

Pacific Northwest Region Aquatic Restoration Project Consideration of Comments Received on the Environmental Assessment

The Forest Service accepted comments on the Pacific Northwest Region Aquatic Restoration Project Environmental Assessment (EA) for 30 days following publication of the legal notice of the opportunity to comment in the Oregonian and in the Seattle Times on October 12, 2018. We received comments from 17 individuals and organizations. In general, comments addressed were related to the scope of the proposal, including modifications to the proposed action; programmatic and site-specific analysis; public notification and opportunity to comment at the local level; environmental impacts; project sideboards, and project design features. Comments that were not related to the proposed action and analysis, or not deemed relevant to the decision to be made are not addressed here. Comment letters are filed in the project record.

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Bennett, LeeAnn

Comment Code: 3-1

Comment: I appreciate all the hard work, planning and completing such projects.

Forest Service Response: Thank you for your support.

Blevins, Emilie—Xerces Society for Invertebrate Conservation

Comment Code: 19-1

Comment: However, the effects as discussed do not specifically include mention of effects to freshwater mussels. Mussel habitat, which is in this case defined as the location of an existing mussel bed or aggregation, is often patchily-distributed and occurs within portions of streams, rivers, and lakes that provide specific, localized characteristics. Indeed, mussel habitat may not otherwise occur in many portions of the region's waterbodies, including areas adjacent to or near restoration sites. Western freshwater mussels are declining in range, present on national forest system lands in the region, and are limited in local distribution. Therefore, the loss of mussel habitat during aquatic restoration projects is an additional concern and an effect that should be considered and accounted for in Appendix 2. Project Design Criteria Common to all 19 Aquatic Restoration Categories, Part F, page 80. Specifically, as has been included for lamprey (point 3, page 80), we recommend inclusion of the following bullet point for mussels: Freshwater Mussels• To the extent possible, incorporate freshwater mussel best management practices found in the 2017 best practices guide for western freshwater mussels (Blevins et al. 2017).¹ Blevins, E., L. McMullen, S. Jepsen, M. Blackburn., A. Code, and S. H. Black. 2017. Conserving the Gems of Our Waters: Best Management Practices for Protecting Native Western Freshwater Mussels During Aquatic and Riparian Restoration, Construction, and Land Management Projects and Activities. 108 pp. Portland, OR: The Xerces Society for Invertebrate Conservation. (Available at: <https://xerces.org/conserving-the-gems-of-our-waters/>). The Blevins et al. (2017) guidelines provide a number of best management practices relevant to the Environmental Assessment's project design criteria that could limit the aforementioned, and other, adverse effects to freshwater mussels resulting from aquatic restoration activities. For example, these guidelines also include information relevant to point 4: "Work area isolation and aquatic organism capture and release. "We appreciate the inclusion of freshwater mussels in point 4, as this is an important practice for avoiding direct mortality of mussels. However, due to the concerns regarding loss of existing mussel beds and habitat discussed above, as well as concerns regarding effectiveness of salvage and relocation efforts (discussed on page 18 of Blevins et al. 2017), "aquatic organism capture and release" should not be the sole option provided to reduce effects to mussels. By including this information, aquatic restoration projects will have greater potential to conserve declining freshwater mussel populations. Ultimately, these efforts will ensure that, in addition to the numerous benefits associated with aquatic restoration, aquatic ecosystems may also continue to enjoy the valuable services mussels contribute, to the benefit of salmon and trout and other native fish and wildlife.

Forest Service Response: Mussel publications were shared by the Xerces Society and they were distributed to personnel planning to implement aquatic restoration projects. Members of Xerces Society are beginning to integrate into some of our restoration project planning and implementation. Project design criteria (EA Appendix 2) also prescribe implementation measures to address your concerns.

Briggs, David

Comment Code: 1-1

Comment: Build hatcheries and fund the current to produce at full capacity for a minimum of 10 years. Ocean predators such as seals must also be managed. There was a time when simply moving seals was sufficient, however recent repeated translocations at Oregon city proved a lethal removal solution was necessary. Local resistance to the idea has led to an exacerbation of current declining fish stocks in coastal river systems. As harsh a solution as lethal removal is, wildlife agencies universally recognize the necessity of such actions.

Forest Service Response: Building hatcheries is not a category addressed in the Aquatic Restoration Biological Opinions (commonly referred to as ARBO II) and is outside the scope of the proposal.

Briggs, David

Comment Code: 1-2

Comment: I failed to see any mention of hatcheries. Nature can only do so much to meet the demand of anglers. They have legitimately paid license fees to cover the production of fish for their recreational enjoyment.

Forest Service Response: Building hatcheries is not a category addressed in ARBO II and is outside the scope of the proposal.

Brunoe, Robert—Confederated Tribes of Warm Springs

Comment Code: 13-3

Comment: Beaver dam analogues: Typically, these are built to replicate the function of beaver dams rather than encourage beaver activity. As written, that would occur under beaver habitat restoration.

Forest Service Response: Beaver dam analogues are constructed to restore stream structure and function by mimicking a real beaver dam.

Comment Code: 13-5

Comment: Channel reconstruction and relocation: The word relocate should be removed as to relocate the channel would typically go into a newly constructed channel otherwise it may fall under a component of "stage 0". The word "mimic" should be replaced with "shall meet". The word "natural" should be replaced with "valley".

Forest Service Response: The words used in the environmental assessment are correct. Sometimes stream channels have been straightened and channelized. Restoration of these channels require their relocation to historic meandering channels. Stage 0 Restoration Projects are not included in this EA. "Mimic" and "natural" are appropriately used.

Comment Code: 13-6

Comment: Large wood, boulder and gravel placement: delete "mimic" and add "in a manner appropriate for the valley type and Forest type". Large wood placement density, size class and other factors may be different if in a lodgepole community versus a mixed conifer Douglas fir component vs Ponderosa pine dominant forests.

Forest Service Response: Change made.

Comment Code: 13-8

Comment: EFFECTS TO AQUATIC SPECIES AND WATER RESOURCES The word frog should be included in the first sentence of paragraph two. Paragraph 3: The BNR does not agree that "a few years" is a short term effect. Language should be more specific to minimize impacts to species in these habitats. Any potential effects in excess of a couple of months should have specific Best Management Practices in place to minimize those effects.

Forest Service Response: Short term is typically considered within a few years. The height of the effects wouldn't happen throughout the period. Rather, it would occur immediately after implementation and decrease over time. Best Management Practices (BMPs) would be implemented in any project proposed under this EA.

Comment Code: 13-9

Comment: The CTWSRO believes that headcut stabilization is typically a short term solution while a more holistic review of the threat causing the headcut can be remedied.

Forest Service Response: We concur.

Comment Code: 13-10

Comment: #5 "all fish screens" should be replaced with "diversion intake pipes"

Forest Service Response: The current wording is correct. Fish screens must be sized according to the flow going through them.

Comment Code: 13-11

Comment: Under the proposed actions this is titled "Beaver Dam Analogues".

Forest Service Response: Comment noted.

Comment Code: 13-12

Comment: BULL TROUT PROTECTION CTWSRO would recommend changing this title to cover other aquatic ESA species and allow for bull frog treatment or other competitors. 2.c. should replace "bull trout" with "ESA species"

Forest Service Response: This is a restoration project type directly out of the Endangered Species Act (ESA) programmatic consultation with the United States Fish and Wildlife Service (USFWS or FWS) and National Oceanic and Atmospheric Administration (NOAA) Fisheries referred to ARBO II. Consistency is required to be compatible between documents.

Comment Code: 13-13

Comment: CHANNEL RECONSTRUCTION 1.b. -"closely mimics" should be replaced with "consistent with" delete "to the extent possible, those that would naturally occur at the that stream and"

Forest Service Response: "Closely mimics" and "consistent with" are similar phrases. The phrase "to the extent possible" is appropriate, considering geographic restrictions that often occur at project locations.

Comment Code: 13-16

Comment: 1. Delete "stream type" add "forest type or Plant Association Group" #4. Current wording may allow rip rap projects to occur. Please re-word to ensure and define what bank stabilization may

occur that doesn't meet the definition of rip-rap or other hardened bank projects. The Tribe believes that bank stabilization is a temporary fix. Severely eroded banks are typically symptomatic of upland conditions. A more holistic approach would be better served to address the erosional issue instream.

Forest Service Response: Stream type is the correct phrase. Rip-rapping is not part of the project types authorized in the EA. In fact, project design criteria include "Material selection (large wood, rock, gravel) shall also mimic natural stream system materials." We concur with the Tribe's perspective on bank stabilization.

Comment Code: 13-18

Comment: Over all this is a fairly simplistic version for describing these types of projects and implementation of these project types. For example, in bedrock dominated systems there is no opportunity to place footer boulders that would hold and prevent under mining of the structure. Again these structures should match valley and stream types. #3 if you are to discuss how to place and build the structures in this section, then the elevation dimensions are missing in this section as the "U" or "V" is built.

Forest Service Response: These are site-specific details to be identified when specific projects are proposed.

Comment Code: 13-19

Comment: GRAVEL AUGMENTATION The CTWSRO believes that gravel augmentation can be used for more than just seeding a stream. That in fact many times spawning habitat might be a limiting factor and the direct placement of appropriate sized gravel for the stream type and species of concern may be recommended. #1. Delete "mimics" replace with "simulating" add at end of sentence..."or distributed in a manner that increases spawning habitat for species of concern".

Forest Service Response: We concur with the Tribes perspective of gravel augmentation. We believe "mimic" is synonymous with "simulate."

Comment Code: 13-20

Comment: Stock piling of trees that extends beyond the instream work window should be stored outside the flood plain until the project is developed and implementation begins.

Forest Service Response: We concur.

Comment Code: 13-2

Comment: Under channel reconstruction and relocation there is no definition of "stage 0". Please define so that lay persons can determine those specific actions that are not covered. The CTWS interprets points b and c under the general design criteria of channel reconstruction or relocation to be components of "stage 0" construction.

Forest Service Response: Stage 0 restoration projects are not part of the proposed action. Stage 0 projects involve stream process based restoration. See Cluer and Thorne 2013 (project record) for definition and discussion of Stage 0.

Comment Code: 13-21

Comment: JUNIPER TREE REMOVAL #8 the CTWSRO understands that juniper removal was for riparian areas only. The CTWSRO does not agree with mechanical equipment in the riparian areas.

Forest Service Response: Comment noted. Mechanical equipment will be used in riparian areas under this EA. The effects of these actions have been documented in the EA.

Comment Code: 13-7

Comment: STEP 4 PROJECT IMPLEMENTATION AND MONITORING. What type of monitoring is required. The Tribe would recommend implementation monitoring to ensure the project met the PDC.

Forest Service Response: Implementation and effectiveness monitoring occur regularly. Validation monitoring is less frequent. We conduct project inspections with Department of State Lands (DSL) and Army Corps of Engineers (USACE) on a subset of project annually. BMP monitoring also occurs. On some projects, intensive monitoring occurs to validate assumptions made during project design. Broad scale monitoring occurs through Forest Plan monitoring such as Aquatic and Riparian Effectiveness Monitoring through the Northwest Forest Plan (NWFP) and PACFISH/INFISH¹ Biological Opinion (PIBO) Monitoring through INFISH.

Comment Code: 13-17

Comment: #9. Does burying wood as discussed in number 5 also count as anchoring?

Forest Service Response: Anchoring is generally considered attachment of wood to bedrock or boulders or other wood.

Comment Code: 13-4

Comment: Bull trout protection: This restoration method should be expanded to cover other listed or culturally significant species so to also include bull frog removal in streams that may contain steelhead or Chinook spawning and rearing habitat. Other invasive species should also be considered under a more broad approach.

Forest Service Response: Removal of bull frogs will likely be an action implemented by State Fish and Game Agencies, USFWS, or Tribal Nations. The activity is not included in this EA.

Comment Code: 13-1

Comment: The Oregon spotted frog is not mentioned. It is currently found on Deschutes and Mount Hood National Forests.

Forest Service Response: Oregon spotted frog, a federally listed amphibian species is not included or analyzed in this EA. Any aquatic restoration activities that occur within occupied habitat for Oregon Spotted Frog would be outside the scope of this project analysis and must undergo site specific National Environmental Policy Act (NEPA) analysis and ESA aquatic restoration activities including Large Wood placement will be implemented in compliance with the FWS' Biological Opinion (10EOW00-2013-F-0090). This Biological Opinion (BO) provides design criteria that minimize effects to marbled murrelets and northern spotted owl individuals and their designated critical habitat. Design criteria such as implementation outside of the breeding season are included in the Biological Opinion.

Comment Code: 13-14

Comment: FENCING 1. Fence placement in flood plain areas will either be in the channel migration zone or in the uplands? Not sure how you implement this one.

¹ PACFISH – Interim strategies for managing Pacific anadromous fish-producing watersheds in eastern Oregon and Washington, Idaho and portions of California; INFISH – Interim inland native fish strategy for the Intermountain, Northern, and Pacific Northwest Regions

Forest Service Response: The specific location of a fence will be described when a specific project is proposed.

Comment Code: 13-15

Comment: 4. How does this fit with number 1 above and is riparian reserves part of this?

Forest Service Response: Riparian reserves will likely be part of the area protected when a fence is proposed in conjunction with a restoration project. They will likely occur within riparian areas.

Davis, Mark

Comment Code: 2-1

Comment: These actions infringe on my rights to navigation and recreation on a public waterway.

Forest Service Response: When specific projects are proposed, the public will be notified and they will have the opportunity to suggest changes or express concerns based on project specifics.

Comment Code: 2-2

Comment: Closing access to the river is wrong at every level and robs me of the use of the river.

Forest Service Response: Comment noted. When specific projects are proposed, the public will be notified and provided the opportunity for input.

Halsey, Shiloh—Cascade Forest Conservancy

Comment Code: 18-7

Comment: In addition, when considering the nature of interdisciplinary restoration planning, planners should incorporate input and collaboration from within Forest Service offices and outside of them, including partner organizations such as The Xerces Society, Audubon Society, The Nature Conservancy, and Cascade Forest Conservancy.

Forest Service Response: Forests will continue to work proactively with their collaborative groups and other groups when planning projects. The organizations listed by the commenter are regular partners for Forest Service restoration projects, so they will likely already be included in the project planning. There will also be an opportunity for interested public to comment on projects as they are proposed.

Comment Code: 18-9

Comment: Removal of unauthorized roads and the consideration of ML1 and ML2 roads. The closing and decommissioning of unused and unneeded Maintenance Level 1 (ML1) and Maintenance Level 2 (ML2) roads should be a key piece of an aquatic restoration plan. We support the closing of unauthorized roads as outlined in the project plan, but there could be more consideration for closing or decommissioning certain ML1 or ML2 roads that are causing ecological harm and that, through site-specific investigation, are found to be unneeded for future harvest efforts. In many cases, there are multiple roads that access harvest units. Since only one road is needed for access, the remaining roads should be considered for closing or decommissioning. As part of this restoration EA, road removal plans should incorporate planting to speed up and improve the revegetation process on the former roadbeds.

Forest Service Response: The Forest Service recognizes the need to address the impacts associated with roads through maintenance and improvements of system roads that are needed for management of national forest system lands and decommissioning of non-system roads and system roads that are no

longer needed. The need for these actions are reflected in the Northwest Forest Plan -Aquatic Conservation Strategy (ACS) and the PACFISH/INFISH strategies as well as the watershed restoration action plans (WRAPs) that have been and will be developed for Priority Watersheds. Decommissioning of non-system roads is included in the Pacific Northwest Region Aquatic Restoration Project. Management of system roads, however, will continued to be authorized under separate environmental analysis and decision-making, as informed by appropriate collaboration and additional travel analysis.

Comment Code: 18-3

Comment: Thinning for prescribed burning and other restoration activities: We request that trees cut for these aquatic restoration projects not be used for commercial purposes as this can undermine the aquatic objectives of the project and can increase the likelihood that heavy equipment is used in sensitive habitat areas. We support the alternatives of using cut trees as in-stream habitat features or moving them to holding sites where they can be used for future aquatic projects.

Forest Service Response: The Pacific Northwest Region Aquatic Restoration Project does not propose to and would not authorize cutting of trees for commercial purposes. The project would authorize use of cut trees in aquatic and riparian restoration projects.

Comment Code: 18-1

Comment: As stated in the original proposal, the purpose of the project is "to increase the pace of aquatic restoration by the Forest Service within the region." We support the streamlined approach outlined in this project plan. With current and expected impacts of climate change on aquatic health and fish habitat, which can exacerbate the currently degraded state of aquatic systems, it is important that we work collaboratively and rapidly to increase the speed of restoration to save species and improve the resilience of these systems. Moreover, aquatic restoration offers job opportunities for local communities, improves water quality, and decreases catastrophic infrastructure impacts resulting from plugged culverts and road washouts.

Forest Service Response: Thank you for your support.

Comment Code: 18-5

Comment: Interdisciplinary planning and the treatment of invasive plants. We were pleased to see that the original proposal outlined the value of an interdisciplinary approach in the treatment of invasive plants. We are surprised to see that the treatment of invasive plants was removed from the project plan. We recommend including this important project detail in the plan.

Forest Service Response: It was realized that including invasive plant treatment in this project would be redundant and therefore inefficient. Invasive plant treatment actions are covered by forest level NEPA analysis that is already in place or are soon to be completed.

Comment Code: 18-6

Comment: As it relates to the various restoration projects outlined in this plan, we request that the pre-project notification include information regarding precautionary steps that will be implemented during restoration work to limit the spread of invasive plants.

Forest Service Response: Yes, we agree and this will definitely be part of the consultation process that occurs as site specific projects are implemented via this decision.

Comment Code: 18-8

Comment: Reed canary grass is spreading in many areas of the region, and a multi-prong approach should be employed to address this, as opposed to a reliance on herbicides. The eradication of reed canary grass is not a quick fix, and plans must be tailored accordingly, even if the goal is to "expedite" aquatic projects. This detail should be considered and outlined in project plans. In a particular site, the majority of an eradication effort can be accomplished in two to three years, but continued monitoring and follow-up efforts will be required for up to ten years to prevent reinvasion. Prevention, partly through planting shade cover and supporting appropriate flood patterns, is an important complementary aspect of treatment. Partners should be engaged in the planning and action of these efforts.

Forest Service Response: Yes, we agree. Therefore when new aquatic restoration projects are proposed at a site specific level we will consult with local forest/district botanists and public's to develop strategies that address issues such as reed canary grass. We hope this will better inform the project and lead to the development of strategies that result in holistic restoration that includes in-water structure as well as riparian vegetation structure.

Comment Code: 18-2

Comment: Large wood placement activities, as well as other restoration projects outlined in this plan, should be planned in ways that decrease impacts to marbled murrelets and northern spotted owls by avoiding loud construction work during breeding and nesting periods where the birds are currently present or were historically present.

Forest Service Response: All aquatic restoration activities including large wood placement will be implemented in compliance with the U.S. Fish and Wildlife Service's Biological Opinion (BO; 10EOW00-2013-F-0090). This BO provides design criteria that minimizes effects to marbled murrelets and northern spotted owl individuals and their designated critical habitat. Design criteria such as implementation outside of the breeding season are included in the BO.

Harvey, Bill—Baker County

Comment Code: 6-3

Comment: On page 4, second paragraph there is a significant error that must be corrected. "For example, the Forest Service is the largest landowner in the Upper Columbia Basin..." This is absolutely false. As directed by the Organic Administration Act of 1897 and the Multiple Use-Sustained Yield Act of 1960, the National Forests are managed by the United States Department of Agriculture's Forest Service for continuous production of their renewable resources - timber, clean water, wildlife habitat, forage for livestock and outdoor recreation.

Forest Service Response: The United States Department of Agriculture (USDA) Forest Service manages National Forests and Grasslands, and some Scenic Areas in the Pacific Northwest.

Comment Code: 6-4

Comment: Continuing on page 4, fourth paragraph, there is another significant error that must be clarified. "Likewise, State agencies rely on designated agencies, such as the Forest Service, to develop water quality management plans aimed at restoring water quality." In Oregon, water quality is under the authorities of the Oregon Department of Agriculture and the Department of Environmental Quality. ORS 568.900-568.933 dictates water quality management plans and speaks to the development of the plans by local area committees, not by Forest Service.

Forest Service Response: When the Oregon Department of Environmental Quality (DEQ) designates waters on National Forest lands as impaired it develops Total Maximum Daily Loads (TMDL). Each Designated Management Authority (DMA) provides input into the management plan which is a DEQ document. The Forest Service develops water quality restoration plans that inform the water quality management plan (DEQ has the authority to approve them). The commenter may be suggesting the committee determines the Forest Service management actions with regard to maintaining water quality which is not true, although we coordinate with the committee.

Comment Code: 6-10

Comment: The County supports and encourages headcut and grade stabilization. Install structures such as v-notch weirs to allow for fish passage and determine that stabilization material size is sufficient, and well anchored. Annual monitoring must be included in the project so failures can be dealt with in a timely manner. Stabilization projects should be designed by an experienced engineer, fisheries biologist and geomorphologist (or hydrologist).

Forest Service Response: The Forest Service agrees with this input.

Comment Code: 6-14

Comment: Projects will be permitted through the Oregon Department of State Lands, Department of Environmental Quality and the Army Corps of Engineers prior to installation.

Forest Service Response: This is standard operating procedure when permits are required by these agencies.

Comment Code: 6-13

Comment: The goal of this project is unclear. Is it to provide restoration to incised channels, change the hydrologic regime within a stream system, provide refugia for fish, a combination thereof, or something else completely? 1. The County believes that the effects of BDAs on natural storage have not been well studied or directly tested with the specific hydrologic mechanisms that promote higher and cooler late summer flows not understood. 2. The effects of timing of hydrologic flows and water availability to downstream users cause water rights concerns. (See section on Oregon Water Rights Laws) 3. The potential for water loss through elevated evapotranspiration rates may off-set the benefits of storage. 4. Legal and regulatory issues for artificial structures must be taken into consideration. In Oregon, you may need a permit from Oregon Department of State Lands and Army Corps of Engineers. 5. Human/beaver interaction can be unpleasant and lead to the destruction of entire beaver communities. They cause extensive damage to riparian trees, including those intentionally planted for aesthetics around houses, clog up culverts and diversions, and can cause flooding in urban areas. "We conclude that the practice and implementation of beaver-related restoration has outpaced research on its efficacy and best practices. Further scientific research is necessary, especially research that inform the establishment of clear guidelines for best practices." (Pilliod, 2017) "Research to evaluate the social conditions that promote the success of artificial structures and other beaver-related stream restoration projects in western rangelands is needed, as is the integration of social and biophysical considerations in selecting sites for such projects." (Pilliod, 2017) Following the mantra of "build it and they will come", does not apply to beavers. If the FS decides to pursue implementation of BDAs, make sure they are very site specific, in areas where beaver are abundant upstream (as beaver move downstream more readily) or where reintroduction of entire 'trouble' beaver communities can be moved, have sufficient food availability for an extended period of time (more than one season) and for additional animals moving into the area or young being born, and, most importantly, where the beaver will not become nuisance through interaction with culverts, diversions, etc. and have to be removed.

Forest Service Response: The intent of beaver dam analogs (BDAs) includes all of those the County described. Like all restoration projects proposed in this EA, they are built to restore the structure and function of streams, resulting in all the benefits the County suggested. This includes restoring natural downstream flows. Restoration is a science we continue to learn through implementation, monitoring, and adaptation. Permits are requested from Oregon DSL and USACE for instream restoration projects. All restoration projects proposed under this EA are expected to be sensitive towards social and biophysical conditions of the site. A subset of all projects will be monitored so we continue to learn of practices' effectiveness, providing the opportunity to adapt implementation based upon what we learn.

Comment Codes: 6-1, 6-2

Comment: The Pacific Northwest Region Aquatic Restoration Project (PNWRARP), Environmental Assessment, goes way beyond the federal statutes that govern the Forest Service by attempting to give the Forest Service authorization for actions not within the language of the Acts. Specifically, the Organic Act of 1897 as amended and the Multiple Use Sustained Yield Act of 1960. The PNWRARP is another attempt to close roads, remove multiple uses, and keep the public off of public lands.

Forest Service Response: All of the actions proposed under the Pacific Northwest Region Aquatic Restoration Project are consistent with federal statutes governing the Forest Service. For example, the project would authorize actions that would help implement the aquatic conservation strategies (i.e., NWFP, PACFISH, and INFISH) that are a foundational component of the Land and Resource Management Plans (LRMPs) for all national forests in the Pacific Northwest Region. As such, the project is intended to implement components of the National Forest Management Act (NFMA) of 1976 and other relevant laws. The project is not intended to nor would it remove multiple uses from national forest system (NFS) lands. Instead, consistent with the NFMA, by implementing critical components of the LRMPs, the project would enhance, not diminish, the ability of NFS lands to support multiple uses. The project would only authorize decommissioning of non-system roads. It would not affect roads that are currently authorized for use by motorized vehicles. As such, it would not hinder authorized public access to public lands.

Comment Code: 6-9

Comment: Baker County has a policy of no net loss of access. (BCNRP, 2016).

Forest Service Response: The project would only authorize decommissioning of non-system roads. It would not affect roads that are currently authorized for use by motorized vehicles. As such, it would not hinder public access to public lands.

Comment Code: 6-8

Comment: Culverts and bridges should be designed by an experienced engineer with input from a fisheries biologist and a geomorphologist (or hydrologist).

Forest Service Response: This is standard Forest Service practice.

Comment Code: 6-21

Comment: Baker County does not support this action. It ignores the Multiple Use Law. This is a blatant attempt to keep the public off of public land and eliminate their access to statutory rights. Leave Recreational sites for public use.

Forest Service Response: All of the actions proposed under the Pacific Northwest Region Aquatic Restoration Project are consistent with federal statutes governing the Forest Service. For example, the project would authorize actions that would help implement the aquatic conservation strategies (i.e.,

NWFP, PACFISH, and INFISH) that are a foundational component of the LMRPs for all national forests in the Pacific Northwest Region. As such, the project is intended to implement components of the National Forest Management Act of 1976 and other relevant laws. The project is not intended to nor would it remove multiple uses from NFS lands. Instead, by implementing critical components of the LRMPs, the project would enhance, not diminish, the ability of NFS lands to support multiple uses. The project would only authorize decommissioning of non-system roads and trails in areas where 36 CFR 212 Subpart A and B decisions have been completed.

It would not affect roads that are currently authorized for motorized vehicles. As such, it would not hinder public access to public lands. Any specific projects that could potentially affect recreation uses would be planned and executed through the five-step project implementation process, which includes substantial opportunity for the public to provide input and thus influence individual actions. Based on this input, projects may be altered to address public concerns, implemented as initially proposed, implemented through a separate analysis and decision, or not implemented at all.

Comment Code: 6-29

Comment: In summary, not only does the EA go beyond the federal statutes that govern the Forest Service by attempting to give the Forest Service authorization for actions not within the language of the Acts. Specifically, the Organic Act of 1897 as amended and the Multiple Use Sustained Yield Act of 1960, the EA is a blatant attempt to violate constitutional rights. For example, the Fifth Amendment states that, "...nor shall private property be taken for public use, without just compensation." This includes the removal of small dams, diversions, and other water conveyance structures that are private property as defined in law. This EA is also in direct violation of the Tenth Amendment that says "The powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people." Those powers are reserved to the states and all of the state laws pertaining to working in water, water rights, wildlife authority, and many others will be violated.

Forest Service Response: All of the actions proposed under the Pacific Northwest Region Aquatic Restoration Project are consistent with federal statutes governing the Forest Service. For example, the project would authorize actions that would help implement the aquatic conservation strategies (i.e., NWFP, PACFISH, and INFISH) that are a foundational component of the LMRPs for all national forests in the Pacific Northwest Region. As such, the project is intended to implement components of the NFMA and other relevant laws. This project would not authorize removal of private property on federal lands without that property owners' consent. All applicable State laws pertaining to working in water, water rights, wildlife management and others would be followed.

Comment Code: 6-24

Comment: Any action that potentially leads to beaver reintroduction must be carefully considered. Baker County supports beaver reintroduction, but only in areas that will not cause adverse impact to culverts, diversions, etc. or other areas that have the potential for negative human/beaver interaction. Fencing must be minimal and the Forest Service must acknowledge that wildlife too impacts new plantings. Use only sparingly and in specific areas.

Forest Service Response: The Forest Service agrees that beaver reintroduction requires consideration of local conditions. These conditions will be addressed through the five-step project implementation process.

Comment Code: 6-16

Comment: Because the success of these types of stream alteration projects require the removal of other uses such as grazing, recreation, and roads in order to be successful, the County cannot support this. The Forest Service must follow the Multiple Use Laws. 1. What is the goal and expected outcome of these

projects? 2. Water Rights from existing streams will be violated. 3. Progression of stream channels is a naturally occurring process. 4. Reconstructed channels pose a high risk of failure through erosion of soils not associated with stream or streambank morphology and implementation equipment causes huge impacts to existing riparian areas causing vegetation removal leading to invasive species to have access to bare soil. Do not engage in channel reconstruction or alteration.

Forest Service Response: Stream channel reconstruction or alteration do not require removal of other uses from NFS lands in general or from particular project areas. In some cases, these projects could modestly affect exactly how and where some other uses of NFS lands are conducted. Such effects will be fully characterized and managed through the five-step project implementation process. This project will help the Forest Service continue to implement its multiple use mandate. The purpose of these projects is clearly described in the EA. We agree that stream channel evolution is a natural process. These projects are intended to facilitate that natural evolution by removing or reducing the effects of past and/or ongoing human impacts on critical natural processes (e.g., sediment routing, wood recruitment). The project design criteria address erosion, invasive species and other issues by, for example, requiring surveys, limiting disturbance, and ensuring adequate ground cover (Appendices 1 and 2). Project design criteria addressing property rights including water rights, have been added to the EA on p. 88.

Comment Code: 6-18

Comment: The County does not support the use of large wood, boulders or gravel without the project being designed by professionals. There are simply too many ways that inaccurately designed placement can go wrong. In addition, these projects may have impacts on water availability which must follow Oregon water Rights Law. The failure rate for these structures can be high, especially in streams and rivers with high velocity during spring run-off. Failure leads to flooding, erosion, and bank failures that impact downstream users, fish and wildlife. See Water Rights Section Projects will be permitted through the Oregon Department of State Lands, Department of Environmental Quality and the Army Corps of Engineers prior to installation. Projects will adhere to all Oregon Water Rights Laws. Projects will be designed by an experienced, licensed engineer with input from geomorphologists (or hydrologists).

Forest Service Response: The Forest Service agrees that these projects need to be designed by experienced professionals to ensure that they meet their objectives and that the risk of unintended consequences is minimized. As such, experienced professional hydrologists, fishery biologists and engineers and other relevant professionals are engaged in all aspects of project design and implementation on each Forest Service administrative unit. In addition, a regional interdisciplinary team of senior project designers and implementers provide additional consultation and support to unit staff, as needed. Lastly, as described in the Project Identification, Compliance, Notification & Public Review, Implementation & Monitoring, and Completion section of the proposed action starting on p. 16, reviews by interdisciplinary teams composed of individuals from multiple agencies are required for more complex projects. Collectively, this system of planning and reviews by experienced professionals provides the requested assurances. Prior to implementation, all projects will be authorized under all applicable authorities (e.g., Clean Water Act, State water rights law) by the responsible agencies (e.g., USACE, Oregon DSL, Oregon DEQ, Oregon Water Resources Dept.). Project design criteria addressing property rights including water rights, have been added to the EA on p. 90.

Comment Code: 6-19

Comment: The County does not support the removal of legacy structures. See Water Rights Section Projects will be permitted through the Oregon Department of State Lands, Department of Environmental Quality and the Army Corps of Engineers prior to installation. Allow nature to balance the stream rather

than the huge impacts removing legacy structures will cause. Moving points of diversions have been established through adverse possession due to their use since the Oregon water rights were established.

Forest Service Response: Removal of some unneeded legacy structures is essential to achieving the purpose and need for this project and to, in some cases, eliminate or reduce hazards to the public. No structures owned by parties other than the Forest Service would be removed or moved without the owners' consent and approval from appropriate regulatory agencies. As documented in the EA and supporting documentation, removal of these structures are not expected to have significant environmental effects.

Comment Code: 6-20

Comment: Baker County does not support off- and side-channel habitat restoration. It modifies the flow regime and may violate water rights. Often, off- and side-channel restoration is not well studied prior to implementation to determine why the original channel was abandoned. This can lead to project failure when a natural process, such as sedimentation or the progress of sinuosity were the cause. The restoration of side channels (also referred to as abandoned channels, former channels, floodplain channels, or side arms) is increasingly implemented to improve the ecological integrity of river-floodplain systems. However, the design of side channel restoration projects remains poorly informed by theory or empirical observations despite the increasing number of projects. Moreover, feedback regarding the hydromorphological adjustment of restored channels is rarely documented, making it difficult to predict channel persistence as aquatic habitats. (Are restored side channels sustainable aquatic habitat features? Predicting the potential persistence of side channels as aquatic habitats based on their fine sedimentation dynamics Jérémie Riquier, Hervé Piégay, Nicolas Lamouroux, Lise Vaudor). Sites must be specifically chosen to benefit the intended fish species. For example, Chinook and Steelhead do not use side channels for spawning. The stream-dwelling species of char, Dolly Varden, and bull trout, have not been commonly observed in off-channel habitats. (Lister and Finnigan 1997).

Forest Service Response: The regional intent of aquatic and riparian restoration projects is to restore the structure and function of the system the project is addressing. Projects are generally not species-specific since species dependent upon restored conditions within that restored reach would benefit if structure and function were restored. Off channel and side channel projects are usually very important for salmon and trout rearing as well as adult fish refuge from higher flows. Project types and priorities are informed by watershed analyses and species recovery plans. Project designs are based on site specific conditions.

Comment Code: 6-22

Comment: Baker County does not support this action. It runs afoul of Oregon Water Rights Laws. Do not remove existing berms, dikes and levees.

Forest Service Response: Removal of some unneeded berms, dikes and levees is essential to achieving the purpose and need for this project. Removal of such structures is not inconsistent with Oregon Water Rights Laws. Project design criteria addressing property rights including water rights, have been added to the EA on p. 90.

Comment Code: 6-23

Comment: Baker County supports streambank restoration with the caveat that hardened alternatives such as rock will be used sparingly and only for specific purposes like large wood stabilization. Too, vegetation should be gathered from local sources to improve success. Monitoring for invasive species is critical.

Forest Service Response: The Forest Service agrees with the concepts reflected in these comments. Those concepts are consistent with the project design criteria described in the EA (Appendices 1 and 2).

Comment Code: 6-28

Comment: Oregon Water Rights Laws * Oregon Water Rights are very specific. Many of the projects associated with this Plan run afoul of them. Below are a few that relate specifically to the PNWRARP EA. ORS: https://www.oregonlegislature.gov/bills_laws/ors/ors540.html 540.510 Appurtenancy of water to premises; restrictions on change of use, place of use or point of diversion; application for transfer of primary and supplemental water rights; right to use conserved water. 540.520 Application for change of use, place of use or point of diversion; public notice; protest; hearing; exemptions 540.525 Installation of fish screening or by-pass device as prerequisite for transfer of point of diversion. 540.530 Order authorizing change of use, place of use or point of diversion; consent to injury; new or modified certificate. OAR: 690-380-0010 Purpose 690-380-0100 Definitions 690-380-2000 Types of Permanent Transfers 690-380-2110 Change in Point of Diversion or Point of Appropriation 690-380-3220 Separate Application Required for Each Water Right 690-380-5060 Fish Screening and By-Pass Devices 537.110 Public ownership of waters. All water within the state from all sources of water supply belongs to the public. 537.120 Right of appropriation; vested rights protected. Subject to existing rights, and except as otherwise provided in ORS chapter 538, all waters within the state may be appropriated for beneficial use, as provided in the Water Rights Act and not otherwise; but nothing contained in the Water Rights Act shall be so construed as to take away or impair the vested right of any person to any water or to the use of any water.

Forest Service Response: All actions implemented under this project will follow applicable procedures and authorizations associated with State water rights laws and regulations. Project design criteria addressing property rights including water rights, have been added to the EA on p. 90.

Comment Code: 6-25

Comment: Baker County supports and encourages the removal of all junipers. There is no scientific justification to leave 10% untreated juniper areas. This will promote seed-set and the return of juniper within a very short time. Remove all junipers.

Forest Service Response: The amount of juniper removal and retention will be determined at the site-specific project level commensurate with the objectives of the project.

Comment Code: 6-26

Comment: The County supports this action with the following caveats: 1) projects need to be designed to incorporate the same species that naturally occur - if there is no historical riparian vegetation, don't try to establish it. 2) Plantings need to be able to take advantage of water availability and some will need to be below bankfull elevation. In the more arid climates, the closer to the green-line the plantings should be. Base plantings on the experience of professionals such as botanists. 3) Exclusion should be only for the time it takes to establish vegetation.

Forest Service Response: Riparian planting and revegetation will be sensitive to site specific conditions. Botanists will review and participate in specific restoration projects when they are proposed.

Comment Code: 6-11

Comment: Baker County does not support the installation of fish ladders in streams that are difficult to access; preferring the methods of grade stabilization more closely aligned to nature. Fish ladders should only be installed where there is ease of access for equipment and only where the use of standard grade stabilization techniques will not be successful. Projects will be permitted through the Oregon Department

of State Lands, Department of Environmental Quality and the Army Corps of Engineers prior to installation.

Forest Service Response: Comment noted.

Comment Code: 6-12

Comment: The County does not accept the policy of improvements in 'unoccupied habitat'. Historical usage may have been influenced by natural processes, rather than anthropological and to improve habitat based on historical use is a waste of time and money. All fish screens must be in full compliance of Oregon Water Resource Laws as well as state and federal wildlife management agencies. Projects will be permitted through the Oregon Department of State Lands, Department of Environmental Quality and the Army Corps of Engineers prior to installation.

Forest Service Response: Restoration is not just focused upon rare fish species. The intent of restoration is to address the structure and function of aquatic and riparian ecosystems and it may occur in areas where no rare fish species occur. For example, restoration may occur in areas where there is a need to improve water quality.

Comment Code: 6-15

Comment: Baker County does not support the use of electrofishing for the removal of brook trout or other non-native species. Studies have shown up to a 50% mortality rate due to spine and gill injuries across all species. As it is impossible to separate bull trout from the other fish, they will be negatively impacted also. Removal of any species of fish, by any means, may cause significant impact to the existing ecosystem. Wildlife that depends on fish for survival may not have the availability with only bull trout, or they will decimate the population as the only food option available. Do not use electrofishing methods to remove brook trout. Do not remove other species that provide food for wildlife.

Forest Service Response: Any activities involving fish population management is in cooperation with State Fish and Game agencies, USFWS and NOAA Fisheries (when federally listed fish species are involved), and associated Tribal Nations. When specific projects are proposed, proper management tools will be identified for implementation. One of those tools has traditionally been electrofishing equipment. If bull trout occur in the project area, the project must be approved by USFWS.

Comment Code: 6-17

Comment: Baker County does not support the use of riparian fencing solely for the purpose of protecting aquatic restoration projects. 1. In this project the FS is admitting that they will not follow the Multiple Use Laws. Restricting access to miners, livestock users, recreationists, and others that have statutory rights to the riparian area is not tolerable or legal. 2. There are negative impacts of fencing to wildlife and birds. 3. Who is going to build and maintain the fence? Baker County does support riparian fencing in grazing allotments to help manage stock access as long as other options are also incorporated such as off-stream watering sites, hardened crossings located on well used, existing trails, and actual management that moves livestock off of the riparian area on a daily basis. This is a thinly veiled attempt to remove Multiple Uses from public lands. The project description is too vague to determine where, and why, the fencing and crossing will be needed. Do not construct riparian fencing solely to protect aquatic restoration projects. If the fencing and crossings are on livestock allotments, they should be a part of the Permit and not suddenly sprung upon unsuspecting permittees. With proper design and maintenance, fencing is a good tool to restore riparian vegetation. However, there must be adequate water available to stock either through water-gaps or off-stream watering facilities. At all times, management of the fence and stock, both by the permittee and the FS, must be prioritized.

Forest Service Response: The Forest Service will maintain consistency with their multiple use direction and mission. Fencing a relatively small reach of stream to protect agency investment in restoration does not impact multiple use of resources within that watershed. Not every acre of land has to be open to all resource uses. Any fencing with the potential of affecting livestock permittees will be coordinated with those permittees. When a specific project is proposed, a local interdisciplinary team is formed to review the project. If the project is within a livestock allotment, local Range Management personnel will be included in the team. There will also be an opportunity for the public to provide input on site specific projects when they are proposed. In addition to the general effects of fencing on wildlife addressed in the Wildlife Effects section of the EA, project-specific impacts will be reviewed by a local wildlife biologist. Mitigation measures or project design changes may be prescribed. Your comments and questions regarding fence maintenance, coordination with permittee, and use of other tools to protect restoration investments in a riparian site will be addressed when a specific project is proposed.

Comment Code: 6-6

Comment: The County does not support the removal of culverts and bridges under any circumstances, on motorized or non-motorized, roads or trails. Because the public may continue to use the road or trail, removal will cause bank damage, increase sedimentation during crossings, impair riparian vegetation growth, potentially cause a change in channel structure, and potentially allow for the contamination of water through fuel/oil leakage. The removal of a culvert or bridge has the potential of closing the road or trail for public access and is not supported through Baker County policy.

Forest Service Response: Comment noted. When specific projects are proposed, the project implementation process found on pp. 16-19 in the EA will be initiated. The public will have an opportunity to provide comments on projects proposed for implementation. In areas where 36 CFR Subpart A and B travel management decisions have not been made, access would not be affected by this proposal.

Comment Code: 6-7

Comment: ONLY replace culverts and bridges. Do not remove them.

Forest Service Response: Removal of culverts and bridges is needed in some cases to meet the purpose and need for the project. Such removals could occur during some actions implemented under this EA (e.g., fish passage projects, non-system road and trail decommissioning). The five-step project implementation process will ensure actions implemented under this EA are fully informed by public input (EA pp. 16-19). Non-system road and trail decommissioning would not occur in areas not covered by 36 CFR Subpart A and B travel management decisions, and access would not be affected by this proposal.

Comment Code: 6-27

Comment: Baker County does not support the decommissioning of any roads. Roads are necessary to supply access to the public for multiple uses, to wildfire personnel to control wildfire, and to emergency personnel for search and rescue or medical removal. Baker County has a policy of no net loss of access. (BCNRP, 2016) DO NOT DECOMMISSION ROADS.

Forest Service Response: The Forest Service agrees that roads are necessary to provide agency and public access to support multiple uses of NFS lands. The proposed action only covers decommissioning of non-system roads and trails in areas covered by 36 CFR Subpart A and B travel management decisions. It would not affect roads that are currently authorized for motorized vehicles. As such, it would not hinder public access to public lands.

Comment Code: 6-5

Comment: On page 5, the document states "...the Forest Service plays a critical role in conserving species that are federally listed...". The federal and state wildlife agencies are authorized to conserve species; the Forest Service is responsible for providing habitat only.

Forest Service Response: State Fish and Game agencies, Tribal Nations, USFWS, NOAA Fisheries, Forest Service, and other agencies work collaboratively to manage fish and wildlife populations and their habitat on Forest Service lands.

Heiken, Doug—Oregon Wild

Comment Code: 12-21

Comment: We are particularly interested in a more effective pre-project notification process. The pre-project notice described in the EA is too short and incomplete. Public involvement in implementation will be greatly improved by requiring: 1. a more detailed description of the project, 2. better description of the location by map and township range, 3. a description of how the project fits the identified restoration category and the effects analysis in this EA, 4. what specific design criteria will be applied, 5. any design issues/complications encountered and the and mitigation/resolution of those issues, 6. description of site-specific environmental effects that were not address in this programmatic EA, 7. results of "survey and manage" requirements, cultural surveys, etc., 8. a description of alternatives considered. The elements describe above are important to include during notice and comment on implementation plans because the effects analysis in this EA is so very generic. It does not describe any site-specific effects, just general statements like "restoration of fish access," "creation of more complex habitat," and "restoration activities would have short-term negative effects and long-term positive effects on most wildlife..."

Forest Service Response: Thank you for the suggestions. It is the intent of the Forest Service to provide sufficient project information when specific projects are proposed. We respond to each of the suggestions below. The compliance form in Appendix 4 has been updated accordingly:

1. A more detailed description of the project: The project will be sufficiently described when proposed.
2. Better description of the location by map and township range: This information will be included with the specific project proposal.
3. A description of how the project fits the identified restoration category and the effects analysis in this EA: The restoration category will be identified in the specific project proposal. It will be apparent to the reader the proposed project fits the associated restoration category.
4. What specific design criteria will be applied: All design criteria associated with particular restoration categories will be considered and applicable criteria will be applied.
5. Any design issues/complications encountered and the mitigation and resolution of those issues: These complications will be identified in the checklist developed by the local interdisciplinary team and provided to the public upon project notification.
6. Description of site-specific environmental effects that were not addressed in this programmatic EA: Site-specific environmental effects not addressed through the Regionwide EA will be identified by the public and project-specific interdisciplinary team and addressed.
7. Results of "survey and manage" requirements, cultural surveys, etc.: These will be conducted and documented by the associated interdisciplinary team members and the project compliance form documenting consistency with this NEPA analysis will be available to the public.
8. A description of alternatives considered: When a Forest or District is notifying the public of a project, no alternative will be included. However, the public will have the opportunity to provide input to the project, potentially adapting the project to site specific conditions. In most cases, there will not be project alternatives provided, just what is being proposed. Changes may be made to the project proposal based

upon public and local interdisciplinary team input. Site-specific issues identified by the interdisciplinary team will be documented and available to the public.

Comment Code: 12-25

Comment: We feel that restoration science is still developing and that site-specific review and public involvement are critical to making sound decisions that are in the public interest and have the support of the public. To the extent that this NEPA analysis will embody a programmatic-only approach to NEPA, we are concerned that this proposal runs afoul of the letter and spirit of the landmark conservation law that is NEPA, as well as the tiered decision-making approach recognized in the applicable LRMPs.

Forest Service Response: The regionwide aquatic restoration EA provides the opportunity for public input when local project proposals are made. All of the projects proposed under the regionwide aquatic restoration NEPA and associated decision would provide the opportunity for the public to provide input at the local level as part of the project implementation process described in the EA on pp. 16-19.

Comment Code: 12-20

Comment: Pre-project Notification, Public Review Oregon Wild appreciates the small steps toward public notification, comment (and agency response) in implementation of projects covered by this programmatic EA. However, we remain concerned that this novel process falls short of the requirements of NEPA and its implementing regulations. There is still no site-specific analysis of alternatives, environmental consequences, mitigation, etc. It's one thing to be more efficient with the limit resources that are available for restoration, but if Congress fails to appropriate enough resources to fully comply with the requirements of the law, then they have not appropriated enough resources to implement restoration. The FS does not get to rewrite the law. We are concerned that the public has limited opportunity to object to projects when they disagree with the findings of the Forest Service. In the unlikely and unfortunate event that some project moves toward litigation, this process raises concerns about final agency action, standing, exhaustion, statute of limitations, etc.

Forest Service Response: The project implementation public notification process is described on pages 16-19 in the EA. This process will allow integration of public and local interdisciplinary team input to the specific project. There will be opportunities to interact with a responsible official to give input on the project.

Comment Code: 12-22

Comment: The "project documentation" described on pages 55-56 of the Appendix indicate that the FS is agreeing to a design review process with the regulatory agencies, BUT NOT THE PUBLIC. Why can't the FS just send the same documentation out for public review at the same time they send it to NMFS for review? Then the FS can incorporate comments from both the regulatory agencies and the public at the same time.

Forest Service Response: The language the commenter refers to is directly out of the NOAA Fisheries Aquatic Restoration Biological Opinion and was agreed to with NOAA Fisheries during the consultation process, not this NEPA process. However, everyone would have an opportunity to review and have input to all types of restoration projects proposed under this EA and associated decision when a specific project is proposed.

Comment Code: 12-23

Comment: The EA says that pre-project notice would be provided via the Aquatic Restoration Reporting System (ARRS), an online database open to public viewing at

http://fswebgsc.gsc.wo.fs.fed.us/services/data_management/ARRRS/index.php. However, this website appears to be behind a security wall. The response says: "ERR_NAME_NOT_RESOLVED".

Forest Service Response: The database will be accessible when projects begin to be implemented under this regionwide EA.

Comment Code: 12-1

Comment: We are concerned that this project attempts a novel approach to NEPA that emphasizes generic programmatic analysis, and fails to follow up with site-specific analysis and public involvement.

Forest Service Response: The broadscale approach does not exclude review by the local project proponent, in this case a National Forest. National Forests will continue to plan and design projects in traditional ways, such as using watershed analysis or other assessments to identify ecological threats that provide the foundation for restoration actions. Through the traditional Interdisciplinary Team (IDT) process, project implementation planning and design will be coordinated with other unit specialists, such as wildlife biologists, botanists, engineers, and other relevant disciplines. To track this coordination, the project compliance form, described and displayed in Appendix 4 of the EA, will be used to ensure that all site-specific issues identified by specialists have been thoroughly addressed. Public entities who have expressed interest in aquatic restoration projects on NFS lands will be notified at least 60 days prior to project implementation and are given a 20-day opportunity to provide feedback to the project proponent. This feedback will be addressed, typically through the IDT, and could result in project modification or disqualification of the project under the EA. The project proponent will provide a response to the public entity no later than 15 days after the input period ends.

Comment Code: 12-24

Comment: Our concerns are mostly with the programmatic process, but we have some specific suggestions on the substance of the PDCs (in bold below). We raise some serious concerns about the use of programmatic NEPA to provide site-specific project analysis. These concerns can be partially mitigated if the Forest Service will provide a robust system of timely public notice and comment on proposed restoration projects.

Forest Service Response: The Pacific Northwest Region has provided a notification process that will allow the public to provide input to proposed implementation projects. All public entities that have expressed interest in viewing and providing input to aquatic restoration on NFS lands will be notified at least 60-days prior to project implementation. The notification will provide a project summary as described under *Step 3 - Pre-Project Notification, Public Review, and Forest Service Response* along with contact information to direct input. Once a public entity is notified, which will occur through an automated email system, they will have 20 days to provide input to the project proponent. From there, the Forest Service has 15 days from the end of the input period to respond to public input. During this time, the public input will be addressed through the IDT process, which could lead to project modification or disqualification.

Comment Code: 12-7

Comment: Channel Relocation The Channel Reconstruction and Relocation category seems to have a lot in common with the stage zero floodplain category. These projects (e.g. Fivemile Bell on the Siuslaw NF) often involve large-scale ground disturbance. Why would they not get their own NEPA analysis? There should be a scale limitation on this category.

Forest Service Response: The Stage 0 restoration technique simulates a disturbance event such as a landslide and is used for aggrading a downcut stream channel and often results in a large surface area of

disturbance, like the natural event it intends to simulate. Channel relocation and reconstruction projects generally do not disturb as much ground. Stage 0 projects are explicitly excluded from this environmental analysis. If such projects are proposed in the future separate analysis will be conducted for them.

Comment Code: 12-9

Comment: Recreation Impacts This category needs some mechanism to ensure that these projects are narrowly focused on ecological goals and not used as a loophole to get recreation improvements done where the ecological benefits are a minor component of the project.

Forest Service Response: All actions implemented under the decision associated with this analysis must be consistent with its purpose, which is watershed and aquatic habitat restoration, and the effects documented in the EA. The five-step project implementation process, which involves the public and Forest Service interdisciplinary teams and decision makers provides a high degree of transparency and accountability to avoid the stated concern.

Comment Code: 12-6

Comment: Stream Diversions The design criteria state "diversion structures ... must pass all life stages of threatened and endangered aquatic species..." This should be modified to include passage for all native aquatic species.

Forest Service Response: The design criteria are based upon conditions established by USFWS and NOAA Fisheries through the ESA programmatic consultation and associated BOs, so ESA species were specified. Projects are conducted in low flow in the summer, when aquatic organisms generally do not migrate, so providing passage for all aquatic organisms at temporary bypasses is not necessary. The use of these temporary structures is generally no longer than a couple of days.

Comment Code: 12-16

Comment: Design criteria state "No limits are to be placed on the size or shape of structures as long as such structures are within the range of natural variability of a given location..." This basically says 'no limits except HRV' (which is a limit). This should be rewritten as "The size or shape of large wood and boulder structures must be within the range of natural variability of a given location..."

Forest Service Response: This change will be made.

Comment Code: 12-18

Comment: Number of Projects. The EA says "A single project can include two aquatic restoration categories ..." Does this just encourage the agency to artificially segment activities in to separate actions even though they may be related? If there was a better process of site-specific analysis and public involvement, I can see this limitation being relaxed.

Forest Service Response: Restoration projects are often multifaceted. For example, an aquatic organism passage project may also include riparian planting and the placement of large wood in the stream and floodplain. It may also include channel reconstruction.

Comment Code: 12-19

Comment: FONSI The EA says "We prepared this environmental assessment to briefly provide sufficient evidence and analysis to determine whether to prepare an environmental impact statement or a finding of no significant impact." This is good. We would hope to see more direct analysis of the indicators of NEPA significance in the CEQ regulations. 40 CFR §1508.27. Can the public review and comment on a carefully crafted draft FONSI, not one that is full of boilerplate language?

Forest Service Response: Based on the analysis in the EA, a Finding of No Significant Impact (FONSI), addressing the 10 intensity factors, has been prepared and attached to the decision notice.

Comment Code: 12-2

Comment: For these projects, the design criteria state "Bankfull width shall be based on the upper end of the distribution of bankfull width measurements as measured in the reference reach to account for channel variability and dynamics." This should be modified to account for climate change as required by the design criteria applicable to all projects, i.e., "Consider climate change information, such as predictive hydrographs for a given watershed or region or local assessments if completed when designing projects." EA, Appendix 2, page 79.

Forest Service Response: Accommodations for predicted climate change effects will be incorporated into specific project design.

Comment Code: 12-5

Comment: Headcut Repair The design criteria state "Minimize lateral migration of channel around headcut ("flanking")" Doesn't this just replace one kind of problem (headcutting) with another problem (artificial constraint of stream migration)? What is the rationale for this trade-off? Is it always better to stop headcutting at the expense of permanently halting stream migration and floodplain dynamics? Are there situations where this trade-off is unacceptable? Wouldn't this require more thorough site-specific NEPA analysis? There is a reference to "part ii below" that does not make sense.

Forest Service Response: Many of the project design criteria have been cross-walked directly over from ARBO II and were inserted by NOAA Fisheries and/or USFWS. Our approach to treating a particular headcut would be tailored to the conditions at the project site and would be prescribed when a project is proposed and designed.

Comment Code: 12-15

Comment: Large Wood Why is large wood placement a connected action instead of a restoration category? This is confusing. What are the implications of this difference? This category contemplates placement of large wood imported from outside the riparian reserves. What about tree tipping, or sourcing wood from within the riparian reserve? The design criteria should allow wood purchased on the open market or sourced from non-federal lands.

Forest Service Response: Potential large wood sources include all the sources you described. This EA would authorize wood use in riparian areas only. Other sources would require other types of environmental analysis.

Comment Code: 12-17

Comment: Design criteria say "partial burial of large wood and boulders is permitted and may constitute the dominant means of placement" Do we really know that partial burial is working. We may be burying wood and trying to make it stay put in the wrong places - a mistake similar to prior tendency toward cabling log and rocks. Maybe it's better to let streams move the material around and bury it (via natural processes) where it makes the most sense for the given stream dynamics. Use of rebar in stream structures should be discouraged. It's unnatural and a hazard to recreation, navigation. Other design criteria refer to the use of "use of manila, sisal or other biodegradable ropes for lashing." These should be preferred.

Forest Service Response: Attachment of large wood during placement for aquatic and riparian restoration is unusual these days. Surface placement or partial burial is more likely. A particular approach

will be described in a project proposal and the public will have an opportunity to provide input in a site specific setting.

Comment Code: 12-13

Comment: Juniper Removal This category should be limited to non-old growth juniper.

Forest Service Response: The amount of juniper removal and/or retention will be determined at the site-specific project level commensurate with the objectives of the project.

Comment Code: 12-14

Comment: Prescribed fire in riparian reserves. This category includes "conifer thinning" which should be limited to non-commercial thinning.

Forest Service Response: The proposed action does not include commercial thinning of riparian areas, only non-commercial thinning.

Comment Code: 12-3

Comment: As we noted in our scoping comments, restoration projects (such as culvert replacement) should be designed for increased capacity to accommodate increased storm flows expected as a result of climate change which is expected to reduce the temperature gradient between the equator and the poles which will slow the jet stream, increase jet stream sinuosity, and slow the passage of storms over watersheds and increase large precipitation events and increase storm discharges. Plus, the warmer atmosphere can hold more water. This may require design to accommodate larger and more frequent high flow events.

Forest Service Response: Climate change will be incorporated into specific project design and its potential effects will be considered in specific project designs.

Comment Code: 12-4

Comment: According to a newly-published NOAA-led study in Geophysical Research Letters, as the globe warms from rising atmospheric concentrations of greenhouse gases, more moisture in a warmer atmosphere will make the most extreme precipitation events more intense. ... "We have high confidence that the most extreme rainfalls will become even more intense, as it is virtually certain that the atmosphere will provide more water to fuel these events," said Kenneth Kunkel, Ph.D., senior research professor at CICS-NC... .. The findings of this report could inform "design values," or precipitation amounts, used by water resource managers, insurance and building sectors in modeling the risk due to catastrophic precipitation amounts. Engineers use design values to determine the design of water impoundments and runoff control structures, such as dams, culverts, and detention ponds. National Oceanic and Atmospheric Administration (2013, April 8). A warming world will further intensify extreme precipitation events, research shows. Science Daily. Retrieved April 9, 2013. <http://www.sciencedaily.com/releases/2013/04/130408190938.htm> citing Kenneth E. Kunkel, Thomas R. Karl, David R. Easterling, Kelly Redmond, John Young, Xungang Yin, Paula Hennon. Probable maximum precipitation (PMP) and climate change. Geophysical Research Letters, 2013; DOI: 10.1002/grl.50334 Extreme winter precipitation events are projected to increase significantly in western United States. Dominguez et al. (2012) Abstract: "We find a consistent and statistically significant increase in the intensity of future extreme winter precipitation events over the western United States, as simulated by an ensemble of regional climate models (RCMs) driven by IPCC AR4 global climate models (GCMs). All eight simulations analyzed in this work consistently show an increase in the intensity of extreme winter precipitation with the multi-model mean projecting an area-averaged 12.6% increase in 20-year return period and 14.4% increase in 50-year return period daily precipitation. In contrast with

extreme precipitation, the multi-model ensemble shows a decrease in mean winter precipitation of approximately 7.5% in the southwestern US, while the interior west shows less statistically robust increases." Citation: Dominguez, F., E. R. Rivera, D. P. Lettenmaier, and C. L. Castro (2012), Changes in winter precipitation extremes for the Western United States under a warmer climate as simulated by regional climate models, *Geophys. Res. Lett.*, doi:10.1029/2011GL050762, in press. <http://www.agu.org/pubs/crossref/pip/2011GL050762.shtml>.

Forest Service Response: The effects of climate change and their relevance to the project are addressed in the EA and supporting documentation (e.g., see flooding discussion on page 8 of Aquatic Species and Water Resources Analysis for Pacific Northwest Region Aquatic Restoration EA). We agree that such information can be used in the design process for some projects.

Comment Code: 12-12

Comment: Beaver Habitat Improvement: This category includes unlimited use of "fire suppression vehicles and equipment." This should be limited to exclude bulldozers and other fire suppression methods that cause unacceptable impacts on vegetation, soil, water, and weeds.

Forest Service Response: This restoration category is seldom used but still important to make a big difference over a large area, relatively quickly. Bulldozers have never been used during the limited times this restoration category has been used. Since the intent of this type of project is to benefit riparian areas and streams, it is unlikely unacceptable impacts upon vegetation, soil, water, and weeds would occur.

Comment Code: 12-8

Comment: Nutrient Enhancement: This category should be limited to nutrient sources that are close analogues of fish carcasses and can serve as direct food sources for fish & wildlife. Inorganic fertilizer should not be recognized as providing the same ecological value as fish carcasses. In particular note that design criteria state for stream bank stabilization states "6. Do not apply surface fertilizer within 50 feet of any stream channel." The design criteria has seasonal restriction on placement of fish carcasses. Those same restrictions should be applied to fish cakes and inorganic fertilizer.

Forest Service Response: Nutrient enhancement is either actual fish carcasses or salmon nutrient analogues. This practice has occurred for decades now. It is not plant fertilizer.

Comment Code: 12-11

Comment: Pesticides: Pesticides should be excluded from the Bull Trout protection category, because this technology could dramatically expand the scale of effects compared to manual removal, and pesticides are not well targeted at non-native fish. There is a notable lack of design criteria to ensure that pesticides are appropriately used.

Forest Service Response: Application of pesticides is not part of the proposed action.

Comment Code: 12-10

Comment: Livestock Fencing: We feel that installation of wildlife-friendly fencing to protect streams from livestock should be included as a covered restoration activity as long as the FS considers fencing as a last resort (i.e. after determining that alternatives such as closing the pasture where problems are occurring or reducing livestock numbers would not be an acceptable alternative.) Maybe there is a reason for limiting fencing to protect "restoration project" but it's hard to understand why we would not want to protect critical stream reaches that are important to aquatic conservation but have not been subject to a restoration project done. The design criteria state "4. Fencing shall not extend beyond riparian habitat conservation area boundaries." This does not make a lot of sense. This EA covers road stormproofing that

is outside of Riparian Reserves, because there is a recognition that road impacts outside the riparian zone can affect streams. Similarly, livestock from outside riparian reserves can affect streams. The list of heavy equipment to be used for this category should be narrowed. If bulldozers are needed to build riparian fences, the project should go through the normal NEPA process.

Forest Service Response: If fencing is proposed for a project, the factors you raise will be addressed during project implementation. Fencing can still be used to protect critical stream reaches through other authorizations, such as through the allotment management plan process.

Heiken, Doug—Oregon Wild; Halsey, Shiloh—Cascade Forest Conservancy

Comment Codes: 12-26; 18-4

Comment: We encourage the Forest Service to come up with an efficient method of public notice and comment on restoration projects as they are site-specifically planned and implemented. The EA states that "[a] wildlife biologist must be fully involved in all tree-removal planning efforts and be involved in making decisions on whether individual trees are suitable for nesting or have other important listed bird habitat value." The details of tree removal should be stated in the pre-project notification sent for public review 60-days prior to project implementation.

Forest Service Response: The project implementation public notification process is described in the EA on pp. 16-19. A wildlife biologist/ecologist is a part of the interdisciplinary team at the project level.

Hood, Paula—Blue Mountains Biodiversity Project

Comment Code: 15-46

Comment: Table 1, seems misleading and confusing. The EA notes under Table 1 that "*Riparian area protectionism not a project listed in the Aquatic Restoration Biological Opinion; it is passive restoration directed under the Northwest Forest Plan, PACFISH and INFISH. BMPs = best management practices".

Forest Service Response: The table has been changed to reflect the title of the table. The proposed action in the EA is for active restoration. Passive restoration (protection) has been authorized through Forest Plans, particularly the Aquatic Conservation Strategies of the Northwest Forest Plan, PACFISH, and INFISH, and is further implemented through BMPs associated with each management activity. The proposed action does not include passive restoration.

Comment Code: 15-10

Comment: Similarly, additional actions that may address pervasive and severe negative impacts to water quality and ESA-listed fish due to livestock grazing should be considered in an alternative within the PNW Region Aquatic Restoration Project (such as livestock exclusion in certain priority subwatersheds supporting key populations of ESA-listed fish, particularly if there is a history of severe negative impacts in the subwatershed due to livestock).

Forest Service Response: Livestock management is beyond the scope of this EA. A separate NEPA analysis is prepared associated with a grazing allotment. Livestock management is specific to a given allotment, including the environmental conditions and the number and types of livestock, so a regionwide decision is not appropriate. Within the authority of a grazing allotment decision, there are opportunities to adjust livestock management through annual operating plans to protect other resources, so in many cases NEPA is not always required.

Comment Code: 15-74

Comment: Please see our addendum with our field survey pictures of non-commercial "restoration" along Bear Creek in the Big Mosquito timber sale (Malheur National Forest). Our addendum also includes our letter to the USFS expressing our concerns about these activities, and our dismay that the USFS did not follow our objection resolution agreement with regard to these "Riparian Enhancement Treatments". We note that this information regarding Bear Creek highlights the importance of public involvement and the high likelihood of significant effects from such projects.

Forest Service Response: Under the proposed action vegetation management for a selective wood source for stream restoration projects, some non-commercial thinning and prescribed burning, and juniper cutting would be allowed.

Comment Code: 15-75

Comment: Step 3: Submit Pre-Project Notification for Public Review" does not provide an opportunity for providing the public with adequate information to submit meaningful or substantive comments or for the USFS.

Forest Service Response: The project implementation public notification process will provide specific information about the proposed project and provide an opportunity for the public to provide input and interact with the responsible official. The section describing this starts on page 16 of the EA.

Comment Code: 15-4

Comment: Logging retards the attainment of Riparian Management Objectives (RMOs) on eastside forests, increases stream temperatures and fine sediments, and decreases large tree and wood recruitment.

Forest Service Response: The Aquatic Restoration proposed action does not include commercial logging, which involves the cutting and removal of trees to somewhere outside the forest for commercial purposes. Under this analysis, vegetation management activities would be constrained to non-commercial conifer thinning, controlled burning, and juniper removal activities with the specific objective of restoring the structure and function of riparian plant communities. As described in the EA, in the long-term these actions are expected to accelerate attainment of aquatic and riparian desired conditions, and thus Riparian Management Objectives (RMOs). Negative effects are expected to be of limited magnitude, duration and extent due to the limited scope and scale of these actions combined with robust project design criteria and the five-step project implementation process. The project would not prioritize any types of individual actions over any others.

Comment Code:

15-83

Comment: Annual coordination (EA pg. 18) relies heavily on non-transparent internal agency discussions. There are no real mechanisms for accountability or public transparency regarding the efficacy or ecological effects resulting from this project.

Forest Service Response: Aquatic restoration projects are monitored at several different levels within the Region. Environmental and biological monitoring and best management practices monitoring may occur for a particular project. In addition, forest plan level monitoring through the Aquatic and Riparian Effectiveness Monitoring Program or the PACFISH/INFISH Biological Opinion (PIBO) Monitoring Program monitor watershed conditions at the broader scale.

Post project monitoring will be available on the following website (EA pp. 18-19)

http://fswebgsc.gsc.wo.fs.fed.us/services/data_management/ARRRS/index.php

Comment Codes: 15-19, 15-18, 15-17

Comment: Very different outcomes would arise from the Pacific Northwest Region Aquatic Restoration project if the project tiers to the new Blue Mountains Forest Plan Revision, and considers the increased negative cumulative affects that will result from the loss of associated protections. The loss of such standards and protections in Forest Plans will cause very different outcomes when coupled with riparian logging and burning as proposed in riparian restoration projects (including this EA). We are concerned that the PNW Region Aquatic Restoration Project does not account for the loss of PACFISH/INFISH in its analyses. The EA does not contain an action alternative or analyses tiered to revised Forest Plans, such as the Blue Mountains Forest Plan Revision.

Forest Service Response: On March 14, 2019 the Reviewing Officer for the Chief of the Forest Service issued a response to the objections to the Final Environmental Impact Statement (FEIS), draft Record of Decision, and Revised Land Management Plans (Revised Plans) for the Umatilla, Malheur, and Wallowa-Whitman National Forests instructing that the documents be withdrawn and the existing Land and Resource Management Plans, as amended, remain in place.

This commenter's concern is noted, however the content of other analyses and decisions, including those tied to Forest Plan revisions, is outside the scope of this analysis. Future plan revisions are expected to provide comparable protection of aquatic and riparian resources.

Comment Code: 15-71

Comment: The lack of opportunity for adequate environmental analyses and public review and input is particularly problematic if the Blue Mountains Forest Plan Revision takes effect, potentially mooted many of the protections and standards this project is tiered to.

Forest Service Response: On March 14, 2019 the Reviewing Officer for the Chief of the Forest Service issued a response to the objections to the Final Environmental Impact Statement (FEIS), draft Record of Decision, and Revised Land Management Plans (Revised Plans) for the Umatilla, Malheur, and Wallowa-Whitman National Forests instructing that the documents be withdrawn and the existing Land and Resource Management Plans, as amended, remain in place. Therefore, this commenter's concern is noted, however it is outside the scope of this project.

Comment Code: 15-27

Comment: Site-specific environmental impact statements and environmental analyses with full public involvement are necessary for sound management and for adherence to NEPA.

Forest Service Response: Site specific input from the local IDT as well as comments from those interested in the project will be considered when specific projects are proposed during the project implementation process.

Comment Code:

15-84

Comment: We are concerned that the USFS did not adequately consider the effects with regard to the no-action alternative, as well as specific actions discussed in the no-action and action alternative. For example, the USFS asserts (EA pg. 19) that under the no-action alternative with the current approved aquatic restoration projects, "the effects associated with stream turbidity, water temp, fish captured, injured or killed under the current program would remain unchanged. These effects fall under Federal Clean Water Act and Endangered Species Act compliance thresholds. However, because additional restoration projects that improve degraded watershed process and associated habitats would not be implemented, the number of watersheds that reach properly functioning conditions via completion of

watershed restoration action plans would be less than numbers achieved under the proposed action. “The USFS can't know, given current lack of monitoring or accountability as discussed throughout our comments, that they're within compliance thresholds.

Forest Service Response: Comment noted. Currently, monitoring occurs on projects through various means. At the project level, Best Management Practices (BMP) monitoring provides insights into compliance with Clean Water Act (CWA) and ESA. In addition, CWA compliance is assessed through interagency field trips to projects implemented under the USACE/DSL programmatic. There is also project specific monitoring that may occur by the project implementer as part of the project.

Comment Code: 15-25

Comment: These actions should include site specific analyses that take a "hard look" at potential site-specific effects on the environment.

Forest Service Response: Prior to project proposals, there is significant public interaction, collaboration, and communication. In most projects, other entities are major partners in proposed projects and are directly involved in assisting with the planning, design, and funding of those projects. When a specific project is proposed, the public will be notified and will have the opportunity to provide input. The compliance form has been updated to provide for additional project information. In addition, a local interdisciplinary team will form to further evaluate implementation of the specific project at the local level. The proposed project can continue, be modified, or stopped during the project implementation process.

Comment Code: 15-67

Comment: We are concerned that this is a very large number of projects/impact over a 10-15 year period. What biological basis or evidence does the USFS have for claiming that the scale of the project will not have significant impacts? What additional analyses or protections are provided for key or priority watersheds? Are there additional efforts to protect these watersheds or subwatersheds from excessive road densities, livestock grazing, or logging, through this project or others?

Forest Service Response: We are confident regarding the effects of the projects based on monitoring of the ESA programmatic activities and BMPs. The proposed action is for active restoration. Passive restoration (protection) occurs separate from this project through different project planning efforts and maintaining consistency with Forest Plans, agency regulations, and other State and Federal laws. Protection for aquatic and riparian areas and watersheds (including Key Watersheds) from the effects of management actions can be found in Forest Plans within the Region.

Management, including review of road densities, livestock grazing, and timber management is outside the scope of this project.

Comment Code: 15-41

Comment: Please see our addendum discussing the ecological risks of logging in streamside corridors, which includes a discussion of the scientific controversies regarding this issue.

Forest Service Response: No commercial logging will occur in riparian areas as a result of this decision. Some vegetation treatments including non-commercial thinning will occur when there are benefits to aquatic and riparian species. However, no commercial timber will be removed from riparian areas as a result of this proposal. The vegetation activities allowed in riparian areas as a result of this decision are burning, non-commercial thinning, juniper treatments, dispersedly accessing tree for stream restoration work, and aspen release.

Comment Code: 15-42

Comment: Logging and burning in RHCAs and riparian areas may be associated with negative and long-term impacts to water quality and ESA-listed fish.

Forest Service Response: No commercial logging will occur in riparian areas in association with this project. The short term impacts associated with the vegetation treatment proposed for riparian areas, including effects on water quality, were analyzed in the effects section of the EA. The effects upon ESA listed species have been analyzed and consulted upon with USFWS and NOAA Fisheries through the Aquatic and Riparian Biological Opinions (ARBO II, 2013).

Comment Code: 15-34

Comment: There are significant disputes regarding much of the science and data on which the Forest Service relied in selecting the Proposed Action.

Forest Service Response: The project types proposed in the EA have been implemented for decades by the agency and many other entities throughout the Pacific Northwest, the country, and the world. A large volume of scientific literature supports these types of projects and can be found in the references section of the Aquatic Species and Water Resources supporting information. Restoration is a science and, as such, there are competing viewpoints. This is a good thing because it helps advance science.

Comment Code: 15-82

Comment: The EA (pg. 18) discusses administration at regional level. We are very concerned that the steps outlined here, including the annual report, is a totally inadequate mechanism for accountability. The components of the "annual assessment of aquatic restoration projects" seem to consist primarily of a tally of the number of projects and where they were carried out, with no hard requirements to look at the ecological or biological ramifications of the projects (for example, how are stream temperatures, fine sediments, or fish responding?).

Forest Service Response: Effectiveness and BMPs monitoring is not the intent of the annual compliance checks and training. Rather, the intent is to ensure compliance with the design criteria and procedures spelled out in the EA. Monitoring will occur through BMP and individual project monitoring. (EA pp. 26, 28, 29, 31, 32, 41 for example)

Comment Code: 15-93

Comment: EA did not include analyses/guidelines/decision tree for determining where hardwood plantings appropriate (for example, may not be appropriate in deeper gulches, steep or north facing slopes, etc.

Forest Service Response: Site specific project implementation details on planting and other project proposals will be included when specific projects are proposed. At that stage, there will be an opportunity for input on where and what planting occurs in association with a project.

Comment Code: 15-96

Comment: Does the above paragraph mean that USFS activities that would manipulate "plant species composition and structure" (e.g., logging and burning) would only apply to low elevation Ponderosa pine forests? While such activities may be problematic in Ponderosa pine forests for all of the reasons discussed, it is nevertheless an important distinction. Logging in mixed conifer forests is even more controversial than logging in lower elevation Ponderosa pine forests.

Forest Service Response: This EA does not analyze logging in riparian areas. Burning is allowed, providing it benefits riparian dependent and aquatic species. It is not likely cutting vegetation and burning in riparian areas will affect ponderosa pine stands since they are uncommon in riparian areas. If such projects are proposed for implementation, the public will have an opportunity to provide input.

Comment Code: 15-60

Comment: The EA states that "to the extent possible" large logs would come from roadside hazard logging and other large tree logging". Presumably enough logs would be supplied from roadside hazard logging for stream restoration, rather than removed through commercial logging in hazard and "other" logging.

Forest Service Response: The aquatic restoration EA only analyzes the use of trees in riparian areas for aquatic work. Other NEPA analyses may authorize the removal of trees from upland sites, but the proposals will be site specific. The Forests will not purchase trees from NFS lands for aquatic restoration.

Comment Code: 15-16

Comment: Juniper removal: will the USFS include protections for old growth juniper and recruitment of old growth juniper? What are they?

Forest Service Response: Protections for large junipers can be found in the project design criteria, page 79 of the EA.

Comment Code: 15-72

Comment: The Blue Mountains Forest Plan Revision contains no RMOs, quantitative standards, or protections with enforcement teeth.

Forest Service Response: On March 14, 2019 the Reviewing Officer for the Chief of the Forest Service issued a response to the objections to the Final Environmental Impact Statement (FEIS), draft Record of Decision, and Revised Land Management Plans (Revised Plans) for the Umatilla, Malheur, and Wallowa-Whitman National Forests instructing that the documents be withdrawn and the existing Land and Resource Management Plans, as amended, remain in place.

This commenter's concern is noted, however the content of other analyses and decisions, including those tied to Forest Plan revisions, is outside the scope of this analysis. Future plan revisions are expected to provide comparable protection of aquatic and riparian resources.

Comment Codes: 15-1, 15-2, 15-3, 15-5

Comment: Proposed actions in the Pacific Northwest Region Aquatic Restoration Project proposed actions will not meet/contradicts the Purpose and Need of the project. Logging will not address any of the problematic issues discussed in the "Need for Proposal" section of the EA. Logging does not address water quality impairments of high stream temperatures or excess fine sediments, and instead exacerbates these problems. Yet logging is the most commonly implemented and emphasized action in practice across the landscape. Note Table 1 in the EA shows that "vegetation" projects (logging and burning projects) were far more common and had disproportionate focus compared to any other less risky or controversial stream restoration. While "vegetation projects" are shown as constituting 12% of expected outcomes, the number of thinning projects may extend many stream miles and have far-reaching impacts that are not accurately reflected in this 12% figure.

Forest Service Response: The proposed action does not include commercial logging, which involves the cutting and removal of trees to somewhere outside the forest for commercial purposes. Under this project,

vegetation management activities would be constrained to non-commercial conifer thinning, controlled burning, and juniper removal activities with the specific objective of restoring the structure and function of riparian plant communities. As described in the EA, in the long-term these actions are expected to accelerate attainment of aquatic and riparian desired conditions, and thus RMOs. Negative effects are expected to be of limited magnitude, duration and extent due to the limited scope and scale of these actions combined with robust project design criteria and the five-step project implementation process. The project would not prioritize any types of individual actions over any others.

Comment Code: 15-28

Comment: The USFS needs to prepare an Environmental Impact Statement for this project. A federal agency must prepare an EIS for "major federal actions significantly affecting the quality of the human environment." 42 U.S.C. § 4332(2)(C). See, e.g., *Ctr. for Biological Diversity v. Nat'l Highway Traffic Safety Admin.*, 538 F.3d 1172, 1185 (9th Cir. 2008) ("If there is a substantial question whether an action 'may have a significant effect' on the environment, then the agency must prepare an Environmental Impact Statement (EIS)") (citation omitted).

Forest Service Response: The potential effects of the proposed action were evaluated by the interdisciplinary team and they were determined to not be significant. There are 1,961 subwatersheds on the National Forest units within the Pacific Northwest Region. Implementation of approximately 80% of the proposed restoration actions will be concentrated in 66 priority subwatersheds, a small proportion of the total subwatershed in the Region (refer to the Summary of Effects to Aquatic Species and Water Resources, page 24 of the EA). In the Wildlife Effects section, another measure of environmental impact is direct fish mortality. This is reported annually to satisfy the direction of the Aquatic Restoration Biological Opinions (ARBO II, 2013). As authorized by Take permits from USFWS and NOAA Fisheries, there have been 151 federally listed fish estimated to have been killed during the implementation of aquatic restoration work conducted through ARBO, between 2015 and 2017. These were primarily juvenile salmonids. From a population perspective, when considered regionwide, this number is insignificant.

Comment Codes: 15-86, 15-87, 15-88

Comment: The USFS also omits key negative impacts that would not occur if the no-action alternative were to be implemented. Such negative affects include long term and widespread disturbed soils and soil compaction within RHCAs and riparian areas, loss of sensitive or rare plants due to heavy equipment and logging, and damage or destruction of cultural resources. Similarly, the effects analysis for the no-action alternative assumes that the proposed project activities would only result in beneficial, non-adverse affects to wildlife, soils, botany, and cultural resources. It is unclear how "the Forest service would forgo restoration of 12,500 of long-term improvements in soil"—but somehow the extensive soil compaction and disturbance, and erosion created by logging and using heavy equipment in RHCAs and riparian areas does not figure into the USFS analyses.

Forest Service Response: Analysis of both negative and beneficial effects of No Action begins on page 20 of the EA. The difference in acres of both detrimental soil conditions and long-term improvements are based on the difference in the likely numbers of aquatic restoration activities to occur with (proposed action) and without (no action with subsequent environmental analysis completed at the forest level) a decision from this EA.

Comment Code: 15-89

Comment: Restoration of early seral vegetation" would occur at "reduced rates, reducing availability of herbaceous forage." "Herbaceous forage" availability is not, as far as I'm aware, a key concern for ESA-listed, sensitive, or at-risk wildlife.

Forest Service Response: The effects analysis in the EA speaks to overall effects of the proposed action, not just the effects upon listed or rare species. The reduction of available forage may affect other valuable wildlife species and, as such, should be described.

Comment Code: 15-7

Comment: The Pacific Northwest Region Aquatic Restoration Project EA should have included more than one action alternative. The USFS should have considered a wider range of possible actions and outcomes—including those that analyzed, for example, a "no thinning" alternative, an alternative that allowed for wildfire and the associated ecological benefits in some areas, an alternative that was not limited to addressing only non-system roads, and an alternative that allowed for the removal of dams larger than those included in this analysis.

Forest Service Response: The proposed action in the EA is the result of responding to internal and external scoping. Riparian non-commercial thinning is included because it is a legitimate approach towards riparian and aquatic restoration. The decision to let fires burn is extremely site and time specific, so would not be compatible with this type of decision process. The proposals for non-system road decommissioning and dam removal are in response to internal and external scoping input and interdisciplinary discussions. The extent of the proposed actions is also constrained by what occurs in the Aquatic and Riparian Restoration Biological Opinions (ARBO II) from USFWS and NOAA Fisheries.

Comment Code: 15-12

Comment: The USFS should have been explored the following in action alternative(s): Why doesn't the USFS include possible relocating of dispersed recreation sites that are causing damage to streams or aquatic ecosystems?

Forest Service Response: One of the proposed actions is Reduction and Relocation of Recreation Impacts on page 9 of the EA, and described in EA appendix 1.

Comment Code: 15-26

Comment: Even seemingly non-controversial projects can have unintended and negative ecological impacts.

Forest Service Response: The agency agrees and has evaluated adverse impacts that may result from implementing an action. The impacts associated with the proposed action are discussed in the environmental impacts section of the EA.

Comment Codes: 15-43, 15-95, 15-44, 15-45

Comment: They are not restorative, they simply make the USFS action taking place less damaging or degrading. BMPs are generally mitigations designed to ameliorate the negative impacts from USFS actions such as logging. This makes the effectiveness of BMPs and PDCs difficult or impossible to verify. BMPs and PDCs are overwhelmingly worded to be unreliable and unenforceable, with phrases such as "when practical" or "as necessary"—rendering the majority of BMPs and PDCs subjective and optional.

Forest Service Response: Best Management Practices (BMPs) are adhered to and used by most action and regulatory agencies and organizations. As valuable as the implementation of the measures

themselves, the associated monitoring the agency has dedicated itself to continue is valuable to learn BMP effectiveness and adapt future actions and BMPs based upon the results. BMPs and other protective measures can be considered to maintain baseline condition through protection. The active restoration measures proposed in the EA would advance conditions further towards a restorative state.

Comment Code: 15-15

Comment: The EA states that "Nonnative Invasive Plant Control: This category dropped from modified proposed action b/c national forest units have or will complete environmental analysis and make local decisions on invasive plant treatments". Why would a separate EA or EIS preclude invasive plant restoration actions here?

Forest Service Response: Invasive plant treatments *would* occur in conjunction with activities covered in this project per the project design criteria identified in Appendices 1 and 2. The distinction is that the *decisions* on how to treat a particular species have already been made at the Forest-level on most Forests. It would be redundant and inefficient to conduct invasive plant treatment analysis for this project while simultaneously having the work covered under a separate forest-level NEPA decision. Forests without existing decisions would need to prepare an analysis prior to treatment.

Comment Codes: 15-20, 15-23, 15-73

Comment: Projects taking place under the PNW Region Aquatic Restoration Project EA would not allow for adequate site-specific analyses, transparency to the public, or meaningful public review or substantive comments. The lack of environmental analyses and extremely limited options for public review would allow little or no recourse for the public. The current process laid out further public review and analyses do NOT satisfy the NEPA requirements for agencies to take a "hard look" at the potential effects of their actions. The process undercuts the NEPA process, and sets a very concerning precedent for allowing thinning and other activities in RHCAs without adequate analyses or public oversight.

Forest Service Response: The public and a local interdisciplinary team will have an opportunity to review, provide input, and influence projects during the implementation process. Local project conditions will be incorporated into project plans. The description of the thinning and prescribed fire category has been clarified on pages 12 and 23 of the EA. No commercial logging would occur.

Comment Code: 15-21

Comment: Issues relevant to a specific project area that may arise (such as riparian logging ("thinning") potentially affecting a genetically important population of ESA-listed fish or other ESA-listed species such as Canada lynx) will not be subject to site-specific review or meaningful public involvement.

Forest Service Response: The proposed action includes an opportunity for the public to provide input to a specific project when it is proposed for implementation. In addition, a local interdisciplinary team will form to identify any implementation effects that may exist beyond those identified in the regional EA. These items will be addressed locally, potentially adapting or stopping the project. Effects to ESA listed species have been addressed through Section 7 consultation with FWS/NMFS. ARBO II provides an effects analysis for activities that affect federally listed species. All projects will be in compliance with the Aquatics Restoration Biological Opinions (ARBO II, 2013). At the project implementation stage, local biologists can add additional guidance to further reduce effects to species above and beyond ARBO II.

Comment Code: 15-101

Comment: Multiple scales of monitoring are needed (reach, subwatershed, reference vs. impacted, etc.). Upstream/downstream and before/after monitoring is needed. The data must be well organized, in a pre-designated fashion, and publically accessible.

Forest Service Response: Some, but not all projects are monitored for effectiveness. In addition, BMP monitoring occurs on a subset of projects. Also, at the Regional scale, long term broad scale monitoring occurs associated with Forest Plans. All of these data are available to the public upon request.

Comment Code: 15-68

Comment: We are very concerned that the process outlined above does NOT provide for public meaningful input into these projects, now or at the time they are developed for more site-specific implementation. It also does not provide sufficient agency disclosure about relevant and crucial circumstances of the project (such as ESA-species that may be affected, direct, indirect, or cumulative impacts), and will not allow for transparency or accountability.

Forest Service Response: The public and a local interdisciplinary team will have an opportunity to review, provide input, and influence proposed projects during the project implementation process. Local conditions will be incorporated into project plans and effects to ESA-listed species will be considered.

Comment Code: 15-6

Comment: There is no mechanism in the PNW Region Aquatic Restoration Plan that would ensure the prioritization of restoration actions that are less risky or controversial than logging. Logging should not be lumped in with other stream restoration actions.

Forest Service Response: Commercial logging is not proposed with this EA. The only vegetation treatments would include non-commercial thinning, selection of trees for placement in the riparian area and stream, prescribed burning, and aspen release. These activities must benefit the condition of the riparian area and aquatic habitat to occur. The description of the non-commercial thinning and prescribed fire category has been clarified on pages 12 and 23 of the EA.

Comment Codes: 15-8; 15-9

Comment: The USFS cannot truly address landscape level restoration project of ESA-listed fish and aquatic ecosystems without addressing roads, which are likely the largest driver of water quality problems across the region (along with grazing). It is essential that the USFS work to address, at a minimum, the roads that are causing the most damage to aquatic systems would be an essential for a regional aquatic restoration project.

Forest Service Response: The EA includes the decommissioning of non-system roads and trails in areas covered by 36 CFR Subpart A and B travel management decisions. Other road decommissioning can still occur, but will require a separate NEPA analysis.

Comment Code: 15-11

Comment: Some of the language in the EA regarding the actions within the one action alternative is confusing. For example, "further, off-channel livestock watering is excluded". Does this mean that this project will not create or will not remove off-channel livestock watering?

Forest Service Response: Projects that provide the opportunity for livestock watering away from streams (the installation of pumps and/or troughs, etc.) are not included in the Regional Aquatic Restoration EA. They will require separate NEPA analysis. See page 9 in the EA.

Comment Codes: 15-24, 15-85

Comment: The USFS fails to consider negative environmental effects associated with activities such as riparian logging. The USFS is creating a disingenuous narrative that the project area would suffer predominately negative impacts from no action, i.e., the lack of projects. This may be the case foursome

of the activities included in the project proposal, but does not adequately consider the benefits to streams, water quality, sub-watersheds, and ESA-listed species from not logging within RHCAs. For example, not conducting logging or thinning within RHCAs or riparian areas would result in not raising stream temperatures and increasing fine sediment levels, and not disrupting or "taking" of ESA-listed species, and not degrading or destroying their habitat. The PNW Region Aquatic Restoration Project does not define or limit the number of streams or stream miles that may experience riparian thinning (there is an annual constraint, but not an overall project constraint that we are aware of).

Forest Service Response: This decision would not authorize commercial logging in riparian areas. Vegetation management in riparian areas will occur for the benefit of riparian dependent and aquatic species and for the purpose of restoration. When a specific project is proposed for implementation, there will be an opportunity for the public to comment on the project and a local interdisciplinary team will form to review the project and provide input to minimize effects, including impacts upon water quality and ESA species. Limitations are provided for non-commercial thinning and they can be found on page 81-82 of the EA. For example, it can only be used to decrease fuels prior to a prescribed burn to further decrease fuels and to supply wood for aquatic and riparian restoration projects. No thinned wood will be commercially sold.

Comment Codes: 15-69, 15-81, 15-99

Comment: There is very little specificity in this project proposal for providing sufficient protections for water quality, fish recovery, critical habitats for ESA listed fish species, or other key resources. There is also no accountability or requirement for the necessary analyses to be conducted at a future date, at the site-specific level. The USFS's proposed activities, including riparian logging (aka "thinning"), should also be estimated and analyzed in a project-specific, site-specific, environmental impact statement that includes a "hard look" at possible effects on the human and natural environment. The large pace, scale, and the intensity of this project is likely to have significant impacts (both positive and negative) and long-term impacts on these species. The likely significant effects to these species warrants further analyses in an EIS. The USFS has not provided a reasoned explanation or evidence to suggest that there would not be significant impacts to ESA-listed species in the project area.

Forest Service Response: The agency has been conducting these projects for decades under separate NEPA analyses and have not documented negative long term effects. The project design criteria were developed for each restoration action type, based upon knowledge gained from previous project implementation. The project types proposed in this EA come directly from the Aquatic and Riparian Biological Opinions (ARBO II), a programmatic consultation between USFWS, NOAA Fisheries, and the Forest Service. In addition, the scale of these projects, when considered throughout the Region, will not likely negatively affect species or their habitat even over the short term, when implemented. Regarding riparian tree thinning, please refer to previous answer.

Comment Code: 15-61

Comment: The EA lumps different class sizes of "large" trees together—and defines "large trees" to include 15" dbh to over 21" dbh trees. "Large" trees on the east side are generally considered to be those = or > 21" dbh. This creates a confusing and inappropriate dialog that does not sufficiently consider the different size classes, or the loss of specific classes of mid and large sized wood and trees, or their recruitment. Removing the large amount of large wood, as described in the project, from the surrounding landscape would have significant impact on large wood recruitment across the landscape and specifically in riparian forests, where they are crucial for wildlife.

Forest Service Response: If large trees on the east side of the Cascades do not exceed 21", then the requirement that source trees are 15" to over 21" is appropriate when considering both sides of the

Cascades. Extraction of wood from riparian areas will not be authorized by this NEPA analysis. Wood use, either large or small, would be solely for the purpose of restoring riparian and aquatic habitat and selection of those trees would not be done in a fashion that would negatively affect riparian habitat. When a specific project is proposed, local wildlife biologists will review it and incorporate changes if needed to protect wildlife resources.

Comment Code: 15-47

Comment: Where is the evidence that this extent, pace, and scale of logging in riparian areas and RHCAs will not have significant and long-term negative effects? What is the biological basis for determining that this level of thinning will not have significant and long-term negative effects within RHCAs/riparian areas in subwatersheds that support ESA-listed fish species?

Forest Service Response: An additional discussion of monitoring of past restoration projects has been included in the aquatic and watershed sections of the EA. The monitoring clearly demonstrates that restoration actions have not had significant and long-term negative effect. The agency has been conducting these projects for decades under separate NEPA analyses and have not documented negative long term effects. The project types proposed in this EA come directly from the Aquatic and Riparian Biological Opinions (ARBO II), a programmatic consultation between USFWS, NOAA Fisheries, and the Forest Service. In addition, the scale of these projects, when considered throughout the Region, will not likely negatively affect species or their habitat even over the short term, when implemented.

Comment Codes: 15-48; 15-49; 15-50; 15-51; 15-52; 15-22; 15-90

Comment: The USFS has not adequately analyzed potential direct, indirect, and cumulative effects associated with logging and burning in RHCAs and riparian areas. PNW Region Aquatic Restoration Project failed to adequately analyze the cumulative effects associated with the proposed actions and livestock grazing, road density and other road-related impacts, and climate change. The EA's use of the current environmental conditions on the landscape as the baseline for cumulative effects analysis is problematic. Reference condition watersheds, Wilderness and Roadless Areas, and other areas that are less compromised due to past and current land management actions would be a more appropriate basis from which to consider cumulative impacts. The EA's use of the current environmental conditions on the landscape as the baseline for cumulative effects analysis is problematic. We are concerned that the USFS does not seem to be considering reference or near-reference conditions as the appropriate baseline. If baseline conditions are considered current conditions by the USFS, then the USFS may unfortunately incorporate severely negatively impacted and non-functioning ecosystems as the baseline. This does not allow for ecologically appropriate analyses of direct, indirect, or cumulative effects. Nor does such a baseline allow for ecologically or biologically appropriate analyses of recovery for species or their habitats. It would seem logical that the USFS cannot take a "hard look" at potential cumulative effects on the environment without separating human effects (recent past and ongoing management) from natural environmental conditions and processes. Lack of site-specific environmental analyses or environmental impact statements would result in lack of accountability. Action alternative did not adequately consider cumulative effects of ongoing activities on the efficacy or success of proposals in this project. For example, the EA (pg. 47) notes: "Activities may include the following: planting conifers, deciduous trees and shrubs; placement of sedge and or rush mats; gathering and planting willow cuttings. The resulting benefits to the aquatic system can include desired levels of stream shade, bank stability, stream nutrients, large wood inputs, increased grasses, forbs, and shrubs, and reduced soil erosion. Equipment may include excavators, backhoes, dump trucks, power augers, chainsaws, and manual tools."

Forest Service Response: The effects analysis begins on page 20 of the EA. The cumulative effects discussion starts on page 22. Our task in the EA was to analyze the effects of the proposed action based

on current conditions. Solely basing reference conditions upon wilderness would provide an inaccurate perspective of the current conditions. Rather, the effects analysis considers current conditions on NFS Lands throughout the Region. Each resource effects section has a cumulative effects section, specific to that resource area. Cumulative effects analyses considers past, current, and reasonably foreseeable human actions, so it is not appropriate to solely consider "natural environmental conditions and processes" and use undisturbed reference conditions as the baseline for comparison.

Comment Code: 15-97

Comment: Actions in the project, including thinning within RHCAs and riparian areas, is likely to increase stream temperatures and excess fine sediments in streams, in violation of the CWA. Actions associated with logging such as road-related activities, skidding and moving logs and machinery, removal of shade, operation of heavy machinery adjacent to and in streams, and other activities are some of the mechanisms by which stream temperatures and excess fine sediments may increase. BMP and PDC efficacy and effectiveness in protecting water quality and stream habitats is problematic, as discussed in other portions of these comments and in our addendum.

Forest Service Response: Non-commercial thinning in riparian areas would be conducted to decrease fuels where necessary prior to controlled burns or to supply wood for instream and riparian restoration projects. Wood generated from this activity would not be commercially sold. All projects will maintain compliance with ESA and CWA. Although disturbance of riparian vegetation and sedimentation will occur with some project implementation activities, it will be short term and at a limited geographic area. These short term impacts would not result in significant negative effects to riparian vegetation or species that inhabit these areas. At the local level, an interdisciplinary team as well as the public will have the opportunity to provide additional input and refinement to the projects, including review of the project and confirmation it falls within the effects disclosed in the EA.

Comment Code: 15-92

Comment: The EA did not include effects of opening up riparian areas through logging for increased livestock access and therefore more severe impacts.

Forest Service Response: The Aquatics Restoration EA does not analyze additional livestock use. Livestock grazing is covered under a separate NEPA analyses and is outside the scope of this decision.

Comment Code: 15-70

Comment: Projects may include extensive RHCA thinning, as well as other actions, which deserve more detailed and site-specific analyses.

Forest Service Response: Non-commercial thinning in riparian areas would be conducted to decrease fuels where necessary prior to controlled burns or to supply wood for instream and riparian restoration projects. Wood generated from this activity would not be commercially sold. Local information associated with the project area will be gathered and considered when specific projects are proposed for implementation. A local interdisciplinary team and public input will be utilized.

Comment Code: 15-64

Comment: Additional effects analyses are needed in an EIS for this project regarding actions such as controlled burning and riparian planting.

Forest Service Response: Additional evaluation of the effects of projects would occur when the project is proposed for implementation. If during implementation review it is determined that a project proposed

for implementation could have effects outside those analyzed in this EA then additional NEPA analysis would be required before that project could be authorized under a different decision.

Comment Codes: 15-65, 15-94

Comment: Shifting tree species composition and density can cause significant and long-term ecological effects. In some circumstances, effects may be both beneficial and negative. For example, trees may be planted too densely, have too homogenous of a composition, not allow for genetic adaptation and evolution, not be genetically appropriate to a given site, disrupt natural processes and regeneration, etc. Positive benefits would include reestablishment of willows and other hardwoods after severe cattle damage (provided livestock are excluded to allow for restoration). The USFS needs to consider these and other direct, indirect, and cumulative effects in an EIS. Also, USFS does not seem to acknowledge or include in their analyses the cyclical nature of hardwoods, fire refugia, etc.

Forest Service Response: The consideration of the effects of changing tree species composition and density, the cyclic nature of hardwoods, and fire refugia are very dependent upon local conditions. An interdisciplinary team will consider these and other needs when a specific project is proposed for implementation. If during implementation review it is determined that a project proposed for implementation could have effects outside those analyzed in this EA then additional NEPA analysis would be required before that project could be authorized under a different decision.

Comment Code: 15-38

Comment: The Proposed Action will also violate the Clean Water Act

Forest Service Response: The Proposed Action will not violate the Clean Water Act (CWA). As described in the EA (pages 24-32) and supporting documentation, the project is specifically intended to and will accelerate attainment of applicable State water quality standards under CWA and address other factors that are limiting various beneficial uses of water that the States have designated. The project is helping to implement CWA Memoranda of Understanding that the Forest Service has with the States of Oregon and Washington. All actions will be conducted in accordance with Federal and State permits under CWA. In addition, the project design criteria and BMPs will significantly constrain the magnitude, duration and extent of any short-term adverse effects on water quality.

Comment Code: 15-100

Comment: We are also extremely concerned about other ESA-listed and Sensitive species within the project area such as Canada lynx, Grey wolves, Northern spotted owls, Marbles murrelets, and special-status plant and lichen species.

Forest Service Response: Effects to ESA listed species were analyzed through the Aquatics Restoration Biological Assessment. A BO (10EOFW00-2013-F-0090) was provided from USFWS. The BO provides design criteria that minimize any adverse effects to federally listed species. Design criteria were also provided as part of the EA to minimize effects to Region 6 Sensitive wildlife and plant species. These design criteria would be used during the site-specific planning stage.

Comment Code: 15-80

Comment: We have the same or similar concerns regarding the EA's discussion of "Aquatic Organism Pursuit and Capture" The EA states that "when a project biologist pursues, handles, and kills fish, amphibians, and mollusks, they will describe removal methods, stream conditions, and the number of organisms handles, injured, or killed. More information will be required for excessive mortality. This report will likely be limited to fish passage, dam removal, and channel restoration and relocation projects.

Forest Service Response: When aquatic organisms are handled there may be a small percentage of those organisms that suffer mortality. This is accounted for when permits are granted for the activity by the state fish and game agencies, USFWS, and NOAA Fisheries.

Comment Code: 15-78

Comment: After logging, including noncommercial thinning in riparian areas, these forests are often less complex and more open, which will have negative and significant effects within the range of the NSO.

Forest Service Response: Effects to the northern spotted owl were analyzed as part of the Aquatics Restoration Biological Assessment. A BO (10EOFW00-2013-F-0090) was provided by the USFWS. Effects to northern spotted owls and their critical habitat were included in this EA by way of incorporation by reference. All projects would be in compliance with the BO. Any thinning in riparian areas would be based on identification of the need during the project implementation review. If thinning is desired and is within the range of the northern spotted owl (NSO), design criteria from the Biological Assessment and Opinion would be used to minimize any negative effects.

Comment Code: 15-79

Comment: Important wildlife trees, including those relied upon by NSO or marbled murrelets another at-risk and special status species, may also be lost through felling of those trees due to OSHA requirements or other logging or restoration activities. Again, future actions within RHCAs and riparian zones require site-specific NEPA analyses. Such analyses are NOT provided by this EA, and will not be provided by an EA compliance form.

Forest Service Response: Effects to the northern spotted owl and marbled murrelet were analyzed as part of the Aquatics Restoration Biological Assessment. A BO (10EOFW00-2013-F-0090) was provided by the USFWS. Effects to these birds and their critical habitat were included in this EA by way of incorporation by reference. All projects would be in compliance with the BO. Danger trees would be removed to facilitate safe working conditions and would be done in accordance to the Region 6 policy on danger trees. The retention of wildlife trees for ecological purposes is included as a design criteria in this EA. An interdisciplinary team including a wildlife biologist would help identify the value and retention of any trees needed by wildlife species.

Comment Code: 15-39

Comment: The Forest Service should have included the total maximum daily load (TMDL) implementation strategies in the FEA in full, so that the public and agency reviewers could judge for themselves whether the Action Alternative will adhere to them. The Project is likely to raise stream temperatures and thus violate the Clean Water Act and TMDL objectives and guidelines

Forest Service Response: Inclusion of multiple, complete Total Maximum Daily Load (TMDL) implementation plans is not necessary to disclose the effects of the proposed action in the EA. Temperature TMDLs throughout the Region are quite similar in that they call for natural thermal conditions (shade, channel form, and/or flow) throughout the basins of interest (see example for John Day River Basin here: <https://www.oregon.gov/deq/FilterDocs/jdTMDLwqmp.pdf>). With respect to Forest Service activities, the TMDL implementation plans rely on continued implementation of both passive and active restoration via execution of our aquatic conservation strategies (NWFP-ACS, PACFISH, and INFISH). This project would authorize multiple types of active restoration activities associated with those conservation strategies and would thus help implement the TMDL plans. Effects on stream temperature are documented in the EA and supporting documentation, as are the ways in which the project is consistent with the CWA (See the Aquatic Species and Water Resources Analysis for Pacific Northwest Region Aquatic Restoration EA).

Comment Code: 15-40

Comment: There is no justification for the conclusion that the Proposed Action will not measurably increase watershed impacts.

Forest Service Response: Pages 24-32 of the EA and supporting analysis associated with the EA describe the effects of the proposed action on watersheds, water resources and aquatic species.

Comment Code: 15-59

Comment: We are also concerned about the failure to analyze direct, indirect, cumulative effects re: "Types of Riparian Actions Proposed", including the "Placement of Large Wood" (EA pgs. 9-12). The USFS has not adequately considered potential increases in excess fine sediment and temperatures in streams (especially given large machinery use), or the potential negative impacts to large wood recruitment (live large trees, snags, large downed woods both terrestrial and in streams).

Forest Service Response: The potential impacts to large wood recruitment on wildlife species that inhabit or use riparian ecosystems was addressed as part of the terrestrial wildlife analysis. The impacts associated with short term sedimentation and potential temperature increases are discussed in the aquatics section of the EA. In most cases, large wood would be added to streams and their associated floodplain and floodplain vegetation condition would improve through planting. The purpose of projects proposed for streams and riparian areas through this environmental analysis is to restore aquatic and riparian structure and function, including natural levels of wood and sediment over time. Project design criteria would be used to decrease the potential effects of actions on aquatic and riparian ecosystems.

Comment Code: 15-57

Comment: The PNW Region Aquatic Restoration Project lacks any substantive analysis regarding climate change.

Forest Service Response: The Effects to Aquatic Species and Water Resources section of the EA (pp. 24-32) provides a brief summary of the effects of climate change and their relevance to the project and its effects. A more detailed description of climate change effects is included in the supporting analysis documents.

Comment Code: 15-58

Comment: The Management Plans that this EA tiers to are decades old, and lack new science and understandings regarding climate change. Core habitats, terrestrial and stream connectivity, and protecting and preserving stream shade are sound restoration strategies commonly recommended by scientists in the face of climate change. Please see our addendum discussing such studies for more detail.

Forest Service Response: The commenter is correct that the Northwest Forest Plan (NWFP) and its Aquatic Conservation Strategy (ACS) as well as the PACFISH and INFISH Strategies are now decades old. However, as concluded in the recent NWFP science synthesis, the fundamental tenets and ecological framework of the NWFP-ACS are sound (Reeves et al. 2018). By inference, the same general conclusions can be made about the PACFISH and INFISH strategies as well as the Aquatic and Riparian Conservation Strategies in the new Forest Plan for the Colville National Forest, since those strategies are comparable to the NWFP-ACS. The Forest Service continues to adapt implementation of those strategies to reflect new science, such as that associated with climate change. For example, climate change vulnerability assessments and adaption strategies have been completed throughout much of the Region (see, for example, Clifton et al. 2018 and Halofsky, J.E. and D.L. Peterson 2017). These strategies include actions focused on core habitats, connectivity and protection and restoration of stream shade. The Pacific

Northwest Aquatic Restoration Project would allow the Forest Service to more effectively and efficiently implement those strategies.

Comment Code: 15-37

Comment: The project area is inhabited by numerous ESA-listed species, and thereby requires much closer consideration of any environmental impacts that could adversely affect either the species or their critical habitat.

Forest Service Response: Effects to federally listed species were analyzed as part of the Aquatics Restoration Biological Assessment. A BO (10EOW00-2013-F-0090) was provided by the USFWS. Effects to these species and their critical habitats were included in this EA by way of incorporation by reference. All projects will be in compliance with the BO including the design criteria in the Biological Assessments that minimize adverse effects to species and their habitats.

Comment Code: 15-63

Comment: We are particularly concerned about potential effects to species that rely on complex ,multi-story canopies, and later seral or old growth forests (often in riparian forests) such as Northern spotted owls, Pacific fisher, American marten, Northern goshawk, numerous bat species, Pileated woodpeckers, Three-toed woodpeckers, Primary Cavity Excavators, and others.

Forest Service Response: Effects to federally listed wildlife species that rely on complex and later seral states of forests were analyzed in the Biological Opinion (2013) and the accompanying Biological Assessment. Effects to Region 6 sensitive species such as carnivores, bats, and insectivores were analyzed in the terrestrial wildlife section of the EA. Effects (both negative and positive) are anticipated as a result of implementation of aquatics restoration activities. However, the scope and scale of restoration activities is limited to riparian areas. Meso carnivores, raptors and bats also use habitat beyond riparian areas which are not affected by the proposed activities. Information can be found in the supporting documentation on the project website. Additional analysis for Management Indicator Species (MIS), which may include bats and woodpeckers will be completed at the forest level during site-specific analysis.

Comment Code: 15-77

Comment: Much of the information required in the project completion report, such as "number of northern spotted owl, or marbled murrelet nests disrupted and disturbed during critical nesting period" should be estimated and analyzed in a project-specific, site-specific, environmental impact statement. The potential for negatively impacting spotted owls or marbled murrelets during nesting through disruption and disturbance requires far more environmental analysis than the process outlined in the PNW Region Aquatic Restoration Project provides for or would allow.

Forest Service Response: Effects to the northern spotted owl and marbled murrelet were analyzed as part of the Aquatics Restoration Biological Assessment. A BO (10EOW00-2013-F-0090) was provided by the USFWS. Effects to these birds and their critical habitat were included in this EA by way of incorporation by reference. All projects will be in compliance with the BO. At the site-specific level a wildlife biologist will be included in the development of the actual project. Additional design criteria above and beyond what was agreed to in the BO may be implemented to further reduce potential effects. As part of compliance with ARBO II, there is forest level annual reporting that is sent to FWS. In this reporting, the number of NSO/MAMU (marbled murrelet) territories and/or acres of habitat affected by aquatics restoration is reported.

Comment Code: 15-53

Comment: We have serious concerns that the cumulative effects analysis does not sufficiently analyze or include the increasing number of projects across the region (and specifically the PNW Regional Aquatic Restoration Project area) that include logging within riparian areas or RHCAs.

Forest Service Response: Commercial logging is not proposed within the Aquatic Restoration EA, rather fine scale restorative non-commercial thinning is proposed. Trees would be cut to decrease overloads of fuel prior to controlled burns or for wood source for instream and riparian wood placement. Wood would not be extracted for commercial purposes. Furthermore project design criteria would mitigate direct and indirect effects to sensitive species. It is assumed that direct and indirect effects will be avoided to a level that results in minimal contribution to cumulative effects relative to proposed actions within the Aquatic Restoration EA. There are cumulative effects from many forest management activities that are inherent and ongoing throughout the region, but the Pacific Northwest Aquatic Restoration proposed action would not be additive to the extent that would increase these impacts to unacceptable levels due to the use of the project design criteria used as part of this proposed project. In addition the long term benefit of restoring functioning riparian ecosystems through implementation of the Aquatic Restoration proposed action outweighs the short term negative effects felt at the individual species level.

Comment Code: 15-55

Comment: We do not see for example, any detailed or site-specific analyses for these actions.

Forest Service Response: When a specific project is proposed for implementation, a local interdisciplinary team will identify any unusual conditions not addressed through the Pacific Northwest Aquatic Restoration EA. There will be an opportunity for the public to do the same.

Comment Code: 15-62

Comment: The USFS needs to analyze the cumulative impacts of logging mid-sized and large trees in combination with other large tree logging across the region

Forest Service Response: Commercial logging is not being analyzed as a part of this Aquatics Restoration EA. Rather site specific non-commercial thinning may be used as part of a suite of tools to restore impaired riparian ecosystems to functioning ecosystems.

Comment Code: 15-36

Comment: The Northwest Region Aquatic Restoration Project warrants a full environmental impact statement due to likely significant impacts to ecological functioning and wildlife species from its large scale, cumulative impacts with other similar adjacent and nearby timber sales. The cumulative effects analysis has not sufficiently considered widespread and pervasive impacts from grazing, present logging (ongoing and proposed; upland as well as riparian), Forest Resiliency Project, road-related impacts, climate change, and others.

Forest Service Response: An EA has been prepared to determine whether to prepare an EIS or a finding of no significant impact (FONSI). The cumulative effects analyses for all resources has been updated.

Comment Code: 15-54

Comment: Examples of such projects across eastern Oregon include the Gap project on the Ochoco National Forest, the Green Ridge project in the Deschutes National Forest, and the Big Mosquito, Camp Lick, Magone, and Ragged Ruby projects on the Blue Mountains District of the Malheur National Forest. All of these projects propose extensive logging across many miles of streamside corridors along dozens of streams. Such projects are being proposed or implemented in subwatersheds that support ESA-listed

species and their critical habitats in eastern Oregon and the region, and may overlap spatially and temporally with the effects resulting from the Pacific Northwest Region Aquatic Restoration Project. Many of these projects may occur within the same general timeline for implementation, share adjacent or nearly adjacent boundaries, and affect overlapping habitats and species. This situation creates extensive cumulative effects that are must be analyzed in an EIS.

Forest Service Response: The projects identified by the commenter include commercial thinning and/or burning in riparian habitat conservation areas (RHCAs) authorized in other decisions where effects could potentially overlap or be adjacent to past, present or future aquatic restoration actions proposed in this EA, should the activities occur at within the same time period and in the same location, which is speculative at this time. The incremental contribution of effects from the aquatic restoration proposals, when added to overlapping effects from commercial logging and/or burning in RHCAs are not expected to contribute to significant cumulative effects; the effects from restoration actions are generally short term, minor or avoided. The cumulative effects analysis has been updated in the EA.

Geographically and temporally, the actions proposed in this project affect a relatively small percentage of riparian habitat across the Pacific Northwest Region over time. Project design criteria ensure that effects to resources are minimized and that any potential for contribution to cumulative effects is substantially diminished. Lastly, the timing of implementing restoration projects can be altered to ensure that no significant cumulative effects would occur, should the implementation of other projects occur at the same time and place.

Comment Code:

15-56

Comment: We are very concerned that numerous key ecological functions and parameters will be put at risk from logging and burning in RHCAs/riparian areas, and that these were not adequately considered in the direct, indirect, or cumulative effects analyses. We are concerned about the lack of sufficient analyses regarding issues such as: livestock grazing, large tree and wood recruitment, snags and downed wood recruitment, continued exclusion of wildfire, ongoing USFS management geared towards maintaining low severity fire regimes across the landscape (despite ecological norms of mixed-severity), loss of post-fire habitats created by medium and high severity fire due to continued fire suppression, and climate change.

Forest Service Response: Cumulative impacts caused by past, present, and future federal, state, and private activities potentially affecting Region 6 sensitive animals and their habitats were evaluated in this EA. Cumulative effects under ESA were incorporated by reference as a part of this EA through the ESA Section 7 consultation with the USFWS and issuance of a Biological Opinion.

Comment Code: 15-91

Comment: The USFS cannot pretend that cows are not everywhere on the landscape and destroying/degrading hardwoods, stream bank stability, and severely negatively affecting water quality.

Forest Service Response: The Forest Service does not deny the fact that livestock continue to graze NFS lands, as they have for many decades. Nor does the agency deny that livestock grazing can have adverse effects on water quality and aquatic resources when it is not adequately managed. The EA and supporting analysis documents describe the effects of past and ongoing grazing (in cumulative effects analyses within the Effects section of the EA, pages 20-53) in the context of the project. All agency actions, including authorization of grazing, must be designed to meet NWFP-Aquatic Conservation Strategy objectives or move the landscape toward, or not retard attainment of, PACFISH and INFISH riparian goals and RMOs. Current research and monitoring suggests these strategies appear to be achieving their

goals of maintaining or restoring aquatic and riparian habitats and key ecological processes at watershed and larger scales.

Comment Code: 15-76

Comment: Project Implementation and Monitoring" in the EA: What monitoring, exactly, is proposed? Will there be increased monitoring of BMPs and PDC efficacy? Will there be upstream/downstream and before/after monitoring of logging in RHCAs? The USFS's discussion of the project completion report for public review also leave us with questions and concerns.

Forest Service Response: Monitoring approaches would be project-specific, but generally, the project implementation monitoring plan could include incorporation of existing monitoring; review team triggers; monitoring frequency, timing, and duration; monitoring technique protocols; data storage and analysis; and a monitoring quality assurances plan. In addition ongoing watershed monitoring would continue (EA p. 18).

Comment Code: 15-98

Comment: The EA's estimation for the number of stream miles experiencing impaired water quality on National Forests is based, in Oregon, on ODEQ's 303d list. In general, National Forests in Oregon have not been sharing ODEQ data for at least 10 years. The USFS has data for many miles of streams that are violating water quality standards, yet ODEQ does not yet have this data. Consequently, this project's analyses regarding the current conditions of water quality impairments is based on a severe underestimation of the problems with temperature and sediment on public lands in eastern Oregon. Please see our addendum with our letter to ODEQ about this issue.

Forest Service Response: The 303d lists in Oregon and Washington are formal, legal determinations made by those States and the US EPA (Environmental Protection Agency). As such, they are the appropriate basis for components of NEPA analyses that are specifically focused on waters listed as impaired under the CWA. The Forest Service has been providing Oregon DEQ with all data that they have requested over the years. Most recently, we provided large volumes of stream temperature data last year. Lastly, the conditions of streams that have water quality issues that are not reflected in the 303d list are represented in other components of the Watershed Condition Framework (WCF) assessment process. Besides the 303d list, results of the WCF assessment were also used as a component of the analysis documented in the EA.

Comment Code: 15-66

Comment: Please see our addendum containing discussion on ecological risks of prescribed burning, as well as discussion on replanting. We are particularly concerned about prescribed burning in the spring, during nesting seasons, in areas that disrupt or destroy habitats for at-risk or ESA-listed species, that may displace or kill species such as Northern spotted owls, Marbled murrelets, Johnson's hairstreak butterflies, and others.

Forest Service Response: Effects to federally listed terrestrial species were analyzed and disclosed in the Biological Assessment. ESA Section 7 consultation was completed and a BO (10EOFW00-2013-F-0090) was provided by the USFWS which allows for a specified amount of harassment. Project design criteria within the BO was provided for activities such as prescribed burning to minimize the effects to wildlife species, such as avoiding nesting season. It is also anticipated that there would be some negative effects and potential mortality of Region 6 sensitive wildlife species during prescribed burning regardless of design criteria implementation. However, displacement or mortality of individual Region 6 sensitive species will not result in trends toward federal listing or loss of viability. These effects were disclosed in the EA.

Comment Code: 15-29

Comment: Because of the context and intensity of the Pacific Northwest Region Aquatic Restoration Project, the Forest Service needs to complete an EIS for the project.

Forest Service Response: Based on the analysis in the EA, a FONSI, addressing the 10 intensity factors, has been prepared and attached to the draft decision notice.

Comment Code: 15-30

Comment: The Forest Service must consider other past, ongoing, or reasonably foreseeable future projects, including projects directly adjacent to or otherwise near project area. Similarly, the USFS's context analysis must look not only at the quantitative context, but also the qualitative context, and ask whether—in the context of the many other previous, ongoing, and reasonably foreseeable future projects—the project is likely to significantly affect the quality (not simply quantity) of the environment.

Forest Service Response: The cumulative effects analyses has been updated in the EA. (EA pp. 31, 39, 45, 47, 49, 51 and 53 for example). The quantitative aspect of the analyses provides, in part, context for effects. Geographically and temporally, the actions affect a relatively small percentage of riparian habitat across the Pacific Northwest Region over time. In this analysis, qualitative descriptions are generalized because exact locations of project implementation are unknown. Project design features ensure that effects to resources are minimized.

Comment Code: 15-32

Comment: The fact that the Forest Service believes that on balance the project will ultimately benefit the environment has no bearing on whether the effects of a project are "significant" enough to warrant an EIS.

Forest Service Response: We agree that these are distinct findings. Based on the analysis in the EA, a FONSI, addressing the 10 intensity factors, has been prepared and attached to the draft decision notice.

Comment Code: 15-33

Comment: In addition, our comments demonstrate the highly controversial nature of the effects of the certain aspects of the Proposed Action on the quality of the human environment.

Forest Service Response: We understand your comments regarding the controversial nature of effects to be related to commercial logging in riparian areas. We've clarified in the activity descriptions in the EA that this category does not include commercial thinning and have further described the category.

Comment Code: 15-35

Comment: Establishes a regional precedent for future actions with significant effects, and represents a decision in principle about a future consideration.

Forest Service Response: The projects proposed under this environmental analysis are no different from the aquatic restoration projects implemented by our agency over the last few decades. After full environmental review, they were implemented under EAs and DN or categorically excluded, not reaching the significance level of an Environmental Impact Statement (EIS) analysis. However, if significant effects are identified through the local interdisciplinary team or during public review of specific projects as they are proposed for implementation, the project would not be covered under the decision associated with this analysis. .

Comment Code: 15-31

Comment: As described below, the project will result in significant effects due to, among other things, the extremely large geographic scope of the project, the likely significant effects to Endangered Species Act (ESA)-listed species such as Northern spotted owls, Bull Trout and Mid- Columbia River steelhead, potential downward trends or loss of viability for ESA, management indicator species(MIS), and sensitive and at-risk species, and the risk of significantly negatively affecting terrestrial and aquatic ecosystems and the species that depend on them. There is a high likelihood that this project will significantly affect the human and ecological environments.

Forest Service Response: A biological assessment was prepared that disclosed the effects to federally listed aquatic, terrestrial and botanical species. A BO (10EOW00-2013-F-0090) was provided by the USFWS and provided by NMFS (NWP-2013-9664), collectively these two opinions are referred to as ARBO II. The ARBO II discloses the effects to these species and is incorporated by reference into this EA. The EA also disclosed the effects to Region 6 sensitive species and provides project design criteria that minimize the effect to these species. It is anticipated that effects to Region 6 sensitive species would occur despite the use of project design criteria. However, these effects whether individually or cumulatively would not result in a trend towards federal listing or loss of viability. Restoration activities that are proposed by this project have the potential to affect a small fraction of the suitable habitat that is occupied by Region 6 sensitive species. Management indicator species will be analyzed at the forest level during the site-specific implementation phase. A wildlife biologist will make recommendations regarding effects to management indicator species at the project scale. Threatened, endangered and sensitive plant species have been analyzed by assessing current distribution of listed species within areas where this project could occur. As a result of the analysis local forest or district level botanists would be consulted by project proponents to ensure that pre-project surveys are completed if it is deemed habitat or species could be present. If threatened, endangered and sensitive plant resources are found there is a project design criteria that requires flagging and protecting populations so that no direct or indirect impact occurs.

Comment Code: 15-13

Comment: Cultural resources: Did the USFS consult with all potentially affected Tribes? How is the USFS planning to ensure full consultation with the Native community, and protection of Native cultural?

Forest Service Response: A programmatic agreement for Phased 106 is being reviewed by OR State Historic Preservation Office (SHPO) and WA Department of Archaeology and Historic Preservation (DAHP) and the draft agreements have been submitted to the tribes for consultation.

Comment Code: 15-14

Comment: Post project surveys—accountability and public process issues?

Forest Service Response: A programmatic agreement is being developed to address post decision, pre-implementation surveys as per 36 CFR 800.

Huddle, Douglas

Comment Code: 10-5

Comment: While it appears that attention to the influences road corridors have on aquatic environments is recognized in this management process, what is not addressed properly enough is the severe underfunding of road maintenance dilemma the Forests of Region 6 face. Special emphasis in advocating for funding adequate to bring up to standard and care for system roads and trails in insufficiently emphasized in this EA.

Forest Service Response: Funding for management of the entire Forest Service road and trail system is beyond the scope of this project.

Comment Code: 10-1

Comment: Noting that the focus of this document is to facilitate accomplishment of projects principally in furtherance of recovery and protect of federally listed fish species, I question the inclusion of the upper North Fork Nooksack above Nooksack Falls (a shear-drop barrier of more than 50 feet height) in the early action delineated zones. Anadromous fish access to this basin segment is not possible and to this date there are no known or documented presence of resident native char in waters above this barrier.

Forest Service Response: Priority watersheds are established by the Forest Fisheries Biologists and Hydrologists and their prioritization is not a part of this environmental analysis or process.

Comment Code: 10-3

Comment: Placement of wood and large rock should be done not haphazardly, but by a design derived from careful study of the hydrologic characteristics and geomorphic influence of the materials, instream restoration is an art that must be tempered and affected by empirical assessment. Further, because of potential for instream projects to influence off-Forest stream segments, obligatory consultation with state and county hydraulics specialists and administrations must be included as a requirement in this Forest Service process.

Forest Service Response: The Forest Service agrees that placement of large wood and rock needs to be done carefully. As such, these projects are designed and implemented by experienced professionals (e.g., hydrologists, fishery biologists, engineers) on individual field units to ensure that they meet their objectives and that the risk of unintended consequences is minimized. This process involves careful study of hydrologic, geomorphic and biological conditions and processes. In addition, a regional interdisciplinary team of senior project designers/implementers provide additional consultation and support to unit staff, as needed. Lastly, as described in the EA design criteria, reviews by interdisciplinary teams composed of individuals from multiple agencies are required for more complex projects. Collectively, this system of planning and reviews by experienced professionals provides the requested assurances. The five-step project implementation process enables agency personnel and the general public to provide input to projects. In addition, prior to implementation, all projects will be authorized under all applicable authorities (e.g., CWA, State water rights law) by the responsible agencies (e.g., USACE, Oregon DSL, Oregon DEQ, Oregon Water Resources Dept.).

Comment Code: 10-2

Comment: While increasing in-stream complexity is a laudable goal, in recent months (2017-2018) implementation of wood debris inclusion at several locations via a random, non-deliberate or designed methodology colloquially referred to as 'tipping,' has actually lead to destabilization of several riparian segments and, in my opinion, committing unnecessary sediment into streams and, causing the washout of a Forest Service road and damage to an agency recreational facility.

Forest Service Response: When specific projects are proposed for implementation, a local interdisciplinary team will be formed that will include potentially affected resources. Projects that could potentially impact recreation facilities will require participation from a recreation specialist on the interdisciplinary team to analyze potential affects.

Comment Code: 10-4

Comment: Eradication of eastern brook trout, a non-native fish species, anywhere is a questionable pursuit and since in their current distribution, perhaps substantial recreational fishing effort is expended

on them, under any circumstance or by any method, removal of eastern brook trout or any other fish species, not known to be indigenous to any project waters, under the auspices of this document should only be done after formal consultation with and concurrence of Washington State Fish and Wildlife Department and Western Washington treaty tribe representatives. I understand this will require reconciliation of federal agency ESA and habitat management objectives with the legitimate management prerogatives of the state and tribes.

Forest Service Response: Any activities involving fish population management would be conducted in cooperation with State Fish and Game agencies, USFWS and NOAA Fisheries (when federally listed fish species are involved), and associated Tribal Nations.

Isbell, Rory—Central Oregon LandWatch

Comment Code: 16-9

Comment: Project methods that disturb large areas, or that seek to remedy aquatic habitat degradation caused by road density, livestock grazing, and timber harvest should be subject to normal site-specific NEPA review.

Forest Service Response: Separate NEPA analysis will occur for project types that have the potential for significant environmental effects and present issues beyond those discussed in this EA. For projects potentially covered under the decision for this analysis the public would be contacted when specific projects are proposed for implementation so they have an opportunity for site-specific input prior to implementation.

Comment Code: 16-3

Comment: We believe that the best way to ensure stream restoration success is to close and decommission roads and better manage livestock grazing. It might be cheaper and more effective than ground-disturbing channel and floodplain work. We are disappointed that only 26% of the proposed projects are non-system road decommissioning. Draft EA at 14. In fact, the Draft EA noted that research had demonstrated that "road decommissioning" caused "an 80 percent reduction in sediment delivery to streams in the Pacific Northwest, Northern, and Intermountain Region." Draft EA at 25.

Forest Service Response: The Forest Service recognizes the need for proper management of livestock and roads in order to protect and enable recovery of watersheds and aquatic ecosystems. This need is reflected in the NWFP-Aquatic Conservation Strategy and the PACFISH/INFISH strategies that govern land management activities on all national forests in the Region. The Pacific Northwest Region Aquatic Restoration Project is intended to authorize only a subset of the actions needed to fully implement those strategies. Other actions will be authorized through separate environmental analysis and decision-making.

Comment Code: 16-8

Comment: We appreciate that the Forest Service has incorporated a step for public involvement that includes pre-project notification 60 days prior to project implementation with a 20 day comment period on site-specific concerns. We recommend the 20-day comment period be increased to at least 30 days in order to give the public a more meaningful amount of time to review and analyze project effects. We encourage the Forest Service staff include an opportunity for their staff to meet with public should concerns arise over a specific project so there is an opportunity to work out issues.

Forest Service Response: Comment noted. We have considered your comment and determined a 20-day comment period is sufficient for these individual projects. The personnel at the specific District or Forest will be responsive, allowing sufficient time for dialogue concerning the specific project. If we determine

through experience more time is needed for public comment, we will modify the comment time period sufficiently.

Comment Code: 16-10

Comment: Cumulative Effects: The Cumulative Effects discussion appears to be a glowing endorsement of the success of implementation of the Aquatic Conservation Strategy, PACFISH, and INFISH. While we laud the goals of all three documents, the realization of these goals, particularly on forests east of the Cascade Mountains, is not quite correct. The Draft EA reports that "current research and monitoring suggests that these strategies appear to be achieving their goals of maintaining or Protecting Central Oregon's Natural Environment And Working For Sustainable Communities restoring aquatic and riparian habitats...." While that may be true in other parts of Region 6, success for stream restoration has largely not occurred on many east-side forests. The Ochoco and Malheur forests are glaring examples where success has been hampered by ongoing land management activities. Most streams remain in a largely degraded condition. In fact, there are many examples on both Forests of past stream projects that were implemented to restore streams. Subsequently, movement of Forest Service personnel to other jobs, and the lack of enforcement of administration of livestock grazing and road closures, means those same streams are in the same or even more degraded condition since project implementation. This is true on streams that have listed steelhead and Chinook salmon.

Forest Service Response: The effects of livestock grazing were considered in the cumulative effects analysis. In addition, the ACS and INFISH monitoring reports incorporates the effects of all land management during analysis. Restoration should not be attempted unless the cause of the degradation is addressed first. This proposal includes the ability to construct fence around restoration projects to protect the investment and ensure recovery.

Comment Code: 16-2

Comment: Those management practices that are harmful to aquatic habitats, such as livestock grazing, timber harvest, and high road densities, also need to be addressed if stream restoration projects are to succeed.

Forest Service Response: The Forest Service recognizes the need to address the impacts associated with livestock grazing, timber harvest, roads and other land uses in order for stream restoration to be successful. This need is reflected in the NWFP-Aquatic Conservation Strategy and the PACFISH/INFISH aquatic strategies that amended all LRMPs in the Region. As described in the EA, current research and monitoring suggests these strategies appear to be achieving their goals of maintaining or restoring aquatic and riparian habitats and key ecological processes at watershed and larger scales. The project is not intended to authorize all actions needed to fully implement those strategies. Implementation of actions other than those specified in the EA would continue to be authorized under separate environmental analyses and decisions.

Comment Code: 16-4

Comment: We are also concerned with the claim that "once actions in a watershed plan are completed, typically in 5 to 10 years, the associated watershed is generally classified as 'functioning properly.'" Draft EA at 5. Many stream restoration projects have been completed on the Ochoco and Deschutes National Forests over the past 3 decades since their associated forest plans were completed. These forest plans (Land and Resource Management Plans) also promised that streams would largely be restored in most watersheds within 10 years. Most streams on the Ochoco National Forest are not properly functioning and some have degraded further. Many streams that support native redband trout have shown marked population declines.

Forest Service Response: Watersheds are not classified as "functioning properly" once only stream restoration projects have been implemented. That re-classification is made only once all essential projects in the watershed restoration plan, including stream restoration and many other types of restoration projects, are implemented at a watershed-scale. In addition, these projects are only intended to restore the critical conditions and processes needed to address critical past and ongoing human activities that are adversely affecting water and aquatic resources. Once those actions are taken, in many cases, continued natural recovery/passive restoration is needed to attain aquatic and riparian desired conditions over the long-run.

Comment Code: 16-6

Comment: We appreciate that the Forest Service has chosen not to include zero stage projects in the Draft EA. While these projects show some promise in the toolkit of stream restoration, they are intensive and costly treatments that do not deal with the underlying causes of degradation, including road density, livestock grazing, and timber harvest. They have not been tested overtime, nor through a variety of climatic conditions. We recommend that the Forest Service carefully monitor current zero stage restoration projects that are already on the ground and evaluate their efficacy prior to broad implementation of new projects across the landscape. Monitoring should include habitat parameters, stream temperatures, sediment, stream flows (relative to weather and climatic conditions), and fish populations. If project monitoring and evaluations reveal positive results, then perhaps the Forest Service could do a second EA that would specifically cover a limited number of these types of projects. In the meantime, these projects should be conducted under site-specific EAs.

Forest Service Response: Comment noted. Stage 0 restoration projects are not part of the proposed action.

Comment Code: 16-1

Comment: We are somewhat concerned that this Draft EA appears to be a type of "programmatic EA" to cover a very large list of site-specific projects and activities in Oregon and Washington. There are up to 1,800 projects proposed to be implemented in the next 10-15 years of which 42% will be channel and floodplain work. This is an ambitious number of projects, many of which have ground-disturbing activities that could have short and midterm impacts such as increased erosion, sediment into streams, some mortality of native aquatic species, and increases in stream temperatures. We urge that when staff implement these projects, that they use a "lighter touch" that minimizes deleterious impacts. We encourage Forest Service personnel to prioritize projects that will have the least impacts and the best long term benefits such as road closures and livestock fencing.

Forest Service Response: Please refer to Appendix 2 to find Project Design Criteria (PDC). These indicate the "lighter touch" we will use when implementing the projects. To better understand how we prioritize our actions, please refer to Project Locations on page 13 of the EA.

Comment Code: 16-5

Comment: We also recommend that the Forest Service be cautious when implementing projects in important reaches of fish-bearing streams, where spawning and rearing occur. Every stream, and every stream reach, is different. As such, restoration objectives may vary. For example, headwater reaches may focus on restoring hydrologic function; while other reaches that have key fish populations need to accommodate their needs. Different restoration techniques should be applied to meet the variable objectives at specific restoration sites. We caution the Forest Service that one size does not fit all.

Forest Service Response: The PDCs are in place to increase sensitivity during implementation and to bound the analysis in this EA. They can be found in Appendix 2. Site specific conditions will be assessed and designed for when specific projects are proposed for implementation.

Comment Code: 16-7

Comment: Channel Reconstruction and Floodplain Restoration In those reaches where important fish populations are present, restoration should include functional fish habitat, including passage, holding, and spawning habitat. We encourage the Forest Service to explore opportunities to implement hybrid designs which improve flood plain and hydrologic function as well as provide fish habitat for all life history stages.

Forest Service Response: Restoration projects are intended to restore the structure and function to aquatic and riparian areas. The projects proposed are frequently multifaceted as you describe.

Macy, Priscilla—American Whitewater

Comment Code: 4-3

Comment: It is the request of American Whitewater and it's representative Oregon members that the USFS, ODFW, Forest Collaboratives, stream restorationists communicate with AW and the river recreating public with intentions for upcoming and planned river restoration projects for public trust resources.

Forest Service Response: Forests will continue to work with collaborative groups and other groups when they propose and design a project for implementation. So when a specific project is proposed for implementation at a Forest, the public will have an opportunity to provide input. American Whitewater's general guidance provided through the EA comment period is helpful for local project managers to consider prior to designing projects. In addition, input will be very valuable when specific projects are proposed for implementation on Forests to ensure resource issues are completely considered.

Comment Code: 4-4

Comment: It is critical that relevant and qualified recreationists with a robust knowledge of regionally navigated streams are included in a part of the planning process for restoration projects.

Forest Service Response: When specific projects are proposed for implementation, a local interdisciplinary team would form to review and help shape the project. If there are recreation use concerns the local team would include a Recreation Specialist. In addition, any of the public who expressed interest in projects on the particular Forest would be notified and invited to provide project-specific input.

Comment Code: 4-6

Comment: It is our belief that by communicating and engaging these projects with qualified AW representatives and volunteers, we can collectively communicate with project managers and volunteers if the restoration project is located in a known and navigated section of stream, and work together to find a way to design for both enhance habitat and protect recreation values of the stream - including the ability to safely swim and navigate.

Forest Service Response: When a specific project is proposed for implementation, the public would be notified and there would be an opportunity to provide comments to improve the project proposal as described in the previous responses.

Comment Code: 4-1

Comment: It is well known and demonstrated that woody debris can present a life-threatening hazard to boaters and swimmers who encounter it, and for those who are unaware of man-placed wood hazards in streams, these hazards can become increasingly dangerous and deadly.

Forest Service Response: When specific projects are proposed for implementation, a local interdisciplinary team will form to review and help shape the project. If there are recreation use concerns the local team would include a Recreation Specialist. In addition, any of the public who expressed interest in projects on the particular Forest would be notified and invited to provide project-specific input. When the project is implemented, signs would be posted at nearby trailheads. A project design criteria has been added to address this.

Comment Code: 4-2

Comment: According to a review of our accident database, 16% of whitewater fatalities are associated with wood in a stream which places it among the leading causes of paddling deaths on rivers.

Forest Service Response: When specific projects are proposed for implementation, a local interdisciplinary team will form to review and help shape the project. The team will include a Recreation Specialist. In addition, any of the public who expressed interest in projects on the particular Forest will be notified and invited to provide local project-specific input.

Comment Code: 4-5

Comment: It is also important that signage is considered to warn recreationists of downstream hazards, so as to avoid potentially life threatening encounters with man-placed wood and debris in publicly owned and navigated waterways.

Forest Service Response: When specific projects are proposed for implementation, a local interdisciplinary team will form to review and help shape the project. If there are recreation use concerns the local team would include a Recreation Specialist. In addition, any of the public who expressed interest in projects on the particular Forest would be notified and invited to provide local project-specific input. When the project is implemented, signs would be posted at nearby trailheads. A project design criteria has been added to address this.

Nichols, Roger—Citizens for Forest Roads

Comment Code: 8-4

Comment: Tree Removal for Large Wood Projects. I question the wide latitude of tree removal associated with Riparian Area. through-out Region 6. There exists a wide variety of different riparian site conditions. In some areas as little as 6% disturbance can trigger riparian slides. The wide latitude suggested in the EA for riparian tree removal demonstrates a cavalier attitude to riparian function. Riparian areas were recognized needing protection. That is why the special designation was established.

Forest Service Response: The NWFP, PACFISH, and INFISH emphasize the management of riparian areas for the benefit of riparian dependent and aquatic resources. There are clear restrictions on the use of riparian trees as wood sources for aquatic and riparian restoration projects in the project design criteria starting on page 70 of the EA. We agree riparian conditions may vary depending upon the specific project, so when a project is proposed for implementation, there would be an opportunity for interested individuals and groups to provide input.

Comment Code: 8-1

Comment: No emphasis is placed on replacement of Forest Service Access Roads failing infrastructure culverts which contribute sediment directly and indirectly to fish habitat. Reducing the risk of sediment delivery was a key element of the Aquatic Conservation Strategy (ACS) and EIS that supported the ACS.

Forest Service Response: Forest Service road maintenance and repairs are already covered through various NEPA categories, so don't need to be included in this EA. Road-stream crossings are included in this analysis.

Comment Code: 8-3

Comment: Replace inadequate size drainage structures for sediment passage. Gravel or bed-load starvation due to interruption of natural gravel movement is a major cause of rearing and spawning habitat loss. Many high energy river systems like Deer Creek tributary to the North Fork Stillaguamish near the town of Arlington Washington are subject to habitat loss from gravel interruption and resulting surge flow. Tributaries areas that were once accessible to steelhead spawning are now impassible. Stream surveys in many cases indicate channel entrenchment due to stream or channels scour below road drainage structures.

Forest Service Response: The Forest Service has national and regional direction to design road-stream crossings using the stream simulation concept, simulating the reference upstream and downstream conditions of the stream at the crossing and "putting a lid on it" at the road surface. We basically create a natural stream under the road crossing, able to pass the same flows and bedload the stream does in reference reaches. The agency is a national leader in aquatic organism passage restoration. We also have a regional design assistance team available to help local engineers, hydrologists, and fisheries biologists when they are designing more difficult projects.

Comment Code: 8-2

Comment: The ACS not only discussed decommissioning roads, it addressed, indeed called for, concurrent proper maintenance of Forest Service Access Roads. Maintenance was defined in the ACS so as to include taking corrective action (replacement) of aging, damaged or deficient drainage structures as well as performing regular maintenance of those structures (clearing of catch basins and outlets). Correction of drainage structure deficiencies has not been done on major roads with significant ongoing drainage problems. On road systems where drainage structures over time have been replaced or upgraded systematically the level of maintenance-related chronic problems occurring has declined. In many of these instances road infrastructure improvement projects were historically funded with salmon recovery dollars obtained in partnership with different County Conservation Districts and Fish Enhancement Groups. See comments dated January 17, 2018.

Forest Service Response: Road-stream crossing projects (aquatic organism passage) are included in the proposed project types in the EA. Road infrastructure maintenance is covered in categorical exclusions or other project analyses so is not included in this NEPA analysis.

Comment Code: 8-5

Comment: Bull Trout Protection: Under "Remove brook trout or other nonnative fish species via electro-fishing or other manual means to protect bull trout from competition, hybridization, or both." Appendix 3. Focus Watersheds and Priority Sub-watersheds in the Pacific Northwest Region, Mt. Baker -Snoqualmie National Forest 5th Field Upper North Fork Nooksack River. There are no ESA listed fish. So one must assume that the action must be beneficial downstream 5th Field Watershed, Lower North Fork Nooksack River where there are listed ESA fish. The rationale is missing for indicating the work in the Upper North

Fork Nooksack 5th Field Watershed has benefit. Also what is not clear is Forest Service manages habitat and Washington State manages fish species, specifically recreational fisheries. Is the Forest Service working in concert with Washington State? Or is the reviewer to assume that Forest Service thinks ESA listed species downstream of the Upper North Fork Nooksack is enough to do what it wants?

Forest Service Response: Road-stream crossing projects (aquatic organism passage) are included in the proposed project types in the EA. Road infrastructure maintenance is covered in categorical exclusions or other project analyses so is not included in this NEPA analysis.

Pickett, Paul

Comment Code: 5-1

Comment: Restoration should include optimization of stand age and harvest practice to maximize summer low flow. See the work reported in: Perry, T. D., & Jones, J. A. (2017). Summer streamflow deficits from regenerating Douglas-fir forest in the Pacific Northwest, USA. *Ecohydrology*, 10(2). Also the work in progress by Bob McKane at EPA: <https://www.slideshare.net/emmettoconnell/bob-mckane-nisqually-community-forest-velma-modeling>

Forest Service Response: The Forest Service recognizes the need to manage stand age and harvest practices to achieve multiple desired conditions and outcomes, including increasing the amount and quality of old forests. The need for these actions are reflected in Forest Plans throughout the Pacific Northwest Region. Implementation of these actions, however, will continue to be authorized under separate environmental analyses and decision-making. There is no commercial thinning associated with this proposal.

Washington Department of Ecology

Comment Code: 11-4

Comment: It was also unfortunate not to see any mention of the 2018 MOA between Ecology and Region 6 of the USFS which clarifies by mutual agreement the need for the USFS to conduct its activities in a manner that meets the state's surface water quality standards (WAC 173-201A) and minimum state requirements for best management practices, and which sets up a process by which Ecology will participate with the USFS in the review of activities which may affect water quality.

Forest Service Response: The agreement was included in the supplemental information supporting the EA. The Washington Department of Ecology will be notified of projects as they are proposed for implementation, providing an opportunity for agency input. Adhering to BMPs is normal operating procedure for the implementation of aquatic restoration projects throughout the region.

Comment Code: 11-5

Comment: Ecology must reserve its support for this proposal given the lack of details on the level of protection that will be afforded to streams and other surface waters of the state, and we hope going forward the USFS will work more proactively and with our state to ensure our shared goals will be achieved. James Capurso, PhD, Regional Fisheries Biologist November 9, 2018 Page 2 Ecology's comments are based upon information provided by the lead agency. As such, they may not constitute an exhaustive list of the various authorizations that must be obtained or legal requirements that must be fulfilled in order to carry out the proposed action.

Forest Service Response: Until specific projects are proposed for implementation the design criteria can be used to determine the degree of protection aquatic and riparian resources would receive during any

particular project. When specific projects are proposed for implementation, all interested entities would be notified with sufficient details and would be provided an opportunity for specific project input.

Comment Code: 11-2

Comment: The current United States Forest Service (USFS) proposal is effectively intended to secure programmatic approval for activities that result in improved long term protection of aquatic resources. Our agency agrees this is an important goal and finds no fault with the list of categories of actions; however, the proposal lacks the level of specificity needed for us to conduct a meaningful assessment of its adequacy. We are especially concerned with activities that would occur within 75 feet of waters; where a reduction of shade or sediment production pose a higher risk to the surface waters of our state.

Forest Service Response: When specific projects are proposed for implementation at the local level, the public will be notified and input will be welcomed. Inherently, projects proposed under this EA would likely be within 75 feet of waterways because their intent is to restore waters and their associated riparian areas. Often, these type of projects have the potential to reduce shade and/or produce sediment over the short term for a long term benefit as disclosed in the analysis.

Comment Code: 11-1

Comment: We are interested in ensuring that any activities which occur within the riparian reserves are done in a manner that represents the best available science for eliminating or minimizing the degradation of water quality and aquatic habitat.

Forest Service Response: We concur. The five-step project implementation process would ensure that best available science is considered and used for individual actions implemented under this project.

Comment Code: 11-3

Comment: It is worth highlighting therefore that the thinning and prescribed burning actions provide no clear target or criteria for how much of the forest will be removed in these treatments or the specific basis that will be used to create such targets. The hyperlinks to referenced materials did not work, and we were unable to find copies of this material in our search on the internet.

Forest Service Response: This site-specific and project-specific information would be provided when a project is proposed for implementation. Riparian vegetation-related projects were 12% of the projects conducted under the Aquatic Restoration Biological Opinions (ARBO II) between 2013 and 2017.

Wierenga, Marlies—WildEarth Guardians

Comment Code: 17-1

Comment: The Proposed Action should include system roads for erosion control and decommissioning, not only non-system roads. As the EA states, the ARBO II does include road and trail closure and decommissioning so there is no reason why this activity has been removed from the modified action. It does not seem possible to address the stated need of this project unless system roads are included. It will also not be possible to achieve the goals of "improved watershed function" without addressing impacts from system roads. The USFS National Watershed Assessment, completed in 2011, concluded that 78% of watersheds across Oregon national forests had a road/trail condition indicator of "poor". That's nearly 11,000,000 acres. Washington forests had the same percentage (78%) across more than 6,600,000 acres. The road/trail indicator focused on system roads: "For the purposes of this reconnaissance-level assessment, the term "road" is broadly defined to include roads and all lineal features on the landscape that typically influence watershed processes and conditions in a manner similar to roads. Roads, therefore

include Forest Service system roads (paved or nonpaved) and any temporary roads (skid trails, legacy roads) not closed or decommissioned, including private roads in these categories. Decommissioning non-system roads in riparian areas does have a positive effect on aquatic conditions and should be done. But by excluding system roads, the Forest Service is not able to address the watershed conditions it aims to improve because that baseline assessment is based on system roads. When the road/trail indicator is poor in a particular watershed but then the only road projects are non-system roads, the major problem is not being addressed and that watershed will remain in poor condition. It is clear that road decommissioning is an essential tool that improves water quality in streams. The EA states: "Studies indicate road decommissioning on National Forest System lands would reduce human-caused sediment to streams. Black and others (2017) noted an 80 percent reduction in sediment delivery to streams in the Pacific Northwest, Northern, and Intermountain Regions. These findings are generally consistent with studies of National Forest System roads in other locations, such as Colorado (Sosa-Pérez and MacDonald 2017)." (EA, p.25) Regional monitoring of the Northwest Forest Plan area also confirms the improvements in aquatic areas due to road decommissioning. The 20-year report of the Status and Trend of Watershed Condition confirmed that: "...as a whole, road decommissioning in unstable terrain and riparian areas has had a large positive impact [on] scores related to sediment delivery and fish passage in specific watersheds" and "improvements in streambed sediment, macroinvertebrates, and water temperature suggest that improvements in roads and vegetation are having the desired effects in the streams."³² USDA Forest Service. Watershed Condition Classification Technical Guide. FS-978. July 2011. p. 26.³³ Miller, Stephanie A.; Gordon, Sean N.; Eldred, Peter; Beloin, Ronald M.; Wilcox, Steve; Raggon, Mark; Andersen, Heidi; Muldoon, Ariel. 2017. Northwest Forest Plan—the first 20 years (1994-2013): watershed condition status and Guardians Comments re. EA on Proposed Action for Aquatic Restoration in the PNW³⁴In a region that is trying to improve 5,500 stream miles that are water quality impaired and recover²⁴ threatened or endangered fish species, and remove thousands of barriers to fish, it is imperative that Forest Service system roads be addressed. We recognize that there is concern around road decommissioning. This concern seems unjustified given that less than 0.2% of the Forest Service road system in the Pacific Northwest is decommissioned each year. There appears to be a need for increased education and outreach on this subject. What could help is to use several of the existing Forest Service tools to pinpoint the key problem roads. In 2015, all forests in the Pacific Northwest completed Travel Analysis Reports that identified risks and benefits of their system roads along with identifying needed and unneeded roads. In Washington State, for example, nearly 40% of the system roads were identified to be high risk to aquatics. When some of those roads are also identified to be unneeded then those could be prioritized for decommissioning. The Rocky Mountain Research Station has also identified several tools (i.e. Geomorphic Road Analysis and Inventory Package (GRAIP) and GRAIP-lite) to help identify where erosion and sediment delivery from the road system is highest in order to prioritize activities related to roads. Using this type of detailed analysis, forest staff would be able to use localized data to then focus in on the key problem hot spots. We would like to re-iterate that the goals and activities outlined in the Proposed Action are needed and will help undo some of the damage from past land management activities. However, system road decommissioning - where roads are directly impacting water quality and salmon habitat - is a critical tool in achieving the results needed.

Forest Service Response: The Forest Service recognizes the need to address the impacts associated with system roads through road maintenance and improvements of system roads that are needed for management of national forest system lands and decommissioning of those roads that are no longer needed. The need for these actions are reflected in the NWFP-Aquatic Conservation Strategy and the PACFISH/INFISH strategies as well as the WRAPs that have been and will be developed for Priority Watersheds. Implementation of these actions, however, will continue to be authorized under separate environmental analysis and decision-making, as informed by extensive collaboration and additional travel analysis. The decommissioning of system roads will be proposed through separate NEPA analyses to

thoroughly address issues typically arising from proposed decommissioning. Although ARBO II includes the decommissioning of system roads, it only addresses ESA recovery issues. NEPA analysis specifically for travel management addresses other sociological issues that arise from these actions. We recognize the need to decommission some system roads and have not discontinued this effort. We are addressing that need in separate specific NEPA analyses to better address issues when they arise.

Comment Code: 17-3

Comment: We appreciate the changes made that allow for public review and comment of site-specific projects and ask for clarification on a few of the steps. As stated in our scoping comments, it is important that stakeholders and the public be provided with relevant information prior to project implementation, as well as time to provide input, if needed. River users, in particular, need to have access to reliable information. And the Forest Service also has an opportunity to showcase the progress they are making to restore aquatics across the region. We offer the following comments for consideration: The Aquatic Restoration Reporting System online database appears to be a helpful tool to share information with the public. However we are concerned that the public has to seek it out to be on the notification list. We suggest that when the database is ready, that a general notice be sent to a wide-range of stakeholders and individuals to invite them to sign-up. Otherwise they may not know that the database exists and that being a part of the databases the only way one will receive project notifications. The following statement (from page 17) was unclear: "Public entities would have 20 days from the date they receive the notification to contact the project lead or responsible official to learn more about a project, provide relevant suggestions, or question the consistency of the project with this environmental assessment and the decision notice." The way this statement is worded makes it sound like the "public entity" needs to contact the Forest Service to learn more about the project. Please clarify that the "notification" that the public will receive will include project information listed in Step 3 as well as the compliance form. Basic information will be provided with the notification but if additional information is needed, then they should contact the project lead. As part of the notification, we suggest separating project description from objectives. We have seen too many times where there is ample description of the project, but not enough description of the problem that the project is supposedly aiming to address. We suggest the notification include: (1) what is the problem in this particular stream (i.e. current condition) (2) what is the desired condition (i.e. future condition) and (3) what is this project (i.e. Project description) and then (4) how will this project achieve the goals. In addition to "species affected" the project notification should indicate whether or not the stream is 303(d) listed or whether there is a TMDL in place that is being addressed by this project. We appreciate having the information outlined in the notification but as stakeholders, we want to understand the purpose of a project and how it improves conditions for listed fish or listed waterways.

Forest Service Response: The EA has been updated to clarify the notification process. A sample page from the Aquatic Restoration Reporting System has been included in the appendices to illustrate the information that would be provided. The public will be notified directly if there is a project proposal on a Forest they expressed interest in. When projects are proposed for implementation all pertinent data, including the elements the commenter suggested, will be included in the database used to inform the public. The public will be able to access project data at:

http://fswebgsc.gsc.wo.fs.fed.us/services/data_management/ARRRS/index.php

Comment Code: 17-5

Comment: Please consider the following edits and comments, as you move forward: P. 70, second bullet - we'd like to see this language changed to say: "sediment-control barriers must be used between the project and stream". It seems like standard practice at construction sites that sediment-control barriers be used so why not here? P.70, third bullet - "native material may be used"....We are not clear why the agency would ever not use native material to restore a site. The chance of introducing invasive species

seems high. We recommend changing this to say "native materials must be used". P.70-71. There are also additional Best Management Practices that appear to be left off this list which we recommend adding namely: decompact soils (as the EA stated: "Nonsystem road decommissioning would have the largest beneficial impact on soil quality and productivity of all the activities. Soil structure, water infiltration, aeration, root penetrability, and soil biological activity improvements are observed with road decommissioning techniques (Lloyd et al. 2013). (EA, page 35)). However these benefits will not be realized unless the soil is decompacted. We also recommend including: use weed-free mulch to control erosion, replant with native vegetation, and use barriers to prevent motorized access on the decommissioned roadbed. Appendix 3: cross-check the watersheds in this list with those on Figure 2 to ensure they match each other. Appendix 3, for example, does not include the Wynoochee on the Olympic National Forest nor the Snoquera/Greenwater watersheds on the Mt. Baker-Snoqualmie National Forest.

Forest Service Response: Under road decommissioning projects, the commenter would like to see the optional use of sediment control barriers, be changed to a requirement when road decommissioning occurs adjacent to water. This is standard operating procedure, so it is appropriate to make the requested change from "consider using" to "use is required" in that type of situation. It is also agreed we should change the wording of #3 under Road Decommissioning Projects from native materials "may be used" to native materials "will be used". Not all BMPs were included in this EA due to size limitations, however, all applicable BMPs will be implemented, included those identified by the commenter. The list of priority watersheds in Appendix 3 are the latest priority watersheds used by the Forests. The map was updated summer 2018.

Forest Service Response: 17-4

Comment: We strongly suggest pre- and post-project site visits be mandatory and be reported in some manner. With the post-project completion report, we also would expect to know whether the project is meeting the stated goals. Sometimes this isn't immediately measurable in the first year, but the post-project assessment only seems to focus on "effects not considered and remedial actions taken" but does not include an assessment of whether project objectives were met. We appreciate the annual assessment of the projects completed because we feel this is an important way for the Forest Service to show their work and highlight their successes. As with the other reports, we urge the agency to provide a clear connection between project implementation and aquatic restoration goals associated with fish habitat and water quality.

Forest Service Response: Monitoring is described in the EA on page 18. Connections between projects and aquatic restoration goals are described in WRAPs. These are required to be prepared for all priority watersheds.

Comment Code: 17-2

Comment: The Proposed Action should include activities to hydrologically disconnect roads from streams. As stated above, forest roads have a significant impact on watershed health and water quality. Large percentage of these roads have been identified to be a high risk to aquatics. Yet forest roads are needed for recreational access and land management activities. When roads provide access and should not be decommissioned, they should have proper Best Management Practices installed to prevent the delivery of sediment to streams. Routine road maintenance is often not enough to ensure waterways are protected - especially not lately when only 10-15% of the roads can be maintained with federal budget cuts. There is a need for additional actions to reduce sediment on roads that are used for access. This should include additional cross-drains and culverts, waterbars, dips, gullies, etc. - with the goal being that the road prism is hydrologically disconnected from the stream system. These activities should be supported by a broad range of road users, since such actions often also improve the condition of the road and it's resilience to

storm-damage. Again, the prioritization tools from GRAIP or Travel Analysis Reports or simply focusing on roads in riparian areas should help the agency strategically determine where the biggest impact can be made. Trends. Gen. Tech. Rep. PNW-GTR-932. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. 74 p.

Forest Service Response: The Forest Service recognizes the need for proper management of roads in order to protect and enable recovery of watersheds and aquatic ecosystems. This need is reflected in the NWFP-Aquatic Conservation Strategy and the PACFISH/INFISH strategies that govern land management activities on all national forests in the Region. The Pacific Northwest Region Aquatic Restoration Project is intended to authorize only a subset of the actions needed to fully implement those strategies. Other actions, including road maintenance and improvements, will continue to be authorized through separate environmental analysis and decision-making.