritization.

d. Bring Boulder Creek Watershed to the Functioning Appropriately Category

Due to the amount of money available for restoration and the amount of time spent analyzing this project we would like to see the Boulder Creek Watershed restoration work result in a "functioning appropriately" category. It could be numerous years before the Forest has additional opportunities for restoration critical for the protection of ESA listed fish species found in this watershed. Currently listed alternatives would move the Boulder Creek Watershed from the "impaired" category to the "functioning at risk" category as defined by the Watershed Condition Framework. The Tribe asks the Forest staff to identify the restoration activities needed to get the Boulder Creek Watershed as close to the "functioning properly" category as possible. We suggest the Forest take a more in depth look at additional road decommissioning opportunities. With the weighting of the Watershed Condition Framework, (12-indicator model) roads and their associated impacts make up 30% of the modeled weight. Roads also play a large role in other aspects of the model; the Aquatic Physical includes water quality (303-d) that is impacted by sedimentation from roads and increased water temperatures due to streamside roads that impact riparian vegetation. Impacts from roads also limit the Aquatic Biological section of the model; high density roads will reduce diversity in macroinvertebrates. Decommissioning (full recontour) of all unauthorized roads could make a substantial difference in moving Boulder Creek and Lost Creek toward the "functioning properly" category.

e. **The Nez Perce Tribe would like to see Alternative C as the proposed action adopted by the Forest Service**

There are currently five alternatives (A-E) listed for consideration regarding this project. The Forest Service has selected Alternative B as their proposed action. Out of the available Alternatives, Alternatives C does the best job of protecting Tribal Treaty Resources. The advantages of Alternative C, over Alternative B, are that it provides more watershed restoration efforts, as listed in the categories below.

Vegetation- In Alternative C, vegetation treatments occurring in RCA's would be achieved exclusively with prescribed fire and are more in line with our recommendations above. In Alternative B, 1,800 acres would be treated in RCA's using commercial thinning treatments. The type of vegetative treatments in Alternative C would be less intensive (14,500 acres of commercial, 22,000 acres of non-commercial vs 22,000 acres of commercial and 18,000 acres of non-commercial). This reduction in commercial treatments and the lack of regeneration treatments (patch cuts or shelterwood) would ensure that channel scour is reduced from elevated stream flows and that elk have more security.

System Road Treatments-In Alternative C, more system and unauthorized route treatments (decommissioning) are performed than in Alternative B, moving the Boulder Creek Watershed and Lower West Fork Weiser River subwatershed closer to "Functioning Appropriately" category. This increase in decommissioning would improve conditions for ESA listed fish species and provide for more elk security.

Fish Passage/Habitat Connectivity- Fish passage projects occurring outside the Boulder Creek Watershed are identical for Alternative C and Alternative B. The main difference between these two alternatives occurs in the Boulder Creek Watershed where under Alternative C, instead of improving culverts they are restored to natural stream channels through the decommissioning process. In a watershed where three ESA listed fish species (Chinook, steelhead and bull trout) are present this seems like the correct alternative.

Recreation Improvements- Alternative C and Alternative B have similar recreation improvements except for the additional 20 miles of non-motorized trails (horse trails) and the limit on dispersed camping to designated sites. Dispersed camping has impacted fishery resources on other watersheds in the Payette National Forest, and limiting such activity would be a step in the right direction for ESA listed fish.

Nez Perce

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December 12, 2013

By electronic mail (klannom@fs.fed.us)

Keith Lannom, Forest Supervisor
Payette National Forest
800 W. Lakeside Avenue
McCall, Idaho 83638

RE: Nez Perce Tribe's supplemental comments on the Lost Creek-Boulder Creek Landscape Restoration Project Draft Environmental Impact Statement

Dear Mr. Lannom,

On behalf of the Nez Perce Tribe (Tribe), I include the attached additional comments on the Payette National Forest (Forest)'s Draft Environmental Impact Statement (DEIS) for the Lost Creek – Boulder Creek Landscape Restoration Project. The project is one of the Collaborative Forest Landscape Restoration Projects (CLFRP) produced by the Payette Forest Coalition in partnership with the Payette National Forest.

The attached comments are intended to supplement the comments the Tribe submitted to you electronically on December 11, 2013.

Thank you again for the opportunity to comment on the project.

Sincerely,

Silas C. Whitman
Chairman

Cultural Resource Concerns for the Lost Creek- Boulder Creek Restoration Project

1. **Adequacy of Cultural Resource Consultation Efforts**

The Payette National Forest has not made a sufficient effort to consult with the Nez Perce Tribe on cultural resource concerns or impacts for this undertaking, as required under NHPA Section 106. The Nez Perce Tribal Archaeologist received the cultural resource compliance report for the project (PY2012-2605) on November 20, 2013, 2 months after it was completed by the Forest Heritage Manager, and 5 weeks after receiving Idaho SHPO concurrence. The Payette NF has also prepared a memorandum of agreement (MOA) for signature with the Idaho SHPO before initiating tribal consultation on cultural resources. The Payette NF and Idaho SHPO are entering a binding commitment to address impacts to tribal resources without tribal consultation, and the language of the MOA excludes future consultation with the tribe.

2. **Project Goals**

It is unclear what the Payette NF means by "trending the forest vegetation toward a Pre-European state and fire regime." It is equally unclear how this can be accomplished through non-native forest management treatments, including commercial thinning, pre-commercial thinning, commercial cut-patch, commercial plantation thinning, or prescribed fire (Whiteman 2013:1).

Assuming that the Payette NF desires to replicate forest conditions before Euroamericans assumed management of the project area and its resources in the late nineteenth century, the management plan should explicitly acknowledge that that condition of the forest was not a "state of nature," but instead was the result of thousands of years of active, symbiotic management and use by the Nez Perce Tribe.

3. **Archaeological Survey**

The Payette NF lists 51 previous cultural resource compliance efforts within the project area, for total of 17,542 acres of inventory. This appears to be as much as 20 percent of the total project area. Unfortunately, the survey report PY2012-2605 fails to summarize how many unique acres were surveyed, but instead provides a table of surveyed acres for each project. It is critical to know if any of these project areas overlap, and if areas have been surveyed more than once.

The report also fails to apply any objective analysis of the survey quality. Archaeological survey methods and results in 1977 are not equal to those from 2013. The Memorandum of Agreement states that the Forest Service shall,

> Conduct systematic archaeological surveys (30-meter transects or less) of the Area of Potential Effects (APE) associated with the Lost Creek – Boulder Creek Restoration Project, in areas either lacking previous inventory or where previous inventory is deemed inadequate. Surveys will conform to the Forests' Sites Identification Strategy and will be reported to the Idaho SHPO utilizing standard reporting formats."

PO Box 219 Owyhee, NV. 89832

January 7, 2014

Keith Lannom
Payette National Forest Supervisor
800 Lakeside Ave.
McCall, Idaho 83638

Re: Tribal Comments to the Lost Meadows - Boulder Creek Landscape Restoration Project Draft Environments Impact Statement

Dear Mr. Lannom,

For over 18 months the Shoshone-Paiute Tribes have engaged in mandated Government-to-Government consultation with the Payette National Forest over the Lost Creek Boulder Creek Landscape Restoration Project on the New Meadows Ranger District.

This project will be a watershed in forest restoration management. We were able to move beyond the consultation relationship between the tribes and the Payette National Forest to forge a collaborative partnership. We characterize this Environmental Impact Statement as a mutual project and stand prepared to support your efforts to protect yet maximize forest management of vital tribally-related resources.

We look forward to further deepening our partnership between the Shoshone-Paiute Tribes and the Payette National Forest.

Sincerely,

Dennis Smith Sr, Tribal Chairman

1

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Portland, Oregon 97205-3026

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December 16, 2013

Payette National Forest
Attn: Holly Hutchinson
800 West Lakeside Avenue
McCall, ID 83638

Dear Ms. Hutchinson:

The Department of the Interior has reviewed the Draft Environmental Impact Statement for the Lost Creek-Boulder Creek Landscape Restoration Project. The Department does not have any comments to offer.

We appreciate the opportunity to comment.

Sincerely,

Allison O'Brien
Regional Environmental Officer

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue, Suite 900
Seattle, WA 98101-3140

OFFICE OF
ECOSYSTEMS,
TRIBAL AND PUBLIC
AFFAIRS

December 16, 2013

Holly Hutchinson, Team Leader
Payette National Forest
800 W. Lakeside Avenue
McCall, Idaho 83638

Re: U.S. Environmental Protection Agency comments on the Lost Creek-Boulder Creek Landscape Restoration Project Draft Environmental Impact Statement, Payette National Forest, New Meadows Ranger District (EPA Project Number: 13-0011-AFS).

Dear Ms. Hutchinson:

The U.S. Environmental Protection Agency has reviewed the Draft Environmental Impact Statement for the proposed Lost Creek-Boulder Creek Landscape Restoration Project on the New Meadows Ranger District of the Payette National Forest. Our review was conducted in accordance with the EPA responsibilities under the National Environmental Policy Act and Section 309 of the Clean Air Act.

The DEIS analyzes the Forest Service's proposal to implement treatments that would 1) move the proposed project area toward a more resilient condition and provide a diversity of habitats consistent with the Forest's Wildlife Conservation Strategy; 2) move the project area toward the desired condition for soil, water, riparian, and aquatic resources; 3) manage recreation; and 4) contribute to the economic vitality of the communities adjacent to the Payette National Forest. Proposed treatments would include commercial and noncommercial vegetation treatments on approximately 40,000 acres; prescribed fire on 45,000 acres; watershed improvements including road closures, decommissioning, and 40 fish passage barrier improvements; and recreation improvements. The project units would be located within an 80,000 acre project area. The DEIS analyzes a no action alternative and four action alternatives. Alternative B is the proposed action and would conduct vegetation treatments on approximately 41,900 acres.

The EPA is supportive of the overarching goals and objectives of the proposed project, and we find the DEIS to be clear, well organized, and robust. We also appreciate the Forest's responsiveness to issues raised during the scoping process. We support the approach to Riparian Conservation Area Treatments laid out in Appendix A, as well as the document's thoughtful approach to vegetation treatments. Overall, we find the treatments proposed under Alternatives B and D to align well with the broad body of science emerging about dry and moist mixed conifer forests[1]. We are less supportive of Alternative C as we believe the ecological return would be less in terms of quality and duration when compared to Alternatives B and D.

[1] http://www.fs.fed.us/pnw/publications/MMC_Synthesis_21Nov13.pdf

We also recognize the Forest's focus on improving hydrologic condition within the project area. We are very supportive of the proposed road closure, decommissioning and culvert replacement work. In addition we appreciate the attention placed on supporting the implementation of the West Fork of the Weiser River TMDL (IDEQ 2013). We also commend the Forest for using the Geomorphic Roads Analysis and Inventory Package to help prioritize sediment related work, and we support the continued use of GRAIP to identify additional site specific sediment improvement activities.

Our review identified questions related to burning, planting, and the establishment of grass/forb/shrub/seedling habitat that we recommend be addressed in the Final EIS. We also recommend definitional clarity/consistency around the terms "canopy closure" and "canopy cover." These questions are detailed below.

Artificial Regeneration

The DEIS notes that artificial regeneration (planting trees) may be a component of the project where the desired species composition would not be expected to be met with natural regeneration, or where necessary to meet desired stocking levels. Where that planting would occur, it would be done consistent with Standard with TRST01 on page III-42 of the Forest Plan (USDA Forest Service 2003).

The EPA is supportive of ensuring stands are on an ecologically appropriate trajectory in terms of species composition, and we note the challenge associated with reestablishing early seral species (ponderosa pine, larch, etc) in patches where grand fir has a well established seed bank. We also note however that Potential Vegetation Groups 2, 5 and 6 are below the desired range for grass/forb/shrub/seedling and sapling tree size classes. In addition, we note that a number of recent studies point to historical stand densities in dry and moist mixed conifer stands that are lower than those reflected in the 2003 Forest Plan.

Recommendations:

- We recommend the FEIS give additional consideration to the effects on GFSS habitat associated with artificial regeneration.
- We recommend the FEIS consider recent science[2] and provide additional context and direction regarding when artificial regeneration would be appropriate
- We recommend the FEIS discuss potential planting and stocking densities beyond referencing Standard TRST01 in the 2003 Forest Plan. We believe the Forest Plan provides some flexibility for management by noting that, "a certified silviculturist may prescribe different minimum stocking requirements, which are more appropriate for site-specific conditions and stand management objectives."

[2] Hagmann, R. K., J. F. Franklin, and K. N. Johnson. 2013. Historical structure and composition of ponderosa pine and mixed-conifer forests in south-central Oregon. Forest Ecology and Management. 49 pp.
Merschel, A. G. 2012. Mixed-conifer forests of central Oregon: structure, composition, history of establishment, and growth. Master's Thesis, Oregon State University. 167 p.
Merschel, A. G., Spies, T.A., Heyerdahl, E.K. 2013. Mixed-conifer forest of central Oregon: Effects of logging and fire exclusion vary with environment. In Review.

Prescribed and Maintenance Burning
Under Alternative B the Forest would conduct prescribed burning on approximately 45,000 acres of the project over the next 15-20 years. Further, the DEIS states on page 37 that maintenance burning would occur every 5-10 years to maintain suitable north Idaho ground squirrel habitat and areas representative of high frequency fire regimes. The EPA supports the reintroduction of fire into these fire prone landscapes, and we believe maintenance burning is critical to ensuring treated stands remain on the desired trajectory. What is not clear in the DEIS is whether or to what extent artificial regeneration might affect the scheduling of maintenance burning. Could planting potentially delay maintenance burning until such time as seedlings are more fire resilient? If so, could this affect the long term species composition and fire resiliency of the stand?

Recommendation:

- We recommend the FEIS clarify management intent with regard to planting in those areas where maintenance burning should be pursued.

Canopy Cover/Canopy Closure
In the discussion of alternatives, the DEIS uses the terms "canopy cover" and "canopy closure" interchangeably. These terms both refer to ways of measuring forest canopies, but "canopy cover" refers to the percent of a fixed area covered by the tree crown, whereas "canopy closure" is the proportion of the sky hemisphere obscured by vegetation when viewed from a single point. We recommend the FEIS identify one approach for measuring forest canopy and use it consistently throughout the document. In general, the EPA prefers canopy cover as a measure of forest canopy.

Based on our review, we are rating the DEIS as LO (Lack of Objections). We support the collaborative, science-based ecosystem restoration of priority forest landscapes consistent with the purpose of the Collaborative Forest Landscape Restoration Program. We also support the Forest's continuing engagement of the Payette Forest Coalition on this project.

We appreciate the opportunity to review and comment on the DEIS, and we look forward to furthering our understanding of this and other CFLRP projects as they develop. If you have any questions about our review, please contact me at (206) 553-1601, or by electronic mail at reichgott.christine@epa.gov. Or you may contact Teresa Kubo of my staff at (503) 326-2859, or by electronic mail at kubo.teresa@epa.gov .

Sincerely,

Christine B. Reichgott

Christine B. Reichgott, Manager
Environmental Review and Sediment Management Unit

3

U.S. Environmental Protection Agency Rating System for
Draft Environmental Impact Statements
Definitions and Follow-Up Action*

Environmental Impact of the Action

LO – Lack of Objections
The U.S. Environmental Protection Agency (EPA) review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

EC – Environmental Concerns
EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce these impacts.

EO – Environmental Objections
EPA review has identified significant environmental impacts that should be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no-action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EU – Environmentally Unsatisfactory
EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the Council on Environmental Quality (CEQ).

Adequacy of the Impact Statement

Category 1 – Adequate
EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis of data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category 2 – Insufficient Information
The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses or discussion should be included in the final EIS.

Category 3 – Inadequate
EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the National Environmental Policy Act and or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

* From EPA Manual 1640 Policy and Procedures for the Review of Federal Actions Impacting the Environment. February, 1987.

4

December 16, 2013

Holly Hutchinson
NEPA Coordinator
Payette National Forest
800 W Lakeside Ave.
McCall, Id. 83638

Dear Ms. Hutchinson:

Thank you for the opportunity to comment on the Boulder Creek-Lost Creek project. I support the following activities listed by the available alternatives:

- Commercial Thin-Free Thin — Alt. D
- Free Thin-Patch Cut — Alt. B
- Commercial Thin-Mature Plantation — Alt. D
- Shelterwood Cuts — Alt. D
- Commercial Treatment-RCA's — Alt. D
- Non-Commercial Thinning — Alt. C
- Temp. Road Construction — Alt. D
- Prescribed Burning — Alt. D (If excessive mortality of commercial timber occurs, then allowances for salvage sales should be incorporated into the ROD.)
- Fish Passage Improvements — Alt. D
- System Road Decommissioning — Alt. E (Higher priorities should be made in RCA's for decommissioning. Mid and high slope roads should be analyzed to be converted to Seasonal Closures, with restoration activities taking place on environmental problems.)
- Unauthorized Road Obliterations — Alt. D (PFC recommendations should be followed, see Road Treatment Guidelines)
- New Long-Term Closures — Alt D. (Higher priorities should be made in RCA's for Long-Term Closures. Mid and high slope roads should be analyzed to be converted to Seasonal Closures, with restoration activities taking place on environmental problems.)
- Conversion of open roads to ATV trails — Alt. D.
- Road Relocations — Alt. D.
- All Recreation Improvements — Alt. D.

- Fuel load reductions to reduce the risk of catastrophic wildfire should have the highest priority throughout the entire project area.
- No roads should be decommissioned until the areas that the roads access have had the suitable vegetative management completed.
- Revenue and job creation within the project area should have a very high priority.
- If Forest Service rules inhibit the hiring of seasonal employees to accomplish work on the ground, then you should seriously consider contracting private experts instead.

Thank you for your consideration.
Mike Paradis

Mike Paradis

OFFICE OF
BOARD OF COUNTY COMMISSIONERS
ADAMS COUNTY
P.O. BOX 48
COUNCIL, IDAHO 83612

Bill Brown, Chairman
Mike Paradis
Joe Holmes

Sherry Ward
Clerk of the Board
Phone: 208-253-4561
Fax: 208-253-4880

December 16, 2013

VIA FAXCIMILE
New Meadows Ranger District
Kim Pierson

RE: Lost Creek Boulder Creek

To Whom It May Concern:

The Board of Adams County Commissioners feels very strongly that the Forest Service direction should be to maximize fuel load reduction, timber harvesting and a minimization of road obliteration.

Thank you.
ADAMS COUNTY BOARD OF COMMISSIONERS

Chairman, Bill Brown

Commissioner, Mike Paradis

Commissioner, Joe Holmes

Appendix B - Riparian Conservation Area Treatments

Delineation of Riparian Conservation Areas

Riparian Conservation Areas (RCAs) are stream and wetland protection zones delineated for the protection of riparian-dependent resources. Management activities are subject to specific Forest Plan goals, objectives, standards, and guidelines. RCAs include traditional riparian corridors, perennial and intermittent streams, wetlands, lakes, springs, reservoirs, and other areas where riparian functions and ecological processes are crucial to maintenance of the area's water quality, sediment regime, large woody debris, nutrient delivery system, and associated biotic communities and habitat.

Appendix B of the Forest Plan outlines a step-down process for delineation of RCAs on perennial and intermittent streams, ponds, lakes, reservoirs, and wetlands (USDA Forest Service 2003). The RCAs within the project area have been identified utilizing Option 2 (Forest Plan page B-34) delineation method. Forest Plan Option 2 provides a more specific delineation of an RCA boundary using site potential tree heights.

Field reconnaissance and stand exam data has indicated that Potential Vegetation Groups (PVGs) 2, 5, and 6 are the dominant PVGs in forested areas within the proposed activity units in the project area. RCA widths in forested areas will be based on the PVG 2 and PVG 6 site potential tree height of 120 feet (Forest Plan page B-36). RCA widths that will be used for this project are displayed in the following table:

Table A-2. Project Area RCA Widths

Water Source	RCA Width
Perennial Forested Streams (and intermittent streams providing seasonal rearing and spawning habitat)	240 feet (two site-potential tree heights) from the ordinary high water mark
Intermittent Forested Streams	120 feet (one site-potential tree height) from the ordinary high water mark
Ponds, Lakes, Reservoirs, and Wetlands	120 feet (one site-potential tree height) from the ordinary high water mark
Non Forested Streams (perennial and intermittent)	The extent of the flood prone width, or riparian vegetation, whichever is greater.

The current model identifies 16,250 acres within RCAs in the project area. Based on implementation of other projects, unmapped streams and other water sources are typically discovered during layout and implementation. Increases in RCAs acres are generally an additional 15 to 30 percent.

Need for Treatment

Initial project area analysis indicates approximately 12,600 acres of vegetative treatments (*i.e.* thinning and prescribed burning) in the RCAs would be needed to maintain or move towards the desired vegetative conditions as specified in Appendix A of the Forest Plan. This initial review indicated that approximately 6,100 acres of mechanical treatments in RCAs would aid in improving or maintaining the desired vegetative conditions. The remaining 6,500 acres would need to have prescribed fire applied to

maintain the desired conditions. Based on Forest Plan management direction and other resource concerns a more detailed approach has been applied to develop an RCA treatment proposal that is consistent with management direction, including Appendix B of the Forest Plan and the Aquatic Conservation Strategy (ACS).

Proposed Treatments in RCAs

Based on the purpose of the project and need to treat vegetation in RCAs, both mechanical and prescribed fire treatments are proposed in the RCAs. RCA vegetation treatments are not proposed in the Boulder Creek subwatershed.

Commercial Thin

Commercial thinning treatments are intended to move upland vegetation within RCAs toward the desired conditions described in the Forest Plan while maintaining soil, water, riparian and aquatic resources. Treatments would be designed to ensure that project activities do not degrade current RCA conditions and do not retard the attainment of SWRA desired conditions. All RCA treatments would apply only to upland vegetation that occurs within the outer portion of a RCA, and not to riparian vegetation (i.e. – willow, spruce). This action, on a site specific basis, is consistent with direction for upland vegetation desired conditions and RCAs in Forest Plan Appendices A and B (USDA Forest Service 2003).

RCA treatments would be limited to thinning where at least 30 percent canopy closure would be retained and would be developed in consultation with the district fish biologist and/or hydrologist to ensure streambank stability, ground cover are considered and riparian function is maintained.

In portions of RCAs where mechanical treatments would not be feasible or deleterious effects to riparian functions and ecological processes (described in the Forest Plan, page B-37) are anticipated, the unit (or portion(s) thereof) would be excluded from treatment.

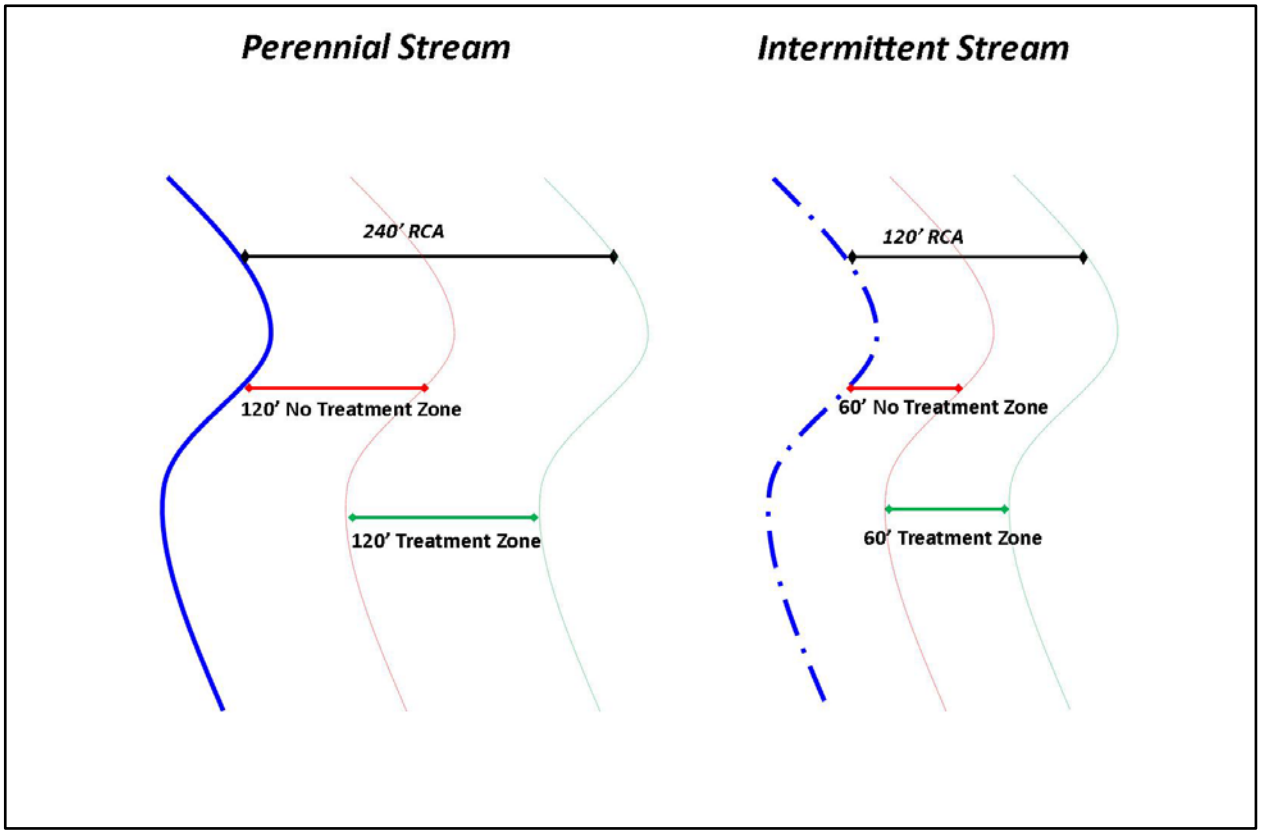
Generally, mechanical disturbance in RCAs would be avoided. Due to the site specificity of each proposed RCA treatment unit, a map and description of the layout of the RCA portion of the unit would be provided to the District fisheries biologist, hydrologist,(or qualified designees)for field verification.. A site specific plan would be approved by a District hydrologist and fisheries biologist prior to implementation.

The following guidelines would be used for RCA treatment layout and implementation (see project Design Features, Table 2-6):

1. Only upland vegetation in the outer portion of the RCA would be treated (Figure A-1).
2. Along intermittent streams, thinning and limited equipment use could only occur in the outer 60 feet of the RCA. No cutting of vegetation would occur within 60 feet of the stream (Figure A-1).
3. Along perennial streams, thinning and limited equipment use could only occur in the outer 120 feet of the RCA. No cutting of vegetation would occur within 120 feet of the stream (Figure A-1).
4. No harvesting would be allowed in the no-cut zones. Cutting of individual trees within the no-cut zone may be approved on a case by case basis but removal of that material would not be permitted.

7. If unidentified RCAs are discovered during layout or implementation, they may be treated if: 1) they meet intent of RCA treatments; 2) all Project Design Features and restrictions can be adhered to; and 3) they meet the following criteria:
    a) They fall outside of the Boulder Creek drainage and the Pony Creek RNA;
    b) The area is proposed for treatment but was identified during the layout/implementation phase of the project;
    c) In PVG 1 and 2 – the existing canopy closure of forested areas within the stand is greater than 65 percent.
    d) In PVG 5 and 6 – the existing canopy closure of the stand is greater than 70 percent.

Figure A-1. RCA Treatment and Stream Buffer Guidelines.



Non-Commercial Thinning

Non-commercial thinning in RCAs is not proposed in the Boulder Creek subwatershed, non-commercial thinning would not occur within 240 feet of perennial streams or within 120 feet of intermittent streams. Elsewhere in the Project Area, non-commercial thinning would be permitted within RCAs in accordance with the description of commercial RCA treatments above. Where non-commercial RCA thinning is proposed, it would not occur within 120 feet of perennial streams and not within 60 feet of intermittent streams (Figure A-1).

Prescribed Fire and Ladder Fuel Treatments

No prescribed fire treatments (direct ignition or ladder fuel treatments) would occur within RCAs in the Boulder Creek subwatershed. In the remaining portions of the Project Area, ignition operations within RCAs shall be implemented to maintain RCA function and processes by creating a mosaic of burned and unburned areas, minimizing severity and intensity; maintaining stream-shading vegetation; retaining adequate ground cover and sediment filtering capacity; and maintaining current and recruitable large and coarse woody debris. In RCAs identified for treatment, no ignitions within 120 feet of perennial stream channels or within 60 feet of intermittent stream channels will occur. Ignition operations should generally only occur in the outer portions of RCAs in the drier PVGs where fuels reduction is needed to increase the resiliency of the RCA and reduce the potential for high intensity/severity wildfire. If any areas are not capable of carrying fire or maintaining RCA function and processes (as described above) at the time of fire application, fire will not be applied.

Ladder fuel treatments conducted as part of prescribed burning activities may be implemented to protect the overstory from effects of prescribed fire and to meet prescribed fire objectives. Ladder fuel treatments- would only occur in RCAs where active ignition is anticipated and would not occur within riparian vegetation, within 60 feet of intermittent channels or within 120 feet of perennial stream channels. All ladder fuel treatments in RCAs will be completed by hand and would not cut trees larger than 8 inches DBH. Slash produced from ladder fuel treatments will be lopped and scattered. Piling of slash will not occur within RCAs.

All burn plans and anticipated ladder fuel treatments will be annually reviewed by District Resource Specialists (fisheries biologist, wildlife biologist and hydrologist). Additional site-specific concerns regarding prescribed fire treatments (including RCA treatments) will be addressed at that time.

Appendix C - Northern Idaho Ground Squirrel Emphasis Areas

Background and Direction for Northern Idaho Ground Squirrel Treatments

The following proposal was developed based on the Northern Idaho Ground Squirrel (NIDGS) Recovery Plan and NIDGS Technical Working Group recommendations.

Restore and Maintain Habitat

Thinning, burning, reseeding, and other measures are necessary management tools for habitat restoration and maintenance. The following management tools and sociological considerations should be used to create the habitat at appropriate stages of ecological succession:

Development of site-specific management plans for primary metapopulation sites

- Consider compatible human uses;
- Assess potential forestry practices;
- Conduct plant community composition analysis

Restoration of habitat

- Thinning and burning
- Reseeding with native grass and forb species;
- Livestock management

Maintenance of appropriate habitat

- Prescribed burning at site-specific intervals;
- Vegetation management (*e.g.,* noxious weed control);
- Grazing regimes appropriate to each site

Priority areas for NIDGS emphasis treatment have been developed and divided into two types. Priority one (P1) areas are areas within ¼ mile of occupied habitat and within US Fish and Wildlife Service (USFWS) recovery plan metapopulation areas. Priority two (P2) areas are based on potential habitat that could link metapopulations to increase and maintain genetic diversity within the known populations. Approximately 5,100 acres of P1 and 8,800 acres of P2 areas have been identified.

Within the P1 areas, approximately 1,064 acres of mechanical treatments are proposed with the remaining acres treated with prescribed fire. Priority 2 areas would receive approximately 3,500 acres of mechanical treatment with the remaining acres treated with prescribed fire. Within these NIDGS priority areas, the objective of these treatments would be as described in the Vegetation Treatments section of this document. The treatment objectives should be designed to move vegetation toward the desired conditions specified in Appendix A of the Forest Plan. The following additional direction should be applied to treatments in the NIDGS priority areas.

NIDGS objectives in P1 areas

1. Prioritize the timing of treatments in these areas to be as soon as practical (i.e. treat these areas first).

2. Manage areas immediately adjacent to occupied sites toward the low end of desired canopy closures (i.e. – average canopy closures should typically be between 15-30 percent in these areas).
3. Emphasize forage/forb production for NIDGS. This can typically be accomplished by managing for frequent (return interval ~3-7 years), low intensity disturbance (i.e. – prescribed fire) or as needed based on monitoring and research.
4. Identify potential corridors for connecting occupied sites. Manage portions of these stands to encourage dispersal and exchange of individuals. (i.e. – reduce canopy closure to near 10-20 percent mostly in PVG 2, but sometimes in PVG 5 in corridor areas). Work with wildlife staff (utilizing NIDGS Recovery Plan and NIDGS technical team recommendations) to determine appropriate corridor location and spatial arrangement.

NIDGS objectives in P2 areas

1. Identify suitable habitat within one quarter mile of known populations and treat to improve habitat.
2. Encourage geographic growth of metapopulations toward other known populations and high quality habitat.
3. Treatments in currently unoccupied habitat should be designed to achieve low to moderate canopy closure similar to that described in the selected alternative for general vegetation treatments.

Appendix D - Cumulative Effects

Past, present, and reasonably foreseeable projects and activities within the following 5th and 6th field hydrologic unit codes (HUCs) were compiled to be considered in the cumulative effects analysis completed for this project:

5th Field HUCs:

- Lower Little Salmon River
- Beaver Creek – Weiser River
- West Fork Weiser River

6th Field HUCs:

- Boulder Creek
- Upper Weiser River
- Lost Creek
- Upper West Fork Weiser River
- Lower West Fork Weiser River
- Warm Springs Creek – Weiser River
- Gaylord Creek – Weiser River

Some of the activities listed in the table may be outside the cumulative impact areas analyzed by individual resource areas and, therefore, may not be considered in every resource-specific analysis. Conversely, some cumulative impact analysis areas may extend well past the cumulative effects area used to compile the list below, and, thereby, could have additional activities specified in the resource specific technical reports (e.g. air quality). The narrative below and Table A-2 identify the past, present / ongoing, and reasonably foreseeable projects which may be considered in each resource analysis.

Actions/Events that May Contribute to Cumulative Effects

1997 Floods: "Snow, rain, and record high temperatures during the last week of December 1996 and the first few days of the New Year produced record flooding and landslides on the Payette National Forest. December precipitation ranged from 280% in the Salmon River Basin to 300% in the Weiser, Payette, and Boise River basins. In the mountain community of McCall, December precipitation totaled 9.8 inches, the highest single month ever recorded. From December 23, 1996 to January 2, 1997, total precipitation was 7.8 inches with 1.6 inches falling in a 24-hour period on January 2, 1997. Rain on snow caused rapid melting of snow and high runoff. Soils were saturated, resulting in landslides and debris flows throughout much of the Forest. Landslides have exposed bare soil, which is subject to additional erosion. Floodwaters and debris flows traveled down stream channels, plugged culverts, and washed out across roads. Stream channels have been altered by migrating laterally and downcutting. Streambanks have lost protective riparian vegetative cover. Several stream channels are clogged with debris." (USDA Forest Service. 1997a "Emergency Watershed Protection Program Report – 1997 New Year's Flood." Payette National Forest)

Within the Little Salmon subbasin, especially at the lower elevations, the effects of this flood event were great. The effects were caused dominantly by slumps and debris avalanches that affected fillslopes, cutslopes, running surfaces, and culverts on roads and contributed to large flows of water and debris in the Little Salmon River and tributaries, especially below (north of) Round Valley. The effects were heavily concentrated within those elevations near the snowline at the time of the precipitation and temperature events.

Impacts associated with the storm events isolated the area from approximately Smokey Boulder Road to Pinehurst on State Highway 95. The Little Salmon River was scoured throughout much of this stretch with downcutting, lateral movement of the River, and loss of riparian vegetation resulting. Portions of Highway 95 were demolished and many residences along the river were partially or totally destroyed. Debris avalanches and slumps are evident in this section of the Little Salmon River.

Personal Use Firewood and Other Personal Use Forest Products Collection: Access for collection of forest products for personal use occurs throughout the project area. Collection of some forest products requires a permit e.g. firewood, plants, mushrooms.

Flow Diversion: A number of water diversions are authorized or have applications for ditch bill easements occur on forest lands in the cumulative effects area.

Introduction of Exotic Fish Species. Introduced non-native fishes within the project area affect native species by competing for food and spawning/rearing habitat. Adult non-native fish species may also consume young of the year and juvenile native species. In addition, exotic species may hybridize with native species (especially introduced brook trout with native bull trout). Competition and hybridization can reduce viability of, and potentially eliminate local populations of native fish species.

NIDGS Habitat Improvement Projects: Several habitat improvement projects have occurred on the New Meadows District near the project area. Projects have occurred near Lost Valley Reservoir and Price Valley Guard Station. Implementation of these projects (thinning and prescribed burning) and monitoring is ongoing. Results have shown an increase in NIDGS at both sites. Additional projects will be implemented that will improve NIDGS habitat in both areas. All projects are expected to improve forage and habitat and link colonies to improve the breeding success.

Noxious weeds: Noxious weeds located in the Lost Creek Boulder Creek Landscape Restoration project cumulative effects area include Canada thistle, yellow toadflax, sulfur cinquefoil, and St. Johnswort. A majority of the infestations observed were associated with ground disturbance activities from livestock grazing, roads, and timber sale activities. Noxious weed treatment is accomplished through integrated pest management using mechanical, biological, and chemical means of control.

Other Agency & Private Lands: The cumulative effects area includes private lands, Bureau of Land Management (BLM), and State of Idaho lands. Over the past years, these lands were managed for timber production, agricultural use including farming, water diversion, and livestock grazing. The State of Idaho conducted several timber sales on Idaho Department of Lands tracts within the cumulative effects area. The BLM manages numerous special use permits, timber sales and recreation activities within or near the cumulative effects area (see Table A-2). The Potlatch Company owns several parcels of land on the eastern edge of the cumulative effects area.

The Tamarack sawmill site is adjacent to Highway 95 between the Price Valley and Lost Valley roads. The Weiser River National Recreation Trail is a popular recreation trail, following the former right-of-way of a Union Pacific Railroad line between Tamarack and the town of Weiser.

Bally Mountain Project – BLM cottonwood. BLM timber sales south of Hazard Creek and west of Hard Creek on east side of Highway 95. The Bally North project planned start is 2014, Bally South currently being prepped. This project includes timber harvest and prescribed fire.

Past Fires Suppression: Forests that once burned at frequent intervals, like the majority of the stands in the cumulative effects area, have been prevented from burning for more than a century by fire suppression. Fires suppression has generally been effective for one to four fire cycles and has allowed the development of denser, multi-storied forests on more of the landscape. While the fire regime in the cumulative effects area is a mix of lethal, mixed, and non-lethal, the relative proportions of fire types has shifted from low-intensity surface fires to more severe crown fires. Severe fires are now more likely to occur on more of the landscape than they would have historically (Brown 2000), affecting a condition class change in the cumulative effects area.

All wildfires in the cumulative effects area have been actively suppressed since the early 1900s. The Payette NF GIS fire history layer shows 496 small fire occurrences and five recent larger fires (10 acres and above). The largest fire in recent history, the Wesley fire, occurred in 2012 and burned 16,000 acres within the cumulative effects project area.

In areas not treated by timber harvest, the lack of wildfire within most of the cumulative effects area has contributed to increased surface fuel loads and tighter tree spacing than would have occurred historically.

Past Road Construction: Most of the past road construction in the cumulative effects area occurred as a result of timber harvest. On private ground roads have been constructed for both land management activities and access.

Past Timber Harvest: Table A-2 lists past timber sales and associated activities within the cumulative effects area. This data is pulled from the FACTS corporate data set and does not include some timber sales, primarily prior to 1950. The current Payette NF Geographic Information System (GIS) vegetation layer delineates areas based on detectable past timber harvest and is a good proxy for estimating area still showing impacts from past activities. Many resource areas use this GIS vegetation layer to assess cumulative impacts.

Range allotment management and historic livestock use: Sheep and cattle grazing have taken place in the area for the last 100 years. Historically, all allotments in the cumulative effects area were fully stocked. An estimated 100,000 to 200,000 sheep annually passed over the Salmon River driveway, west of the Little Salmon River. In 2010 the Payette Forest Plan was amended reducing the number of acres suited for domestic sheep and goat grazing. As a result of that amendment the number of domestic sheep grazed has been reduced.

The cumulative effects area is within the following allotments:

- Warm Springs Cattle Allotment
- Price Valley Sheep Allotment
- Round Valley Cattle Allotment

- Smith Mountain Sheep Allotment
- North Hornet Cattle Allotment
- Boulder Creek Sheep Allotment (currently unsuited for domestic sheep and goat grazing)

Range-related Past Projects in Analysis Area

- Bear Wallow Aspen Regeneration Project
- Salmon River Stock Driveway Rehabilitation Project
- NIDGS Interpretation Site
- "Gully Plug" Stabilization in Boulder Creek Allotment
- Lost Creek Exclosure CE (Wildlife Viewing Area)

Recreational Use: Recreational use with the cumulative effects area is primarily dispersed. There are several trails, developed campgrounds, parking lots and bathroom facilities within the project area. ATV use is also popular throughout the project area, particularly around the Lost Valley Reservoir.

Road Maintenance and Construction: The project area currently has 473 miles of system roads. Most were constructed between the 1950s and the present, with major episodes of construction occurring in the 1960s and 1970s. Prior to the 1950s very few roads existed in the area. The vast majority of the roads were constructed for accessing timber harvest units. There are several roads analysis reports covering the cumulative effects area including a Travel Analysis Report completed in 2012 for the Lost Creek Boulder Creek Landscape Restoration project area. The recent Travel Analysis Report and past reports provide a review of the roads and recommendations on future road management in the area.

Routine road maintenance occurs on most open roads within the project area. Maintenance on gravel and native surface roads is mainly surface grading and culvert cleaning. Periodic replacement of gravel on road surfaces occurs when gravel wears out.

Special Uses: Two major power lines managed by Idaho Power traverse the southern third of the cumulative effects area, the Cambridge-McCall line and the Oxbow-McCall line. Idaho Power also is permitted use of 14.9 miles of road in support of these two power lines.

Travel Management Plan Revision: The Payette National Forest updated its Travel Management Plan for the Council and New Meadows Ranger Districts. The updated travel plan closed much of the cumulative effects area to cross country motorized travel and restricted OHV use to designated roads and trails. The Forest issues an annual MVUM (Motor Vehicle Use Map) to aid the public in determining trails designated motorized use.

Table A-3. Past, Present / Ongoing, and Reasonably Foreseeable Activities

Project / Activity	Date	In Project Area?
Past Culvert Bridge Replacement Activities		
Star Creek Culvert / Bridge Replacement	2010	Y
Road Decommissioning	1997-2010	Y
Past Transportation Management Activities		
Council & New Meadows Ranger Districts Snow-free Season Travel Management Plan	2009	Y
Past Reforestation Activities		

Project / Activity	Date	In Project Area?
Beaver Creek	1963	N
Boat Ramp	1975	Y
Brush Mountain	2001	Y
Butter Gulch 77	1981	Y
Crawford	1998	Y
Dry Beaver	1971	N
Eddies Cleanup SSTS	1997	N
Fourth of July	1969	Y
Grouse Creek	1967	Y
Hall Fire Salvage	2004	N
Hall Ridge	1993	N
Hotlicks	1999	Y
Huckleberry 61	1964	Y
Legacy Planting w/no sale name associated	1954 - 2000	Y
Longshot	1995	Y
Lookout	1970	Y
Lost Bear	1990	Y
Lost Boat	1991	Y
Lost Creek	1968	Y
Lost Lake Progeny Site	1976	Y
Lost Town	1989	Y
Lost Town	1998	Y
Lower Grouse	1996	Y
Lower Grouse 72	1975	Y
Lumpy's Cleanup SSTS	1997	N
Many LP SS	1986	Y
Oleo	1991	Y
Railroad Saddle	1976	Y
Raven Corral	1990	Y
Rock Creek	1972	Y
Rock Jack	1994	Y
Saddle	1992	Y
Sheep Creek	1967	Y
Sheep Weiser	1986	Y
Slaughter Gulch 67	1970	Y
Squirrelly Billy	2010	Y
State Sales	1980	Y
Switch	1993	Y
Town Creek	1989	Y
Town Creek Salvage	1989	Y
Triple Creek	1970	Y
Turkey	1990	Y
Upper Grouse	1978	Y
Upper Weiser	2010	Y
Wally's Salvage	1995	N
Weiser River Fuels	1988	N
West Butter Salvage	1988	Y
West Fork 68	1970	Y
Yantis Ditch	1981	Y
Yellow Jacket	1984	Y
Past Timber Stand Improvement Activities		
Beaver Creek	1984	N

Project / Activity	Date	In Project Area?
Beaver Creek	2006	N
Boat Ramp	1992	Y
Brush Mountain	2001	Y
Butter Gulch 77	2003	Y
Dry Beaver	1996	N
East Lost Squirrel	2010	Y
Fourth of July	1986	Y
Fourth of July	1996	Y
Grouse Creek	1983	Y
Grouse Creek	1991	Y
Joker Creek 72	2006	N
Legacy TSI w/no sale name associated	1965 -1999	Y
Lookout	1984	Y
Lost Boat	1991	Y
Lost Lake Progeny Site	1996	Y
Lost Squirrel	2002	Y
Lost Town	1998	Y
Lower Grouse 72	1996	Y
Railroad Saddle	1994	Y
Raven Corral	1991	Y
Rock Jack	1994	Y
Saddle	1991	Y
Sheep Creek	1985	Y
Sheep Weiser	1986	Y
Slaughter Gulch 67	1986	Y
Squatters	1993	Y
Switch	1993	Y
Topless	2006	Y
Triple Creek	1985 - 1996	Y
Upper Grouse	1985	Y
Wally's Salvage	1994	N
Weiser River Fuels	2011	N
West Fork 68	1983 - 1991	Y
Yellow Jacket	1987	Y
Past Vegetation Management Activities		
Beaver Creek	1962	N
Bird	1983	Y
Boat Ramp	1975	Y
Boulder Creek TSI	2006	Y
Brush Mountain	2000	Y
Butter Gulch	1995	Y
Butter Gulch Salvage	1996	Y
Butter Gulch 77	1979	Y
Dry Beaver	1970	N
East Lost Squirrel	2010	Y
Final LP SS	1985	Y
Fourth Gulch	1977	N
Fourth of July	1967	Y
Hall Fire Salvage	2004	N
Hotlicks	1997	Y
Huckleberry 61	1963	Y
Landore Salvage	2003	N

Project / Activity	Date	In Project Area?
Leave it to Beaver	1992	N
Legacy Harvest w/no sale name associated	1950 - 1996	Y
Lookout	1969	Y
Lost Bear	1989	Y
Lost Boat	1989	Y
Lost Creek	1967	Y
Lost Lake Progeny Site	1973	Y
Lost Squirrel	2005	Y
Lost Town	1996	Y
Lower Grouse	1995	Y
Lower Grouse 72	1974	Y
Many LP SS	1984	Y
Oleo	1990	Y
Porcupine	1973	Y
Railroad Saddle	1974	Y
Raven Corral	1989	Y
Red Point	1979	N
Reservoir	1964	Y
Roadside Salvage	1981	Y
Rock Creek	1971	Y
Rock Jack	1993	Y
Saddle	1991	Y
Sheep Creek	1985	Y
Sheep Weiser	1985	Y
Slaughter Gulch 67	1967	Y
Slaughter Gulch 75	1975	Y
Slaughter Salvage	1983	Y
Squatters	1974	Y
Squirrelly Billy	2006	Y
State Sales	1975	Y
Switch	1993	Y
Switchback	1973	Y
Tordon Salvage	1985	N
Town Creek	1987	Y
Town Creek Salvage	1988	Y
Triple Creek	1969	Y
Tumble Tree	1991	Y
Turkey	1988	Y
Upper Grouse	1976	Y
Upper Lost	1995	Y
Upper Weiser	2006	Y
Vick Creek	1987	N
Wally's Salvage	1994	N
Weiser River Fuels	2011	N
West Butter	1983	Y
West Butter Salvage	1984	Y
West Fork 68	1969	Y
West Fork Face	1976	Y
Yantis Ditch	1980	Y
Yellow Jacket	1983	Y
IDL – Mosquito Skern	2009	N
IDL – Skern Ridge	2009	N

Project / Activity	Date	In Project Area?
IDL – Price Pit	2011	N
IDL – Mudball	2011	N
IDL – Pine Ridge	2012	
Past Prescribed Fire Activities		
Underburn 97 acres	2009	
Underburn 118 acres	2011	
Underburn 1,024 acres	2010	
Underburn 1,449 acres	2012	
Past Large Wildfire Activity		
Sale Fire	1989	Y
Rock Jack	1996	Y
Hall	2003	Y
North Star Butte	2004	Y
Wesley	2012	Y
Past Livestock Grazing		
Warm Springs Cattle Allotment	Ongoing	Y
Price Valley Sheep Allotment	Ongoing	Y
Round Valley Cattle Allotment	Ongoing	Y
Smith Mountain Sheep Allotment	Ongoing	Y
North Hornet Cattle Allotment	Ongoing	Y
Boulder Creek Sheep Allotment	2011	Y
Bear Wallow Aspen Regeneration Project	2010	Y
Salmon River Stock Driveway Rehabilitation Project	2010	Y
NIDGS Interpretation Site	Ongoing	Y
"Gully Plug" Stabilization Project, Boulder Creek Allotment	2010	Y
Lost Creek Exclosure – Wildlife Viewing Area	Ongoing	Y
Present / Ongoing Transportation System Including Roads and Road Maintenance Activities		
National Forest System Roads and Road Maintenance on MVUM Roads	Ongoing	Y
Other Jurisdiction Roads and Trails	Ongoing	
Present / Ongoing Vegetation Management Activities		
IDL – West Mud Salvage Ton	2013	N
Present / Ongoing Noxious Weed Treatment		
Payette National Forest Noxious Weed Program	Ongoing	Y
Cold Springs Campground	Ongoing	Y
Price Valley Winter Sports Parking Lot / Trailhead	Ongoing	Y
Facilities Management – Dispersed Recreation Sites	Ongoing	Y
Evergreen Campground	Ongoing	N
Lost Valley Reservoir Boat Ramp (managed by the Reservoir Association)	Ongoing	Y
Passages in Time Interpretation Site	Ongoing	Y
Lost Creek Riparian Area Interpretation Site	Ongoing	Y
Boulder Creek Dispersed Camping Area	Ongoing	Y
Reasonably Foreseeable Vegetation Management		
IDL – Island North	2015	N
IDL – Pine Slaughter	2015	N
Reasonably Foreseeable Special Use / ROW		
BLM - Indian Mountain Boulder Timber Project Road Acquisition	2015	N

Appendix E - Project Area Road Management

This appendix shows road management within the project area and describes the gravel pits that will be used for used for road actions associated with project alternatives.

Table A-4. System Road Management by Alternative.

Road Number	Operational Maintenance Level	Existing	Alternative B	Alternative C	Alternative D	Alternative E	Miles
50006	3 - SUITABLE FOR PASSENGER CARS	OPEN	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	0.25
50006A	3 - SUITABLE FOR PASSENGER CARS	OPEN	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	0.05
50012	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	TRAIL CONVERSION	DECOMMISSION	TRAIL CONVERSION	TRAIL CONVERSION	0.18
50063	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	LONG TERM CLOSURE	DECOMMISSION	LONG TERM CLOSURE	LONG TERM CLOSURE	1.68
50063	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	DECOMMISSION	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	1.46
50063	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	LONG TERM CLOSURE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	0.52
50074	3 - SUITABLE FOR PASSENGER CARS	OPEN	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	13.52
50076	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	DECOMMISSION	DECOMMISSION	DECOMMISSION	DECOMMISSION	0.35
50079	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	DECOMMISSION	DECOMMISSION	DECOMMISSION	DECOMMISSION	0.55
50079	2 - HIGH CLEARANCE VEHICLES	OPEN	DECOMMISSION	DECOMMISSION	DECOMMISSION	DECOMMISSION	0.78
50079	2 - HIGH CLEARANCE VEHICLES	OPEN	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	3.91
50080	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	DECOMMISSION	DECOMMISSION	DECOMMISSION	DECOMMISSION	0.65
50080	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	LONG TERM CLOSURE	DECOMMISSION	LONG TERM CLOSURE	LONG TERM CLOSURE	3.92
50083	3 - SUITABLE FOR PASSENGER CARS	OPEN	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	1.29
50083	3 - SUITABLE FOR PASSENGER CARS	SEASONAL	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	9.03
50084	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	LONG TERM CLOSURE	DECOMMISSION	LONG TERM CLOSURE	LONG TERM CLOSURE	0.35
50089	3 - SUITABLE FOR PASSENGER CARS	OPEN	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	9.68
50090	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	2.31
50090	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	LONG TERM CLOSURE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	2.43
50090	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	0.94
50091	4 - MODERATE DEGREE OF USER COMFORT	SEASONAL	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	0.63
50093	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	DECOMMISSION	DECOMMISSION	DECOMMISSION	DECOMMISSION	0.46
50094	2 - HIGH CLEARANCE VEHICLES	CLOSED	NEW LONG TERM CLOSURE	LONG TERM CLOSURE	NEW LONG TERM CLOSURE	NEW LONG TERM CLOSURE	0.32

Road Number	Operational Maintenance Level	Existing	Alternative B	Alternative C	Alternative D	Alternative E	Miles
50097	3 - SUITABLE FOR PASSENGER CARS	OPEN	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	0.12
50100	3 - SUITABLE FOR PASSENGER CARS	OPEN	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	1.31
50101	2 - HIGH CLEARANCE VEHICLES	OPEN	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	0.38
50101	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	4.12
50101	3 - SUITABLE FOR PASSENGER CARS	OPEN	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	4.62
50102	3 - SUITABLE FOR PASSENGER CARS	OPEN	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	4.77
50115	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	3.80
50120	2 - HIGH CLEARANCE VEHICLES	CLOSED	NEW LONG TERM CLOSURE	LONG TERM CLOSURE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	5.50
50120	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	1.47
50123	3 - SUITABLE FOR PASSENGER CARS	OPEN	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	7.26
50126	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	3.18
50127		YEARLONG	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	2.28
50127	3 - SUITABLE FOR PASSENGER CARS	OPEN	MAINTAIN OR IMPROVE	DECOMMISSION	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	2.57
50127	3 - SUITABLE FOR PASSENGER CARS	OPEN	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	5.37
50128	3 - SUITABLE FOR PASSENGER CARS	OPEN	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	8.47
50131	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	DECOMMISSION	DECOMMISSION	DECOMMISSION	DECOMMISSION	0.84
50132	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	5.53
50135	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	0.78
50135	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	6.20
50136	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	4.99
50138	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	1.83
50139	3 - SUITABLE FOR PASSENGER CARS	OPEN	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	11.12
50146	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	1.77
50146	3 - SUITABLE FOR PASSENGER CARS	OPEN	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	0.26
50146	3 - SUITABLE FOR PASSENGER CARS	SEASONAL	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	1.12
50153		SEASONAL	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	2.71
50153	3 - SUITABLE FOR PASSENGER CARS	SEASONAL	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	2.42
50154	3 - SUITABLE FOR PASSENGER CARS	OPEN	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	10.50
50155	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	2.51
50158	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	DECOMMISSION	DECOMMISSION	DECOMMISSION	DECOMMISSION	0.40

Road Number	Operational Maintenance Level	Existing	Alternative B	Alternative C	Alternative D	Alternative E	Miles
50158	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	DECOMMISSION	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	4.11
50158	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	3.04
50159	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	2.24
50188	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	LONG TERM CLOSURE	DECOMMISSION	LONG TERM CLOSURE	LONG TERM CLOSURE	0.87
50274	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	DECOMMISSION	DECOMMISSION	DECOMMISSION	DECOMMISSION	1.94
50274	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	1.93
50274	2 - HIGH CLEARANCE VEHICLES	OPEN	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	0.20
50274	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	0.14
50275	2 - HIGH CLEARANCE VEHICLES	OPEN	MAINTAIN OR IMPROVE	DECOMMISSION	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	0.40
50275	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	DECOMMISSION	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	4.27
50290			MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	0.74
50292			MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	0.57
50333	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	LONG TERM CLOSURE	DECOMMISSION	LONG TERM CLOSURE	LONG TERM CLOSURE	0.47
50336			MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	0.47
50342	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	1.27
50374	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	0.31
50380	2 - HIGH CLEARANCE VEHICLES	SEASONAL	DECOMMISSION	DECOMMISSION	DECOMMISSION	LONG TERM CLOSURE	0.41
50381	2 - HIGH CLEARANCE VEHICLES	OPEN	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	0.27
50386	2 - HIGH CLEARANCE VEHICLES	OPEN	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	0.37
50411	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	2.37
50429	2 - HIGH CLEARANCE VEHICLES	OPEN	DROP	DROP	DROP	DROP	0.02
50525	2 - HIGH CLEARANCE VEHICLES	CLOSED	NEW LONG TERM CLOSURE	LONG TERM CLOSURE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	6.37
50525	2 - HIGH CLEARANCE VEHICLES	CLOSED	NEW LONG TERM CLOSURE	LONG TERM CLOSURE	NEW LONG TERM CLOSURE	NEW LONG TERM CLOSURE	0.03
50525	2 - HIGH CLEARANCE VEHICLES	OPEN	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	0.37
50526	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	DECOMMISSION	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	1.18
50527	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	DECOMMISSION	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	1.11
50535	2 - HIGH CLEARANCE VEHICLES	CLOSED	NON-MOTO SYSTEM TRAIL	NON-MOTO SYSTEM TRAIL	NON-MOTO SYSTEM TRAIL	NON-MOTO SYSTEM TRAIL	0.70
50535A	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	DECOMMISSION	DECOMMISSION	DECOMMISSION	DECOMMISSION	0.11
50535B	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	DECOMMISSION	DECOMMISSION	DECOMMISSION	DECOMMISSION	0.03
50539	2 - HIGH CLEARANCE VEHICLES	CLOSED	NEW LONG TERM CLOSURE	LONG TERM CLOSURE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	3.39

Road Number	Operational Maintenance Level	Existing	Alternative B	Alternative C	Alternative D	Alternative E	Miles
50540	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	0.96
50556	2 - HIGH CLEARANCE VEHICLES	CLOSED	DECOM COMPLETE	DECOM COMPLETE	DECOM COMPLETE	DECOM COMPLETE	1.35
50556	2 - HIGH CLEARANCE VEHICLES	CLOSED	NEW LONG TERM CLOSURE	DECOMMISSION	NEW LONG TERM CLOSURE	NEW LONG TERM CLOSURE	0.21
50556	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	DECOMMISSION	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	0.48
50556	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	0.36
50557	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	LONG TERM CLOSURE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	0.05
50557	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	3.16
50561	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	0.43
50563	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	0.57
50576	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	1.36
50577	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	DECOMMISSION	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	0.21
50578	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	DECOMMISSION	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	0.71
50578	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	0.00
50579	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	0.92
50580	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	LONG TERM CLOSURE	MAINTAIN OR IMPROVE	LONG TERM CLOSURE	LONG TERM CLOSURE	2.69
50586	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	DECOMMISSION	DECOMMISSION	DECOMMISSION	DECOMMISSION	0.41
50586	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	LONG TERM CLOSURE	DECOMMISSION	LONG TERM CLOSURE	LONG TERM CLOSURE	0.86
50615	2 - HIGH CLEARANCE VEHICLES	CLOSED	NEW LONG TERM CLOSURE	LONG TERM CLOSURE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	3.54
50616	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	DECOMMISSION	DECOMMISSION	DECOMMISSION	DECOMMISSION	0.52
50648	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	DECOMMISSION	DECOMMISSION	DECOMMISSION	DECOMMISSION	1.12
50649	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	2.13
50653	2 - HIGH CLEARANCE VEHICLES	CLOSED	NEW LONG TERM CLOSURE	LONG TERM CLOSURE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	3.91
50657	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	1.20
50662	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	LONG TERM CLOSURE	DECOMMISSION	LONG TERM CLOSURE	LONG TERM CLOSURE	2.21
50662	2 - HIGH CLEARANCE VEHICLES	CLOSED	LONG TERM CLOSURE	DECOMMISSION	LONG TERM CLOSURE	LONG TERM CLOSURE	1.08
50662	2 - HIGH CLEARANCE VEHICLES	CLOSED	NEW LONG TERM CLOSURE	DECOMMISSION	NEW LONG TERM CLOSURE	NEW LONG TERM CLOSURE	0.17
50662	2 - HIGH CLEARANCE VEHICLES	OPEN	MAINTAIN OR IMPROVE	DECOMMISSION	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	0.35
50668	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	0.34
50669	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	0.46
50767	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	0.47

Road Number	Operational Maintenance Level	Existing	Alternative B	Alternative C	Alternative D	Alternative E	Miles
50778	2 - HIGH CLEARANCE VEHICLES	CLOSED	NEW LONG TERM CLOSURE	DECOMMISSION	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	1.22
50778R	2 - HIGH CLEARANCE VEHICLES	CLOSED	DECOMMISSION	DECOMMISSION	DECOMMISSION	LONG TERM CLOSURE	0.63
50784	2 - HIGH CLEARANCE VEHICLES	CLOSED	DECOM COMPLETE	DECOM COMPLETE	DECOM COMPLETE	DECOM COMPLETE	0.12
50786	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	1.37
50787	2 - HIGH CLEARANCE VEHICLES	CLOSED	DECOM COMPLETE	DECOM COMPLETE	DECOM COMPLETE	DECOM COMPLETE	0.07
50789	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	DECOM COMPLETE	DECOM COMPLETE	DECOM COMPLETE	DECOM COMPLETE	1.47
50789	2 - HIGH CLEARANCE VEHICLES	OPEN	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	0.38
50790	2 - HIGH CLEARANCE VEHICLES	CLOSED	NEW LONG TERM CLOSURE	DECOMMISSION	NEW LONG TERM CLOSURE	NEW LONG TERM CLOSURE	1.67
50791	2 - HIGH CLEARANCE VEHICLES	CLOSED	NEW LONG TERM CLOSURE	DECOMMISSION	NEW LONG TERM CLOSURE	NEW LONG TERM CLOSURE	0.71
50792	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	DECOMMISSION	DECOMMISSION	DECOMMISSION	DECOMMISSION	0.41
50792	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	1.05
50793	2 - HIGH CLEARANCE VEHICLES	CLOSED	DECOMMISSION	DECOMMISSION	DECOMMISSION	LONG TERM CLOSURE	1.11
50794	2 - HIGH CLEARANCE VEHICLES	CLOSED	DECOMMISSION	DECOMMISSION	DECOMMISSION	LONG TERM CLOSURE	1.81
50795	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	DECOMMISSION	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	2.16
50808	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	1.32
50808R	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	0.31
50825	2 - HIGH CLEARANCE VEHICLES	OPEN	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	0.15
50825	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	0.83
50834	2 - HIGH CLEARANCE VEHICLES	CLOSED	NEW LONG TERM CLOSURE	LONG TERM CLOSURE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	2.59
50834	2 - HIGH CLEARANCE VEHICLES	CLOSED	NEW LONG TERM CLOSURE	LONG TERM CLOSURE	NEW LONG TERM CLOSURE	NEW LONG TERM CLOSURE	0.13
50929	2 - HIGH CLEARANCE VEHICLES	CLOSED	NEW LONG TERM CLOSURE	LONG TERM CLOSURE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	0.55
50930	2 - HIGH CLEARANCE VEHICLES	CLOSED	NEW LONG TERM CLOSURE	LONG TERM CLOSURE	NEW LONG TERM CLOSURE	NEW LONG TERM CLOSURE	0.48
50931	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	1.64
50932	2 - HIGH CLEARANCE VEHICLES	SEASONAL	DECOMMISSION	DECOMMISSION	DECOMMISSION	LONG TERM CLOSURE	0.88
50933	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	2.52
50934	2 - HIGH CLEARANCE VEHICLES	CLOSED	NEW LONG TERM CLOSURE	LONG TERM CLOSURE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	1.99
50935	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	DECOMMISSION	DECOMMISSION	DECOMMISSION	DECOMMISSION	0.41
50943	2 - HIGH CLEARANCE VEHICLES	OPEN	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	0.15
50943	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	2.88
50944	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	4.05

Road Number	Operational Maintenance Level	Existing	Alternative B	Alternative C	Alternative D	Alternative E	Miles
50945	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	0.67
50946	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	1.25
50947	2 - HIGH CLEARANCE VEHICLES	CLOSED	NEW LONG TERM CLOSURE	LONG TERM CLOSURE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	0.64
50948	2 - HIGH CLEARANCE VEHICLES	CLOSED	NEW LONG TERM CLOSURE	LONG TERM CLOSURE	NEW LONG TERM CLOSURE	NEW LONG TERM CLOSURE	0.65
50949	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	0.42
50950	2 - HIGH CLEARANCE VEHICLES	CLOSED	NEW LONG TERM CLOSURE	LONG TERM CLOSURE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	4.38
50950	2 - HIGH CLEARANCE VEHICLES	CLOSED	NEW LONG TERM CLOSURE	LONG TERM CLOSURE	NEW LONG TERM CLOSURE	NEW LONG TERM CLOSURE	0.05
50950	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	2.84
50951	2 - HIGH CLEARANCE VEHICLES	CLOSED	IMPROVE AND OPEN	LONG TERM CLOSURE	IMPROVE AND OPEN	IMPROVE AND OPEN	1.51
50951	2 - HIGH CLEARANCE VEHICLES	SEASONAL	IMPROVE AND OPEN	LONG TERM CLOSURE	IMPROVE AND OPEN	IMPROVE AND OPEN	0.07
50953	2 - HIGH CLEARANCE VEHICLES	SEASONAL	DECOMMISSION	DECOMMISSION	DECOMMISSION	LONG TERM CLOSURE	1.40
50954	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	DECOMMISSION	DECOMMISSION	DECOMMISSION	DECOMMISSION	1.48
50954	2 - HIGH CLEARANCE VEHICLES	OPEN	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	0.17
50954	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	1.20
50955	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	2.70
50956	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	0.51
50974	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	0.01
50974	2 - HIGH CLEARANCE VEHICLES	SEASONAL	TRAIL CONVERSION	TRAIL CONVERSION	TRAIL CONVERSION	TRAIL CONVERSION	1.40
50975	2 - HIGH CLEARANCE VEHICLES	SEASONAL	TRAIL CONVERSION	TRAIL CONVERSION	TRAIL CONVERSION	TRAIL CONVERSION	0.89
50976	2 - HIGH CLEARANCE VEHICLES	SEASONAL	TRAIL CONVERSION	TRAIL CONVERSION	TRAIL CONVERSION	TRAIL CONVERSION	2.21
50977	2 - HIGH CLEARANCE VEHICLES	SEASONAL	TRAIL CONVERSION	MAINTAIN OR IMPROVE	TRAIL CONVERSION	TRAIL CONVERSION	1.62
50977	2 - HIGH CLEARANCE VEHICLES	SEASONAL	TRAIL CONVERSION	TRAIL CONVERSION	TRAIL CONVERSION	TRAIL CONVERSION	0.53
50978	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	LONG TERM CLOSURE	DECOMMISSION	LONG TERM CLOSURE	LONG TERM CLOSURE	0.62
50979	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	1.36
50979	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	TRAIL CONVERSION	TRAIL CONVERSION	TRAIL CONVERSION	TRAIL CONVERSION	0.27
50980	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	TRAIL CONVERSION	TRAIL CONVERSION	TRAIL CONVERSION	TRAIL CONVERSION	0.96
50981	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	0.79
50982	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	DECOMMISSION	DECOMMISSION	DECOMMISSION	DECOMMISSION	0.52
50987	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	2.69
50988	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	0.63

Road Number	Operational Maintenance Level	Existing	Alternative B	Alternative C	Alternative D	Alternative E	Miles
50989	2 - HIGH CLEARANCE VEHICLES	CLOSED	NEW LONG TERM CLOSURE	LONG TERM CLOSURE	NEW LONG TERM CLOSURE	NEW LONG TERM CLOSURE	0.81
50990	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	DECOMMISSION	DECOMMISSION	DECOMMISSION	DECOMMISSION	0.27
50990	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	0.28
50991	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	1.94
50992	2 - HIGH CLEARANCE VEHICLES	CLOSED	NEW LONG TERM CLOSURE	LONG TERM CLOSURE	NEW LONG TERM CLOSURE	NEW LONG TERM CLOSURE	0.50
50993	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	1.43
50994	2 - HIGH CLEARANCE VEHICLES	CLOSED	NEW LONG TERM CLOSURE	LONG TERM CLOSURE	NEW LONG TERM CLOSURE	NEW LONG TERM CLOSURE	0.53
51041	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	DECOMMISSION	DECOMMISSION	DECOMMISSION	DECOMMISSION	0.08
51051	2 - HIGH CLEARANCE VEHICLES		MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	0.05
51051	2 - HIGH CLEARANCE VEHICLES	CLOSED	DROP	DROP	DROP	DROP	0.05
51056	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	TRAIL CONVERSION	TRAIL CONVERSION	TRAIL CONVERSION	TRAIL CONVERSION	3.92
51057	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	3.70
51079	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	DECOMMISSION	DECOMMISSION	DECOMMISSION	DECOMMISSION	0.38
51080	2 - HIGH CLEARANCE VEHICLES	OPEN	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	1.46
51081	2 - HIGH CLEARANCE VEHICLES	SEASONAL	DECOMMISSION	DECOMMISSION	DECOMMISSION	LONG TERM CLOSURE	0.72
51081	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	0.15
51082	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	0.59
51083	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	LONG TERM CLOSURE	DECOMMISSION	LONG TERM CLOSURE	LONG TERM CLOSURE	0.64
51083	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	0.24
51083	2 - HIGH CLEARANCE VEHICLES	OPEN	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	0.41
51083	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	1.00
51084	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	LONG TERM CLOSURE	DECOMMISSION	LONG TERM CLOSURE	LONG TERM CLOSURE	2.70
51087	2 - HIGH CLEARANCE VEHICLES	OPEN	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	2.20
51093	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	0.50
51094	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	DECOMMISSION	DECOMMISSION	DECOMMISSION	DECOMMISSION	0.43
51121	2 - HIGH CLEARANCE VEHICLES	CLOSED	NEW LONG TERM CLOSURE	LONG TERM CLOSURE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	2.22
51121	2 - HIGH CLEARANCE VEHICLES	CLOSED	NEW LONG TERM CLOSURE	LONG TERM CLOSURE	NEW LONG TERM CLOSURE	NEW LONG TERM CLOSURE	0.02
51122	2 - HIGH CLEARANCE VEHICLES	CLOSED	NEW LONG TERM CLOSURE	DECOMMISSION	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	0.51
51123	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	LONG TERM CLOSURE	DECOMMISSION	LONG TERM CLOSURE	LONG TERM CLOSURE	0.52
51124	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	3.69

Road Number	Operational Maintenance Level	Existing	Alternative B	Alternative C	Alternative D	Alternative E	Miles
51125	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	1.11
51126	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	2.28
51127	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	DECOMMISSION	DECOMMISSION	DECOMMISSION	DECOMMISSION	1.17
51128	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	DECOMMISSION	DECOMMISSION	DECOMMISSION	DECOMMISSION	0.96
51129	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	DECOMMISSION	DECOMMISSION	DECOMMISSION	DECOMMISSION	0.32
51130	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	0.83
51131	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	DECOMMISSION	DECOMMISSION	DECOMMISSION	DECOMMISSION	0.36
51132	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	DECOMMISSION	DECOMMISSION	DECOMMISSION	DECOMMISSION	0.69
51156	2 - HIGH CLEARANCE VEHICLES	CLOSED	NEW LONG TERM CLOSURE	LONG TERM CLOSURE	NEW LONG TERM CLOSURE	NEW LONG TERM CLOSURE	0.52
51159	2 - HIGH CLEARANCE VEHICLES	CLOSED	DECOMMISSION	DECOMMISSION	DECOMMISSION	LONG TERM CLOSURE	0.37
51160	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	0.97
51163	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	DECOMMISSION	DECOMMISSION	DECOMMISSION	DECOMMISSION	1.26
51175	2 - HIGH CLEARANCE VEHICLES	CLOSED	NEW LONG TERM CLOSURE	LONG TERM CLOSURE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	1.14
51175	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	3.31
51176	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	0.75
51177	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	1.79
51178	2 - HIGH CLEARANCE VEHICLES	CLOSED	IMPROVE AND OPEN	LONG TERM CLOSURE	IMPROVE AND OPEN	IMPROVE AND OPEN	1.33
51179	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	2.05
51180	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	LONG TERM CLOSURE	DECOMMISSION	LONG TERM CLOSURE	LONG TERM CLOSURE	0.52
51181	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	DECOMMISSION	DECOMMISSION	DECOMMISSION	DECOMMISSION	0.82
51182	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	1.27
51183	2 - HIGH CLEARANCE VEHICLES	CLOSED	NEW LONG TERM CLOSURE	DECOMMISSION	NEW LONG TERM CLOSURE	NEW LONG TERM CLOSURE	1.22
51184	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	DECOMMISSION	DECOMMISSION	DECOMMISSION	DECOMMISSION	0.18
51210	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	3.41
51212	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	1.22
51213	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	0.52
51214	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	DECOMMISSION	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	2.40
51215	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	LONG TERM CLOSURE	DECOMMISSION	LONG TERM CLOSURE	LONG TERM CLOSURE	0.79
51216	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	2.65
51227	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	DECOMMISSION	DECOMMISSION	DECOMMISSION	DECOMMISSION	1.28

Road Number	Operational Maintenance Level	Existing	Alternative B	Alternative C	Alternative D	Alternative E	Miles
51228	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	DECOMMISSION	DECOMMISSION	DECOMMISSION	DECOMMISSION	0.67
51229	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	LONG TERM CLOSURE	DECOMMISSION	LONG TERM CLOSURE	LONG TERM CLOSURE	1.19
51231	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	LONG TERM CLOSURE	DECOMMISSION	LONG TERM CLOSURE	LONG TERM CLOSURE	0.49
51232	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	1.57
51233	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	0.57
51234	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	0.81
51235	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	1.62
51243	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	LONG TERM CLOSURE	DECOMMISSION	LONG TERM CLOSURE	LONG TERM CLOSURE	0.76
51246	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	DECOMMISSION	DECOMMISSION	DECOMMISSION	DECOMMISSION	1.86
51247	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	IMPROVE AND OPEN	DECOMMISSION	IMPROVE AND OPEN	IMPROVE AND OPEN	0.65
51248	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	DECOMMISSION	DECOMMISSION	DECOMMISSION	DECOMMISSION	1.60
51248	2 - HIGH CLEARANCE VEHICLES	SEASONAL	DECOMMISSION	LONG TERM CLOSURE	DECOMMISSION	DECOMMISSION	0.92
51248	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	LONG TERM CLOSURE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	0.80
51249	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	DECOMMISSION	DECOMMISSION	DECOMMISSION	DECOMMISSION	0.31
51250	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	DECOMMISSION	DECOMMISSION	DECOMMISSION	DECOMMISSION	1.94
51250	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	LONG TERM CLOSURE	DECOMMISSION	LONG TERM CLOSURE	LONG TERM CLOSURE	4.00
51251	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	DECOMMISSION	DECOMMISSION	DECOMMISSION	DECOMMISSION	0.87
51251	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	LONG TERM CLOSURE	DECOMMISSION	LONG TERM CLOSURE	LONG TERM CLOSURE	1.27
51251	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	LONG TERM CLOSURE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	0.73
51252	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	DECOMMISSION	DECOMMISSION	DECOMMISSION	DECOMMISSION	1.96
51253	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	DECOMMISSION	DECOMMISSION	DECOMMISSION	DECOMMISSION	4.63
51254	2 - HIGH CLEARANCE VEHICLES	OPEN	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	1.26
51255	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	0.83
51256	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	DECOMMISSION	DECOMMISSION	DECOMMISSION	DECOMMISSION	2.12
51257	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	DECOMMISSION	DECOMMISSION	DECOMMISSION	DECOMMISSION	1.58
51295	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	DECOMMISSION	DECOMMISSION	DECOMMISSION	DECOMMISSION	0.38
51313	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	DECOMMISSION	DECOMMISSION	DECOMMISSION	DECOMMISSION	0.70
51317	2 - HIGH CLEARANCE VEHICLES	OPEN	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	0.74
51317	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	2.90
51318	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	2.02

Road Number	Operational Maintenance Level	Existing	Alternative B	Alternative C	Alternative D	Alternative E	Miles
51319	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	LONG TERM CLOSURE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	0.87
51320	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	1.07
51322	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	1.67
51323	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	0.92
51365	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	DECOMMISSION	DECOMMISSION	DECOMMISSION	DECOMMISSION	1.04
51366	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	DECOMMISSION	DECOMMISSION	DECOMMISSION	DECOMMISSION	1.21
51367	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	DECOMMISSION	DECOMMISSION	DECOMMISSION	DECOMMISSION	1.19
51368	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	DECOMMISSION	DECOMMISSION	DECOMMISSION	DECOMMISSION	0.64
51368	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	LONG TERM CLOSURE	DECOMMISSION	LONG TERM CLOSURE	LONG TERM CLOSURE	2.95
51369	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	DECOMMISSION	DECOMMISSION	DECOMMISSION	DECOMMISSION	0.53
51369	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	LONG TERM CLOSURE	DECOMMISSION	LONG TERM CLOSURE	LONG TERM CLOSURE	1.41
51370	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	DECOMMISSION	DECOMMISSION	DECOMMISSION	DECOMMISSION	0.67
51418	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	DECOMMISSION	DECOMMISSION	DECOMMISSION	DECOMMISSION	0.61
51420	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	0.67
51421	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	0.92
51422	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	DECOMMISSION	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	1.45
51423	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	1.26
51435	2 - HIGH CLEARANCE VEHICLES	CLOSED	DECOMMISSION	DECOMMISSION	DECOMMISSION	LONG TERM CLOSURE	0.33
51435	2 - HIGH CLEARANCE VEHICLES	CLOSED	NEW LONG TERM CLOSURE	LONG TERM CLOSURE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	0.80
51435	2 - HIGH CLEARANCE VEHICLES	CLOSED	NEW LONG TERM CLOSURE	LONG TERM CLOSURE	NEW LONG TERM CLOSURE	NEW LONG TERM CLOSURE	0.01
51436	2 - HIGH CLEARANCE VEHICLES	CLOSED	NEW LONG TERM CLOSURE	LONG TERM CLOSURE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	0.46
51437	2 - HIGH CLEARANCE VEHICLES	CLOSED	DECOMMISSION	DECOMMISSION	DECOMMISSION	LONG TERM CLOSURE	0.52
51438	2 - HIGH CLEARANCE VEHICLES	CLOSED	NEW LONG TERM CLOSURE	LONG TERM CLOSURE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	1.14
51439	2 - HIGH CLEARANCE VEHICLES	CLOSED	NEW LONG TERM CLOSURE	LONG TERM CLOSURE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	0.70
51440	2 - HIGH CLEARANCE VEHICLES	CLOSED	DECOMMISSION	DECOMMISSION	DECOMMISSION	LONG TERM CLOSURE	1.44
51440	2 - HIGH CLEARANCE VEHICLES	CLOSED	NEW LONG TERM CLOSURE	LONG TERM CLOSURE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	0.32
51441	2 - HIGH CLEARANCE VEHICLES	CLOSED	DECOMMISSION	DECOMMISSION	DECOMMISSION	LONG TERM CLOSURE	0.71
51441	2 - HIGH CLEARANCE VEHICLES	CLOSED	NEW LONG TERM CLOSURE	NEW LONG TERM CLOSURE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	0.46
51442	2 - HIGH CLEARANCE VEHICLES	CLOSED	NEW LONG TERM CLOSURE	DECOMMISSION	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	0.76
51442	2 - HIGH CLEARANCE VEHICLES	CLOSED	NEW LONG TERM CLOSURE	NEW LONG TERM CLOSURE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	0.30

Road Number	Operational Maintenance Level	Existing	Alternative B	Alternative C	Alternative D	Alternative E	Miles
51443	2 - HIGH CLEARANCE VEHICLES	CLOSED	NEW LONG TERM CLOSURE	LONG TERM CLOSURE	NEW LONG TERM CLOSURE	NEW LONG TERM CLOSURE	0.80
51444	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	1.16
51445	2 - HIGH CLEARANCE VEHICLES	SEASONAL	DECOMMISSION	DECOMMISSION	DECOMMISSION	LONG TERM CLOSURE	0.95
51446	2 - HIGH CLEARANCE VEHICLES	CLOSED	DECOMMISSION	DECOMMISSION	DECOMMISSION	LONG TERM CLOSURE	1.48
51447	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	DECOMMISSION	DECOMMISSION	DECOMMISSION	DECOMMISSION	1.04
51448	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	1.30
51454	2 - HIGH CLEARANCE VEHICLES	CLOSED	NEW LONG TERM CLOSURE	LONG TERM CLOSURE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	2.66
51469	2 - HIGH CLEARANCE VEHICLES	CLOSED	DECOMMISSION	DECOMMISSION	DECOMMISSION	LONG TERM CLOSURE	0.38
51471	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	DECOMMISSION	DECOMMISSION	DECOMMISSION	DECOMMISSION	0.82
51472	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	DECOMMISSION	DECOMMISSION	DECOMMISSION	DECOMMISSION	0.41
51473	2 - HIGH CLEARANCE VEHICLES	OPEN	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	1.15
51474	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	0.91
51475	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	1.90
51476	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	1.37
51477	2 - HIGH CLEARANCE VEHICLES	CLOSED	DECOMMISSION	DECOMMISSION	DECOMMISSION	LONG TERM CLOSURE	0.40
51478	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	1.20
51479	2 - HIGH CLEARANCE VEHICLES	CLOSED	DECOMMISSION	DECOMMISSION	DECOMMISSION	LONG TERM CLOSURE	1.64
51479	2 - HIGH CLEARANCE VEHICLES	CLOSED	NEW LONG TERM CLOSURE	DECOMMISSION	NEW LONG TERM CLOSURE	NEW LONG TERM CLOSURE	1.70
51479	2 - HIGH CLEARANCE VEHICLES	CLOSED	NEW LONG TERM CLOSURE	LONG TERM CLOSURE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	0.21
51479	2 - HIGH CLEARANCE VEHICLES	CLOSED	NEW LONG TERM CLOSURE	LONG TERM CLOSURE	NEW LONG TERM CLOSURE	NEW LONG TERM CLOSURE	0.00
51480	2 - HIGH CLEARANCE VEHICLES	CLOSED	NEW LONG TERM CLOSURE	LONG TERM CLOSURE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	2.68
51481	2 - HIGH CLEARANCE VEHICLES	CLOSED	DECOMMISSION	DECOMMISSION	DECOMMISSION	LONG TERM CLOSURE	0.52
51482	2 - HIGH CLEARANCE VEHICLES	CLOSED	NEW LONG TERM CLOSURE	DECOMMISSION	NEW LONG TERM CLOSURE	NEW LONG TERM CLOSURE	0.50
51483	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	DECOMMISSION	DECOMMISSION	DECOMMISSION	DECOMMISSION	0.68
51483	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	LONG TERM CLOSURE	DECOMMISSION	LONG TERM CLOSURE	LONG TERM CLOSURE	1.65
51483	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	0.01
51484	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	DECOMMISSION	DECOMMISSION	DECOMMISSION	DECOMMISSION	0.53
51485	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	DECOMMISSION	DECOMMISSION	DECOMMISSION	DECOMMISSION	1.02
51485	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	LONG TERM CLOSURE	DECOMMISSION	LONG TERM CLOSURE	LONG TERM CLOSURE	0.74
51486	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	DECOMMISSION	DECOMMISSION	DECOMMISSION	DECOMMISSION	0.31

Road Number	Operational Maintenance Level	Existing	Alternative B	Alternative C	Alternative D	Alternative E	Miles
51491	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	LONG TERM CLOSURE	DECOMMISSION	LONG TERM CLOSURE	LONG TERM CLOSURE	0.46
51492	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	DECOMMISSION	DECOMMISSION	DECOMMISSION	DECOMMISSION	0.53
51536	2 - HIGH CLEARANCE VEHICLES	OPEN	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	0.24
51590	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	DECOMMISSION	DECOMMISSION	DECOMMISSION	DECOMMISSION	0.17
51591	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	0.76
51592	2 - HIGH CLEARANCE VEHICLES	SEASONAL	DECOMMISSION	DECOMMISSION	DECOMMISSION	LONG TERM CLOSURE	0.22
51593	2 - HIGH CLEARANCE VEHICLES	SEASONAL	DECOMMISSION	DECOMMISSION	DECOMMISSION	LONG TERM CLOSURE	0.45
51594	2 - HIGH CLEARANCE VEHICLES	SEASONAL	DECOMMISSION	DECOMMISSION	DECOMMISSION	LONG TERM CLOSURE	0.22
51632	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	DECOMMISSION	DECOMMISSION	DECOMMISSION	DECOMMISSION	0.95
51659	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	DROP	DROP	DROP	DROP	0.04
51660	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	0.45
51661	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	LONG TERM CLOSURE	0.09
51732	2 - HIGH CLEARANCE VEHICLES	SEASONAL	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	1.16
51733	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	DECOMMISSION	DECOMMISSION	DECOMMISSION	DECOMMISSION	0.32
51826	1 - BASIC CUSTODIAL CARE (CLOSED)	CLOSED	LONG TERM CLOSURE	DECOMMISSION	LONG TERM CLOSURE	LONG TERM CLOSURE	0.47
51927	2 - HIGH CLEARANCE VEHICLES	OPEN	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	0.08
58013	2 - HIGH CLEARANCE VEHICLES	OPEN	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	MAINTAIN OR IMPROVE	0.01
58017	2 - HIGH CLEARANCE VEHICLES	CLOSED	NEW LONG TERM CLOSURE	LONG TERM CLOSURE	NEW LONG TERM CLOSURE	NEW LONG TERM CLOSURE	0.09

Table A-5. Unauthorized Route Treatments by Alternative.

Subwatershed	Id	Alternative B	Alternative C	Alternative C	Alternative E	Miles
Boulder Creek	500000000	No Action	No Action	No Action	No Action	0.2
Boulder Creek	500631000	Obliteration	Obliteration	Obliteration	Obliteration	0.5
Boulder Creek	500743700	No Action	No Action	No Action	No Action	0.2
Boulder Creek	500745000	No Action	No Action	No Action	No Action	0.1
Boulder Creek	500746000	Obliteration	Obliteration	Obliteration	Obliteration	0.1
Boulder Creek	500791000	No Action	No Action	No Action	No Action	0.2
Boulder Creek	500792000	Obliteration	Obliteration	Obliteration	Obliteration	0.6
Boulder Creek	500801000	No Action	Obliteration	No Action	No Action	0.7
Boulder Creek	500831000	Obliteration	Obliteration	Obliteration	Obliteration	0.2
Boulder Creek	500832000	Obliteration	Obliteration	Obliteration	Obliteration	0.9
Boulder Creek	500833000	No Action	Obliteration	No Action	No Action	0.9

Subwatershed	Id	Alternative B	Alternative C	Alternative C	Alternative E	Miles
Boulder Creek	500833010	No Action	Obliteration	No Action	No Action	0.3
Boulder Creek	500833020	No Action	Obliteration	No Action	No Action	0.1
Boulder Creek	500834000	Obliteration	Obliteration	Obliteration	Obliteration	0.5
Boulder Creek	500835000	Partial Obliteration	Partial Obliteration	Partial Obliteration	Partial Obliteration	0.1
Boulder Creek	501016500	Obliteration	Obliteration	Obliteration	Obliteration	0.9
Boulder Creek	501016520	Obliteration	Obliteration	Obliteration	Obliteration	0.4
Boulder Creek	501281000	Obliteration	Obliteration	Obliteration	Obliteration	0.1
Boulder Creek	501282000	No Action	Obliteration	No Action	No Action	0.4
Boulder Creek	501283000	No Action	Obliteration	No Action	No Action	0.2
Boulder Creek	501581000	Obliteration	Obliteration	Obliteration	Obliteration	0.2
Boulder Creek	501582100	Temp/Obliteration	No Action	Temp/Obliteration	No Action	1.2
Boulder Creek	501582105	Temp/Obliteration	No Action	Temp/Obliteration	No Action	0.8
Boulder Creek	501582111	No Action	No Action	No Action	No Action	0.1
Boulder Creek	501582115	Obliteration	Obliteration	Obliteration	Obliteration	0.3
Boulder Creek	506621000	Obliteration	Obliteration	Obliteration	Obliteration	0.3
Boulder Creek	509872000	Obliteration	Obliteration	Obliteration	Obliteration	<.1
Boulder Creek	511831000	Obliteration	Obliteration	Obliteration	No Action	0.5
Boulder Creek	512271000	Obliteration	Obliteration	Obliteration	Obliteration	1.1
Boulder Creek	512272000	Obliteration	Obliteration	Obliteration	Obliteration	0.2
Boulder Creek	512461000	Obliteration	Obliteration	Obliteration	Obliteration	0.5
Boulder Creek	512481000	Obliteration	Obliteration	Obliteration	Obliteration	0.3
Boulder Creek	512482000	Obliteration	Obliteration	Obliteration	Obliteration	1.1
Boulder Creek	512482010	Obliteration	Obliteration	Obliteration	Obliteration	0.2
Boulder Creek	512511000	No Action	No Action	No Action	No Action	<.1
Boulder Creek	512513000	Obliteration	Obliteration	Obliteration	Obliteration	0.4
Boulder Creek	512514000	No Action	No Action	No Action	No Action	0.3
Boulder Creek	512515000	Obliteration	Obliteration	Obliteration	Obliteration	<.1
Boulder Creek	512531000	Obliteration	Obliteration	Obliteration	Obliteration	0.2
Boulder Creek	512541000	Add Effective Closure	Add Effective Closure	Add Effective Closure	Add Effective Closure	0.7
Boulder Creek	512561000	Obliteration	Obliteration	Obliteration	Obliteration	0.3
Boulder Creek	512562000	Obliteration	Obliteration	Obliteration	Obliteration	0.6
Boulder Creek	512563000	Obliteration	Obliteration	Obliteration	Obliteration	0.4
Boulder Creek	513131000	Obliteration	Obliteration	Obliteration	Obliteration	0.1
Boulder Creek	513681000	Obliteration	Obliteration	Obliteration	Obliteration	0.4
Boulder Creek	513682000	Obliteration	Obliteration	Obliteration	Obliteration	0.5
Boulder Creek	No ID	Temp/Obliteration	No Action	Temp/Obliteration	No Action	0.2
Boulder Creek	No ID	Reroute - Unauth	Reroute - Unauth	Reroute - Unauth	Reroute - Unauth	0.6
Boulder Creek	No ID	Temp/Obliteration	Obliteration	Temp/Obliteration	Obliteration	0.6

Subwatershed	Id	Alternative B	Alternative C	Alternative C	Alternative E	Miles
Boulder Creek	No ID	Temp/Obliteration	Temp/Obliteration	Temp/Obliteration	Temp/Obliteration	1.1
Lost Creek	500000000	No Action	No Action	No Action	No Action	0.7
Lost Creek	500891000	No Action	No Action	No Action	No Action	0.3
Lost Creek	500891500	No Action	No Action	No Action	No Action	0.1
Lost Creek	500892500	Obliteration	Obliteration	Obliteration	Obliteration	0.4
Lost Creek	500893500	No Action	No Action	No Action	No Action	0.1
Lost Creek	500894500	No Action	No Action	No Action	No Action	0.2
Lost Creek	500894500	Obliteration	Obliteration	Obliteration	Obliteration	0.8
Lost Creek	500894700	Obliteration	Obliteration	Obliteration	Obliteration	<.1
Lost Creek	500894700	No Action	No Action	No Action	No Action	0.1
Lost Creek	500896000	Obliteration	Obliteration	Obliteration	Obliteration	0.1
Lost Creek	500896500	Obliteration	Obliteration	Obliteration	Obliteration	0.1
Lost Creek	500899000	Obliteration	Obliteration	Obliteration	Obliteration	0.1
Lost Creek	500931000	Partial Obliteration	Partial Obliteration	Partial Obliteration	Partial Obliteration	0.2
Lost Creek	501026000	Obliteration	Obliteration	Obliteration	Obliteration	0.2
Lost Creek	501026010	Obliteration	Obliteration	Obliteration	Obliteration	0.9
Lost Creek	501151000	No Action	No Action	No Action	No Action	0.7
Lost Creek	501151010	No Action	No Action	No Action	No Action	0.8
Lost Creek	501153000	No Action	No Action	No Action	No Action	<.1
Lost Creek	501153500	Obliteration	Obliteration	Obliteration	Obliteration	0.2
Lost Creek	501153510	Obliteration	Obliteration	Obliteration	Obliteration	0.4
Lost Creek	501154000	No Action	No Action	No Action	No Action	0.3
Lost Creek	501155000	No Action	No Action	No Action	No Action	0.4
Lost Creek	501157000	Obliteration	Obliteration	Obliteration	Obliteration	0.1
Lost Creek	501203000	No Action	No Action	No Action	No Action	0.2
Lost Creek	501203100	No Action	No Action	No Action	No Action	0.3
Lost Creek	501204000	No Action	Obliteration	No Action	No Action	1.5
Lost Creek	501205000	Obliteration	Obliteration	Obliteration	Obliteration	0.5
Lost Creek	501205500	Add Effective Closure	Obliteration	Add Effective Closure	Add Effective Closure	0.9
Lost Creek	501205500	No Action	Obliteration	No Action	No Action	1.0
Lost Creek	501206000	No Action	No Action	No Action	No Action	0.4
Lost Creek	501206010	No Action	No Action	No Action	No Action	0.8
Lost Creek	501206020	No Action	No Action	No Action	No Action	0.4
Lost Creek	501206030	No Action	No Action	No Action	No Action	0.4
Lost Creek	501206040	No Action	No Action	No Action	No Action	0.2
Lost Creek	501206060	No Action	No Action	No Action	No Action	0.2
Lost Creek	501272000	No Action	Obliteration	No Action	No Action	0.1
Lost Creek	501282410	No Action	No Action	No Action	No Action	0.2
Lost Creek	501289000	No Action	No Action	No Action	No Action	0.1

Subwatershed	Id	Alternative B	Alternative C	Alternative C	Alternative E	Miles
Lost Creek	501390500	Obliteration	Obliteration	Obliteration	Obliteration	0.2
Lost Creek	501391000	No Action	Obliteration	No Action	No Action	0.3
Lost Creek	501391500	No Action	No Action	No Action	No Action	0.4
Lost Creek	501392000	No Action	No Action	No Action	No Action	0.4
Lost Creek	501392500	Add Effective Closure	Add Effective Closure	Add Effective Closure	Add Effective Closure	1.7
Lost Creek	501392510	No Action	No Action	No Action	No Action	0.3
Lost Creek	501392520	No Action	No Action	No Action	No Action	0.3
Lost Creek	501395000	No Action	No Action	No Action	No Action	0.1
Lost Creek	501395200	Obliteration	Obliteration	Obliteration	Obliteration	0.4
Lost Creek	501395500	Obliteration	Obliteration	Obliteration	Obliteration	0.5
Lost Creek	501396000	Obliteration	Obliteration	Obliteration	Obliteration	0.5
Lost Creek	501396500	Obliteration	Obliteration	Obliteration	Obliteration	0.2
Lost Creek	501397000	Obliteration	Obliteration	Obliteration	Obliteration	0.1
Lost Creek	501397500	Obliteration	Obliteration	Obliteration	Obliteration	0.6
Lost Creek	501397510	Obliteration	Obliteration	Obliteration	Obliteration	0.2
Lost Creek	501461000	No Action	Obliteration	No Action	No Action	0.2
Lost Creek	501461050	No Action	Obliteration	No Action	No Action	0.2
Lost Creek	501462000	Obliteration	Obliteration	Obliteration	Obliteration	0.4
Lost Creek	501462020	Obliteration	Obliteration	No Action	No Action	0.1
Lost Creek	501462022	No Action	Obliteration	No Action	No Action	0.1
Lost Creek	501462025	No Action	Obliteration	No Action	No Action	0.2
Lost Creek	501463000	Obliteration	Obliteration	Obliteration	Obliteration	1.3
Lost Creek	501463070	Obliteration	Obliteration	Obliteration	Obliteration	0.1
Lost Creek	501464000	No Action	Obliteration	No Action	No Action	0.5
Lost Creek	501465000	No Action	Obliteration	No Action	No Action	0.5
Lost Creek	501466000	No Action	No Action	No Action	No Action	0.3
Lost Creek	501468000	Obliteration	Obliteration	Obliteration	Obliteration	0.3
Lost Creek	501468100	Obliteration	Obliteration	Obliteration	Obliteration	0.1
Lost Creek	501469000	No Action	Obliteration	No Action	No Action	0.7
Lost Creek	501469100	No Action	No Action	No Action	No Action	<.1
Lost Creek	501541000	No Action	No Action	No Action	No Action	<.1
Lost Creek	501541000	Conv to UTV Trail	Conv to ATV Trail	Conv to UTV Trail	Conv to UTV Trail	0.2
Lost Creek	501551000	No Action	No Action	No Action	No Action	0.7
Lost Creek	503421000	No Action	No Action	No Action	No Action	0.2
Lost Creek	503811000	No Action	No Action	No Action	No Action	0.1
Lost Creek	503861000	No Action	No Action	No Action	No Action	0.3
Lost Creek	503862000	No Action	No Action	No Action	No Action	0.3
Lost Creek	503862000	Conv to UTV Trail	Conv to ATV Trail	Conv to UTV Trail	Conv to UTV Trail	0.3

Subwatershed	Id	Alternative B	Alternative C	Alternative C	Alternative E	Miles
Lost Creek	503862100	Conv to UTV Trail	Conv to ATV Trail	Conv to UTV Trail	Conv to UTV Trail	0.1
Lost Creek	503862200	Obliteration	Obliteration	Obliteration	Obliteration	0.1
Lost Creek	503862300	No Action	No Action	No Action	No Action	<.1
Lost Creek	503863000	Obliteration	Obliteration	Obliteration	Obliteration	0.2
Lost Creek	503864000	Maintain or Improve	Maintain or Improve	Maintain or Improve	Maintain or Improve	0.1
Lost Creek	503865000	Add Effective Closure	Add Effective Closure	Add Effective Closure	Add Effective Closure	<.1
Lost Creek	504111000	Obliteration	Obliteration	Obliteration	Obliteration	0.5
Lost Creek	504111040	Obliteration	Obliteration	Obliteration	Obliteration	0.3
Lost Creek	504112000	Temp/Obliteration	Temp/Obliteration	Temp/Obliteration	Temp/Obliteration	1.6
Lost Creek	504112500	No Action	Obliteration	No Action	No Action	0.3
Lost Creek	504112510	No Action	Obliteration	No Action	No Action	0.1
Lost Creek	504113000	Temp/Obliteration	Temp/Obliteration	Temp/Obliteration	Temp/Obliteration	0.1
Lost Creek	504114000	No Action	No Action	No Action	No Action	0.3
Lost Creek	504115000	Obliteration	Obliteration	Obliteration	Obliteration	0.5
Lost Creek	505351000	No Action	No Action	No Action	No Action	0.6
Lost Creek	506150000	No Action	No Action	No Action	No Action	0.2
Lost Creek	506150000	Temp/Obliteration	Temp/Obliteration	Temp/Obliteration	Temp/Obliteration	0.7
Lost Creek	506151000	Obliteration	Obliteration	Obliteration	Obliteration	0.5
Lost Creek	506152000	Obliteration	Obliteration	Obliteration	Obliteration	0.2
Lost Creek	506152000	Obliteration	Temp/Obliteration	Temp/Obliteration	Temp/Obliteration	0.2
Lost Creek	506152100	Obliteration	Obliteration	Obliteration	Obliteration	0.1
Lost Creek	506481000	Obliteration	Obliteration	Obliteration	Obliteration	0.2
Lost Creek	506481010	Obliteration	Obliteration	Obliteration	Obliteration	0.2
Lost Creek	506481020	Obliteration	Obliteration	Obliteration	Obliteration	0.1
Lost Creek	506482000	No Action	Obliteration	No Action	No Action	0.6
Lost Creek	506491000	Obliteration	Obliteration	Obliteration	Obliteration	0.4
Lost Creek	506532000	No Action	No Action	No Action	No Action	0.2
Lost Creek	506532500	No Action	No Action	No Action	No Action	0.1
Lost Creek	506533000	No Action	No Action	No Action	No Action	1.0
Lost Creek	506533500	No Action	No Action	No Action	No Action	0.6
Lost Creek	506534000	Obliteration	Obliteration	Obliteration	Obliteration	0.5
Lost Creek	506534500	Obliteration	Obliteration	Obliteration	Obliteration	0.6
Lost Creek	506534540	Obliteration	Obliteration	Obliteration	Obliteration	0.4
Lost Creek	506535000	Obliteration	Obliteration	Obliteration	Obliteration	0.2
Lost Creek	506536000	No Action	Obliteration	No Action	No Action	0.2
Lost Creek	506570000	Temp/Obliteration	Temp/Obliteration	Temp/Obliteration	Temp/Obliteration	0.4
Lost Creek	506570000	Obliteration	Obliteration	Obliteration	Obliteration	0.7
Lost Creek	506570500	No Action	No Action	No Action	No Action	0.1

Subwatershed	Id	Alternative B	Alternative C	Alternative C	Alternative E	Miles
Lost Creek	506571000	No Action	No Action	No Action	No Action	1.0
Lost Creek	506571100	No Action	No Action	No Action	No Action	0.2
Lost Creek	506571200	No Action	No Action	No Action	No Action	0.2
Lost Creek	506682000	No Action	Obliteration	No Action	No Action	0.2
Lost Creek	506683000	No Action	No Action	No Action	No Action	0.2
Lost Creek	506880000	Obliteration	Obliteration	Obliteration	Obliteration	0.2
Lost Creek	506880000	Add Effective Closure	Add Effective Closure	Add Effective Closure	Add Effective Closure	0.2
Lost Creek	506950000	Obliteration	Obliteration	Obliteration	Obliteration	0.2
Lost Creek	507781000	No Action	No Action	No Action	No Action	0.2
Lost Creek	507782000	No Action	No Action	No Action	No Action	0.7
Lost Creek	507783000	No Action	No Action	No Action	No Action	0.3
Lost Creek	508990000	Obliteration	Obliteration	Obliteration	Obliteration	0.7
Lost Creek	509301000	No Action	No Action	No Action	No Action	0.3
Lost Creek	509311000	Obliteration	Obliteration	Obliteration	Obliteration	0.4
Lost Creek	509312000	Obliteration	Obliteration	Obliteration	Obliteration	1.8
Lost Creek	509331000	No Action	No Action	No Action	No Action	0.1
Lost Creek	509331500	No Action	No Action	No Action	No Action	0.2
Lost Creek	509343000	Obliteration	Obliteration	Obliteration	Obliteration	0.5
Lost Creek	509343010	Obliteration	Obliteration	Obliteration	Obliteration	0.7
Lost Creek	509343020	Obliteration	Obliteration	Obliteration	Obliteration	0.2
Lost Creek	509431000	Obliteration	Obliteration	Obliteration	Obliteration	0.7
Lost Creek	509432000	Obliteration	Obliteration	Obliteration	Obliteration	1.8
Lost Creek	509433000	Obliteration	Obliteration	Obliteration	Obliteration	0.4
Lost Creek	509441000	No Action	No Action	No Action	No Action	1.0
Lost Creek	509442000	No Action	Obliteration	No Action	No Action	0.3
Lost Creek	509443000	No Action	No Action	No Action	No Action	0.5
Lost Creek	509443500	No Action	No Action	No Action	No Action	0.3
Lost Creek	509443510	No Action	No Action	No Action	No Action	0.2
Lost Creek	509444000	No Action	No Action	No Action	No Action	0.2
Lost Creek	509444100	No Action	No Action	No Action	No Action	0.2
Lost Creek	509444110	No Action	No Action	No Action	No Action	<.1
Lost Creek	509444120	No Action	No Action	No Action	No Action	0.1
Lost Creek	509444500	Obliteration	Obliteration	Obliteration	Obliteration	0.6
Lost Creek	509444530	Obliteration	Obliteration	Obliteration	Obliteration	0.7
Lost Creek	509444531	Obliteration	Obliteration	Obliteration	Obliteration	0.3
Lost Creek	509445000	No Action	No Action	No Action	No Action	0.6
Lost Creek	509446000	No Action	Obliteration	No Action	No Action	0.7
Lost Creek	509551000	Add Effective	Add Effective Closure	Add Effective Closure	Add Effective Closure	0.4

Subwatershed	Id	Alternative B	Alternative C	Alternative C	Alternative E	Miles
		Closure				
Lost Creek	509551010	No Action	No Action	No Action	No Action	0.3
Lost Creek	509741000	Obliteration	Obliteration	Obliteration	Obliteration	0.3
Lost Creek	509741010	Obliteration	Obliteration	Obliteration	Obliteration	0.2
Lost Creek	509751000	No Action	No Action	No Action	No Action	0.4
Lost Creek	509751010	No Action	No Action	No Action	No Action	0.4
Lost Creek	509752000	Conv to UTV Trail	Conv to ATV Trail	Conv to UTV Trail	Conv to UTV Trail	0.4
Lost Creek	509752000	No Action	No Action	No Action	No Action	0.8
Lost Creek	509752030	No Action	No Action	No Action	No Action	0.1
Lost Creek	509761000	No Action	Obliteration	No Action	No Action	0.1
Lost Creek	509761010	Obliteration	Obliteration	Obliteration	Obliteration	0.3
Lost Creek	509771000	No Action	No Action	No Action	No Action	0.1
Lost Creek	509771000	Add Effective Closure	Add Effective Closure	Add Effective Closure	Add Effective Closure	0.6
Lost Creek	509771010	No Action	No Action	No Action	No Action	0.3
Lost Creek	509772000	No Action	No Action	No Action	No Action	0.1
Lost Creek	509772010	No Action	No Action	No Action	No Action	0.1
Lost Creek	509772500	No Action	No Action	No Action	No Action	0.6
Lost Creek	509792000	No Action	No Action	No Action	No Action	0.8
Lost Creek	509793000	No Action	No Action	No Action	No Action	0.5
Lost Creek	509810500	Obliteration	Obliteration	Obliteration	Obliteration	0.2
Lost Creek	509811000	Obliteration	Obliteration	Obliteration	Obliteration	0.3
Lost Creek	509811500	No Action	No Action	No Action	No Action	0.5
Lost Creek	509821000	Obliteration	Obliteration	Obliteration	Obliteration	0.2
Lost Creek	510410000	Obliteration	Obliteration	Obliteration	Obliteration	2.2
Lost Creek	510561000	No Action	Obliteration	No Action	No Action	0.2
Lost Creek	510571500	Obliteration	Obliteration	Obliteration	Obliteration	0.5
Lost Creek	510572000	Obliteration	Obliteration	Obliteration	Obliteration	0.3
Lost Creek	510573000	No Action	No Action	No Action	No Action	0.3
Lost Creek	510573010	No Action	No Action	No Action	No Action	0.2
Lost Creek	510573020	No Action	No Action	No Action	No Action	0.2
Lost Creek	510791000	No Action	Obliteration	No Action	No Action	0.3
Lost Creek	510792000	No Action	No Action	No Action	No Action	0.2
Lost Creek	510801000	Obliteration	Obliteration	Obliteration	Obliteration	0.1
Lost Creek	510801500	Obliteration	Obliteration	Obliteration	Obliteration	0.7
Lost Creek	510873000	No Action	Obliteration	No Action	No Action	0.1
Lost Creek	510873500	No Action	No Action	No Action	No Action	0.9
Lost Creek	511211000	Obliteration	Obliteration	Obliteration	Obliteration	0.8
Lost Creek	511241000	Obliteration	Obliteration	Obliteration	Obliteration	0.4
Lost Creek	511241010	Obliteration	Obliteration	Obliteration	Obliteration	0.1

Subwatershed	Id	Alternative B	Alternative C	Alternative C	Alternative E	Miles
Lost Creek	511242000	No Action	No Action	No Action	No Action	0.7
Lost Creek	511272000	Obliteration	Obliteration	Obliteration	Obliteration	0.3
Lost Creek	511311000	Obliteration	Obliteration	Obliteration	Obliteration	0.4
Lost Creek	511312000	No Action	No Action	No Action	No Action	0.1
Lost Creek	511321000	No Action	No Action	No Action	No Action	0.5
Lost Creek	511321010	No Action	No Action	No Action	No Action	0.1
Lost Creek	511321030	No Action	No Action	No Action	No Action	0.1
Lost Creek	511322000	Obliteration	Obliteration	Obliteration	Obliteration	0.2
Lost Creek	511323000	No Action	No Action	No Action	No Action	0.1
Lost Creek	512161000	Obliteration	Obliteration	Obliteration	Obliteration	0.6
Lost Creek	512161010	Obliteration	Obliteration	Obliteration	Obliteration	0.1
Lost Creek	513171000	Obliteration	Obliteration	Obliteration	Obliteration	1.1
Lost Creek	513171010	Obliteration	Obliteration	Temp/Obliteration	Obliteration	0.1
Lost Creek	513171020	Obliteration	Obliteration	Obliteration	Obliteration	0.1
Lost Creek	513171030	Obliteration	Obliteration	Obliteration	Obliteration	0.1
Lost Creek	513171100	Obliteration	Obliteration	Obliteration	Obliteration	0.1
Lost Creek	513171200	Obliteration	Obliteration	Obliteration	Obliteration	0.1
Lost Creek	513173000	Obliteration	Obliteration	Obliteration	Obliteration	0.9
Lost Creek	513231500	No Action	No Action	No Action	No Action	0.3
Lost Creek	513232000	No Action	No Action	No Action	No Action	0.1
Lost Creek	513232500	Obliteration	Obliteration	Obliteration	Obliteration	0.4
Lost Creek	513232510	Obliteration	Obliteration	Obliteration	Obliteration	0.6
Lost Creek	513232520	Obliteration	Obliteration	Obliteration	Obliteration	<.1
Lost Creek	513232530	Obliteration	Obliteration	Obliteration	Obliteration	0.2
Lost Creek	513232535	Obliteration	Obliteration	Obliteration	Obliteration	0.1
Lost Creek	513232540	Obliteration	Obliteration	Obliteration	Obliteration	0.1
Lost Creek	513232550	Obliteration	Obliteration	Obliteration	Obliteration	0.1
Lost Creek	514391500	No Action	No Action	No Action	No Action	0.1
Lost Creek	514392000	Obliteration	Obliteration	Obliteration	Obliteration	0.3
Lost Creek	514392020	Obliteration	Obliteration	Obliteration	Obliteration	0.5
Lost Creek	514392030	Obliteration	Obliteration	Obliteration	Obliteration	0.2
Lost Creek	514392040	Obliteration	Obliteration	Obliteration	Obliteration	0.1
Lost Creek	514451000	Obliteration	Obliteration	Obliteration	Obliteration	0.3
Lost Creek	514461000	Obliteration	Obliteration	Obliteration	Obliteration	0.5
Lost Creek	514462000	Obliteration	Obliteration	Obliteration	Obliteration	0.4
Lost Creek	514462010	Obliteration	Obliteration	Obliteration	Obliteration	0.3
Lost Creek	514462030	Obliteration	Obliteration	Obliteration	Obliteration	0.2
Lost Creek	514464000	Add Effective Closure	Add Effective Closure	Add Effective Closure	Add Effective Closure	0.5

Subwatershed	Id	Alternative B	Alternative C	Alternative C	Alternative E	Miles
Lost Creek	514481000	No Action	No Action	No Action	No Action	0.3
Lost Creek	514481000	Add Effective Closure	Add Effective Closure	Add Effective Closure	Add Effective Closure	0.3
Lost Creek	514481020	No Action	No Action	No Action	No Action	0.2
Lost Creek	514482000	No Action	No Action	No Action	No Action	0.3
Lost Creek	514541000	No Action	Obliteration	No Action	No Action	0.2
Lost Creek	514541500	Obliteration	Obliteration	Obliteration	Obliteration	0.3
Lost Creek	514542000	Obliteration	Obliteration	Obliteration	Obliteration	0.2
Lost Creek	514692000	No Action	No Action	No Action	No Action	0.4
Lost Creek	514692010	No Action	No Action	No Action	No Action	0.1
Lost Creek	514732000	Conv to UTV Trail	Conv to ATV Trail	Conv to UTV Trail	Conv to UTV Trail	0.1
Lost Creek	514732010	Add Effective Closure	Add Effective Closure	Add Effective Closure	Add Effective Closure	0.1
Lost Creek	515921000	Obliteration	Obliteration	Obliteration	Obliteration	0.7
Lost Creek	515931000	Obliteration	Obliteration	Obliteration	No Action	0.1
Lost Creek	517321000	Obliteration	Obliteration	Obliteration	Obliteration	0.1
Lost Creek	No ID	Temp/Obliteration	Temp/Obliteration	Temp/Obliteration	Temp/Obliteration	0.4
Lost Creek	No ID	Temp/Obliteration	Obliteration	Temp/Obliteration	Temp/Obliteration	0.5
Lost Creek	No ID	Temp/Obliteration	Obliteration	Temp/Obliteration	No Action	0.7
Lost Creek	No ID	No Action	No Action	Temp/Obliteration	No Action	1.8
Lower West Fork Weiser River	501363000	No Action	No Action	No Action	No Action	0.7
Lower West Fork Weiser River	503801000	Temp/Obliteration	Obliteration	Temp/Obliteration	No Action	0.4
Upper Weiser River	500742000	No Action	No Action	No Action	No Action	0.8
Upper Weiser River	500742500	No Action	No Action	No Action	No Action	0.1
Upper Weiser River	500742520	No Action	No Action	No Action	No Action	0.1
Upper Weiser River	500743000	No Action	No Action	No Action	No Action	0.1
Upper Weiser River	500743500	No Action	Obliteration	No Action	No Action	0.4
Upper Weiser River	501011000	Obliteration	Obliteration	Obliteration	Obliteration	0.2
Upper Weiser River	501011010	Obliteration	Obliteration	Obliteration	Obliteration	0.2
Upper Weiser River	501011500	No Action	Obliteration	No Action	No Action	0.2
Upper Weiser River	501012000	No Action	No Action	No Action	No Action	0.1
Upper Weiser River	501012500	Obliteration	Obliteration	Obliteration	Obliteration	0.4
Upper Weiser River	501012800	Obliteration	Obliteration	Obliteration	Obliteration	0.2
Upper Weiser River	501013200	No Action	No Action	No Action	No Action	0.1
Upper Weiser River	501013500	Obliteration	Obliteration	Obliteration	Obliteration	0.1
Upper Weiser River	501014000	Obliteration	Obliteration	Obliteration	Obliteration	2.0
Upper Weiser River	501014010	No Action	Obliteration	No Action	No Action	0.4
Upper Weiser River	501014500	No Action	Obliteration	No Action	No Action	<.1

Subwatershed	Id	Alternative B	Alternative C	Alternative C	Alternative E	Miles
Upper Weiser River	501014500	No Action	No Action	No Action	No Action	0.1
Upper Weiser River	501015000	No Action	No Action	No Action	No Action	0.2
Upper Weiser River	501016500	Obliteration	Obliteration	Obliteration	Obliteration	1.2
Upper Weiser River	501016510	Obliteration	Obliteration	Obliteration	Obliteration	0.4
Upper Weiser River	501017000	Temp/Obliteration	Temp/Obliteration	Temp/Obliteration	Temp/Obliteration	1.3
Upper Weiser River	501020500	Obliteration	Obliteration	Obliteration	Obliteration	0.7
Upper Weiser River	501021000	No Action	Obliteration	No Action	No Action	0.1
Upper Weiser River	501021500	No Action	Obliteration	No Action	No Action	0.1
Upper Weiser River	501022000	No Action	No Action	No Action	No Action	0.2
Upper Weiser River	501022500	No Action	Obliteration	No Action	No Action	0.4
Upper Weiser River	501023000	No Action	No Action	No Action	No Action	0.6
Upper Weiser River	501024000	No Action	No Action	No Action	No Action	0.1
Upper Weiser River	505391000	No Action	Obliteration	No Action	No Action	0.3
Upper Weiser River	505392200	Obliteration	Obliteration	Obliteration	Obliteration	0.1
Upper Weiser River	505392500	No Action	No Action	No Action	No Action	0.4
Upper Weiser River	505392800	Obliteration	Obliteration	Obliteration	Obliteration	0.1
Upper Weiser River	505393000	No Action	Obliteration	No Action	No Action	0.2
Upper Weiser River	505393200	Obliteration	Obliteration	Obliteration	Obliteration	0.1
Upper Weiser River	505394500	No Action	No Action	No Action	No Action	0.2
Upper Weiser River	505395000	No Action	No Action	No Action	No Action	0.1
Upper Weiser River	505573000	Obliteration	Obliteration	Obliteration	Obliteration	0.3
Upper Weiser River	505573500	Obliteration	Obliteration	Obliteration	Obliteration	0.3
Upper Weiser River	505574000	No Action	Obliteration	No Action	No Action	0.2
Upper Weiser River	507871000	Obliteration	Obliteration	Obliteration	Obliteration	0.3
Upper Weiser River	507872000	No Action	Obliteration	No Action	No Action	0.3
Upper Weiser River	507891000	No Action	Obliteration	No Action	No Action	0.2
Upper Weiser River	507891010	No Action	Obliteration	No Action	No Action	0.1
Upper Weiser River	507893000	No Action	No Action	No Action	No Action	0.4
Upper Weiser River	507893020	No Action	No Action	No Action	No Action	0.1
Upper Weiser River	507896000	Obliteration	Obliteration	Obliteration	Obliteration	0.7
Upper Weiser River	507897000	No Action	No Action	No Action	No Action	0.5
Upper Weiser River	507900500	No Action	No Action	No Action	No Action	0.5
Upper Weiser River	507901000	No Action	No Action	No Action	No Action	0.7
Upper Weiser River	507911000	No Action	Obliteration	No Action	No Action	0.3
Upper Weiser River	507920500	No Action	No Action	No Action	No Action	0.2
Upper Weiser River	507932000	Obliteration	Obliteration	Obliteration	Obliteration	0.5
Upper Weiser River	507943000	Obliteration	Obliteration	Obliteration	Obliteration	0.7
Upper Weiser River	507952000	No Action	Obliteration	No Action	No Action	0.1
Upper Weiser River	509312000	Obliteration	Obliteration	Obliteration	Obliteration	<.1

Subwatershed	Id	Alternative B	Alternative C	Alternative C	Alternative E	Miles
Upper Weiser River	509331500	No Action	No Action	No Action	No Action	<.1
Upper Weiser River	509343020	Obliteration	Obliteration	Obliteration	Obliteration	0.1
Upper Weiser River	509771000	Add Effective Closure	Add Effective Closure	Add Effective Closure	Add Effective Closure	0.1
Upper Weiser River	509771010	No Action	No Action	No Action	No Action	0.4
Upper Weiser River	509811000	Obliteration	Obliteration	Obliteration	Obliteration	<.1
Upper Weiser River	509872000	Obliteration	Obliteration	Obliteration	Obliteration	0.7
Upper Weiser River	509872005	Obliteration	Obliteration	Obliteration	Obliteration	0.4
Upper Weiser River	509872008	Obliteration	Obliteration	Obliteration	Obliteration	0.1
Upper Weiser River	509872010	Obliteration	Obliteration	Obliteration	Obliteration	0.2
Upper Weiser River	509872015	Obliteration	Obliteration	Obliteration	Obliteration	0.1
Upper Weiser River	509881000	Obliteration	Obliteration	Obliteration	Obliteration	0.5
Upper Weiser River	509891000	No Action	Obliteration	No Action	No Action	0.2
Upper Weiser River	509892000	No Action	Obliteration	No Action	No Action	0.3
Upper Weiser River	509900500	No Action	No Action	No Action	No Action	0.3
Upper Weiser River	509900510	No Action	No Action	No Action	No Action	0.3
Upper Weiser River	509911020	Temp/Obliteration	No Action	Temp/Obliteration	Temp/Obliteration	0.6
Upper Weiser River	509931000	No Action	Obliteration	No Action	No Action	0.2
Upper Weiser River	509932000	Obliteration	Obliteration	Obliteration	Obliteration	1.0
Upper Weiser River	509933000	No Action	Obliteration	No Action	No Action	0.2
Upper Weiser River	510571000	No Action	No Action	No Action	No Action	0.1
Upper Weiser River	510941000	Obliteration	Obliteration	Obliteration	Obliteration	0.5
Upper Weiser River	514481000	Add Effective Closure	Add Effective Closure	Add Effective Closure	Add Effective Closure	<.1
Upper Weiser River	514481020	No Action	No Action	No Action	No Action	0.1
Upper Weiser River	514741000	No Action	No Action	No Action	No Action	0.2
Upper Weiser River	514742000	No Action	No Action	No Action	No Action	0.3
Upper Weiser River	514751000	Obliteration	Obliteration	Obliteration	Obliteration	0.4
Upper Weiser River	514752000	No Action	Obliteration	No Action	No Action	0.1
Upper Weiser River	514754000	No Action	No Action	No Action	No Action	0.1
Upper Weiser River	514755000	No Action	Obliteration	No Action	No Action	0.1
Upper Weiser River	514761000	Obliteration	Obliteration	Obliteration	Obliteration	1.4
Upper Weiser River	514762000	No Action	No Action	No Action	No Action	0.4
Upper Weiser River	514771000	Obliteration	Obliteration	Obliteration	Obliteration	0.4
Upper Weiser River	514781000	No Action	Obliteration	No Action	No Action	0.2
Upper Weiser River	514781500	Obliteration	Obliteration	Obliteration	Obliteration	0.3
Upper Weiser River	514782000	Obliteration	Obliteration	Obliteration	Obliteration	0.3
Upper Weiser River	514783000	No Action	Obliteration	No Action	No Action	0.3
Upper Weiser River	514784000	No Action	No Action	No Action	No Action	0.2
Upper Weiser River	514784500	No Action	No Action	No Action	No Action	0.4

Subwatershed	Id	Alternative B	Alternative C	Alternative C	Alternative E	Miles
Upper Weiser River	514785000	No Action	No Action	No Action	No Action	0.5
Upper Weiser River	514791000	No Action	Obliteration	No Action	No Action	0.9
Upper Weiser River	514792000	Obliteration	Obliteration	Obliteration	Obliteration	0.4
Upper Weiser River	514801000	No Action	Obliteration	No Action	No Action	1.2
Upper Weiser River	514802000	No Action	Obliteration	No Action	No Action	0.5
Upper Weiser River	514802500	No Action	Obliteration	No Action	No Action	0.2
Upper Weiser River	514803000	No Action	Obliteration	No Action	No Action	0.4
Upper Weiser River	514803010	No Action	Obliteration	No Action	No Action	0.2
Upper Weiser River	514803500	No Action	Obliteration	No Action	No Action	0.5
Upper Weiser River	514803510	No Action	Obliteration	No Action	No Action	0.1
Upper Weiser River	514804000	No Action	Obliteration	No Action	No Action	0.4
Upper Weiser River	514810500	Obliteration	Obliteration	Obliteration	Obliteration	0.2
Upper Weiser River	514811000	Obliteration	Obliteration	Obliteration	Obliteration	0.1
Upper Weiser River	514811500	Obliteration	Obliteration	Obliteration	Obliteration	0.2
Upper Weiser River	514812000	Obliteration	Obliteration	Obliteration	Obliteration	0.3
Upper Weiser River	514831000	Obliteration	Obliteration	Obliteration	Obliteration	0.4
Upper Weiser River	514832000	No Action	Obliteration	No Action	No Action	0.2
Upper Weiser River	514861000	Obliteration	Obliteration	Obliteration	Obliteration	0.4
Upper Weiser River	514862000	Obliteration	Obliteration	Obliteration	Obliteration	0.1
Upper Weiser River	514863000	Obliteration	Obliteration	Obliteration	Obliteration	1.3
Upper West Fork Weiser R.	500902000	Obliteration	Obliteration	Obliteration	Obliteration	0.6
Upper West Fork Weiser R.	500902010	Obliteration	Obliteration	Obliteration	Obliteration	0.1
Upper West Fork Weiser R.	500905000	Obliteration	Obliteration	Obliteration	Obliteration	0.3
Upper West Fork Weiser R.	501151000	No Action	No Action	No Action	No Action	0.2
Upper West Fork Weiser R.	501152000	No Action	No Action	No Action	No Action	0.2
Upper West Fork Weiser R.	501153000	No Action	No Action	No Action	No Action	0.1
Upper West Fork Weiser R.	501153500	Obliteration	Obliteration	Obliteration	Obliteration	<.1
Upper West Fork Weiser R.	501201000	Obliteration	Obliteration	Obliteration	Obliteration	0.3
Upper West Fork Weiser R.	501201000	No Action	No Action	No Action	No Action	0.3
Upper West Fork Weiser R.	501201500	Obliteration	Obliteration	Obliteration	Obliteration	0.9
Upper West Fork Weiser R.	501203000	No Action	No Action	No Action	No Action	0.5
Upper West Fork Weiser R.	501203100	No Action	No Action	No Action	No Action	<.1
Upper West Fork Weiser R.	501231000	Obliteration	Obliteration	Obliteration	Obliteration	0.3
Upper West Fork Weiser R.	501362000	No Action	Obliteration	Obliteration	Obliteration	0.3
Upper West Fork Weiser R.	501362500	No Action	No Action	No Action	No Action	0.2
Upper West Fork Weiser R.	501363000	No Action	No Action	No Action	No Action	0.2
Upper West Fork Weiser R.	501591000	Obliteration	Obliteration	Add Effective Closure	Add Effective Closure	0.6
Upper West Fork Weiser R.	501592500	Obliteration	Obliteration	Obliteration	Obliteration	0.3
Upper West Fork Weiser R.	502745000	No Action	No Action	No Action	No Action	0.6

Subwatershed	Id	Alternative B	Alternative C	Alternative C	Alternative E	Miles
Upper West Fork Weiser R.	502751000	No Action	No Action	No Action	No Action	0.3
Upper West Fork Weiser R.	509481000	Obliteration	Obliteration	Obliteration	Obliteration	0.2
Upper West Fork Weiser R.	509481500	Obliteration	Obliteration	Obliteration	Obliteration	0.5
Upper West Fork Weiser R.	509502000	Obliteration	Obliteration	Obliteration	Obliteration	0.9
Upper West Fork Weiser R.	509502500	Obliteration	Obliteration	Obliteration	Obliteration	1.3
Upper West Fork Weiser R.	509502510	Obliteration	Obliteration	Obliteration	Obliteration	0.4
Upper West Fork Weiser R.	509503000	Obliteration	Obliteration	Obliteration	Obliteration	1.5
Upper West Fork Weiser R.	509503030	Obliteration	Obliteration	Obliteration	Obliteration	0.6
Upper West Fork Weiser R.	509504000	Obliteration	Obliteration	Obliteration	Obliteration	0.2
Upper West Fork Weiser R.	509504500	Obliteration	Obliteration	Obliteration	Obliteration	0.2
Upper West Fork Weiser R.	509531000	Obliteration	Obliteration	Obliteration	Obliteration	0.3
Upper West Fork Weiser R.	509541000	Obliteration	Obliteration	Obliteration	Obliteration	0.5
Upper West Fork Weiser R.	509542000	No Action	No Action	No Action	No Action	0.3
Upper West Fork Weiser R.	509542020	No Action	No Action	No Action	No Action	0.5
Upper West Fork Weiser R.	509542500	No Action	No Action	No Action	No Action	0.5
Upper West Fork Weiser R.	509544000	Obliteration	Obliteration	Obliteration	Obliteration	1.4
Upper West Fork Weiser R.	509544010	Obliteration	Obliteration	Obliteration	Obliteration	0.5
Upper West Fork Weiser R.	509546000	Obliteration	Obliteration	Obliteration	Obliteration	0.2
Upper West Fork Weiser R.	510831000	Obliteration	Obliteration	Obliteration	Obliteration	0.8
Upper West Fork Weiser R.	510831500	Obliteration	Obliteration	Obliteration	Obliteration	0.3
Upper West Fork Weiser R.	510831520	Obliteration	Obliteration	Obliteration	Obliteration	0.4
Upper West Fork Weiser R.	510832000	Obliteration	Obliteration	Obliteration	Obliteration	0.2
Upper West Fork Weiser R.	511321000	No Action	No Action	No Action	No Action	0.5
Upper West Fork Weiser R.	511321020	No Action	No Action	No Action	No Action	0.1
Upper West Fork Weiser R.	511321030	No Action	No Action	No Action	No Action	0.3
Upper West Fork Weiser R.	511323000	No Action	No Action	No Action	No Action	0.3
Upper West Fork Weiser R.	511592000	Obliteration	Obliteration	Obliteration	No Action	0.5
Upper West Fork Weiser R.	512101000	Obliteration	Obliteration	Obliteration	Obliteration	0.3
Upper West Fork Weiser R.	512121000	Obliteration	Obliteration	Obliteration	Obliteration	0.2
Upper West Fork Weiser R.	512141000	Add Effective Closure	Add Effective Closure	Add Effective Closure	Add Effective Closure	0.2
Upper West Fork Weiser R.	512151000	No Action	Obliteration	No Action	No Action	0.2
Upper West Fork Weiser R.	512151010	No Action	Obliteration	No Action	No Action	0.1
Upper West Fork Weiser R.	512321000	Obliteration	Obliteration	Obliteration	Obliteration	0.5
Upper West Fork Weiser R.	512351000	Partial Obliteration	Partial Obliteration	Partial Obliteration	Partial Obliteration	0.7
Upper West Fork Weiser R.	512351010	No Action	No Action	No Action	No Action	0.3
Upper West Fork Weiser R.	513181000	No Action	No Action	No Action	No Action	0.3
Upper West Fork Weiser R.	513182000	No Action	No Action	No Action	No Action	0.3
Upper West Fork Weiser R.	513182000	Obliteration	Obliteration	Obliteration	Obliteration	0.6
Upper West Fork Weiser R.	513183000	Obliteration	Obliteration	Obliteration	Obliteration	0.1

Subwatershed	Id	Alternative B	Alternative C	Alternative C	Alternative E	Miles
Upper West Fork Weiser R.	513183500	Obliteration	Obliteration	Obliteration	Obliteration	0.6
Upper West Fork Weiser R.	513231000	Obliteration	Obliteration	Obliteration	Obliteration	0.8
Upper West Fork Weiser R.	513231010	No Action	No Action	No Action	No Action	1.0
Upper West Fork Weiser R.	513231500	No Action	No Action	No Action	No Action	<.1
Upper West Fork Weiser R.	513232000	No Action	No Action	No Action	No Action	<.1
Upper West Fork Weiser R.	513232500	Obliteration	Obliteration	Obliteration	Obliteration	0.6
Upper West Fork Weiser R.	513232510	Obliteration	Obliteration	Obliteration	Obliteration	0.1
Upper West Fork Weiser R.	513232520	Obliteration	Obliteration	Obliteration	Obliteration	0.4
Upper West Fork Weiser R.	513232530	Obliteration	Obliteration	Obliteration	Obliteration	0.3
Upper West Fork Weiser R.	514211010	Obliteration	Obliteration	Obliteration	Obliteration	0.2
Upper West Fork Weiser R.	514211020	Obliteration	Obliteration	Obliteration	Obliteration	0.1
Upper West Fork Weiser R.	514232000	No Action	No Action	No Action	No Action	0.1
Upper West Fork Weiser R.	514232010	No Action	No Action	No Action	No Action	0.1
Upper West Fork Weiser R.	514392000	Obliteration	Obliteration	Obliteration	Obliteration	0.3
Upper West Fork Weiser R.	No ID	Temp/Obliteration	Temp/Obliteration	Temp/Obliteration	Temp/Obliteration	0.2
Upper West Fork Weiser R.	No ID	No Action	No Action	Temp/Obliteration	No Action	0.7
Upper West Fork Weiser R.	No ID	Temp/Obliteration	Obliteration	Temp/Obliteration	Obliteration	0.8
Upper West Fork Weiser R.	No ID	Temp/Obliteration	Obliteration	Temp/Obliteration	Temp/Obliteration	0.9
Upper West Fork Weiser R.	No ID	Temp/Obliteration	No Action	Temp/Obliteration	No Action	2.5

Table A-6. Project Area System Road Closures.

Road Number	Maintenance Level	Barrier Listed in Forest Service Database[1]	Motorized Use Occurring	Closure Sign	Closure Device Observed	Effective Closure
50012	1	No Entry	Yes	No	Natural	No
50063	1	Veg - Barrier	Unknown	Unknown	NA	Unknown
50076	1	Barricade	Unknown	Yes	Wooden Fence	No
50079	1	Gate	No	No	Rocks/Natural	Yes
50079	1	Veg - Barrier	No	No	Rocks/Natural	Yes
50080	1	Earth Berm	Yes	No	Earth Berm/Natural	Yes
50084	1	No Entry	No	No	None	No
50090	1	Gate	Unknown	Unknown	NA	Unknown
50090	1	Veg - Barrier	Unknown	Unknown	NA	Unknown
50093	1	No Entry	No	Yes	Rocks	Yes
50094	2	No Entry	Unknown	Unknown	NA	Unknown

[1] INFRA, *i.e*. Infrastructure Application.

Road Number	Maintenance Level	Barrier Listed in Forest Service Database[1]	Motorized Use Occurring	Closure Sign	Closure Device Observed	Effective Closure
50120	2	No Entry	No	No	Natural	Unknown
50131	1	Earth Berm	Yes	Yes	Rocks/Earth Berm	Yes
50135	1	No Entry	No	No	None	No
50146	1	Gate	No	No	Earth Berm	Yes
50158	1	Gate	Unknown	Unknown	NA	Unknown
50158	1	Veg - Barrier	Unknown	Unknown	NA	Unknown
50159	1	No Entry	No	No	Natural	Yes
50188	1	No Entry	No	No	Natural	Yes
50274	1	Earth Berm	Yes	No	None/Rocks	No
50274	1	Gate	Yes	No	None/Rocks	No
50333	1	No Entry	No	No	Natural	Unknown
50411	1	Earth Berm	Yes	No	Earth Berm	Yes
50525	2	Gate	No	Yes	Gate	No
50535	2	Barrier	No	Yes	Gate/Fence	Yes
50535	2	Gate	No	Yes	Gate/Fence	Yes
50539	2	Earth Berm	No	No	Gate	Yes
50539	2	Gate	No	No	Gate	Yes
50540	1	Earth Berm	Unknown	Unknown	NA	Unknown
50556	2	No Entry	No	No	Brush/Rocks	Yes
50580	1	No Entry	Yes	No	None	No
50580	1	No Entry	Yes	No	None	No
50586	1	Earth Berm	Yes	No	Earth Berm	Yes
50615	2	No Entry	No	No	None	No
50616	1	No Entry	Unknown	Unknown	NA	Unknown
50648	1	No Entry	Unknown	Unknown	NA	Unknown
50649	1	Earth Berm	No	No	Earth Berm	Yes
50653	2	No Entry	Yes	No	None	No
50657	1	No Entry	Yes	No	None	No
50662	1	Gate	Unknown	Unknown	NA	Unknown
50662	1	Nat - Natural	Unknown	Unknown	NA	Unknown
50668	1	No Entry	Yes	Yes	Natural	Unknown
50669	1	No Entry	Unknown	Unknown	NA	Unknown
50778	2	No Entry	No	Yes	Gate	Yes
50786	1	Earth Berm	Yes	No	None	No
50790	2	No Entry	Unknown	Unknown	NA	Unknown
50791	2	No Entry	Unknown	Unknown	NA	Unknown
50792	1	No Entry	Yes	No	None	No
50793	2	No Entry	Unknown	Unknown	NA	Unknown

Road Number	Maintenance Level	Barrier Listed in Forest Service Database[1]	Motorized Use Occurring	Closure Sign	Closure Device Observed	Effective Closure
50794	2	No Entry	Unknown	Unknown	NA	Unknown
50808	1	No Entry	Yes	No	None	No
50834	2	No Entry	No	Yes	Gate	Yes
50929	2	No Entry	No	No	Recontour	Yes
50930	2	No Entry	No	No	Recontour	Yes
50931	1	Rock - Rock Berm	Yes	Yes	Gate	No
50934	2	No Entry	Yes	Yes	None	No
50935	1	Rock - Rock Berm	No	Yes	Rocks/Natural	Yes
50945	1	Earth Berm	Yes	No	Earth Berm	Yes
50947	2	No Entry	No	No	Natural	Unknown
50948	2	No Entry	No	No	Natural	Unknown
50949	1	No Entry	Unknown	Unknown	NA	Unknown
50950	2	No Entry	No	No	None	No
50951	2	No Entry	Unknown	Unknown	NA	Unknown
50954	1	Gate	Yes	No	Gate	Yes
50974	1	Earth Berm	Unknown	Unknown	NA	Unknown
50974	1	Gate	Unknown	Unknown	NA	Unknown
50978	1	No Entry	Unknown	Unknown	NA	Unknown
50979	1	Earth Berm	Yes	No	Earth Berm	Yes
50980	1	No Entry	Unknown	Unknown	NA	Unknown
50981	1	Earth Berm	Yes	No	Earth Berm	Yes
50982	1	No Entry	Unknown	Unknown	NA	Unknown
50988	1	Earth Berm	Yes	No	Natural	Unknown
50989	2	No Entry	Yes	No	None	No
50990	1	Earth Berm	No	No	Natural/Earth Berm	Yes
50992	2	No Entry	Yes	Unknown	NA	No
50993	1	Earth Berm	Yes	No	Earth Berm	Yes
50994	2	No Entry	Yes	Yes	None	No
51041	1	No Entry	No	Yes	Gate	Yes
51056	1	Earth Berm	No	No	Rocks And Humps	Yes
51079	1	No Entry	Unknown	Unknown	NA	Unknown
51083	1	Gate	No	No	Natural	Unknown
51083	1	Veg - Barrier	No	No	Natural	Unknown
51084	1	No Entry	No	No	Rocks/Natural	Yes
51093	1	Earth Berm	Yes	No	Earth Berm	Yes
51094	1	Veg - Barrier	No	No	Natural	Unknown
51121	2	Gate	Unknown	Unknown	NA	Unknown

Road Number	Maintenance Level	Barrier Listed in Forest Service Database[1]	Motorized Use Occurring	Closure Sign	Closure Device Observed	Effective Closure
51122	2	No Entry	Unknown	Unknown	NA	Unknown
51123	1	No Entry	Yes	No	None	No
51124	1	Earth Berm	No	No	None	No
51127	1	No Entry	No	No	None	No
51128	1	No Entry	No	No	None	No
51129	1	No Entry	No	No	None	No
51131	1	Earth Berm	No	No	None	No
51132	1	No Entry	No	No	Natural	Yes
51156	2	No Entry	No	No	Natural	Unknown
51159	2	No Entry	Unknown	Unknown	NA	Unknown
51160	1	Earth Berm	No	No	Natural	Unknown
51163	1	Veg - Barrier	No	No	Rocks/Trees	Yes
51175	2	Gate	Yes	No	None	No
51178	2	No Entry	Unknown	Unknown	NA	Unknown
51180	1	No Entry	Yes	No	Natural	Unknown
51181	1	Earth Berm	No	No	Natural	Unknown
51183	2	No Entry	Unknown	Unknown	NA	Unknown
51184	1	No Entry	No	No	Earth Berm/Natural	Yes
51212	1	Earth Berm	No	No	None	No
51213	1	No Entry	No	No	None	No
51215	1	Earth Berm	Yes	No	Earth Berm	Yes
51216	1	Earth Berm	Yes	No	Earth Berm	Yes
51227	1	Earth Berm	Yes	Yes	Earth Berm	Yes
51228	1	No Entry	Unknown	Unknown	NA	Unknown
51229	1	No Entry	No	No	Earth Berm/Natural	Yes
51231	1	No Entry	Unknown	Unknown	NA	Unknown
51234	1	No Entry	Yes	No	None	No
51243	1	No Entry	Unknown	Unknown	NA	Unknown
51246	1	Earth Berm	No	No	Earth Berm/Natural	Yes
51247	1	Earth Berm	Yes	No	None	No
51248	1	Veg - Barrier	Unknown	Unknown	NA	Unknown
51249	1	No Entry	Unknown	Unknown	NA	Unknown
51250	1	Earth Berm	No	No	Rocks/Natural	Yes
51251	1	Earth Berm	No	No	Brush/Rocks	Yes
51251	1	Gate	No	No	Brush/Rocks	Yes
51252	1	Earth Berm	No	No	Rocks/Natural	Yes
51253	1	No Entry	No	No	Rocks/Natural	Yes
51255	1	No Entry	Unknown	Unknown	NA	Unknown

Road Number	Maintenance Level	Barrier Listed in Forest Service Database[1]	Motorized Use Occurring	Closure Sign	Closure Device Observed	Effective Closure
51256	1	Earth Berm	No	No	Rocks/ Natural	Yes
51257	1	Earth Berm	No	No	Rocks/Earth Berm/Natural	Yes
51295	1	No Entry	No	No	None	No
51313	1	No Entry	Yes	No	None	No
51322	1	No Entry	Unknown	Unknown	NA	Unknown
51323	1	No Entry	Unknown	Unknown	NA	Unknown
51365	1	No Entry	No	No	Earth Berm	Yes
51366	1	No Entry	Unknown	Unknown	NA	Unknown
51367	1	No Entry	Unknown	Unknown	NA	Unknown
51368	1	No Entry	Yes	No	Earth Berm	Yes
51369	1	Earth Berm	Yes	No	Earth Berm	Yes
51370	1	No Entry	No	No	Earth Berm	No
51418	1	No Entry	Unknown	Unknown	NA	Unknown
51420	1	No Entry	Yes	No	None	No
51423	1	No Entry	Yes	No	None	No
51435	2	No Entry	Unknown	Unknown	NA	No
51435	2	No Entry	Unknown	Unknown	NA	No
51436	2	No Entry	Unknown	Unknown	NA	No
51437	2	No Entry	Unknown	Unknown	NA	No
51438	2	No Entry	Unknown	Unknown	NA	No
51439	2	No Entry	Unknown	Unknown	NA	No
51440	2	No Entry	Unknown	Unknown	NA	No
51441	2	No Entry	Unknown	Unknown	NA	No
51442	2	No Entry	Unknown	Unknown	NA	No
51443	2	No Entry	Unknown	Unknown	NA	No
51446	2	No Entry	No	Yes	Gate	Yes
51447	1	No Entry	Yes	Yes	None	No
51454	2	No Entry	No	No	None	No
51469	2	No Entry	Unknown	Yes	Wooden Fence	No
51471	1	No Entry	Unknown	Unknown	NA	Unknown
51472	1	No Entry	No	No	Downed Tree/Natural	Yes
51477	2	No Entry	Unknown	Unknown	NA	Unknown
51479	2	Gate	No	Yes	Gate	Yes
51480	2	No Entry	Unknown	Unknown	NA	Unknown
51481	2	No Entry	Unknown	Unknown	NA	Unknown
51482	2	No Entry	Unknown	Unknown	NA	Unknown

Road Number	Maintenance Level	Barrier Listed in Forest Service Database[1]	Motorized Use Occurring	Closure Sign	Closure Device Observed	Effective Closure
51483	1	No Entry	Yes	No	None	No
51484	1	No Entry	Yes	No	Earth Berm/Natural	Yes
51485	1	No Entry	Yes	No	None	No
51486	1	No Entry	Yes	No	None	No
51491	1	Earth Berm	Unknown	Unknown	NA	Unknown
51492	1	No Entry	No	Yes	Rocks/Natural	Yes
51590	1	No Entry	Yes	No	None	No
51632	1	No Entry	Unknown	Unknown	NA	Unknown
51659	1	No Entry	Unknown	Unknown	NA	Unknown
51660	1	No Entry	Yes	No	None	No
51661	1	No Entry	Unknown	Unknown	NA	Unknown
51733	1	No Entry	No	No	None	No
51826	1	No Entry	No	No	Natural	Unknown
58017	2	No Entry	Unknown	Unknown	NA	Unknown
50535A	1	No Entry	No	Yes	Boulders	Yes
50535B	1	No Entry	Unknown	Unknown	NA	Unknown
50778R	2	No Entry	No	Yes	None	No

Project Area Gravel Pits

All action alternatives would include re-opening the following the gravel pits described below. These pits are located within the Lost Creek-Boulder Creek project area.

All of the gravel pits have suitable rock for present and foreseeable future expansion needs. Activities in the pits will be coordinated with the Wildlife Biologist for any restrictions or constraints for protection of wildlife. Expansion of the gravel pits outside of the existing disturbed area will require additional coordination with Level 1 and resource specialists such as heritage, botany, and wildlife. Short road sections to access gravel pits may be constructed and added to the NFS; however, these additions may not be paid for by CFLRP funds. Alternate pit locations may be considered when the impacts of developing a new rock source would be less or equal to using an existing source. These alternate pits are located within the Lost Creek-Boulder Creek project area and are discussed further in the next section (*potential gravel pit sites*). Each of the existing gravel pits are briefly described below.

- Fourth of July/Rock Cr Pit - located on the divide between 4th of July Creek and Rock Creek in the SW ¼ of the NE ¼ of Section 12, T. 18 N., R. 2 W. The pit lies on the large flat open area on the west of Road #50136 and is approximately ½ acres in size. The pit is on basalt geology and has been used as a source for pit run. The pit would need to be expanded up to 2 acres for proposed use. The pit would serve as a source of rock for the road system in the 4th of July Creek area.
- Rough Creek Pit - located on Road # 50580 to the west of Rough Creek in the Lower Lost Creek drainage. The pit is on lower basalt geology. The legal location is the SW 1/4 of the NW ¼ of Section 8, T. 18 N., R. 1 W. The pit is about 2 acres in size and has been used as a crushed rock source. It may be suitable for pit run but should be checked on the ground. The pit serves as a rock source for lower Lost Creek and Lower West Fork Weiser River. The pit would require expansion up to 2 acres for removal of additional rock.
- Lost Warm Pit - located in the SE ¼ of the SE ¼ of Section 16, T. 18N, R. 1 W. The pit is about 1 acre in size and is located on the ridge between Lost Creek and Warm Springs Creek drainages. The pit has been used as a pit run source. The pit would require expansion of up to 2 acres. Road #50155 provides access to the pit.
- West Fork Weiser/Grouse Cr. Pit - located in the NE ¼ of the SW ¼ of Section 30, T. 19 N., R. 1 W. The pit is about 1 acre in size and is located off of Road #50123 near the mouth of Grouse Creek. The pit is a potential source for large riprap, and may be suitable for crushing. The pit is about an acre in size could be expanded up to three acres depending on use. This pit would require a short access road (up to 500 feet in length) which would be constructed and added to the NFS.
- Lost Town Pit - located on Road #51124 in the NE ¼ of the SE ¼ of Section 35, T. 20 N., R. 2 W. The pit is about two acres in size and is in diced basalt rock. The pit has been used for crushed rock surfacing. The pit would serve as a gravel source for Upper Lost Creek and Town Creek road systems. The pit will require further development and expansion of up to 3 acres depending on how much gravel is needed.
- Grouse Fawn Pit - located on Road #50123 at the saddle between Grouse Creek and Fawn Creek. Grouse Fawn Pit is located in the NE ¼ of the NE ¼ of Section 10, T. 19 N., R. 2 W., on basalt rock. Depending on the quantities of gravel need the pit would require expansion up to 2 acres.
- Grouse Creek Pit - located on Road #50123 in the SW ¼ of the NW ¼ of Section 11, T. 19 N., R. 2 W., on basalt rock. The approximate 1 ½ acre pit is located between two intermittent streams and future expansion will limited to about ½ acre. The pit would make suitable pit run.

- Sheep Creek Pit - located on Road # 50946 in the Sheep Creek drainage about three miles northwest of Lost Valley Reservoir. The legal description is the SE ¼ of the NE ¼ of Section 18, T. 19 N., R. 1 W. The pit is about three acres in size. The pit is in basalt and has been used for producing crushed aggregate. The pit serves as a gravel source for roads in the Lost Valley Reservoir area. It will require expansion of about 2 acres depending on the amount of gravel required.
- Switchback Pit - located on the divide between Mud Creek drainage and the East Branch on Road #51927. The legal description is the SE ¼ of the NW ¼ of Section 13, T. 19 N., R. 1 W. The pit has been used for crushed aggregate. It is about 2 acres in size and will need to be expanded up to 2 more acres depending on the quantity of gravel needed. The pit serves as a gravel source for roads in the East Branch and Mud Creek areas.
- West Branch Pit - located on the divide between the West Branch and the East Fork of Lost Creek on just to the north of Road #50102. The pit is on basalt geology and is located in the SW ¼ of the SE ¼ of Section 21, T. 20 N., R. 1 W. The pit is about 2 ½ acres in size and has been used to produce crushed aggregate. There is about 400 feet of non-system road that accesses the pit from Road #50934 near its' junction with Road #50102. This access road would be added to the NFS. The pit serves as a gravel source for roads in the upper Lost Creek and the West Branch areas. The pit would require expansion of up to 2 acres depending on the amount of gravel required.
- Yantis Ditch Pit - located in the center of the NE ¼ of Section 10, T 20 N., R. 1 W. The pit is about 3 acres in size and has an approximate 500 feet long non system access road coming off of Road # 50074 at Yantis Ditch on the divide between the East Branch and Boulder Creek. The road to the pit will be added to the Forest's road system and managed as an open road. The pit is used for reoccurring road maintenance activities. The pit is on basalt geology and has been used for producing crushed aggregate. The pit could be expanded an additional two acres depending on the amount of gravel needed. The pit currently is the primary aggregate source for activities in Boulder Creek.

Potential Gravel Pit Sites

The following alternative gravel pit sites have not been developed. The sites were selected based on: basalt geology, shallow rocky soils with surface rock showing, outside of RCAs, and located in strategic areas without nearby rock pits to reduce haul costs. Development of these could be up to three acres in size depending on the amount of gravel needed.

- Lost Bear Pit Site - located in the SW ¼ of the SW ¼ of Section 3, T. 18 N., R. 1 W. on Road #50978. The site is a rocky area without trees above the road on a broad gentle sloping ridge facing the south. The site would provide gravel for Lower Bear Gulch and Lost Creek below Lost Valley Reservoir.
- Bear Gulch Pit Site - located in the NE ¼ of the SW ¼ of Section 34, T. 19 N., R. 1 W. on Road #51243. The site is a rocky area without trees above the road on a gentle to moderately slope facing the south. The site would provide gravel for Upper Bear Gulch and roads on the east and south of Lost Valley Reservoir.
- Lost Valley Pit Site - located in the NW ¼ of the NE ¼ of Section 29, T. 19 N., R. 1 W. on Road #51317. The site is a rocky area without trees above the road on a moderately slope facing the east. The site would provide gravel for roads on the west and south of Lost Valley Reservoir.
- Lost Ridge Pit Site - located in the NW ¼ of the SE ¼ of Section 32, T. 19 N., R. 1 W. on Road #51322. The site is a broad gentle sloped rocky area with few trees facing the south. The site would provide gravel for roads on the east side of the West Fork Weiser River.

- Huckleberry Pit Site - located in the NW ¼ of the SE ¼ of Section 24, T. 21 N. on Road #50083. The site is a broad gentle sloped rocky area with few trees facing the south. The site would provide gravel for roads in the northern portion of the Boulder Creek drainage.
- Railroad Saddle Pit Site - located in the SW ¼ of the NW ¼ of Section 16, T. 20 N. R. 1 W., west of Railroad Saddle off of Road 50662. The site is a broad gentle sloped rocky area with few trees facing the east. Development of the site would include about 300 feet of road. This site would provide gravel to upper Boulder Creek area and could be a replacement for Yantis Ditch Pit.
- East Lost Pit Site - located in the NW ¼ of the NE ¼ of Section 19, T. 20 N., R. 1 W., near the end of road 51178. The site is located on the ridge between upper Lost Creek and East Fork of Lost Creek. Gravel from the site would serve roads in these drainages.

Table A-7. Special Use Permits within the Project Area.

Name	Location
Forgy Hydropower/water diversion	T22N, R1E section 32
Yantis Water Diversion	T20N, R1W section 10
Natural Resource Conservation Service Snotel Site, West Branch	T20N, R1W section 15
Lost Valley Reservoir	T19N, R1W section 27
Idaho Department of Lands, Slaughter Gulch Rd. 50153	T19N, R1W section 27
Idaho Department of Lands, Lost Valley Reservoir Loop Rd. 50089	T19N, R1W sections 21, 22, 26, 27, 35
Idaho Department of Lands, State Rd. 7087	T19N, R1W section 21
Idaho Department of Lands, Slaughter Spur Rd. 58017	T19N, R1W section 27
Scism Spring Development and Pipeline	T18N, R1W section 29

Appendix F – Monitoring and Modeling Forms

Best Management Practices Effectiveness and Implementation Monitoring

Program: Soil and Water Resources

Activity, Practice or Effect: Project monitoring, timber management. Implementation monitoring of timber Best Management Practices (BMPs) and Soil and Water Conservation Practices (SWCPs).

Project Name /Location: Lost Creek-Boulder Creek Landscape Restoration Project area.

Objective: Determine if site-specific BMPs and SWCPs identified in the Record of Decision are being implemented. Provide qualitative assessment of effectiveness of BMPs and SWCPs.

Parameters: Various, depending on activity being monitored.

Methodology: The parameters will be observed occularly. The project hydrologist will review the Record of Decision, mitigation measures and management requirements in the office, develop a BMP checklist, and review the implementation of BMPs on the ground.

Frequency/Duration: When on-site, at least once a year, for the duration of sale-related activities.

Data Storage: All data will be summarized in a monitoring report by the hydrologist at the New Meadows or Council District Office.

Analysis: Field forms and photographs will be used to document the following questions:

1. Which of the Soil and Water BMPs were implemented?
2. Which of the Soil and Water BMPs appear to be effective at this time?
3. Which of the Soil and Water BMPs need to be improved?

Report: All data will be reported yearly on the monitoring summary results table for the Payette National Forest. Written reports will be retained on the District.

Cost: $300/year

Personnel: Hydrologist/Hydrologic Technician

Responsible Individual: New Meadows District Hydrologist

Responsible Official: New Meadows District Ranger

Prepared By: Leigh Bailey **Date:** 9/9/2013

Road Decommissioning Effectiveness /Implementation

Program: Soil and Water Resources

Activity, Practice, or Effect: Effectiveness monitoring

Project Name: Lost Creek-Boulder Creek Landscape Restoration Project

Location: Lost Creek-Boulder Creek Landscape Restoration Project area, New Meadows Ranger District

Objectives: Determine if treatments were effective in allowing for adequate self-maintaining drainage and allowing permitted access. Evaluate vegetative recovery and erosion potential.

Parameters: photo record

Methodology: Sites to be visited by Watershed Specialist and/or District Hydrologist

Frequency/Duration: Sites to be visited once per year for a minimum of one year.

Data Storage: Photos/field notes are stored in digital form in the East Zone District files. Summary monitoring reports are stored in electronic format on the intranet server.

Reports: All data will be reported in the monitoring summary results table for the Payette Forest. Written reports and field notes will be retained on file at an ezone District Office.

Costs: Costs listed are for field season 2012.

District Hydrologist	GS11	1/2 day	$162
Watershed Specialist	GS9	1/2 day	$107

Personnel/Skills Needed: Hydrologist/watershed restoration specialist.

Responsible Individual: District Hydrologist

Responsible Official: New Meadows District Ranger

Prepared by: Leigh Bailey Date: 9/9/2013

Thinning and Prescribed Burning In Riparian Conservation Areas

Program: Soil and Water Resources

Activity, Practice, or Effect: Thinning and Prescribed Burning in Riparian Conservation Areas (RCAs)

Project Name: Lost Creek-Boulder Creek Landscape Restoration Project

Location: Lost Creek-Boulder Creek Landscape Restoration Project RCA units

Objectives: Determine if design features were effective in maintaining coarse woody debris recruitment, shading, soil productivity, water quality and groundcover.

Parameters: photo record

Methodology: Sites to be visited by District Hydrologist and additionally the Fuels specialist and Fisheries Biologist.

Frequency/Duration: Three to seven pre-treatment photopoints to be established. Sites to be visited once after treatment and then once per year for a minimum of one year.

Data Storage: Photos/field notes are stored in digital form in the ezone District files. Summary monitoring reports are stored in electronic format on the intranet server.

Reports: All data will be reported in the monitoring summary results table for the Payette Forest. Written reports and field notes will be retained on file at an East Zone District Office.

Costs:

District Hydrologist	GS11	1/2 day	$162
Fisheries Biologist	GS9	1/2 day	$107
Fuels Specialist	GS9	1/2 day	$107

Personnel/Skills Needed: Hydrologist/watershed restoration specialist.

Responsible Individual: District Hydrologist

Responsible Official: New Meadows District Ranger

Prepared by: Leigh Bailey **Date:** 9/9/2013

Detrimental Disturbance

Program: Soil and Water Resources

Monitoring Item: Detrimental Disturbance (DD) - Project Monitoring, Timber Management, Implementation and Effectiveness of Forest Plan Standards and Guidelines.

Project Name: Lost Creek-Boulder Creek Landscape Restoration Project

Location: Lost Creek-Boulder Creek Landscape Restoration Project area, New Meadows Ranger District.

Priority: High.

Objectives: Before logging operations commence to get an existing condition for any units not already surveyed. Post-logging for units at or above 15% to determine whether the units have DD at levels that require mitigation.

Parameters: Percent DD in activity area.

Methodology: Visual survey of units and calculation of percent DD in activity area.

Frequency/Duration: Once to determine existing condition, additionally if needed to determined post-harvest condition.

Data Storage: The results and the annual monitoring results summary will be documented and stored in the 2500 files on the District. All supporting information (i.e. transects, photographs, etc.) will be stored with the documentation.

Analysis/Report: Field notes from transects and observations as well as photographs will be used to determine the amount of DD. The report will document the results of the analysis and include transect data and photographs as well as recommendations for mitigation.

Personnel: Field: one hydro tech for 3 days.

Projected Cost: $600.

Responsible Individual: Hydrologist or Hydro Technician

Responsible Official: New Meadows District Ranger.

Preparer: Leigh Bailey, Hydrologist.

Date: 9/9/2013

Coarse Woody Debris

Program: Soil and Water Resources

Monitoring Item: Coarse Woody Debris - Project Monitoring, Timber Management, Implementation and Effectiveness of Forest Plan Standards and Guidelines.

Project Name: Lost Creek-Boulder Creek Landscape Restoration Project

Location: Lost Creek-Boulder Creek Landscape Restoration Project area

Priority: High.

Objectives: To determine whether the specified amount, size, and distribution of coarse woody debris for the purpose of maintaining long-term soil productivity remains within cutting units following completion of all harvest-related activities.

Parameters: Amount of coarse (greater than 3 inch diameter) woody debris: tons/acre. Size of coarse woody debris: 3 to 15 inch and greater than 15 inch classes. Distribution (visual/photograph and by transect) of coarse woody debris.

Methodology: Brown's transect methodology for amount, size, and distribution; and visual and photograph to support distribution.

Frequency/Duration: One time per unit on a sample (10 percent of units) of various site preparation/brush disposal treatments.

Data Storage: The results and the annual monitoring results summary will be documented and stored in the 2500 files on the District. All supporting information (i.e. transects, photographs, etc.) will be stored with the documentation.

Analysis/Report: Field notes from transects and observations as well as photographs will be used to determine: 1)whether coarse woody debris guidelines and project prescriptions have been met, 2) whether those guidelines are effective in contributing to the long-term maintenance of soil productivity by supplying wood throughout the unit. The report will document the results of the analysis and include transect data and photographs as well as recommendations for changes in monitoring procedures and management prescriptions, if applicable. The report will be summarized and documented in the annual monitoring results package prepared by watershed personnel.

Personnel: Field: two GS-5's (Watershed or Fuels) for two days each, and one GS-11 Hydrologist for one-half day. The field portion can be done in conjunction with fuels (fuel transects) and/or wildlife personnel (snag monitoring) to increase efficiency. Office: one GS-11 Hydrologist for one day, analysis and write-up.

Projected Cost: $600.

Responsible Individual: Hydrologist or Hydro Technician.

Responsible Official: New Meadows District Ranger.

Preparer: Leigh Bailey, Hydrologist.

Date: 9/9/2013

Implementation Monitoring

Program: Fisheries and Watershed

Monitoring Item: Implementation Monitoring (RCA vegetation treatments)

Project Name: Lost Creek-Boulder Creek Landscape Restoration Project

Location: New Meadows Ranger District: Upper Weiser River, Lost Creek, Upper West Fork Weiser River, and Lower West Fork Weiser River subwatersheds.

Objectives: A subset of RCAs will be visited prior to implementation of project activities. Intermittent streams will be surveyed to determine fish presence (if needed) prior to implementation.

Methodology: Field verify that buffers are appropriate widths and RCA treatments (thinning and prescribed fire) follow the required mitigations and Project Design Features. Fish surveys (either electrofishing surveys or visual surveys) will be conducted on intermittent streams to determine fish presence if no previous surveys have been conducted. RCA widths will be adjusted if necessary prior to implementation.

Frequency/Duration: Implementation monitoring will be conducted prior to and/or coincide with activities within RCAs.

Data Storage: Data will be stored at the New Meadows District Office and at the Payette National Forest Supervisors Office.

Analysis/Report: Summaries of field observations (including photographs) will be prepared and stored on file at the New Meadows District Office and Payette National Forest Supervisors Office. Fish distribution data (electrofishing or other fish surveys) will be stored in the Fisheries Inventory Database and the Payette National Forest Supervisor's Office.

Personnel: Fisheries Biologist/District Hydrologist or qualified designee.

Responsible Official: New Meadows District Ranger.

Preparer: Jason Greenway, New Meadows Fisheries Biologist

Date: 7/15/2013

Effectiveness Monitoring

Program: Fisheries and Watershed

Monitoring Item: Effectiveness monitoring will coincide with activities within and continue for three years

Project Name: Lost Creek-Boulder Creek Landscape Restoration Project

Location: New Meadows Ranger District: Upper Weiser River, Lost Creek, Upper West Fork Weiser River, and Lower West Fork Weiser River Subwatersheds.

Objectives: To determine the effects of RCA treatments (including thinning and prescribed fire) on Watershed Condition Indicators and effectiveness of Project Design Features and Mitigation Measures designed to maintain RCAs and RCA processes.

Methodology: Field verify RCA treatments (thinning and prescribed fire) followed the required mitigations and Project Design Features and document effects to RCAs from project activities. Photos and field notes will be compiled to document monitoring results.

Frequency/Duration: Effectiveness monitoring will occur during activities and annually for three years.

Data Storage: Data will be stored at the New Meadows District Office and at the Payette National Forest Supervisors Office.

Analysis/Report: Summaries of field observations (including photographs) will be prepared and stored on file at New Meadows Ranger District and Payette National Forest Supervisors Office.

Personnel: Fisheries Biologist/District Hydrologist or qualified designee.

Responsible Official: New Meadows District Ranger

Preparer: Jason Greenway, New Meadows Fisheries Biologist

Date: 7/15/2013

Culvert Monitoring

Program: Fisheries

Project Name: Lost Creek-Boulder Creek Landscape Restoration Project

Location: New Meadows Ranger District: Boulder Creek, Upper Weiser River, Lost Creek, Upper West Fork Weiser River, Lower West Fork Weiser River subwatersheds.

Objectives: Document culvert replacements and evaluate fish passage at those sites. In Boulder Creek, monitoring will also fulfill the requirements of the *Stream Crossing Replacement/Removal Programmatic Section 7 Post-Project Checklist.*

Methodology: Culverts will be photographed. Fish passage, the crossing structure and stream channel characteristics will be evaluated.

Frequency/Duration: Culverts will be monitored immediately upon completion, then annually for three years.

Data Storage: Data will be stored at the New Meadows District Office and at the Payette National Forest Supervisors Office.

Analysis/Report: Data and Section 7 Post-project checklists will be stored at the New Meadows District Office and the Payette National Forest Supervisors Office.

Personnel: Fisheries Biologist

Responsible Official: New Meadows District Ranger

Preparer: Jason Greenway, New Meadows Fisheries Biologist

Date: 7/15/2013

Temperature Monitoring

Program: Fisheries

Project Name: Lost Creek-Boulder Creek Landscape Restoration Project

Location: New Meadows Ranger District: Boulder Creek, Upper Weiser River, Lost Creek, Upper West Fork Weiser River, Lower West Fork Weiser River subwatersheds.

Objectives: Monitor stream temperatures in the project area

Methodology: Temperature monitoring sites located in the project area will continue to be monitored by annually placing thermographs. Current sites may be adjusted or additional sites may be added to better monitor any effects of the project on stream temperatures. Methodologies may be adjusted as needed.

Frequency/Duration: 10 Years (annually from 2014 through 2024).

Data Storage: Data will be stored at the New Meadows District Office and at the Payette National Forest Supervisors Office.

Analysis/Report: Temperature monitoring output summaries will be developed through the NRM AqS Temperature analysis tool and stored at the Payette National Forest Supervisors Office.

Personnel: Fisheries Biologist/Forest Fisheries Field Crew

Responsible Official: New Meadows District Ranger

Prepared By: Jason Greenway, New Meadows Fisheries Biologist

Date: 07/15/2013

Threatened, Endangered and Sensitive Wildlife Species

Program: Wildlife

Monitoring Item: Threatened, Endangered, and Sensitive species (TES) surveys including snag retention

Project name: Lost Creek-Boulder Creek Landscape Restoration Project

Location: Lost Creek-Boulder Creek Landscape Restoration Project area

Priority: High

Objectives: Inventory TES with emphasis on Family 2 species (Great gray owl, northern goshawk, flammulated owl, etc.)

Parameters: Presence/Absence

Methodology: Field observation, coordination with IDFG and private landowners

Frequency/Duration: During and after project implementation as

Data Storage: Project Files

Analysis/Report: Written report

Personnel: Wildlife Biologist

Projected Costs: $3000.00 including vehicle

Responsible Individual: District Wildlife Biologist

Responsible Official: New Meadows District Ranger

Preparer: Russ Richards, Wildlife Biologist

Date: 9/9/2013

Road Decommissioning

Program: Wildlife

Monitoring Item: Road building and decommissioning

Project name: Lost Creek-Boulder Creek Landscape Restoration Project

Location: Project area

Priority: High

Objectives: Compliance with road closures elk security

Parameters: Presence/Absence

Methodology: Field observation, coordination with IDFG and private landowners

Frequency/Duration: During and after project implementation as necessary

Data Storage: Project Files

Analysis/Report: Written report

Personnel: Wildlife Biologist

Projected Costs: $2000.00 including vehicle

Responsible Individual: District Wildlife Biologist

Responsible Official: New Meadows District Ranger

Preparer: Russ Richards, Wildlife Biologist

Date: 9/9/2013

Effectiveness Monitoring

Program: Fire and Fuels

Monitoring Item: Effectiveness monitoring will coincide with activities within and continue for the Duration of Implementation

Project Name: Lost Creek-Boulder Creek Landscape Restoration Project

Location: New Meadows Ranger District: Thinning and Burning Units of the Lost Creek-Boulder Creek Project

Objectives: To determine the effects of restoration treatments (including thinning and prescribed fire) on fire regimes (vegetative conditions, fuel conditions, and ecological processes).

Methodology: Measure the tree species composition and structure, snags, and coarse wood, fuel profiles using a combination of fixed radius plots, variable radius plots, and transects. Common Stand Exam (CSE) standards would be used. Photo series guides would be used to determine changes in fuel loadings and aid in determining coarse wood.

Photo points would be established. Photos and field notes would be compiled to document monitoring results.

Frequency/Duration: Effectiveness monitoring will occur before, during, and post treatment. Post treatment may include immediately post treatment, but may also include one year and/or five years post treatment.

Data Storage: Data would be stored at the New Meadows District Office and at the Payette National Forest Supervisors Office.

Analysis/Report: Summaries of field observations (including photographs) would be prepared and stored on file at New Meadows Ranger District and Payette National Forest Supervisors Office.

Personnel: Zone Fire and/or Zone Fuels Specialists or qualified designee.

Responsible Official: New Meadows District Ranger

Preparer: Dustin Doane, Central Zone Fire Management Specialist, PAF

Date: August 23, 2013

Computer Modeling Forms

NEXUS Version 2.0 (NEXUS)

Modeling Program: NEXUS (Scott and Reinhardt 2001). Assessing crown fire potential by linking models of surface and crown fire behavior. Res. Pap. RMRS-RP-29. Fort Collins, CO: U. S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 59 p.

Purpose of the Model: Use NEXUS to compare crown fire potential for different stands, and to compare the effects of alternative fuel treatments on crown fire potential. NEXUS includes several visual tools useful in understanding how surface and crown fire models interact.

Methodology: NEXUS 2.0 is crown fire hazard analysis software that links separate models of surface and crown fire behavior to compute indices of relative crown fire potential.

Assumptions: NEXUS assumes the Rothermel crown model estimates the spread rate of fully-active crown fires. The correlation simulates the flame front spread rate alone, without the effect of spotting. However, the observed spread rates used in the correlation include the effect of short- and medium- spotting on overall fire spread rate. Also, the average spread rate from Rothermel is used, instead of the maximum.

Limitations: Due to a lack of high-quality validation data, NEXUS methods have not been validated. Users should apply results cautiously.

Data Storage: Inputs/outputs for modeling runs are found in the project record.

Output: Relevant model outputs include type of fire, rates of spread, flame lengths, and crown fire indices.

Preparer: Dustin Doane, Central Zone Fire Management Specialist, PAF

Date: August 23, 2013

BOISED Model Description

Modeling Program: BOISED is an operational sediment yield model used by the Boise and Payette National Forests to evaluate alternative land management scenarios. BOISED is a local adaptation of the R1/R4 sediment yield model developed by the Northern and Intermountain Regions of the U. S. Forest Service for application to forested watershed associated with the Idaho Batholith (Reinig et al. 1991). The model predicts changes in erosion over time and adjustments are made to fit the model to geologic parent materials other than granitics.

Purpose of the Model: BOISED can provide an estimation of on-site erosion and produces quantified estimates of average annual sediment yields for the undisturbed condition, past activities, and activities proposed in the future. The model can be used to predict natural sediment rates and sediment yield increases that may result from road construction, timber harvest, and forest fires. BOISED models dominant erosion processes, including surface and mass erosion, for each landtype in a watershed to provide estimates of natural sediment yields for undisturbed watersheds and sediment yields resulting from management activities.

Methodology: The user develops a data input file that contains acres for each landtype, harvest units, large fires, and miles of roads within each subwatershed of a project area. Harvest units, large fires, and road miles are stratified by landtype. Additionally, harvest units are stratified by harvest and yarding methods, and include harvest year. Fire data are also grouped by burn intensity and fire date. Lastly, road miles are separated by construction activity (new construction, light reconstruction, heavy reconstruction, reclaimed), level of use (open, closed, etc.), and include road gradient and construction year. Generally, data is obtained from Geographic Information System (GIS) coverages based on field observations.

Assumptions: The Boise National Forest Modified WRENS (Water Resources Evaluation of Non-point Silvicultural Sources) Procedure was applied to all landtypes on the Boise National Forest to generate a list of natural sediment yields and geologic erosion factors for the BOISED sediment yield model. Arnold (1991) completed estimates for natural sedimentation rates and geologic erosion factors for landtypes that exist on parent geologies other than the granitics of the Idaho Batholith, such as many of those on the Payette National Forest.

Basic erosion rates for road construction and road management were estimated based on the relative amount of soil disturbance compared to new construction.

Sediment from logging, fire, and roads is delivered to the stream system the same year erosion occurs. Not all sediment is necessarily delivered to streams, nor is it necessarily delivered in the same year as erosion occurs.

Boulder Creek Analysis Area - BOISED Model Assumptions

Timing

Past and proposed activities were modeled in BOISED as occurring:

Year	Activity
2015	Road Construction/Reconstruction; 1/4 of Timber Harvest
2016	1/4 of Timber Harvest
2017	1/4 of Timber Harvest

Year	Activity
2018	1/4 of Timber Harvest
2016-2025	Prescription Burning
2019	Road Decommissioning – Proposed

Unknown years of construction for existing roads were assumed to be 1960, as this date would not affect model results for period of interest.

Road use was based on road data compiled for the Forest-wide Travel Plan, with most roads receiving the light use designation, and the main travel routes receiving heavy use.

Road gradients were generally assigned based on USGS 24k topography.

All roads were rounded to the nearest 10th of a mile.

Mitigation

The values used for the mitigation were provided by the USFS. These values were based on sediment reduction data from the publication: "RI-R4" and "BOISED" Sediment Prediction Model Tests Using Forest Roads in Granitics (Ketcheson, Megahan, and King, Journal A WRA, Vol. 35, No.1 Feb. 1999, pages 83-89) and were used in previous modeling efforts in the PNF.

Mitigation 1: The standard mitigation that shows seed and fertilizer at the time of construction.

Mitigation 2: Used for graveled roads. This includes seed and fertilizer at the time of construction.

Mitigation 3: Used for closed roads. This was used only on roads closed prior to the Gaylord North project.

Mitigation 4: Used for all new construction. This reflects all current erosion control techniques that are used.

Mitigation 5 and 6: Used for light and heavy reconstruction, respectively.

Mitigation 7: Used for closed roads as part of the activities planned for the Lost Creek-Boulder Creek project. The roads are shown as light reconstruction, but the sediment delivery rate is reduced to 5% of the open road rates. Closed roads normally show 0%.

All roads received the "seed and fertilize" mitigation, as it is standard in Forest road construction practices. All new roads were shown as receiving the gravel and windrow mitigations. Because there was no year specified by the engineers to indicate the year that gravel was installed on roads, the mitigation was shown as coinciding with the year of construction.

All reconstruction (both light and heavy) and obliteration received mitigation factors that result in lower sediment delivery rates. These mitigations were added to more accurately reflect the activities that actually occur on the ground during these operations.

MITIGATION BREAKDOWN

New Road Construction: Incorporates gravel within RCAs and on sensitive landtypes within 200 feet of non-fishbearing streams, filtered windrows where feasible, seed and fertilizer, mulch and slash.

Road Segment	% of Total Area	Activity	Total Reduction %
Cut Slope	15	Mulch/slash	0.15 * 80 = 12
Contributing Area	40	Netting/filter	0.40 * 80 = 32
Fill Slope	25	Filter/windrow	0.25 * 80 = 20
Tread	20	Gravel	0.20 * 80 = 16
Totals	100	Weighted Average	80%
		Erosion Mitigation Factor	0.2

Light Road Reconstruction: Incorporates seed and fertilizer, erosion control netting and gravel within RCAs and within 200 feet of on-fishbearing streams, road re-alignment (inslope to outslope where feasible).

Road Segment	% of Total Area	Activity	Total Reduction %
Cut Slope	15	Mulch/slash	0.15 * 20 = 3
Contributing Area	40	Netting/filter	0.40 * 30 = 12
Fill Slope	25	Filter/windrow	0.25 * 20 = 5
Tread	20	Gravel	0.20 * 85 = 17
Totals	100	Weighted Average	37%
		Erosion Mitigation Factor	0.63

Heavy Road Reconstruction: Incorporates seed and fertilizer, erosion control netting and gravel within RCAs and within 200 feet of on-fishbearing streams, road re-alignment (inslope to outslope where feasible).

Road Segment	% of Total Area	Activity	Total Reduction%
Cut Slope	15	Mulch/slash	0.15 * 20 = 3
Contributing Area	40	Netting/filter	0.40 * 60 = 24
Fill Slope	25	Filter/windrow	0.25 * 20 = 5
Tread	20	Gravel	0.20 * 85 = 17
Totals	100	Weighted Average	49%
		Erosion Mitigation Factor	0.51

Road Decommissioning: Incorporates ripping the road tread, partial to full recontour, slash, mulch, silt fence at perennial stream crossings, seed and fertilizer.

Road Segment	% of Total Area	Activity	Total Reduction %
Cut Slope	15	Mulch/slash	0.15 * 80 = 12

Road Segment	% of Total Area	Activity	Total Reduction %
Contributing Area	40	Netting/filter	0.40 * 80 = 32
Fill Slope	25	Filter/windrow	0.25 * 80 = 20
Tread	20	Gravel	0.20 * 80 = 16
Totals	100	Weighted Average	80%
		Erosion Mitigation Factor	0.2

Note: For all mitigation practices, an additional 5% reduction is assumed for year 2, and years 3 through 10 receive an additional 10% reduction. These increased reductions result from increasing slope stability and vegetation recruitment.

HARVEST UNITS

Prescription	Option Chosen for BOISED
Shelterwood with reserve	Select Cut
Commercial thin/Free thin	Select Cut
Free thin/Mature plantation	Select Cut
Non-Commercial thin	Select Cut

Only the harvest activities within the last 10 years were entered in BOISED. The sediment delivery rate for any harvest activity older than 6 years declines to 0% over natural. Harvest units were rounded to the nearest 10th of an acre.

WILDFIRES

The 2012 Wesley Fire was mapped in the project area using BARC data.

OTHER

Predicted sediment is routed to single point for the analysis area as the area modeled is a complete watershed.

LIMITATIONS: The BOISED program is intended to be used within small forested watersheds approximately 1 to 50 square miles (mi^2) or 640 to 32,000 acres in size. The Boulder Creek watershed is approximately 39 mi^2 (25,000 acres).

The BOISED model simplifies for analysis an extremely complex physical system and was developed from empirical data supplemented by extrapolation based on professional judgment and our current understanding of erosion and sediment transport processes on forested lands (Potyondy et al. 1991).

It is inappropriate to use the model as a highly reliable predictor of absolute quantities of sediment delivered to streams at specific times. Model outputs are expressed as average annual natural yield and average annual management-induced yield for each year included in the analysis. Because the output is expressed as annual average conditions, actual sediment yields for individual years may exceed modeled values by an order of magnitude or more (Reinig et al. 1991), especially if significant rain on snow events were to occur. It is only appropriate to use model results for comparison of alternative management scenarios.

The routing coefficient is a very broad based value derived for the average of many stream systems and may not accurately reflect sediment transport characteristics of the particular stream system in question (Reinig et al. 1991).

DATA STORAGE: Data files are stored electronically on the hydrologist's computer hard drive and in hard copy with each project record. BOISED output can be reproduced at any time, provided the data input file and the BOISED software is available, so it is not necessary to retain copies electronically or in hard copy format.

OUTPUT: Output data from the BOISED model that was used for this project include:

Natural Sediment Yield: A table listing each landtype within the watershed and the respective acres, square miles, natural sediment yield, total landtype natural sediment yield, average landtype slope, surface and mass sediment delivery ratios, and the geologic erosion factor assigned to each landtype.

Average Natural Sediment Yield: the total natural sediment rate divided by the square miles within the watershed (tons/square mile/year).

Timber Harvest Sediment Yield: estimated sediment production from logging for each of the first three decades following the specified current year.

Fire Sediment Yield: estimated sediment production from fire for each of the first three decades following the specified current year.

Roading Sediment Yield: estimated sediment production from road construction activities for each of the first three decades following the specified current year.

Sediment Yield Summary Table: This is the most useful output for most users. It summarizes sediment yield from all sources for 10 years prior to implementation of the current project and 10 years post-implementation in one table. Total average annual sediment yield for each activity (i.e., logging, fire, roading) in tons per year is listed. Annual Percent Increase Over Natural Sediment – this displays the projected sediment yield for any single year.

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DATE: 9/09/2013

Appendix G - Legal and Regulatory Requirements

This FEIS adheres to the following legal and regulatory requirements and coordination:

Archaeological Resources Protection Act of 1979 (ARPA)

The purpose of ARPA is to protect irreplaceable archaeological resources on federal and Indian lands.

This statute (16 U.S.C. 470aa-470mm; Public Law 96-95 and amendments to it) was enacted

"...to secure, for the present and future benefit of the American people, the protection of archaeological resources and sites which are on public lands and Indian lands, and to foster increased cooperation and exchange of information between governmental authorities, the professional archaeological community, and private individuals (Sec. 2(4)(b))".

The reasons behind enactment include recognition that archaeological resources are an irreplaceable part of America's heritage and that they were endangered increasingly because of the escalating commercial value of a small portion of the contents of archeological sites.

The primary impetus behind ARPA was the need to provide more effective law enforcement to protect public archeological sites. Two improvements over the Antiquities Act, which was the statute designed to provide this protection prior to ARPA's enactment, were more detailed descriptions of the prohibited activities and larger financial and incarceration penalties for convicted violators. Section 6 of the statute describes the range of prohibited actions, including damage or defacement in addition to unpermitted excavation or removal. Also prohibited are selling, purchasing, and other trafficking activities whether within the United States or internationally. Section 6(c) prohibits interstate or international sale, purchase, or transport of any archeological resource excavated or removed in violation of a state or local law, ordinance, or regulation. This is addressed in Chapter 1, section 1.11.

Clean Air Act, as amended in 1990

The purposes of this Act are "…to protect and enhance the quality of the Nation's air resources so as to promote the public health and welfare and the productive capacity of its population; to initiate and accelerate a national research and development program to achieve the prevention and control of air pollution; to provide technical and financial assistance to State and local governments in connection with the development and execution of their air pollution prevention and control programs; and to encourage and assist the development and operation of regional air pollution prevention and control programs." This is addressed in Section 1.13.6, *Air Quality.* More information is available in the Fire and Fuels project record.

Clean Water Act, as amended in 1977 and 1982

The primary objective of this Act is to restore and maintain the integrity of the nation's waters. This objective translates into two fundamental national goals: (1) eliminate the discharge of pollutants into the nation's waters; and (2) achieve water quality levels that are fishable and swimmable. This Act establishes a non-degradation policy for all federally proposed projects. This would be accomplished through implementation of Best Management Practices (BMPs) and Project Design Features.

Water Quality and the Clean Water Act are addressed in Table 2-6 (*Project Design Features/Mitigation Measures*) and Monitoring (Appendix E).

Civil Rights, Consumers, Minorities, and Women

All Forest Service actions have potential to produce some form of impacts, positive or negative, on the civil rights of individuals or groups, including minorities and women. The need to conduct an analysis of these potential impacts is required by Forest Service Manual and Forest Service Handbook direction. This project would not affect civil rights, consumers, minorities or women.

Endangered Species Act of 1973, as amended

The purposes of this Act are to "…provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved, to provide a program for the conservation of such endangered species and threatened species, and to take such steps as may be appropriate to achieve the purposes of the treaties and conventions set forth in subsection (a) of this section." The Act also states: "It is further declared to be the policy of Congress that all Federal departments and agencies shall seek to conserve endangered species and threatened species and shall utilize their authorities in furtherance of the purposes of this Act."

Species	Scientific Name	Status	Determination[1]
Bull Trout	*Salvelinus confluentus*	Threatened Designated Critical Habitat	Likely to Adversely Affect
Spring/Summer Chinook Salmon	*Oncorhynchus tshawytscha*	Threatened Designated Critical Habitat	Likely to Adversely Affect
Steelhead	*Oncorhynchus mykiss*	Threatened Designated Critical Habitat	Likely to Adversely Affect
Canada Lynx	*Lynx canadensis*	Threatened	May Affect, Not Likely to Adversely Affect
Northern Idaho Ground Squirrel	*Spermophilus brunneus brunneus*[2]	Threatened	Likely to Adversely Affect
Wolverine	*Gulo gulo luscus*	Proposed	May Affect, Not Likely to Jeopardize
Yellow-billed cuckoo	*Coccyzus americanus*	Proposed Little Salmon River and Weiser River	No Effect

Executive Order 11990

This order provides direction to federal agencies to protect the nation's wetlands when undertaking all activities. This Executive Order is addressed through Project Design Features.

Executive Order 11988

This order requires that proposed activities must not increase flood hazards and must preserve the resource benefit of floodplains (the ability to dissipate flood flows and moderate flood peaks). This is addressed through Project Design Features.

Executive Order 12898 – Environmental Justice

This order directs each federal agency to make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority and low-income populations. The President also signed a memorandum emphasizing the need to consider these types of effects during NEPA analysis. On March 24, 1995, the Department of Agriculture completed an implementation strategy for the executive order. Where Forest Service proposals have the potential to adversely affect minority or low-income populations disproportionately, effects must be considered and disclosed (and mitigated to the degree possible) through NEPA analysis and documentation. This project is not expected to have adverse effects on minorities or low-income populations.

Executive Order 13007

This order requires that Federal agencies accommodate American Indian and Hawaiian access and ceremonial use of sacred sites, and must avoid adversely affecting the physical integrity of these sites. This is addressed in Chapter 1, section 1.11.

Executive Order 13112

This order requires Federal agencies whose actions may affect the status of invasive species to identify such actions, prevent the introduction of invasive species, detect and respond rapidly to and control populations of such species, provide for restoration of native species and habitat conditions; and promote public education on invasive species. Additionally, Federal agencies are directed to not carry out actions that it believes are likely to cause or promote the introduction or spread of invasive species.

Activities proposed under the Lost-Creek Boulder Creek Project are not anticipated to substantially cause or promote the introduction or spread of invasive species.

Migratory Bird Treaty Act and Executive Order 13186—Responsibilities of Federal Agencies to Protect Migratory Birds

The Migratory Bird Treaty Act (MBTA) protects all migratory birds and their parts (including eggs, nests, and feathers) from “take”. Take is defined in the MBTA to include by any means or in any manner, any attempt at hunting, pursuing, wounding, killing, possessing, or transporting any migratory bird, nest, egg, or part thereof. A migratory bird is any species or family of birds that live, reproduce, or migrate within or across international borders at some point during their annual life cycle. Under the MBTA, taking, killing, or possessing migratory birds is unlawful. The original intent was to put an end to the commercial trade in birds and their feathers that had wreaked havoc on the populations of many native bird species. On January 10, 2001, President William Clinton signed Executive Order (EO) 13186, Responsibilities of Federal Agencies to Protect Migratory Birds, directing executive departments and agencies to take certain actions to further implement the MBTA. The Bald and Golden Eagle Protection Act affords additional protection to all bald (*Haliaeetus leucocephalus*) and golden eagles (*Aquila chrysaetos canadensis*)

The Forest Service and USFWS have entered into a memorandum of understanding (MOU) to promote the conservation of migratory birds as a direct response to EO 13186 (USDA Forest Service and USFWS 2008). One of the steps outlined for the Forest Service is applicable to this analysis, "Within the NEPA process, evaluate the effects of agency actions on migratory birds, focusing first on species of management concern along with their priority habitats and key risk factors." The Forest Service additionally agreed, to the extent practicable, to evaluate and balance benefits against adverse effects, pursue opportunities to restore or enhance migratory bird habitat, and consider approaches for minimizing take that is incidental to otherwise lawful activities. The analysis of effects to migratory birds is included in the Wildlife Specialist Report.

This project complies with the MBTA but may result in an "unintentional take" of individuals during proposed activities. However the project complies with the USFWS Director's Order No. 131 related to the applicability of the MBTA to Federal agencies and requirements for permits for "take". In addition, this project complies with EO 13186 because the analysis meets agency obligations as defined under the 2008, MOU between the Forest Service and USFWS designed to complement EO 13186. EO 13186 requires federal agencies to evaluate the effects of federal actions and agency plans on migratory birds with an emphasis on species of concern. No interagency determinations are to be made for migratory birds as with federally listed species. This information is reviewed with the USFWS; no mechanism is in place for the USFWS to consult on project effects. If new requirements or direction result from subsequent interagency MOUs pursuant to EO 13186, this project will be reevaluated to ensure that it is consistent (refer to the Wildlife Specialist Report in the project record).

Federal Noxious Weed Act of 1974

This Act provides for the control and management of non-indigenous weeds that injure or have the potential to injure the interests of agriculture and commerce, wildlife resources, or the public health. Noxious weed treatment would be conducted according to federal and state law if implemented in conjunction with this project.

Idaho Forest Practices Act

The purpose of the Idaho Forest Practices Act is to insure the continuous growth and harvest of forest trees, and to maintain forest soil, air, water, vegetation, wildlife, and aquatic habitat. The Act requires consistency with forest practice rules for federal, state, and private lands, in order to protect, maintain, and enhance the state's natural resources. Best Management Practices and contract provisions will be used to meet specific Idaho Forest Practices Act regulations. Site-specific mitigation measures are listed in Section 2.10, *Project Design Features/Mitigation Measures*.

Migratory Bird Treaty Act of 1918

The purposes of this act are to establish an international framework for the protection and conservation of migratory birds (all wild species of ducks, geese, brants, coots, gallinules, rails, snipes, woodcocks, crows, and mourning and white-winged doves). The act makes it illegal, unless permitted by regulations to "pursue, hunt, take, capture, purchase, deliver for shipment, ship, cause to be carried by any means whatever, receive for shipment, transportation or carriage, or export, at any time, or in any manner, any migratory bird, included in this Convention…for the protection of migratory birds…or any part, nest, or egg of any such bird" (16 USC 703). The original 1918 statute implemented the 1916 Convention between the United States and Great Britain (for Canada). Later amendments implemented treaties between the

United States and Mexico, Japan, and the Soviet Union (now Russia). This project is consistent with the Migratory Bird Treaty Act.

National Environmental Policy Act of 1969, as amended

The purposes of this act are "To declare a national policy which will encourage productive and enjoyable harmony between man and his environment, to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; to enrich the understanding of the ecological systems and natural resources important to the Nation; and to establish a Council on Environmental Quality" (42 U.S.C. Sec. 4321). The law further states "...it is the continuing policy of the Federal Government, in cooperation with State and local governments, and other concerned public and private organizations, to use all practicable means and measures, including financial and technical assistance, in a manner calculated to foster and promote the general welfare, to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans" [42 U.S.C. Sec. 4331(a)]. The National Environmental Policy Act establishes the format and content requirements of environmental analysis and documentation. This project was designed to adhere to the National Environmental Policy Act.

National Forest Management Act of 1976

This act guides development and revision of National Forest Land Management Plans and has several sections ranging from required reporting the Secretary must submit annually to Congress to preparation requirements for timber sale contracts.

Required project-level National Forest Management Act consistency findings are described in Forest Service Manual 1900, Chapter 1920, Section 1921.12-Vegetation Management Requirements from the National Forest Management Act, and in the Forest Service Handbook 1909.12, Chapter 20, Section 29-Application of Plan to Project. Forest Service Handbook 1909.12, Chapter 60, Section 61 describes Vegetation Management Requirements at the Project Level.

All proposed vegetative treatments are found within Management Prescription Category 5.1: restoration and maintenance emphasis within forested landscapes. All proposed treatments are designed to meet Forest Plan Standards and Guidelines and MA goals and standards applicable to timber.

A. FMS 1921.12-Vegetation Management Requirements from National Forest Management Act

1921.12a Timber Management Requirements

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

1. Soil, slope, or other watershed conditions will not be irreversible damaged. See Sections 3.3 *Watershed Resources* and 3.4 *Soils* in this document.
2. There is assurance that the lands can be adequately restocked within five years after final regeneration harvests (FSM 1921.12g). FSM 1921.12g-Plan Components for Restocking states; "Responsible Officials may authorize harvesting of timber only when there is reasonable assurance the harvested lands can be adequately restocked within 5 years after final regeneration harvest". See Section 3.1 *Forested Vegetation* in this document

3. Streams, streambanks, shorelines, lakes, wetlands, and other bodies of water are protected from detrimental changes in water temperatures, blockages, or water courses, and deposits of sediment where harvests are likely to seriously and adversely affect water conditions. See Sections 3.3 *Watershed Resources* and 3.4 *Soils* in this document.
4. 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. The harvesting systems utilized in the Lost Creek-Boulder Creek Project would be proposed based on the site specific ground needs given soil, water, and other issues are not selected primarily to give the greatest dollar return or the greatest output of timber.

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

1. For clear cutting, it is the optimum method; or where seed tree, shelterwood and other cuts are determined to be appropriate to meeting the objectives and requirements of the relevant plan (16 U.S.C. 1604 (g)(3)(F)(i)). See Section 3.1 *Forested Vegetation* in this document.
2. The interdisciplinary review has been completed and the potential environmental, biological, aesthetic, engineering, and economic impacts have been assessed on each advertised sale area and the cutting methods are consistent with the multiple use of the general area (16 U.S.C. 1604 (g)(3)(F)(ii)). Refer to other resource sections in this DEIS for specific resource assessments. Proposed treatments are consistent with Payette National Forest, Forest Plan 2003.
3. Cut blocks, patches, or strips are shaped and blended to the extent practicable with the natural terrain (16 U.S.C. 1604 (g) (3) (F) (iii)). Design of proposed treatment areas was done with consideration of visual impacts.
4. Cuts are carried out according to the maximum size limit requirements for areas to be cut during one harvest operation (FSM 1921.12e).
5. Timber cuts are carried out in a manner consistent with the protection of soil, watershed, fish, wildlife, recreation, esthetic resources, cultural and historic resources, and the regeneration of timber resources. Refer to the resource sections in Chapter 3 of this DEIS.
6. Stands of trees are harvested according to requirements for culmination of mean annual increment growth (16 U.S.C. 1604 (m); FSM 1921.12f; FSH 1909.12, ch. 60).

National Historic Preservation Act of 1966, as Amended

This act requires federal agencies to consult with the State Historic Preservation Office (SHPO) and American Indian Tribes when non-renewable cultural resources, such as archaeological sites and historic structures, may be affected by a federal action. Section 106 of this act requires federal agencies to review the effects proposed projects may have on cultural resources in the project area.

Several archaeological surveys have been completed for the project area and several archaeological sites have been identified.

Due to the landscape scale of the proposed project, Forest Heritage staff recognized the need to implement a phased identification effort as defined 36CFR800.4(b)(2). The Forest executed a Memorandum of Agreement (MOA PY 2012-2065) with the Idaho SHPO December 2013.

The MOA specifies the following stipulations:

THE FOREST SERVICE SHALL

- Sign a formal NEPA decision authorizing the Lost Creek – Boulder Creek Restoration Project prior to completing Stipulations 2-5.
- Mark all National Register eligible sites for avoidance prior to implementation.
- Conduct systematic archaeological surveys (30-meter transects or less) of the Area of Potential Effects (APE) associated with the Lost Creek – Boulder Creek Restoration Project, in areas either lacking previous inventory or where previous inventory is deemed inadequate. Surveys will conform to the Forests' Sites Identification Strategy and will be reported to the Idaho SHPO utilizing standard reporting formats.
- Evaluate all new cultural resources found within the APE for their National Register eligibility and report those determinations to the Idaho SHPO utilizing standard reporting formats.
- Conduct secondary consultation with Idaho SHPO on each project phase requiring new inventory or if previous inventory is determined to be inadequate. This consultation will follow standard reporting formats.
- Resolve adverse effects to historic properties following regulations found in 36 CFR 800.6.
- Articulate provisions for managing unanticipated discoveries which may occur during project implementation.

If the stipulations of the MOA are met the project will be considered "No Adverse Effect".

Prior to implementation of the Lost Creek Boulder Creek Landscape Restoration Project components, previous identification efforts will be reviewed to determine if they meet current professional standards as defined in The Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation. If these previous efforts do not meet these standards additional surveys will be necessary.

This is addressed in Chapter 1, section 1.11. All implementation guidelines will avoid impacts to all archaeological sites and identified cultural resources (Section 2.10 Project Design Features/Mitigation Measures).

Idaho Stream Alteration Act

All action alternatives would adhere to the requirements of the Idaho Stream Alterations Act and the 404 Permit process of the US Corps of Engineers (Watershed Specialist Report).

Inventoried Roadless Areas and Idaho Roadless Rule

In October 2008, the USDA adopted a state-specific, final rule establishing management direction for designating roadless areas in Idaho (36 CFR 294; 73 Federal Register 61456-61496). The final rule designates 250 Idaho Roadless Areas and establishes five management themes that provide prohibitions with exceptions or conditioned permissions governing road construction, timber cutting, and discretionary mineral development. This project proposed less than one mile of passive trail decommissioning within the Rapid River Inventoried Roadless Area. Vegetation management and prescribed burning activities are proposed immediately adjacent to the Rapid River IRA and its boundary. No impacts to the Rapid River IRA are anticipated with implementation of any of the action alternatives (see project record Iventoried Roadless Area Report). This project is consistent with the Idaho Roadless Rule.

Wild and Scenic Rivers Act

The National Wild and Scenic Rivers System was created by Congress in 1968 (Public Law 90-542; 16 U.S.C. 1271 et seq.) to preserve certain rivers with outstanding natural, cultural, and recreational values in

a free-flowing condition for the enjoyment of present and future generations. There are no river corridors designated as Wild and Scenic Rivers within the project area.

Executive Order 13443, Facilitation of Hunting Heritage and Wildlife Conservation

The project area provides habitat for several game species, including deer (*Odocoileus* spp.), elk (*Cervus canadensis*), black bear (*Ursus americanus*), mountain lion (*Felix concolor*), wolf (*Canis lupus*), and forest grouse. The effects to elk are presented in FEIS, effects to wolves are disclosed in the Wildlife Specialist Report. The project was designed to benefit elk and minimize impacts so that habitat is provided in support of Idaho Department of Fish and Game's population objectives.

Black bears are habitat generalists. While they prefer mixed deciduous-coniferous forests with thick understories, they will utilize a variety of habitats. Special habitat features include fallen logs and debris and standing hollow trees that provide denning sites for bears. Snag and coarse wood desired conditions apply to all management activity areas and provide for these components on the landscape in amounts, distribution, and sizes that were historically expected to exist within each of the PVGs.

Dusky grouse (*Dendragapus obscurus*) and ruffed grouse (*Bonasa umbellus*) are present in the project area. Both grouse species are associated with forested habitats. Habitat use and needs vary between the species. Dusky grouse are found in open coniferous forests, often with a fir component. Douglas-fir provides day roosts and the buds and needles are an important winter food. Subalpine fir (*Abies lasiocarpa*), with its dense foliage, is often selected as a night roost. Ruffed grouse utilize dense forests with some deciduous trees or shrubs. Aspen is an important component of habitat. Young forests provide optimum habitat for the species. This project is expected to reduce tree densities and canopy cover within dense stands, thus, improving conditions for the dusky grouse. There will likely be no change to ruffed grouse habitat from this project.

Prime Farmland, Rangeland, and Forest Land (USDA Regulation 9500-3)

All alternatives are consistent with the Secretary of Agriculture's Memorandum for prime farmland, rangeland, and forest land, The project area does not contain prime farmland or rangeland. "Prime" forest land is a term used only for non-federal land, which would not be affected by proposed activities. Regardless of the alternative selected for implementation, NFS lands would be managed with sensitivity to adjacent private and public lands.

Appendix H – Legacy Tree Guide

Lost Creek-Boulder Creek Project - Legacy Tree Guidelines

Ponderosa Pine, Western Larch, and Douglas-fir

February 20, 2014

Perry and Amaranthus (1997) defined forest legacies as "anything handed down from a pre-disturbance ecosystem". In simplest terms, legacy trees are those that survived the previous stand initiating disturbance event in lethal fire regimes, or survived numerous low to moderate intensity disturbance events in the other fire regimes. Legacy trees tend to emerge above younger trees in some homogenous stand conditions but this can be variable depending on the topography and the time that has elapsed since the last disturbance event.

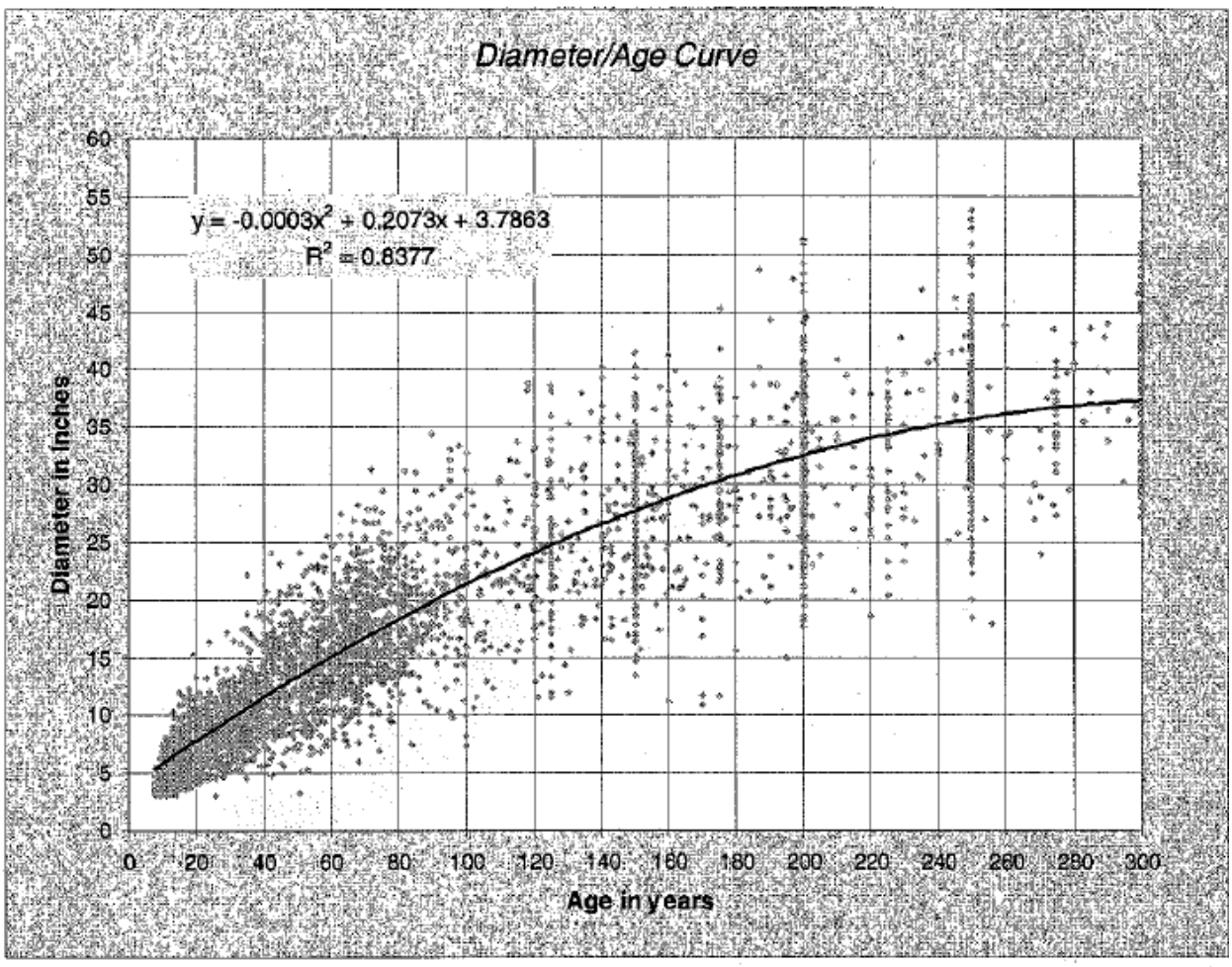
The remainder of this document outlines a process for identifying legacy ponderosa pine, western larch, and Douglas-fir for the Lost Creek-Boulder Creek project on the Payette National Forest. For the purposes of this exercise, it was assumed that all legacy trees should exceed 150 years of age. Based on sampling within the project area, most trees that meet the criteria for legacy trees in this guide are at least 150 years old. This is a good indicator that the guide does identify trees that were resilient enough to survive previous disturbance events.

The basis for this guide is *Identifying Old Trees and Forests in Eastern Washington* (Van Pelt 2008). Modifications have been made, based on professional judgment, inventory data on the Payette National Forest (USDA 2004), and sampling conducted in the Lost Creek-Boulder Creek project area, to provide a simple process to identify legacy trees. As with all field guides, the scoring system provided in this document will not address every situation and application of both professional judgment and common sense will be necessary and is encouraged.

The intent of this guide is to aid in identification of trees that are greater than approximately 150-200 years in age and have survived previous disturbance events.

It is well documented that diameter is a poor indicator of the age of individual trees (VanPelt 2008, Johnston 2014). Payette National Inventory data (USDA Forest Service 2004) also appear to support this conclusion. The chart on the following page (from the Payette National Forest inventory data (USDA 2004)) indicates that the average DBH of a 150 year old tree is approximately 27 inches but could range in DBH from approximately 13 to 42 inches while the average DBH of a 200 year old tree is approximately 33 inches with DBHs ranging from 17 to 52 inches. The table also indicates that it is rare for trees greater than 40 inches DBH to be less than 150 years in age and for trees greater than 50 inches DBH to be less than 200 years in age.

Based on this information the following indicators will be utilized to identify legacy trees in the Lost Creek-Boulder Creek project:



This graph displays the average progression of diameter as trees age. It is not specific to any particular species, as it includes all species from all strata and all working groups.

Data source: individual tree measurements from the 1979, 1991, and 2001 forest inventories. Also included is data from permanent growth plots for young trees. No cull or suppressed trees are included; only trees designated as live, crop, or site trees in the database were used for this graph. Age groupings are apparent around 150, 175, 200, and 250 years because stand exams rarely require exact age measurements beyond a certain age (often around 120-150), and are therefore estimated to the nearest 25 or 50 years.

Ponderosa Pine

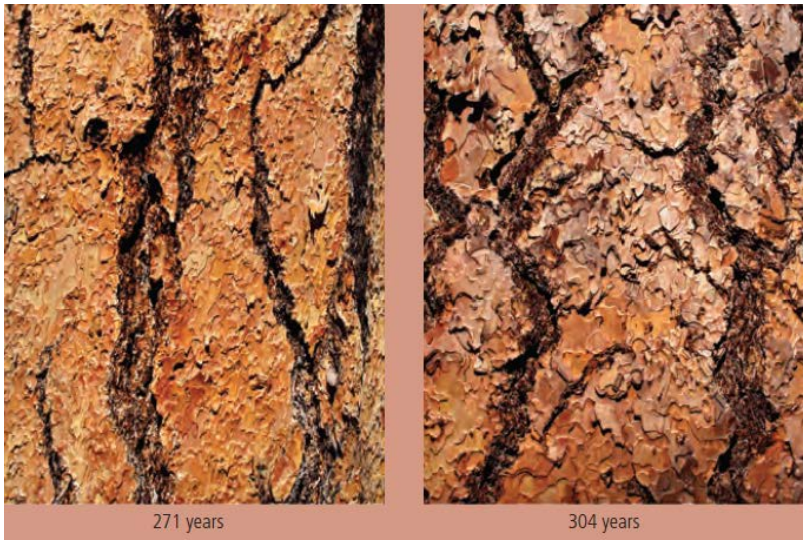
Legacy ponderosa pine tend to have little terminal leader growth, the top of the crown is generally flattened as the lateral branches reach the same height as the terminal, branches throughout the bole become larger in diameter, and lower branches tend to droop. Huckaby et al. (2003) noted that the majority of trees with large fire scarred cat-faces are legacies since most trees established more recently have not been subjected to the same fire regimes as occurred historically.

As with many tree species with wide distributions and ecological amplitudes, age and size of ponderosa pine are not closely correlated (Van Pelt 2008, pg. 75). Because ponderosa pine can grow in vegetation zones ranging from rocky cliffs to riparian zones, the size of the tree reveals little about its age (Van Pelt 2008, pg. 75). However the color and condition of the bark, knot indicators on the main trunk of the tree, and the overall form of the tree's crown do provide an indication of the tree's age.

Unlike trunk diameter, maximum plate width of the bark is well correlated with tree age (Van Pelt 2008, pg. 79). As the tree ages, the outermost bark continues to flake off, causing the colorful plates of outer bark to get wider, while the width of the dark fissures in between those plates remain relatively constant (Figure 1) (Van Pelt 2008, pg. 78). Bark plates substantially wider than the fissures is an indication of old age (Figure 2) (Van Pelt 2008, p. 79).

Figure 1. Bark patterns on mature ponderosa pine. Note residual charcoal in the center photo (Van Pelt 2008, pg. 79).

Figure 2. Bark patterns on old ponderosa pine. The colorful bark plates are generally more than three times wider than the darker fissures that separate them (Van Pelt 2008, pg. 79).



Ponderosa pine growth is whorl-based, like many members of the pine family (Van Pelt 2008, pg. 80). This pattern repeats every year, so that over time the tree will consist of a series of branch whorls, separated by short sections of trunk (Figure 3) (Van Pelt 2008, pg. 80). Over time, branches in the lower crown die due to shading and the lower crown lifts as the tree grows taller (Figure 4) (Van Pelt 2008, pg. 80).

Figure 3. Whorl-based branch growth on a young ponderosa pine (Van Pelt 2008, pg. 81).

Figure 4. The whorl-based branch growth is clearly visible below the receding crown of this ponderosa pine (Van Pelt 2008, pg. 82).

Dead branches are usually present in the lower crowns of 100 year old trees, but eventually fall off, leaving tell-tale signs of where the branches once were (Figure 5) (Van Pelt 2008, pg. 80 and 81). As the tree grows, the bark begins to cover up the locations of these former branches – however, residual evidence may be visible on trees older than 200 years (Figure 6) (Van Pelt 2008, pg. 81). Only in old age are the scars of original branches completely covered (Figure 7) (Van Pelt 2008, pg. 81).

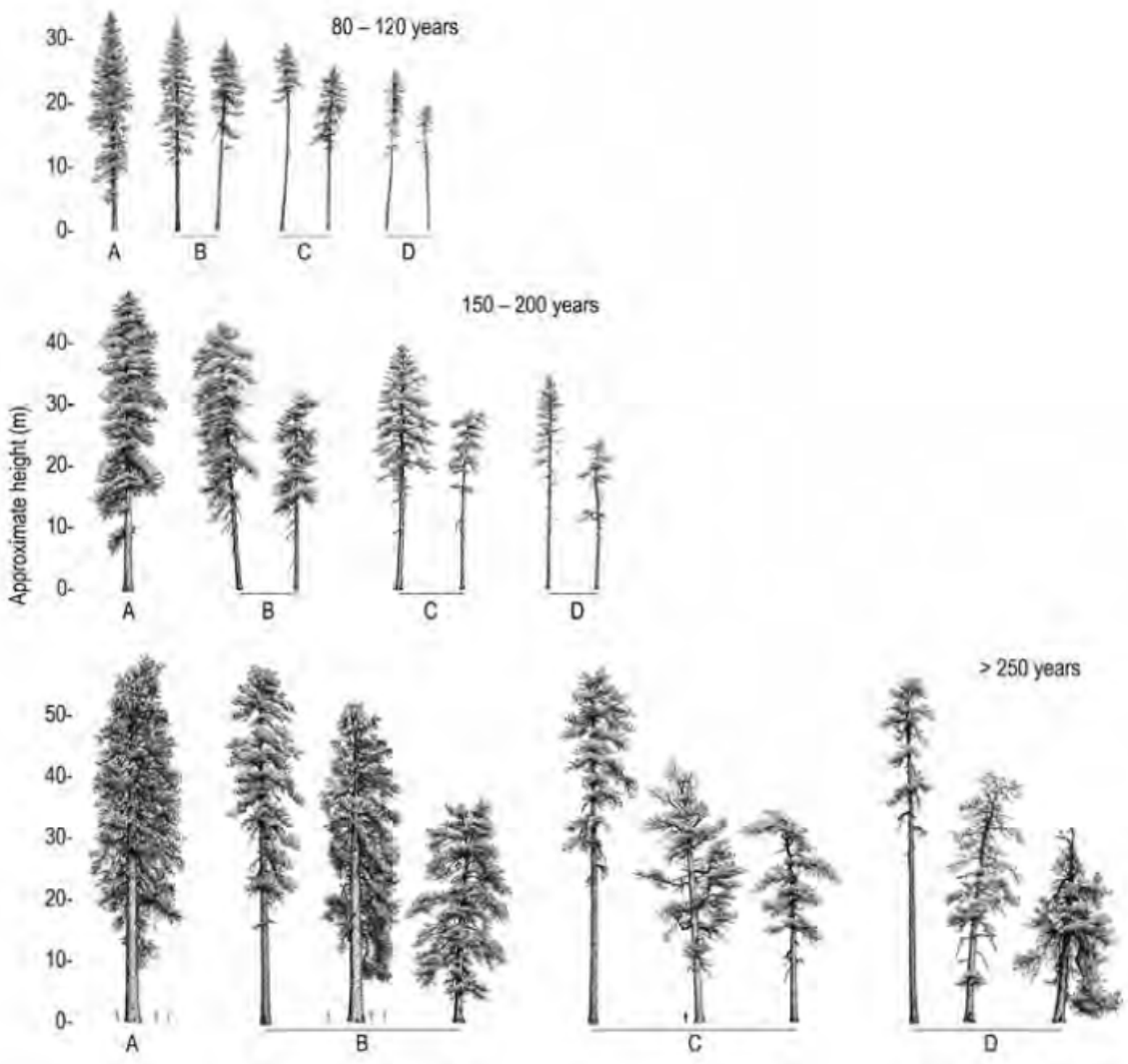
Figure 5. Old branch whorls are still visible decades after the branches have fallen off (Van Pelt 2008, pg. 83).

Figure 6. A century may pass before bark growth completely obscures old branch locations (Van Pelt 2008, pg. 84).

Figure 7. The rough and deeply furrowed bark of old trees shows no indication of where the original branches were located when the tree was younger (Van Pelt 2008, pg. 85).

The appearance of a tree of a given age is affected by a number of factors, including site productivity and overall tree vigor. In general, differences become accentuated with age (Van Pelt 2008, pg. 83). To aid in their identification, a series of crown profiles of trees has been prepared that represent trees of different ages and degrees of vigor (Figure 8) (Van Pelt 2008, pg. 83 and 84).

Figure 8. Ponderosa pine crown form and tree vigor on the Payette National Forest. Idealized forms represent three age and four vigor classes (A-high vigor to D-low vigor). Vigor is a function of site productivity and response to disturbance and environmental stress. More than one individual is shown for vigor classes B through D to illustrate possible variations. Competition-based mortality usually ensures that most trees in vigor classes C and D do not survive to the next age class. The trees depicted are the same scale in the image below.



Rating System for Determining Ponderosa Pine Legacy Trees

Lower Trunk Bark Condition*	**Score**
Dark Bark with Small Fissures	0
Outmost Bark Ridge Flakes Reddish, Fissures Small	1
Colorful Plates, Width About Equal to Fissure Widths	2
Maximum Fissure to Fissure Plate Width ≥6 inches and <10 inches	3
Maximum Fissure to Fissure Plate Width ≥10 inches	5
Knot Indicators on Main Trunk Below Crown	**Score**
Dead Branches Below Main Crown, Whorl Indicators Extending Nearly to Tree Base	0
Old Knot/Whorl Indicators Visible Below Main Crown	1
No Knot/Whorl Indicators Visible	3
Crown Form (Refer to Figure 8)	**Score**
Similar to a Tree in Top Row	0
Similar to a Tree in Middle Row	3
Similar to a Tree in Bottom Row	5
Scoring Key**	
<2	Young Tree
2 - 5	Mature Tree
≥6	Legacy Tree

* Determine bark conditions on the uphill side of tree near dbh.

** Choose one score from each category and sum scores to determine developmental stage.

Western Larch

In some ways, western larch fills the niche occupied by ponderosa pine in environments too cold for the pine to tolerate (Van Pelt 2008, pg. 99). Old, but slender trees can be found rising above canopies of Engelmann spruce and subalpine fir at the upper elevations, elsewhere under more favorable conditions, the larch can dominate forest stands with subordinate mixtures of grand fir, lodgepole pine, and Douglas-fir (Van Pelt 2008, pg. 99 and 101).

Like ponderosa pine, western larch develops very thick bark with age. Mature trees often have the rugged, grayish-brown bark of a Douglas-fir (Figure 9) (Van Pelt 2008, pg. 101). Old trees, greater than 250 years, often develop the richly colored bark of a ponderosa pine (Figure 10) (Van Pelt 2008, pg. 101). However, the bark transformation from young to mature to old is not as consistent, nor as predictable, as that of ponderosa pine (Van Pelt 2008, pg. 101). Ultimately, bark characteristics must be used with other characteristics to determine approximate tree age (Van Pelt 2008, pg. 103)

Figure 9. Mature western larch (left) will often have bark that is difficult to distinguish from Douglas-fir (right) (Van Pelt 2008, pg. 102).

Figure 10. The bark of very old western larches (left) is often a mimic for ponderosa pine bark (right) (Van Pelt 2008, pg. 102).

While larch branches do not grow in a whorl-based manner, young trees still develop tiers of original branches. As the stand develops, lower branches are shed as they become shaded (Van Pelt 2008, pg. 106). Depending on the stand's density, the crown base often will recede at a rate comparable to the height growth of the stand (Van Pelt 2008, pg. 106). Similar to ponderosa pine, as the tree grows, bark begins to cover up the locations of these former branches.

As the maturing stand thins, light is able to penetrate below the living crown (Van Pelt 2008, pg. 106). Larches often respond by producing epicormic branches below the base of the live crown (Van Pelt 2008, pg. 106). Epicormic branches, which start from the cambium and not from terminal buds, often occur at the axils of branches and twigs, the sites of old branch wounds, or other locations where the bark is thin (Figure 11) (Van Pelt 2008, pg. 106). The crowns of mature western larch are often a combination of original and epicormic branches, a pattern that becomes accentuated as trees age (Van Pelt 2008, pg. 106). Because epicormic branches form on the outside of the trunk, they can grow in any direction, even tangential to the trunk. Original branches, in contrast, always form perpendicular (radially oriented) to the trunk. If many epicormic branches start from a common locus, a fan-shaped system of branches will result (Figure 12) (Van Pelt 2008, pg. 108).

Figure 11. Epicormic branches developing below the main crown in a maturing western larch (Van Pelt 2008, pg. 105).

Figure 12. Mature western larch. The graceful crown consists of original branches and an unmistakable radiating fan of epicormic branches adorning the base of the crown (Van Pelt 2008, pg. 106).

Crown complexity, arising from damage due to prolonged mistletoe infections or physical events, can assist in determining tree age (Figure 13) (Van Pelt 2008, pg. 109). In a manner similar to the production of epicormic branches, larches have the ability to produce reiterated trunks following crown damage (Figure 14) (Van Pelt 2008, pg. 109). A series of profiles have been prepared to illustrate the crown structures that can occur in western larch during its lifetime, including the variations imposed by site productivity and elevation (Figure 15).

Figure 13. Large limbs with mature bark are a sign of an old tree. In this case, the twisted shape resulted from an old mistletoe infection (Van Pelt 2008, pg. 109).

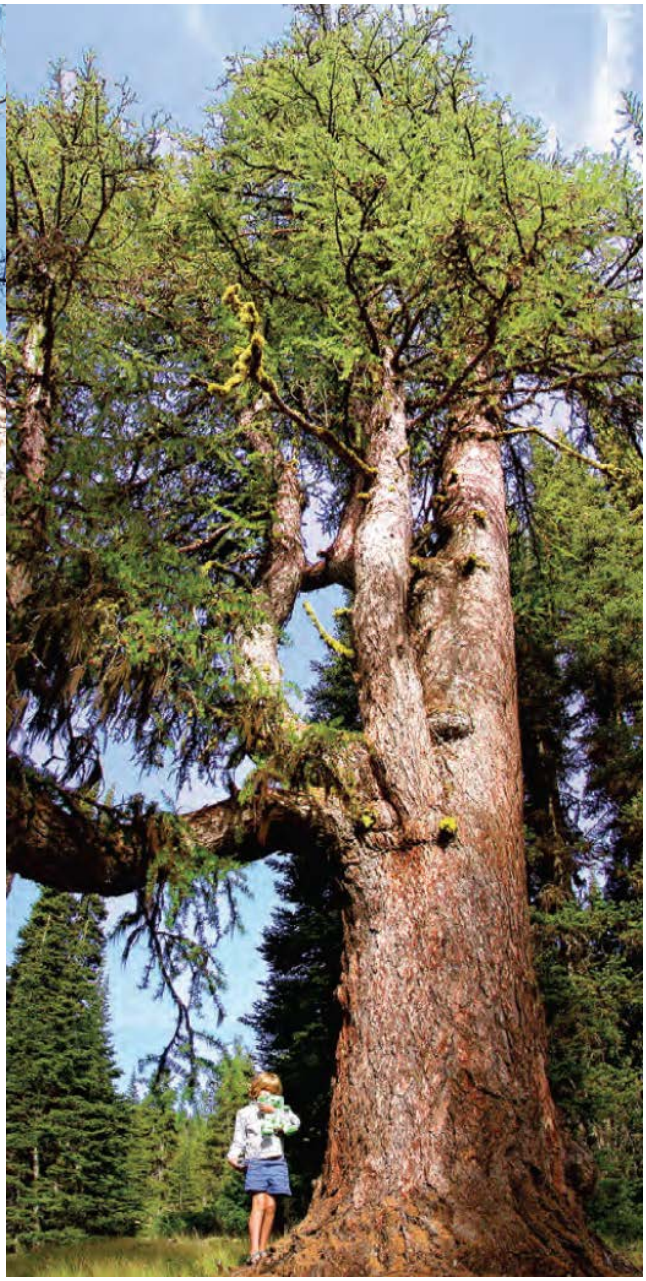
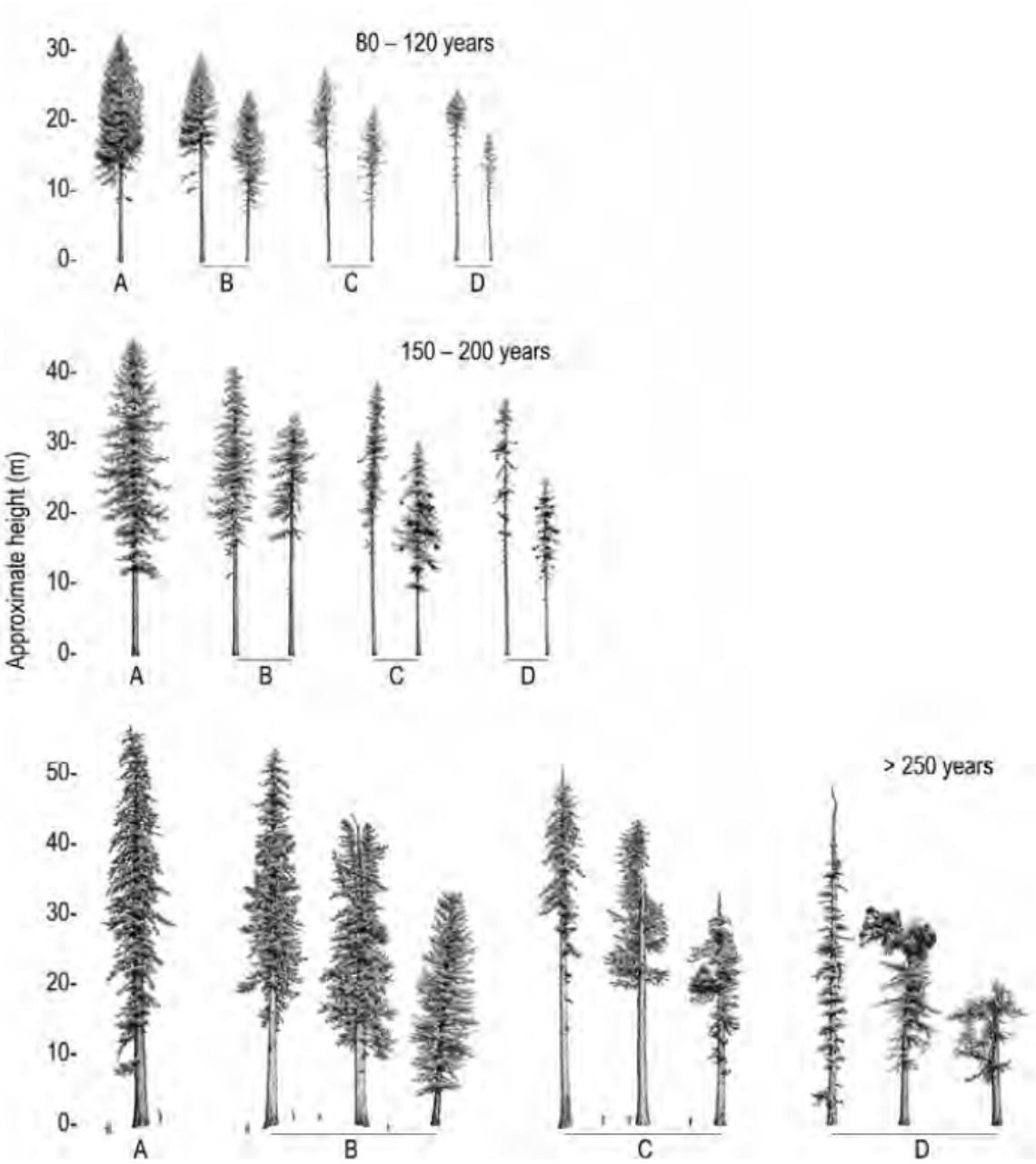


Figure 14. Reiterated trunk formation in western larches. Old trees can recover from crown damage by producing secondary trunks, as illustrated here (Van Pelt 2008, pg. 110).

Figure 15. Western larch crown form and tree vigor on the Payette National Forest. Idealized forms represent three age and four vigor classes (A-high vigor to D-low vigor). Vigor is a function of site productivity and response to disturbance and environmental stress. More than one individual is shown for vigor classes B through D to illustrate possible variations. Competition-based mortality usually ensures that most trees in vigor classes C and D do not survive to the next age class. The trees depicted are the same scale in the image below.



Rating System for Determining Western Larch Legacy Trees

Lower Trunk Bark Condition*	**Score**
Hard, Bony Bark with Small Fissures	0
Hard Bark with Moderately Deep Fissures (2 to 4 inches)	1
Deep Fissures Present (>4 inches)	3
Maximum Fissure to Fissure Plate Width ≥6 inches	3
Knot Indicators on Lower One-third of Tree	**Score**
Branch Stubs Present	0
Old Knot/Whorl Indicators Visible	1
No Knot/Whorl Indicators Visible	2
Lower Crown Indicators	**Score**
No Epicormic Branches	0
Small Epicormic Branches Present	1
Large and/or Gnarly Epicormic Branches Present	2
Crown Form (Refer to Figure 15)	**Score**
Similar to a Tree in Top Row	0
Similar to a Tree in Middle Row	3
Similar to a Tree in Bottom Row	5
Scoring Key**	
<3	Young Tree
3 - 6	Mature Tree
≥7	Legacy Tree

* Determine bark conditions on the uphill side of tree near dbh.

** Choose one score from each category and sum scores to determine developmental stage.

Douglas-fir

This species shares many features with ponderosa pine and western larch; namely, very thick bark at maturity and the ability to withstand moderate to high-intensity fires (Van Pelt 2008, pg. 121). Old Douglas-firs are very fire-resistant, due largely to the protective bark that develops with age (Van Pelt 2008, pg. 123). In contrast, the thin bark of young trees offers little protection, even with low-intensity fires (Van Pelt 2008, pg. 123). The thin bark begins to thicken and develop vertical fissures as trees mature (Van Pelt 2008, pg. 123). For the first 100 to 200 years, the bark is hard and bony, and usually brown to gray (Figure 16) (Van Pelt 2008, pg. 123).

Figure 16. The hard, bony bark of mature trees. Depending on environmental conditions, Douglas-fir bark is either brown or gray. In this case the gray is caused by lichens (Van Pelt 2008, pg. 123).

Bark development in Douglas-fir reflects the wide range of conditions within which it occurs. In the drier parts of its range, particularly within the grand fir and Douglas-fir vegetation zones, the appearance of old trees can be quite different (Figure 17) from what may be seen in much wetter forests in its range. As a general rule, bark thickness in Douglas-fir is a more consistent feature than either the color of the bark on old trees or the physical characteristics of the outer bark.

Douglas-fir growth is whorl-based, like that of ponderosa pine (Van Pelt 2008, pg. 124). In Douglas-fir, the lower crown begins to recede once a stand has achieved canopy closure (Van Pelt 2008, pg. 124). The lower branches die when they become too heavily shaded. Once dead, they often rot at their base and drop off the tree, leaving just a small scar in the otherwise unblemished bark (Figure 18) (Van Pelt 2008, pg. 124).

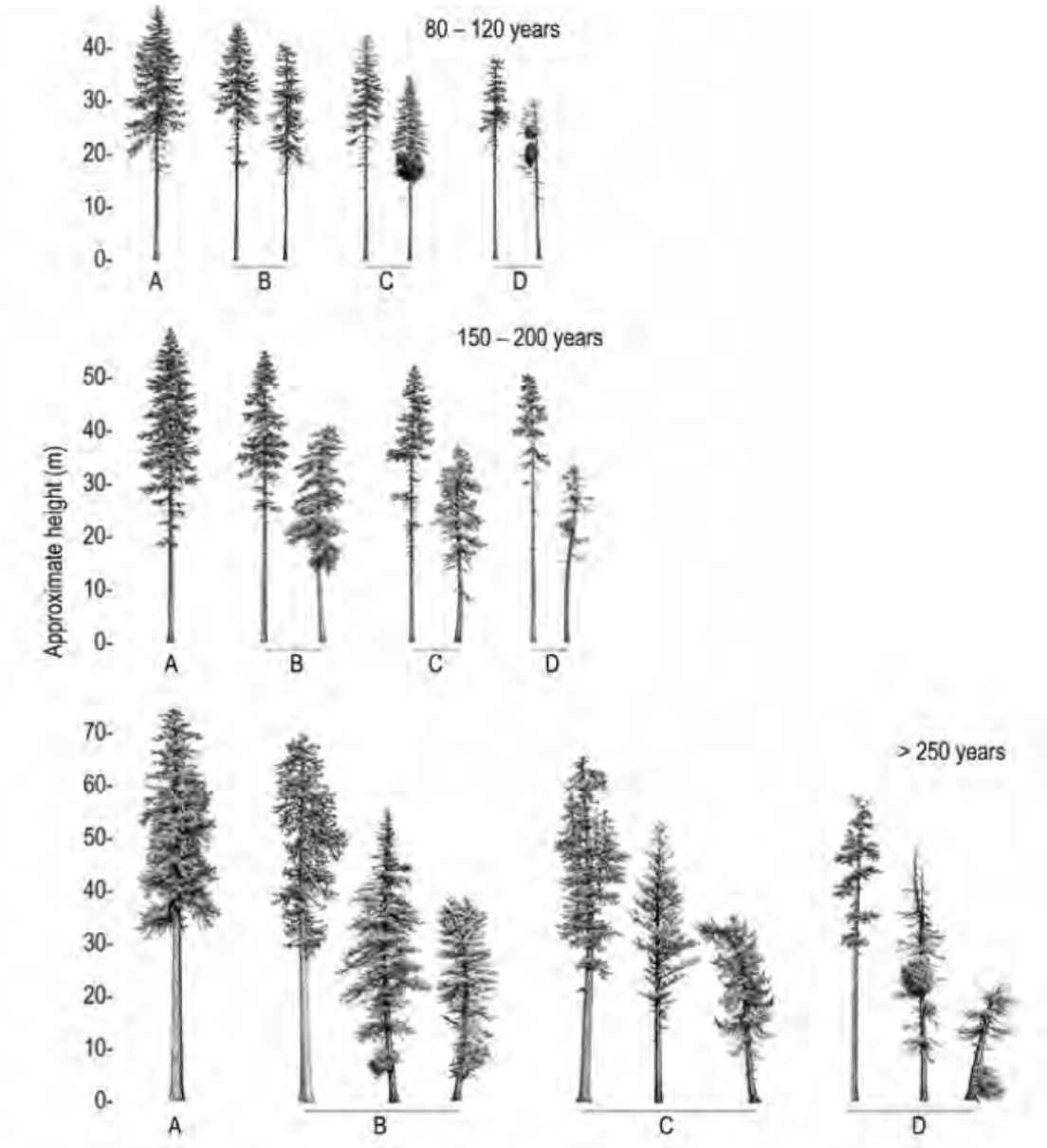
Figure 17. Hard, but thick bark is common on old Douglas-fir in the drier parts of its range (Van Pelt 2008, pg. 125).
Figure 18. Branch scars on a mature Douglas-fir. The locations of original branches that have since died and fallen off are still evident. One original live branch and some epicormic branches are still visible in this photograph (Van Pelt 2008, pg. 126).

Ultimately, branch scars are hidden by the continually expanding trunk after a period of several decades to more than a century (Van Pelt 2008, pg. 124). During that interval, the bark will be thinner at these spots than in the surrounding areas (Van Pelt 2008, pg. 125). If changes in the surrounding forest occur, such as the opening up of the canopy or the death of a neighboring tree, epicormic branches begin to form at some of these old wounds (Van Pelt 2008, pg. 125). Old Douglas-fir trees often have an upper crown of original branches and a lower crown composed of the dead remnants of original branches surrounded by younger epicormic branches and fan-shaped epicormic systems (Figure 19) (Van Pelt 2008, pg. 125).

Figure 19. Epicormic branches. A fan of epicormic branches (visible at the base of the Douglas-fir crown) often indicates a tree in late maturity (Van Pelt 2008, pg. 126).

Crown profiles of Douglas-fir at three age classes and four vigor classes (A-D) are presented in Figure 20 (Van Pelt 2008, pg. 125). As with ponderosa pine and western larch, variation in crown structure is a function of age, productivity, and crown damage (Van Pelt 2008, pg. 125). Naturally, not all of the trees in one series will advance to the next (Van Pelt 2008, pg. 125). For example, competition-based mortality will ensure that most of the trees in classes 1C and 1D do not make it to the next stage (Van Pelt 2008, pg. 125).

Figure 20. Douglas-fir crown form and tree vigor on the Payette National Forest. Idealized forms represent three age and four vigor classes (A-high vigor to D-low vigor). Vigor is a function of site productivity and response to disturbance and environmental stress. More than one individual is shown for vigor classes B through D to illustrate possible variations. Competition-based mortality usually ensures that most trees in vigor classes C and D do not survive to the next age class. The trees depicted are the same scale in the image below.



Rating System for Determining Douglas-fir Legacy Trees

Bark Condition, Lower One-third of Tree*	**Score**
Hard, Bony Bark with Small Fissures	0
Hard Bark with Moderately Deep Fissures (2 to 4 inches)	1
Deep Fissures Present (>4 inches)	3
Knot Indicators on Lower One-third of Tree	**Score**
Branch Stubs Present	0
Old Knot/Whorl Indicators Visible	1
No Knot/Whorl Indicators Visible	3
Lower Crown Indicators	**Score**
No Epicormic Branches	0
Small Epicormic Branches Present	1
Large and/or Gnarly Epicormic Branches Present	3
Crown Form (Refer to Figure 20)	**Score**
Similar to a Tree in Top Row	0
Similar to a Tree in Middle Row	3
Similar to a Tree in Bottom Row	5

Scoring Key**	
<3	Young Tree
3 - 6	Mature Tree
≥7	Legacy Tree

* Determine bark conditions on the uphill side of tree near dbh.

** Choose one score from each category and sum scores to determine developmental stage.

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Appendix J. Glossary and Acronyms

Adventitious - Pertaining to a plant part that develops outside the usual order of time position, or tissue (Helms 1998).

Air quality—The composition of air with respect to quantities of pollution therein; used most frequently in connection with "standards" of maximum acceptable pollutant concentrations.

Allotment (grazing)—Area designated for the use of a certain number and kind of livestock for a prescribed period of time.

Alternative—In an Environmental Impact Statement (EIS) or Environmental Assessment (EA), one of a number of possible options for responding to the purpose and need for action.

Analysis area—One or more areas grouped for purposes of analysis of a specific resource based on common impacts, effects, and social or economic factors.

Aquatic Conservation Strategy (ACS)—"A long-term strategy to restore and maintain the ecological health of watersheds and aquatic ecosystems contained within lands administered by National Forests," page B-48, Forest Plan, 2003 as amended.

Attainment area – Any area that meets the national primary or secondary ambient air quality standard for the pollutant.

Beneficial use (designated use)—Use specified in water quality standards for each waterbody or segment whether or not it is being attained. Types of uses include public water supplies; protection and propagation of fish, shellfish, and wildlife; recreation; agriculture; industry; navigation; marinas; groundwater recharge; aquifer protection; and hydroelectric power.

Best Management Practice (BMP)—Methods, measures, or practices selected by an agency to meet its nonpoint source control needs. BMPs include but are not limited to structural and nonstructural controls and operation and maintenance procedures. BMPs can be applied before, during, and after pollution-producing activities to reduce or eliminate the introduction of pollutants into receiving waters (36 CFR 219.19).

Biological Assessment (BA)—A document required by the Endangered Species Act (ESA), prepared by the fisheries and wildlife biologists to determine the effects of the proposed project on federally listed fish and wildlife species, as well as species proposed for federal listing, and designated and proposed critical habitat for listed species. The document provides an official determination of effects for each species. Following review by the District Ranger and the Forest fisheries or wildlife biologist, the BA is reviewed by the U.S. Fish and Wildlife Service (USFWS) and NOAA Fisheries, through a process called consultation. The USFWS and NOAA Fisheries can suggest changes to the project, or concur with the biologists' determinations and mitigations.

Biological Evaluation (BE)—A document prepared by the fisheries and wildlife biologists to determine if there are effects to listed species. If so, then a BA is completed. The BE also is used to determine the effects of the proposed project on Region 4 sensitive species and migratory bird species habitats.

Biological Opinion (BO)—A document resulting from formal consultation that states the opinion of USFWS or NOAA fisheries as to whether a federal action is likely to jeopardize the continued existence of listed species or their habitat.

Biomass—A renewable energy source, a biological material from living, or recently living organisms, such as wood, waste, (hydrogen) gas, and alcohol fuels. Relevant to this project, biomass includes forest product material derived from woody material, not meeting sawlog specifications that is typically chipped at landings and removed for burning in a plant that utilizes the energy produced during combustion for electricity generation. This material is typically tops of trees, branches and cull material or trees smaller in diameter than those that meet sawtimber specifications (see Sawtimber).

Board foot—A measurement of wood equivalent to a board 1-foot square and 1 inch thick. Usually expressed in terms of thousand board feet (MBF) or million board feet (MMBF).

Broadcast burning—Burning forest fuels as they are, with no piling or windrowing.

Canopy—The more-or-less continuous cover of branches and foliage formed collectively by the crown of adjacent trees and other woody growth.

Canopy closure—Canopy closure represents the total non-overlapping crown closure of all trees in a stand, excluding the seedling tree size class. Trees in the seedling tree size class are used to estimate canopy closure class only when they represent the only structural layer present. Canopy closure classes are based on the following:

- Low = 10–39% canopy closure
- Moderate = 40–69% canopy closure
- High = 70% or more canopy closure

Canopy Cover: Total non-overlapping cover of all trees in a vegetative unit excluding the seedling size class. Trees in the seedling size class are used to estimate canopy cover only when they represent the only structural layer on the site. NOTE: The Forest plan uses the term canopy closure and canopy cover interchangeably. The definition and intent of these terms, as it relates to the desired future conditions specified in Appendix A of the Forest Plan, is better represented by the definition of “canopy cover”. To avoid further confusion in this document, the term canopy cover, when used in this document, follows the above definition.

Commercial thin—Any type of thinning that produces merchantable material at least equal to the value of the direct cost of harvesting.

Condition class—The degree of departure from historical fire regimes and vegetation characteristics.

Critical Habitat— Specific areas within a geographical area occupied by a threatened or endangered species, on which are found physical or biological features essential to conservation of the species.

Cultural resource - An object or definite location of human activity, occupation, or use identifiable through field survey, historical documentation, or oral evidence. Cultural resources are prehistoric, historic, archaeological, or architectural sites, structures, places, or objects and traditional cultural properties. Cultural resources include the entire spectrum of resources for which the Heritage Program

is responsible from artifacts to cultural landscapes without regard to eligibility for listing on the National Register of Historic Places. (FSH 2309.12 (05)).

Cumulative effects—Impacts on the environment that result from the incremental impact of an action when added to other past, present, and reasonably foreseeable future actions. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time.

Cut slope—that portion of the slope that is excavated for road construction, trails, landings, or skidtrails.

DBH (diameter at breast height)—Diameter at breast height. The diameter of a tree measured 4 feet 6 inches above the ground, uphill side.

Denning habitat or sites—Habitat and locations used by mammals during reproduction and rearing of their young, when the young are highly dependent on adults for survival.

Desired Condition (DC)—Also called Desired Future Condition, a portrayal of the land, resource, or social and economic conditions that are expected in 50-100 years if management goals and objectives are achieved. A vision of the long-term conditions of the land.

Detrimental soil disturbance (DD)—The alteration of natural soil characteristics that results in immediate or prolonged loss of soil productivity and soil-hydrologic conditions. Detrimental disturbance can occur from soil that has been displaced, compacted, puddled or severely burned.

Disturbance—Any event, such as wildfire or a timber sale that alters the structure, composition, or function of an ecosystem.

Ecosystem—A naturally occurring, self-maintained system of living and non-living interacting parts that are organized into biophysical and human dimension components.

Ecosystem health—A condition where the components and functions of an ecosystem are sustained over time and where the system's capacity for self-repair is maintained, such that goals for ecosystem uses, values, and services are met.

Effective cover- (in Forest Plan glossary, listed as "effective ground cover")—Vegetation, litter, and rock fragments larger than ¾" in diameter. Expressed as the percentage of material, other than bare ground, covering the land surface. May include live vegetation, standing dead vegetation, litter, cobble, gravel, stones, and bedrock. This cover contributes to preventing soil erosion.

Endangered species—Designated by the USFWS or NOAA Fisheries, in accordance with the Endangered Species Act (ESA), an animal or plant species, or critical habitat, that has been given federal protection status, because it is in danger of extinction throughout all or a significant portion of its natural range.

Endemic—Indiginous to (native) or characteristic of a particular restricted geographical area.

Environmental Impact Statement (EIS)—A document required of federal agencies by the National Environmental Policy Act (NEPA) for major projects or legislative proposals significantly affecting the environment. A tool for decision making, it describes the positive and negative effects of the undertaking and cites alternative actions.

Ephemeral stream—A stream or portion of a stream that flows only in direct response to precipitation or run-off events, and that receives little or no continuous water from springs, snow, or other sources. Unlike

intermittent streams, an ephemeral usually does not have a defined stream channel or banks, and its channel is at all times above the water table.

Epicormic – A shoot arising spontaneously from an adventitious or dormant bud on the stem or branch of a woody plant, often following exposure to increased light levels or fire. (Helms 1998).

Erosion—This includes processes of weathering, solution, corrosion, and transportation of earth and rock materials. Forces involved may be water, ice, wind, and gravity.

Executive Order (EO)—Executive orders are official documents, numbered consecutively, through which the President of the United States manages the operations of the federal government.

Family—A collection of focal species that share similarities in source habitats, with the similarities arranged along major vegetative themes.

Fill—Earth or rock moved during road construction and used to build up portions of the roadway.

Fill slope—The sloping earth surface on the downhill side of a road resulting from roadway excavation.

Fine fuels—Cured grasses, leaves, needles, twigs, and small branches that ignite easily and carry fire rapidly.

Fire Intensity- the rate of heat release from a fire.

Fire regimes—The characteristics of fire in a given ecosystem, including factors such as frequency, intensity, severity, and patch size.

Fire severity—Effects of fire as it relates to vegetation, soils, fuels, or any item measured or discussed.

Focal species – Species that represent the varying characteristics of a landscape's attributes that must be represented in the landscape.

Forest plan—In this document, the Payette National Forest Land and Resource Management Plan (2003).

Forest Road—As defined in Title 23, Section 101 of the United States code, any road wholly or partly within, or adjacent to, that serves the NFS and that is necessary for the protection, administration, and utilization of the NFS and the use and development of its resources.

Fuel treatment—The rearrangement or disposal of natural or activity fuels to reduce the fire hazard. Fuels are defined as both living and dead vegetative materials consumable by fire.

Geographic Information System (GIS)—A computer system that stores and uses spatial (mapable) data.

Goal—As Forest Plan management direction, a goal is a concise statement that helps describe a desired condition, or how to achieve that condition.

Guideline—As Forest Plan management direction, a guideline is a preferred or advisable course of action generally expected to be carried out. Deviation from compliance does not require a Forest Plan amendment (as with a standard), but rationale for deviation must be documented in the project decision document.

Habitat family – A collection of focal species that share similarities in source habitats, with the similarities arranged along major vegetative themes.

Hiding Cover – Defined in this FEIS as "cover" based on strata 23, 24, 34, 35 and "potential cover" based on stratum 32.

IDT or ID Team - (Interdisciplinary Team)—A team of individuals with skills from different disciplines that focus on the same task or project.

Indicator—In effects analysis, a way or device for measuring effects from management alternatives on a particular resource or issue.

Indirect effects—Impacts caused by an action but occurring later in time or farther removed in distance.

Insignificant effect—An insignificant effect is one that cannot by detected, measured, or evaluated in any meaningful way.

Intermittent stream—A stream or portion of a stream that flows only in direct response to precipitation or seasonal run-off, and that receives little or no water from springs or other permanent sources. Unlike ephemeral streams, an intermittent has defined channel bed and bank, and it may seasonally be below the water table.

Irretrievable commitments—Losses of production or use for a period of time. An example is suited timberland being used for a skid trail. Timber growth on the land is irretrievably lost while the land is a skid trail, but the timber resource is not irreversibly lost because the land could grow trees again in the near future.

Irreversible commitments—Permanent or essentially permanent resource uses or losses that cannot be reversed, except in the extreme long term. Examples include minerals that have been extracted or soil productivity that has been lost.

Issue—A public or agency concern about a specific action or area that is addressed in the NEPA process.

Knutson-Vandenburg Act (KV)—In 1930, Congress passed the Knutson-Vandenburg Act (KV Act) to authorize collection of funds (KV Funds) for reforestation and timber stand improvement on areas cut over following a timber sale. Funds are to be used to protect and improve the future productivity of renewable resources on timber sale areas.

Ladder fuels—Continuous vertical vegetation that connects surface fuels to the crown fuels of overstory trees, forming a ladder by which a fire can spread into tree or shrub crowns (DeBano et al. 1998).

Landform—A natural feature of the land surface such as a mountain, valley, or ridge.

Landing—A location (usually cleared and level) where logs are stored or loaded onto logging trucks for transport.

Landslide prone—Land that has a probability of mass movement greater than or equal to 10% during a period of 100 years.

Landtype—A portion of the landscape resulting from geomorphic and climatic processes with defined characteristics having predictable soil, hydrologic, engineering, productivity, and other behavior patterns.

Landtype associations—A grouping of landtypes similar in general surface configuration and origin.

Legacy tree – Older trees that have survived recent disturbances and are a relic of historical communities. These trees are important because they exhibit definitive characteristics and contribute to ecosystem function in a different manner than younger trees.

Long-term—For environmental effects, greater than 15 years. See short-term and temporary.

Long-term road closure—Roads placed in maintenance level 1 and receiving treatments to keep damage to adjacent resources to an acceptable level, and to perpetuate the road to facilitate future management activities. These roads were identified as not needed for project use for more than 15 years. Closure activities could include removing man-made drainage structures, restoring stream channel and banks, providing for drainage (waterbars), scarifying, seeding, and fertilizing.

Lop and scatter—When branches are cut from fallen trees and scattered over the area rather than piled for burning. This allows the slash to lie close to the ground to reduce the fire hazard and accelerate decomposition.

Management Area—A land area with similar management goals and a common prescription, as described in the Forest Plan.

Management direction—Activities that must be carried out to meet the goals of agency management.

Management Indicator Species (MIS)—Representative species whose habitat conditions or population changes are used to assess the impacts of management activities on similar species in a particular area. MIS are generally presumed to be sensitive to habitat changes.

Management Prescription Category (MPC)—Management prescriptions are defined as, "Management practices and intensity selected and scheduled for application on a specific area to attain multiple use and other goals and objectives" (36 CFR 219.3). MPCs are broad categories of management prescriptions that indicate the general management emphasis prescribed for a given area. They are based on Forest Service definitions developed at the national level, and represent management emphasis themes, ranging from Wilderness (1.0) to Concentrated Development (8.0). The national MPCs have been customized during Forest Plan revision to better fit the needs and issues of the Southwest Idaho Ecogroup Forests.

Market value—The price that timber and wood products would bring if sold today.

MBF and MMBF—One thousand board feet, and one million board feet, respectively.

Merchantable (timber)—Trees or stands of size and quality suitable for marketing and utilization.

Minimum Road System (MRS) - The minimum system is the road system determined to be needed to meet resource and other management objectives adopted in the land and resource management plan (36 CFR part 219), to meet applicable statutory and regulatory requirements, to reflect long-term funding expectations, to ensure that the identified system minimizes adverse environmental impacts associated with road construction, reconstruction, decommissioning, and maintenance. The selected alternative in the LC-BC EIS will determine the minimum road system for the analysis area.

Mitigation—Actions to avoid, minimize, reduce, eliminate, or rectify the impact of a management practice.

Mixed conifer—Stands on the Payette National Forest composed primarily of ponderosa pine, Douglas-fir, and grand fir.

Monitoring—The process of collecting information to evaluate if objectives and anticipated results of a management plan are being realized, or if implementation is proceeding as planned.

Mortality (stand)—The number or volume of trees that died because of fire, insects, disease, climatic factors, or competition from other trees or vegetation.

National Environmental Policy Act (NEPA)—The National Environmental Policy Act of 1969 requires environmental analysis and public disclosure of federal actions.

National Fire Plan (NFP)—Strategic and implementation goals, budget requests and appropriations, and agency action plans to address severe wildland fires, reduce fire impacts on rural communities, and ensure effective firefighting capability in the future.

National Forest Management Act (NFMA)—A law passed in 1976 as an amendment to the Forest and Rangeland Renewable Resources Planning Act requiring the preparation of Regional Guides and Forest Plans and the preparation of regulations to guide that development.

National Register of Historic Places (NRHP)—A list of cultural resources that have local, state, or national significance maintained by the Secretary of the Interior.

Native species—Animals or plants that originated in the area in which they live. Species that normally live and thrive in a particular ecosystem.

Natural fuel—The combustible material resulting from natural processes and not directly generated or altered by land management practices.

No action (alternative)—The most likely condition expected to exist if current management practices continue unchanged. The analysis of this alternative is required for federal actions under NEPA.

Non-attainment area – any area that does not meet (or that contributes to ambient air quality in a nearby area that does not meet) the national primary or secondary ambient air quality standard for the pollutant.

Non-point pollution—Pollution that emanates from diffuse and intermittent sources.

Noxious weed—A state-designated plant species that causes negative ecological and economic impacts to both agricultural and other lands within the state.

No-cut zone – The area along intermittent and perennial streams where no trees would be cut.

Obliteration – road decommissioning treatment that fully removes the road prism by recontouring the cut and fill to match the original slope contour and initiates native vegetative cover.

Objective—As Forest Plan management direction, an objective is a concise time-specific statement of actions or results designed to help achieve goals. Objectives form the basis for project-level actions or proposals to help achieve Forest goals. The time frame for accomplishing objectives, unless otherwise stated, is generally considered to be the planning period, or the next 10 to 15 years. More specific dates are not typically used because achievement can be delayed by funding, litigation, environmental changes, and other influences beyond the Forest's control.

Old forest – Old forest is a component of the Large Tree Size Class, with the following general characteristics: a variability in tree size that includes old, large trees with signs of decadence, increasing numbers of snags and coarse woody debris, canopy gaps, and understory patchiness. There are two broad types of old forest in the Southwest Idaho Ecogroup area, --single storied and multi storied. Single storied old forest is characterized by a single canopy layer of large or old trees. These stands generally consist of widely spaced, shade intolerant species, such as ponderosa pine and western larch, that are adapted to a nonlethal, high frequency fire regime. Multi storied old forest is characterized by two or more canopy layers, with large or old trees in the upper canopy. These stands can include both shade tolerant and shade intolerant species, and are typically adapted to a mixed regime of both lethal and nonlethal fires. Because

old forest characteristics have been aggregated into two basic categories, it is generally easier to identify, monitor, and compare the characteristics of these old forest types with desired vegetative conditions than it is with "old growth".

Old growth – Old growth is a defined set of forested vegetation conditions that reflect late successional characteristics, including stand structure, stand size, species composition, snags, downed logs, and decadence. Minimum amounts of large trees, large snags, and coarse wood are typically required. Definitions of old growth generally vary by forest type, depending on the disturbance regimes that may be present. Also, within a given forest type, considerable variability can exist across the type's geographical range for specific ecological attributes that characterize late seral and climax stages of development. This variability among and within multiple (often 10-20) forest types makes old growth characteristics difficult to identify, monitor, and compare to desired vegetative conditions.

Open road density—Miles of open road per square mile.

Opening (created) -Related to vegetation management, openings are created only by planned, even-aged, regeneration timber harvesting. Only those even-aged timber harvest practices that reduce stocking levels to less than 10% create openings. Canopy closure will normally be used to determine stocking levels. Residual stands of mature trees will generally have less than 10% stocking when fewer than 10 to 15 trees per acre remain following harvest.

Overstory—That portion of the trees, in a Forest of more than one story, forming the upper or uppermost canopy.

Overstory removal—Removal of most or all of the trees forming the uppermost canopy in a two or multi storied stand. The remaining trees are of good quality and will be managed as the next crop of trees on the site.

Perennial stream—A stream that typically maintains year-round surface flow, except possibly during extreme periods of drought. A perennial stream receives its water from springs or other permanent sources, and the water table usually stands at a higher level than the floor of the stream.

Potential Vegetation Group (PVG)—Potential vegetation types grouped on the basis of a similar general moisture or temperature environment.

Prescribed fire—Any fire ignited by management actions to meet specific objectives.

Private Road—A road located on private land within the National Forest boundary.

Project area—The area bounding all management activities associated with a project. This area is greater than the total acres treated; some analysis of effects to resources may be appropriate at this scale and others may occur at the activity area level and not include the entire project area.

Proposed action—A proposal made by the Forest Service or other federal agency to authorize, recommend, or implement an action to meet a specific purpose and need.

Proposed species—Species that are proposed to the US Fish and Wildlife Service or NOAA Fisheries for threatened or candidate status.

Proposed endangered—Taxa proposed to be listed as endangered.

Proposed threatened—Taxa proposed to be listed as threatened.

Recontour—Reestablish the natural slope of the land where a road has been located. This may involve pulling the fill material up onto the road surface and/or bringing in material to replace that, which was removed to build the road.

Recreation Opportunity Spectrum (ROS)—A framework for stratifying and defining classes of outdoor recreation environments, activities, and experience opportunities. The settings, activities, and opportunities for obtaining experiences are arranged along a continuum or spectrum divided into six classes--primitive, semiprimitive nonmotorized, semiprimitive motorized, roaded natural, rural, and urban.

Reforestation—The natural or artificial restocking of an area with Forest trees.

Regeneration—The renewal of a tree crop, whether by natural or artificial means. Also, the young crop itself, which commonly is referred to as reproduction.

Restore—For biological and physical resources, restore means to repair, re-establish, or recover ecosystem functions, processes, or components so that they are moving toward or within their range of desired conditions. For the Recreation, Scenic Environment, Heritage, Lands, Special Uses, Wilderness, Roads and Facilities resources, restore means to use management actions to re-establish desired resource conditions.

Revegetation—The reestablishment of plant cover, either naturally or by manually seeding.

Riparian—Relating to the banks of natural watercourses such as rivers or streams.

Riparian Conservation Areas (RCAs)—Portions of watersheds where riparian-dependent resources receive primary emphasis, and management activities are subject to specific goals, objectives, standards, and guidelines. RCAs include traditional riparian corridors, perennial and intermittent streams, wetlands, lakes, springs, reservoirs, and other areas where proper riparian functions and ecological processes are crucial to maintenance of the area's water, sediment, woody debris, nutrient delivery system, and associated biotic communities and habitat.

Ripping—Breaking up a compacted surface to a depth of at least 16 inches.

Road -A motor vehicle travelway over 50 inches wide, unless designated and managed as a trail. A road may be classified, unclassified, or temporary.

Road construction— see New road construction.

Road decommissioning—Activities that result in the stabilization and restoration of unneeded roads to a more natural state (36 CFR 212.1, FSM 7703). The goal for decommissioning of system roads and for treatment of unauthorized routes in this project is to re-establish hillslope hydrologic function and long-term soil productivity. Treatments would include the following:

- Reestablishing former drainage patterns, stabilizing slopes, and restoring vegetation;
- Removing culverts, reestablishing drainages, removing unstable fills, pulling back road shoulders, and scattering slash on the roadbed;
- Completely eliminating the roadbed by restoring natural contours and slopes

Road maintenance— The ongoing upkeep of a road necessary to retain or restore the road to the approved road management objective.

Road Maintenance Level -

Road reconstruction—Activity that results in improvement or realignment of an existing classified road as defined below:

Road improvement — Activity that results in an increase of an existing road's traffic service level expansion of its capacity, or a change in its original design function.

Road maintenance—The ongoing upkeep of a road necessary to retain or restore the road to the approved road management objective.

Road realignment—Activity that results in a new location of an existing road or portions of an existing road and treatment of the old roadway (36 CFR 212.1).

Road reconstruction—Activity that results in improvement or realignment of an existing classified road.

Scoping—The process the Forest Service uses to determine, through public involvement, the range of issues that the planning process should address.

Seasonally open road—Roads open to motorized use on a seasonal basis (e.g., closed during hunting season).

Section 106 review- A review required by the National Historic Preservation Act to determine effects of a federal action on cultural resources.

Section 7 Consultation—Consultation required by the Endangered Species Act with the appropriate jurisdictional agency for a listed species.

Sediment—Any solid material (mineral and organic) that has been moved to a water body and is being transported or has been deposited.

Sensitive species—A Forest Service or BLM designation, sensitive plant and animal species are selected by the Regional Forester or the BLM State Director because population viability may be a concern, as evidenced by a current or predicted downward trend in population numbers or density, or a current or predicted downward trend in habitat capability that would reduce a species' existing distribution. Sensitive species are not addressed in or covered by the Endangered Species Act.

Seral—The unique characteristics of a biotic community that is a developmental, transitory stage in an orderly ecological succession involving changes in species, structure, and community processes with time.

Short term—For environmental effects, greater than 3 to 15 years. See temporary and long term.

Short-term road closure—Roads placed in maintenance level 1 and closed to vehicular traffic for greater than one year. Basic custodial maintenance is performed to keep damage to adjacent resources to an acceptable level, and to perpetuate the road to facilitate future management activities. Emphasis is normally given to maintaining drainage facilities and runoff patterns.

Silvicultural prescription—The method selected to manage a forest stand. Silvicultural prescriptions are broken into broad types, including even aged and uneven aged. Even aged prescriptions include clearcut, seed tree, and shelterwood. Uneven aged prescriptions include individual tree selection and group selection. Other non regeneration prescriptions include thinning and sanitation/salvage cuttings.

Silviculture –The care and tending of stands of trees to meet specific objectives.

Site potential tree height—For delineating RCAs, a site potential tree height is the height that a dominant or co-dominant tree within a stand is expected to attain at an age of 200 years. Outside of RCAs, a site

potential tree height is the average height that the dominant or co-dominant tree within a stand will attain within 100 years.

Site preparation—A general term for removing unwanted vegetation, slash, roots, and stones from a site before reforestation.

Skid trail—A route used by loggers to drag logs from stump to landing.

Skidding—A loose term for hauling trees by sliding, not on wheels, from stump to roadside, deck, skidway, or other landing.

Skyline logging—A logging system using steel cable, a tower, and a powered winch to elevate logs from their position in the woods and carry them suspended to a point where they can be loaded on to trucks.

Slash—The residue left on the ground after timber cutting and/or accumulation as a result of storm, fire, or other damage. It includes logs, uprooted stumps, broken or uprooted stems, branches, twigs, leaves, bark, and chips.

Slash filter windrow-- Woody debris placed along a slope to trap and hold sediment coming off a hill or road above.

Snag—standing dead tree.

Soil compaction—Where one or more of the following conditions occurs in relation to natural: a 50% reduction in macropore space; less than 15% macropore space, total; 15% increase in soil bulk density; or a 40% reduction in hydraulic conductivity.

Soil erosion—Soil erosion is the detachment and transport of soil particles or aggregates by wind, water, or gravity. Management practices may increase soil erosion hazard when they remove ground cover and detach soil particles. .

Soil productivity—Soil productivity includes the inherent capacity of a soil under management to support the growth of specified plants, plant communities, or a sequence of plant communities. Soil productivity may be expressed in terms of volume or weight/unit area/year, percent plant cover, or other measures of biomass accumulation.

Source Habitat—Source habitats are those characteristics of macrovegetation (i.e., cover types and structural stages) that contribute to stationary or positive population growth for a species in a specified area and time (Wisdom et al. 2000).

Species composition—The different tree species within a stand, usually expressed as a percentage within each age class.

Stand—An aggregation of trees or other vegetation occupying a specific area and sufficiently uniform in composition (species), age arrangement, and condition as to be distinguishable from the Forest or other vegetation of land cover on adjoining areas.

Stand density—A measure of how crowded a stand is. Measures of density include: trees per acre, square feet of basal area, stand density index (SDI), and percent of maximum SDI.

Stand initiation—A stage of stand development following a disturbance when new individuals and species continue to appear for several years (Oliver and Larson 1996).

Stand structure—The different sizes and ages of trees within a stand.

Standard—As Forest Plan management direction, a standard is a binding limitation placed on management actions. It must be within the authority and ability of the Forest Service to enforce. A project or action that varies from a relevant standard may not be authorized unless the Forest Plan is amended to modify, remove, or waive application of the standard.

State Historic Preservation Officer (SHPO)—A person appointed by a state's Governor to administer the State Historic Preservation Program.

Subwatershed—An area of land that drains to a common point. A subwatershed is smaller subdivision of a watershed but is larger than a drainage or site.

System roads — Roads wholly or partially within or adjacent to national Forest System lands that are determined to be needed for long-term motor vehicle access. System roads can include state roads, county roads, privately owned roads, NFS roads, and other roads authorized by the Forest Service.

Temporary road—Roads authorized by contract, permit, lease, other written authorization, or emergency operation, that are not intended to be a part of the forest transportation system, that are not necessary for long-term resource management, and that is not a forest road or a forest trail and that is not included in a forest transportation atlas.

Thinning—A cultural treatment made to reduce stand density of trees primarily to improve growth, enhance forest health, or recover potential mortality (Helms 1998). Types of thinning include the following: Crown thinning—the removal of trees from the dominant and codominant crown classes in order to favor the best trees of those same crown classes- synonym thinning from above. Free thinning—The removal of trees to control stand spacing and favor desired trees, using a combination of thinning criteria without regard to crown position. Low thinning—The removal of trees from the lower crown classes to favor those in the upper crown classes—synonym thinning from below.

Threatened species—Designated by the FWS or NOAA Fisheries, in accordance with the Endangered Species Act; a plant or animal species, or critical habitat, given federal protection, because it is likely to become endangered throughout all or a significant portion of its range within the foreseeable future.

Timber sale contract—The binding document between the Forest Service and timber purchaser that states, among other things, how the sale will be logged.

Timber Stand Improvement (TSI)—An intermediate treatment made to improve the composition, structure, condition, health, and growth of even or uneven aged stands.

Total Maximum Daily Load (TMDL)—TMDL is the sum of waste load allocations for point sources, non-point sources, natural background, and a margin of safety. A TMDL specifies the amount of a pollutant that needs to be reduced to meet water quality standards set by the state. TMDL is used in a process to attain water quality standards that (1) identifies water quality problems and contributing pollutant sources, (2) allocates pollution control responsibilities among sources in the watershed, and (3) provides a basis for taking actions needed to restore a water body.

Total Soil Resource Commitment (TSRC)—A measure of how much land in a project area is converted to a non-productive condition (less than 40% of natural productivity rates) for 50 years or more. Examples are permanent skid trails, landings, roads, campgrounds, administrative sites, and recreational trails.

Tractor logging—Any logging method, which uses a tractor as the motive power for transporting logs from the stumps to a collecting point—whether by dragging or carrying the logs.

Unauthorized Road or Trail—Roads on NFS lands that are not managed as part of the forest transportation system, such as unplanned roads, abandoned travelways, and off-road vehicle tracks that have not been designated and managed as trails. Non-system roads also include those roads that were once under permit or other authorization and were not decommissioned upon the termination of the authorization (36 CFR 212.1).

Underburn—A light broadcast burn under an existing forest canopy. A fire prescribed to reduce fuels without damaging existing trees.

Watershed Condition Framework (WCF) – The WCF is a comprehensive approach for proactively implementing integrated restoration on watersheds located on national forests and grasslands. It provides the Forest Service with an outcome-based performance measure for documenting improvement to watershed condition at forest, regional, and national scales.

Watershed Condition Indicator (WCI)—WCIs are an integrated suite of aquatic (including biophysical components), riparian (including riparian –associated vegetation species), and hydrologic (including uplands) condition measures that are intended to be used at a variety of watershed scales. They assist in determining the current condition of a watershed and should be used to help design appropriate management actions, or to alter or mitigate proposed and or ongoing actions, to move watersheds toward desired conditions. WCIs represent a diagnostic means to determine factors of current condition and assist in determining future conditions associated with implementing management actions or natural restoration over time.

Acronyms

ACS – Aquatic Conservation Strategy

AMP – Allotment Management Plan

AOI – Annual Operating Instructions

AOP – Aquatic Organism Passage

ATV – All Terrain Vehicle

BA – Biological Assessment

BMP – Best Management Practice

BO – Biological Opinion

CEQ – Council on Environmental Quality

CFLRA - Collaborative Forest Landscape Restoration Act

CFR – Code of Federal Regulations

CT-FT – Commercial Thin-Free Thin

CT-MP – Commercial Thin Mature Plantations

DBH – diameter breast height

DCH – Designated Critical Habitat

DEIS – Draft Environmental Impact Statement

DD – Detrimental Disturbance

ECA – Equivalent Clearcut Area

EIS – Environmental Impact Statement

EPA – Environmental Protection Agency

ESA – Endangered Species Act

FA – Functioning Appropriately

FEAST - Forest Economic and Analysis Spreadsheet Tool

FEIS – Final Environmental Impact Statement

FLOW – Flammulated Owl

FMO – Fuels Management Officer

FR – Functioning at Risk

FRCC – Fire Regime Condition Class

FSH – Forest Service Handbook

FT-PC – Free Thin – Patch Cut

FUR – Functioning at Unacceptable Risk

GFSS - grass/forb/shrub/seedling

GIS – Geographic Information System

GRAIP - Geomorphic Road Analysis and Inventory Package

HRV – Historic Range Of Variability

ICBEMP –Interior Columbia Basin Ecosystem Management Project

IDFG – Idaho Department Of Fish And Game

IRA – Inventoried Roadless Area

ISCWCS - Idaho State Comprehensive Wildlife Conservation Strategy

LSP – Landslide Prone Area

LTC – Long Term Closure

LWD – Large Woody Debris

MA – Management Area

MIS – Management Indicator Species

MPC – Management Prescription Category

MRS – Minimum Road System

MVUM – Motor Vehicle Use Map

NCT – Non-Commercial Thinning

NFMA – National Forest Management Act

NIDGS – Northern Idaho Ground Squirrel

NOGO – Northern Goshawk

NOI – Notice of Intent

OHV – Off-Highway Vehicle

PFC – Payette Forest Coalition

PVG – Potential Vegetation Group

RCA – Riparian Conservation Area

PDF – Project Design Feature

ROD – Record of Decision

ROS – Recreational Opportunity Spectrum

RNA – Research Natural Area

SHPO – State Historic Preservation Office

SOSI – Species of Special Interest

SOPA – Schedule of Proposed Actions

SWCP – Soil and Water Conservation Practices

SWRA – Soil, Water, Riparian, and Aquatic Resources

TAP – Travel Analysis Process

TEPC – Threatened, Endangered, Proposed and Candidate Species

TES – threatened or endangered species

TMDL – Total Daily Maximum Load

TSA – Timber Sale Administrator

TSRC – Total Soil Resource Commitment

USACE – United States Army Corps of Engineers

USDA – United States Department Of Agriculture

USFWS – US Fish and Wildlife Service

VQO – Visual Quality Objective

WCC – Watershed Condition Classification

WCF – Watershed Condition Framework

WCI - Watershed Condition Indicator

WCS – Wildlife Conservation Strategy

WFW – West Fork Weiser River