

**Waucoma Huckleberry Enhancement Project  
Final Environmental Assessment (EA)  
Hood River Ranger District  
Mt. Hood National Forest  
Objection Statements  
September 2020**

<b>Objector</b>	<b>Objection Number</b>
Felice Kelly (FK)	#20-06-06-0002-218(B)
Oregon Wild (OW)	#20-06-06-0003-218(B)
BARK (BARK)	#20-06-06-0004-218(B)
American Forest Resource Council (AFRC)	#20-06-06-0005-218(B)
Tom Russell (TR)	#20-06-06-0006-218(B)

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***NEPA/Purpose and Need/Huckleberry Prescriptions***

**Overview and Objector’s Suggested Remedies:** These objection issues surround the concern that the selected alternative does not meet the purpose and need, that the shelterwood prescription is not compatible with huckleberry production over the mid to long term and that other reasonable alternatives exist. Suggested remedies by Objector Russell is to drop shelterwood units from the proposed action. Suggested remedies by Objector OW is to prepare an Environmental Impact Statement (EIS) and address the specific concern in their objection. Suggested remedies by Objector BARK is to shift the prescription from shelterwood harvest to variable density thinning in units 13, 14, 57, 69, 70, 81, and 95 and to consider additional action alternatives.

**Objector Statement #1:** Objector states the “shelterwood treatments will reduce the canopy below ideal levels for huckleberries, and the EA and accompanying reports do not sufficiently justify how a Shelterwood approach meets the Purpose and Need.” TR at 2<sup>1</sup>; BARK at 14. Objector states that “Nothing in the record addresses or changes the fact that bringing the canopy cover down to 15% is known to delay, rather than enhance, huckleberry production compared to variable density thinning.” BARK at 14-15.

**Response:** I find that the Responsible Official justified the activities in the proposed action and provided rationale as to how it met the purpose and need.

The Code of Federal Regulations (CFR) at 36 CFR 220.7(b)(2) states that an EA, “...must briefly describe the need for the project.”

Numerous sections of the EA provide the background for the context of the treatments that are needed to restore huckleberry, including the Introduction (EA at 3<sup>2</sup>), the Purpose and Need (EA at 4) and the description of the proposed action (EA at 5-8); all of these sections describe how reducing canopy closure would enhance huckleberry production. The Botany section of the EA states that huckleberry would be enhanced with reduction of canopy cover to 30% or less. The EA and Botany Report indicate

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<sup>1</sup> The reference of TR at 2 refers to the objector, in this case, Tom Russell, and the page number where this issue can be found. This reference to the objector and page number is used throughout the rest of this document.

<sup>2</sup> The reference of EA at 3 refers to the document, in this case the EA, and the page number where the cited information can be found. This reference is used throughout the rest of the document.

that the reduction of canopy to below 30% would improve the conditions for the huckleberry. Shelterwood tree removal to a 15% canopy closure is consistent with the Botanical Report and subsequent supporting documentation. The report also states that huckleberry can decline due to closing canopy and high intensity fires. Without reoccurring low or medium severity fires, the huckleberry would continue to decline. Without an alternative treatment method, the interdisciplinary determined that the huckleberry habitat has declined due to fire exclusion and ingrowth, is at high risk of continued decline, and will continue this path into the future. EA at 11-14; Botany Report at 3-4 and 6-7. The vegetation section describes several treatment methods, depending on site specific conditions, noting that the additional growing space provided by the reduction in canopy cover would stimulate natural regeneration of species such as huckleberry. EA at 16-19; Vegetation Report at 15-16.

**Objector Statement #2:** Objector states the shelterwood prescription could trigger the Forest Plan's requirements to restock, which is in direct conflict with huckleberry growth over the mid and long term. BARK at 15. Objector also states that the hydrological findings regarding hydrological recovery are inconsistent with the rationale for achieving the purpose and need in shelterwood units. BARK at 15. Objector notes that the new PDCs do not resolve their concerns, since they do not change the project and are already required because they implement the Forest Plan. BARK at 15.

**Response:** I find that the EA and project record discusses forest plan suitability for regeneration harvest and reforestation requirements, and the analysis regarding hydrologic recovery is consistent with using regeneration harvests to meet the Purpose and Need.

The regulation at 36 CFR 220.7(b)(2) states that an EA, "...must briefly describe the need for the project." The regulation at 36 CFR 220.7(b)(3) requires that an EA include a discussion of the environmental effects of the proposed action and alternatives.

The Vegetation Report at 25 discusses forest plan suitability for regeneration harvest. The language states "stands proposed for regeneration harvest under the proposed action have on average met 75% of CMAI. As such the proposed action requires an exception to this standard to help meet other resource management objectives (i.e. creation of early seral habitat for huckleberry enhancement)." In layman's terms, this means that stands have not reached 95 % of Culmination of Mean Annual Increment (CMAI), a growth standard meant to maximize production of timber in terms of timing of harvest. Because the standard is a "should" standard, the project analysis documented why this exception is being considered, which according to the silviculture report, is to help meet other resource management objectives, such as early seral habitat creation for huckleberry enhancement. Vegetation Report at 25.

The EA at 19 and Vegetation Report at 26 goes on to note under suitability for reforestation that "Forest plan guidelines advise timber harvesting shall be completed in a fashion that reasonably assures each harvest area can be adequately restocked within 5 years after final harvest (FW-358). Replanting would occur to a minimum of 125 trees per acre (FW361-363) in root rot openings large enough to support resistant tree species establishment and shelterwood treatments. Interplanting would be used to maintain genetic quality and desired species composition (FW-332). The proposed treatments would be consistent with all of the above mentioned standards for reforestation."

The project design criteria at 3 further elaborates on reforestation, stating that "1- VT-Silviculture (SILV): Reforestation activities would occur where stocking is below standards 5 years post treatment. Where appropriate, shade intolerant species such as Western white pine should be considered in the mix of

tree species used to meet this stocking standard.” As such, post implementation monitoring would determine the need to reforest.

Watershed Impact Areas (WIA) are defined as “previously disturbed forest areas where the average tree diameter was estimated to be less than 8 inches, *and* the canopy cover less than 70 percent.” Hydrology Resources Report at 7. Stands recover by increasing average tree diameter or canopy cover. The objector did not specify what “longer time frame” they are assuming when they assert that “more heavily logged stands may take longer to produce huckleberries” (suggesting that hydrologic recovery of stands would preclude huckleberry success). The EA at 28 and Hydrology Report at 15 estimates that full recovery rates for shelterwood treatments would be about 35 years for until they are no longer considered a watershed impact area. Huckleberries would continue to increase during the recovery period, and persist for some time after canopy recovery. EA at 28-29.

**Objector Statement #3:** Objectors state that the District failed to take a hard look at whether there is a real need to log to enhance huckleberries. OW at 2 and 5; BARK at 14. Objector states that “This purpose and need will be accomplished by natural disturbance driven by global climate change. The analysis fails to highlight that no action meets the purpose and need.” OW at 2 and 5. Objector further articulates that other types of fire (natural) would also produce huckleberries across the Oregon Cascades, where huckleberries could be collected as fire shifts around the landscape. OW at 5.

**Response:** I find that the District adequately described the need for huckleberry enhancement.

The regulation at 36 CFR 220.7(b)(2) states that an EA, “...must briefly describe the need for the project.” The regulation at 36 CFR 220.7(b)(3) requires that an EA include a discussion of the environmental effects of the proposed action and alternatives.

The Purpose and Need is detailed in section 2.0 of the EA at 4. The section discussed forest health, wildlife needs, Tribal values, and recreational picking in terms of the need to increase huckleberry production, and the section also discusses conditions adjacent to the project area where there have been positive results to huckleberries by reducing canopy cover. A background description and a discussion of the purpose and need for the project was also disclosed in the 2018 scoping letter, located in the project record.

Analysis of the no action alternative was included throughout the document. Specifically, the EA at 12 states that “With no action, huckleberry shrubs would be directly and indirectly affected. Huckleberry density and fruit production would continue to decline over time as tree canopy increases, resulting in the eventual loss of huckleberry shrubs from those stands. This is a species which prefers early-seral, open grown conditions. If a stand-replacing fire occurred and returned this area to an early-seral condition, the huckleberry shrubs would potentially return.” It also states that “if no action were taken, there would be no direct effects to the vegetation at the landscape or site specific scale in the short-term. In the long-term, (in absence of a disturbance event) taking no action would result in stands becoming overstocked. This would result in reduced growth rates, declining huckleberry production, and potential for increased mortality due to insects, disease and fire.” EA at 17.

The effects of the proposed action are also described in the Fuels Report at 3, which states “If the proposed actions were not implemented, natural successional process would continue. With treatment or no treatment, the landscape would remain in a fire regime comprised of high intensity wildland fires, with long fire return intervals between fire disturbances.”

The Consideration of Comments document (pages 1 and 2) in the project record described the infeasibility of the use of fire as a responsible management tool in the area and outlined the reasons the team did not develop and analyze fire as alternative treatment methods. This was also discussed in the EA section of “Alternatives Considered and Proposed Action Development.” EA at 9-10.

**Objector Statement #4:** Objector states that the final EA and draft DN fail to respond to public comment. OW at 2 and 60-61. Objector also states that the agency should refrain from releasing NEPA documents during the COVID-19 pandemic, as they are concerned that the public cannot adequately access the project area, and that the agency specialists working on the project may not be able to do high quality work since they don’t have access to the area either. Objector cites the April 3, 2020 memo from the Deputy Chief as rationale for delaying the release of documents. OW at 4-5.

**Response:** I find that the District adequately considered public comments.

The regulation at 36 CFR 218.25(b) requires the responsible official to consider comments on an EA.

The objector stated in their letter at 60 that “We found a document on the website, which is referenced nowhere in the final EA or draft DN, which purports to address public comments.” The objector found the document as part of the project record on the public website, which indicates that not only was it publicly available, it documented the regulatory requirement of consideration of comments. There are also multiple documents in the project record that address the science presented during the scoping and comment periods. Public comments and public involvement are addressed in the draft DN at 1, 2, 4-6, and 14 and in the EA at 10 and 48.

As for the COVID-19 pandemic, the memo from Deputy Chief Chris French did not prohibit releasing NEPA documents for objection, but instead encouraged local officials to consider how the public can be engaged given local conditions. I note that the project area was never “closed” to the public during the objection filing period and District staff were readily available via phone or email to answer questions objectors may have had. I also note that at no time during the objection filing period did the objector request any information from the District or Forest or notify us that they couldn’t access the project area. Since field trips typically don’t occur during the objection period, engaging with the public was not impeded by the pandemic. As such, I find that the Responsible Official did consider local conditions, prior to beginning the objection filing period.

**Objector Statement #5:** Objector states that the District failed to develop mitigation alternatives to address the trade-offs described in their objection and in public comments and failed to consider reasonable alternatives, such as relying on natural disturbance processes and meeting the need for timber volume by thinning dense young planted stands. OW at 2 and 61-63.

**Response:** I find that the District considered a reasonable range of alternatives.

The regulation at 36 CFR 220.7(b)(2) states that an EA “shall briefly describe the proposed action and alternative(s) that meet the need for action. No specific number of alternatives is required or prescribed.”

The District developed an adequate purpose and need statement and made changes to the proposed action based on public input. EA at 9-11. The District considered public comments and described why

they did not develop fire-related alternatives. EA at 10. The no action alternative serves as the analysis of the natural disturbance alternative suggested by the objector. The specialists analyzed the no action and the proposed action with PDCs and did not find a need to apply additional mitigation. Timber volume is not part of the purpose and need. See the responses to Objector Statements #2 and #3.

**Objector Statement #6:** Objector states that the District “failed to take a hard look at the adverse effect of regen logging which has potentially significant effects on wildlife, carbon, fire hazard, water quality/quantity, recreation and scenic values, etc.,” stating that shelterwood harvest and heavy thinning would increase fire hazards and make forests less resilient to disturbance and climate change. OW at 2, 22-23.

**Response:** I find that the EA and associated resource reports adequately addressed the potential effects of regeneration logging on the resources listed by the objector.

The regulation at 36 CFR 220.7(b)(3) requires that an EA include a discussion of the environmental effects of the proposed action and alternatives.

The EA and Wildlife Report analyzed the potential effects of the proposed action on federally threatened or endangered species, Region 6 Sensitive Species, Management Indicator Species and migratory bird species and their habitats that may be found in the project area. The analysis included the potential effects of regeneration harvest on these species. EA at 41-48; Wildlife Report at 1-35. A summary of effects determinations is found in the EA at 41, which shows that adverse effects or impacts on the viability of these species are not expected. Specifically, the analysis showed that the proposed treatments would not occur within suitable habitat for the federally listed northern spotted owl and the proposed action was “not likely to adversely affect” the species. EA at 41-43; Wildlife Report at 1-8.

The District did include climate considerations in the effects analysis for the project. A Climate Report completed for the project included analysis of project effects on carbon emissions and sequestration and how the project may help or hinder the “forest’s ability to deal with climate change.” Waucoma Climate Report at 1. Section 6.11.2 of the EA (at 48) summarizes the Climate Report’s determination. The report and EA disclose that vegetation treatments aimed at enhancing the health of the stand could leave residual trees “better able to withstand stresses such as dry summer conditions.” The report reveals that equipment needed to log the stands will emit fossil fuels and carbon would be released into the atmosphere from burning associated with slash. Some debris will be left on the ground which will increase carbon sequestration and trees removed are likely to be used as long-term wood products which may lead to a “more favorable carbon balance when compared to other building materials such as steel, concrete or plastic.” Climate Report at 2-3.

As stated in the Fuels Report and in the EA, the fire risk throughout the project area is low and the purpose and need/proposed action are not related to fuels reduction for wildfire risk mitigation. EA at 48; Fuels Report at 3-6. The modification of fuels during harvest operations increases the fire risk in the short term; the PDCs for this condition is to treat the fuels/slash per a prescribed fire plan considering smoke management according to state guidelines. Fuels Report at 4-6; Project Design Criteria at 11-12. The brush disposal plan mitigates the fire risk created by operations, and the fire regime remains unchanged. EA at 48; Fuels Report at 3-6.

Effects to water quality and quantity are disclosed in the EA at 22-25 and in the Hydrology Report at 3-22. Effect to recreation and scenic values are disclosed in the EA at 38-41, in the Recreation Report at 3-12 and in the Visual Analysis Report at 3-14.

**Objector Statement #7:** Objector believes that the purpose and need to enhance huckleberries conflicts with the purpose to improve resilience, because shelterwood/regeneration harvest, heavy thinning and reforestation would stimulate new growth that would create a dense/continuous fuels that would have longer flame lengths, carry fire and serve as ladder fuels. OW at 22-23; BARK at 15.

**Response:** I find that the District adequately described the need for huckleberry enhancement.

The regulation at 36 CFR 220.7(b)(2) states that an EA, "...must briefly describe the need for the project."

The potential for increased fire hazard is addressed in the response to Objector Statement #6. See the responses to Objector Statements #1, #2, #3 and #5 which address how the project meets the purpose and need. Design criteria included in the EA would require subsequent treatments via mechanical and/or manual methods in order to assist with the release of huckleberry shrubs, if needed after thinning. PDC 23-VT-SILV; DN at 3.

**Objector Statement #8:** Objector states that the District "failed to prepare an EIS to address significant effects on the environment, including: logging in unroaded areas, carbon emissions/storage and climate change, spotted owls and adverse competitive interactions with barred owls, mature and old growth forest habitat, recruitment of snags and dead wood habitat, logging steep and unstable slopes that should be designated as riparian reserves, etc." OW at 2.

**Response:** I find that the Responsible Official adequately analyzed the applicable environmental effects to support a finding of no significant impact (FONSI).

The Council on Environmental Quality (CEQ) defines a FONSI as documentation briefly presenting the reasons why an action will not have a significant effect on the human environment and for which an environmental impact statement therefore will not be prepared. The FONSI may incorporate the EA by reference. 40 CFR 1508.13. Significance is defined by both context and intensity of effects, as described in the regulation at 40 CFR 1508.27. The responsible official determined that the project would not have a significant impact on the human environment as disclosed in the FONSI at 7-8.

The EA disclosed that the project does not occur in unroaded areas that qualify as potential Wilderness. EA at 49. As documented in the response to Objector Statement #6, a Climate Report completed for the project included analysis of project effects on carbon emissions and sequestration and how the project may help or hinder the "forest's ability to deal with climate change." Waucoma Climate Report at 1. Section 6.11.2 of the EA (at 48) summarized the Climate Report's determination. The report and EA disclose that vegetation treatments aimed at enhancing the health of the stand could leave residual trees "better able to withstand stresses such as dry summer conditions." The report reveals that equipment needed to log the stands will emit fossil fuels and carbon would be released into the atmosphere from burning associated with slash. Some debris will be left on the ground which will increase carbon sequestration and trees removed are likely to be used as long-term wood products which may lead to a "more favorable carbon balance when compared to other building materials such as steel, concrete or plastic." Climate Report at 2-3. The Forest provided rationale to support the FONSI

and show that the project is expected to have negligible indirect effects to climate change. Waucoma Climate Report at 3.

The Wildlife Report at 4-8 discusses potential effects on the spotted owl from the proposed action. The EA at 41-42 and the Wildlife Report at 5 clearly state that the proposed action would not occur within or remove existing suitable nesting habitat for the spotted owl and that only dispersal habitat would be affected. The Wildlife Report at 4-5 discusses the potential effects on spotted owl from disturbance, dispersal habitat modification and effects to spotted owl prey species from the proposed action. The potential for the proposed action to delay development of late seral habitat is also mentioned. Wildlife Report at 5. The Wildlife Report at 6 discusses the potential effects of the proposed action on the competitive interactions between the spotted owl and barred owl, including the potential for the proposed action to confer competitive advantage and the difference in potential effects on prey of the two species. The EA at 43 states "The cumulative effects to dispersal habitat would not prevent spotted owls from foraging or dispersing throughout the analysis area. The private land to the south and east is not providing for dispersal of spotted owl. Owls would continue to be able to disperse north and west across the Forest. For these reasons, the effects to northern spotted owls from the project when added to other actions, would be negligible and would not impact northern spotted owl survival or reproduction." In addition, barred owls are thoroughly addressed in the Letter of Concurrence from the US Fish and Wildlife Service, located in the project record.

The impacts of no action and the proposed action on old forest habitat/old growth (late-seral) dependent species are discussed throughout the Wildlife Report at 3-8, 13-16, 19-23, 32-35. The Consideration of Comments at 10 and Wildlife Report at 5, 21, and 23 state that the stands that currently provide suitable habitat for the spotted owl, pileated woodpecker, and American marten would not be treated under the proposed action. The Consideration of Comments at 11 states that a new PDC was developed (DN Section 2, PDC III) to ensure that late-seral characteristics would be preserved in stands where they exist.

The EA and Wildlife Report also analyzed potential effects on snags and down wood. As stated in the EA at 47, "Snags are not proposed to be cut as part of the proposed action, however, some snags may be cut for safety concerns during project implementation. Snags that need to be cut would remain nearby and provide down wood habitat. While some snags may be more prone to falling after treatments, the number of snags lost would not make a measurable difference to dependent species at the watershed scale." The Wildlife Report at 24-32 provides an analysis of potential effects of the proposed action on snags and down wood, including the use of DecAID. The Wildlife Report at 30 shows the results of a snag analysis that compares recruitment of snags under the current condition compared to the proposed action, and the Wildlife Report at 31 discusses effect of the proposed action on down wood recruitment. Forest Plan Standards and Guidelines provide snag and down wood retention standards and the proposed action would be consistent with these standards. EA at 47-48; Wildlife Report at 32.

The snag and down wood analysis resulted in the following effects determination: "Under the proposed action, the current conditions at the watershed level would remain unchanged. While some snags may be more prone to fall after thinning; becoming down wood, there would be fewer trees after thinning that would contribute to future down logs. Recruitment would not be measurable at the watershed scale. Skips and streamside protection buffers would provide short and mid-term recruitment of down wood similar to the levels under the current condition. Snags or green trees that fall after thinning would contribute to down wood" ... "Cumulatively the impact to snag and down wood levels would

remain relatively unchanged when considered at the watershed scale and therefore the cumulative effects to down wood and snags would not be substantial.” EA at 47.

The EA provides rationale to support a FONSI in terms of unstable slopes. Project design criteria were developed to minimize soil disturbance and erosion from operations in steep-slope units. The Soil Resources Report at 4 considered erosion hazard for mapped soil types within the project area. Protection buffers substantially reduce risk of resource damage and sediment delivery to stream-courses. Based on project PDCs, “the risk of erosion and subsequent sediment delivery caused by the proposed action is extremely small.” Soils Specialist Report at 7. See the response to Objector Statement #11, which addresses the consideration of potentially unstable slopes.

**Objector Statement #9:** Objector states that the FONSI is flawed because it determines context in terms of the entire forest, which is “an incomplete and misleading approach to NEPA significance” that “fails to recognize that the site-specific effects of logging and roads can be significant and fails to recognize cumulative effects across the forest from similar projects.” OW at 5-6.

**Response:** I find that the Responsible Official appropriately considered both context and intensity when determining significance and provided rationale to support a finding of no significant impact (FONSI).

The Council on Environmental Quality (CEQ) defines a FONSI as documentation briefly presenting the reasons why an action will not have a significant effect on the human environment and for which an environmental impact statement therefore will not be prepared. The FONSI may incorporate the EA by reference. 40 CFR 1508.13. The regulation at 1508.27 explains that “significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality. Significance varies with the setting of the proposed action. For instance, in the case of a site-specific action, significance would usually depend upon the effects in the locale rather than in the world as a whole. Both short- and long-term effects are relevant.” The regulation at 36 CFR 220.7(b)(3)(i) state that “environmental impacts of the proposed action and alternative (s) shall briefly provide sufficient evidence and analysis, including the environmental impacts of the proposed action and alternative(s), to determine whether to prepare either an EIS or a FONSI (40 CFR 1508.9).”

The draft DN explained the context of the Waucoma Project by explaining its size relative to the larger planning area and the forest as a whole. The draft DN explained that the area where stand treatments and associated actions would occur is an acreage equivalent to 0.2 percent of the Forest. It also explained that within these treatment units, some of the acres would not receive treatment because they are set aside as skips or buffers. Draft DN at 6 and 7.

The draft DN also referenced resource effects analysis for placing the project’s effects into context. The resource reports and documentation in the EA included a cumulative effects analyses that outlined logical cumulative effects areas. The Responsible Official did not find any effects in any of the local, cumulative, or forest wide contexts that rose to the level of significance, and concluded that an EIS need not be prepared. Draft DN at 7-12.

**Objector Statement #10:** Objector states that “the decision to defer density management treatments in riparian reserves adjacent to shelterwood units will diminish the scale of attainment of the resource objectives that are identified in the Purpose & Need.” AFRC at 2.

**Response:** I find that the Responsible Official adequately determined the scope and scale of the project that met the purpose and need.

The regulation at 36 CFR 220.7(b)(2) states that an EA, "...must briefly describe the need for the project."

The purpose and need states "To achieve huckleberry enhancement for multiple resource objectives, these treatments have been considered at the landscape scale in addition to easily accessible roadside areas." EA at 4. In the Proposed Action, riparian reserve treatment primary goals are to meet Aquatic Conservation Strategy (ACS\_ objectives by retaining at least 50% canopy and include treatments to "improving understory species composition, enhancing structural diversity, and improving future quality of downed wood and in-stream large wood." EA at 7, 3.2.2. In the Draft DN/FONSI at 3, Draft Decision Rationale, the Responsible Official stated that "My decision also includes approximately 129 acres of lighter thinning within the outer areas of some riparian reserves.....to improve the vegetative conditions for the huckleberry shrubs, while ensuring values associated with other important resources in the project area are maintained for access, recreation, and irrigation infrastructure." The Draft DN/FONSI also described changes to the shelterwood treatments near riparian reserves. Draft DN/FONSI at 5. The draft decision did explain that there would be a change to shelterwood treatments near riparian reserves by stating that there will be no shelterwood treatments that would border riparian reserves; however, the Responsible Official documented that this still meets the purpose and need to achieve multiple resource objectives. Draft DN/FONSI at 5.

**Final Remedies/Resolution for NEPA/Purpose and Need:** The EA, project record and draft DN/FONSI adequately documented the purpose and need, alternatives considered and potential environmental impacts, as well as the rationale for the decision. No remedy or resolution is needed.

### ***Aquatic/Riparian Habitats***

**Overview and Objector's Suggested Remedies:** These objection issues surround the concern that the project will impact riparian reserves and will not meet Aquatic Conservation Strategy (ACS) Objectives. Suggested remedies by Objector OW are to drop units 136 and 138.

**Objector Statement #11:** Objector states that the District "failed to take a hard look at the adverse effect of logging riparian reserves, including steep and unstable slopes such as units 136 and 138 that should be designated as riparian reserves." OW at 2.

**Response:** I find that the District adequately considered potential effects of thinning in riparian reserves and adequately considered the presence of steep and potentially unstable slopes.

The regulation at 36 CFR 220.7(b)(3) requires that an EA include a discussion of the environmental effects of the proposed action and alternatives.

Effects from proposed treatments in riparian reserves were analyzed in the Fisheries Report, including analysis and disclosure of consistency with ACS objectives. The report displayed a table showing the project would "maintain" CS objectives, while seeing "slight improvement" in the long-term for others. The analysis did not show a degradation in the function of riparian reserves. Draft DN at 4. The proposed action includes protection buffers on perennial streams, wetlands, lakes and ponds (60-foot buffer) and on intermittent streams (30-foot buffer), with the express intent of protecting riparian

reserve ecosystem functions. "Protection buffers would serve to maintain current shade conditions, maintain small wood recruitment to streams, maintain snags for standing and down wood recruitment, and protect streams from sediment generated from timber harvest activities. Where VDT and intermediate treatments would be applied within Riparian Reserves, trees would not be cut within the protection buffers. Where sapling thinning would be applied within Riparian Reserve, trees may be removed by hand within the protection buffer." EA at 7. The analysis concluded that protection buffers and proposed treatments within Riparian Reserves adequately addressed and supported Aquatic Conservation Strategy objectives. Draft DN/FONSI at 5, 9 and 11.

Project PDC were developed to minimize soil disturbance and erosion from operations in steeply sloped units such as Units 136 and 138. The Soil Resources Report (at 4) considers erosion hazard for mapped soil types within the project area. Protection buffers substantially reduce risk of resource damage and sediment delivery to stream-courses. The Soils Specialist Report at 7 states that "...the [Rashin] study showed an assessment of surface erosion and sediment routing during the first two years following harvest indicated a 10 meter (approximately 30 feet) setback from ground disturbance can be expected to prevent sediment delivery to streams from about 95 percent of harvest related erosion features. The PDC for this project uses setbacks up to three times that distance, in addition to directional felling and hand treatments (i.e., no machinery) that would further reduce erosion features and disturbance. (...) by maintaining proper amounts of protective groundcover along with BMP's and PDC, the risk of erosion and subsequent sediment delivery caused by the Proposed Action is extremely small."

I asked my staff for clarification regarding the consideration of potentially unstable areas. The project hydrologist provided a site-specific interpretation of the bare-earth LiDAR data to show how potentially unstable areas were considered for units 136 and 138. There are some potentially unstable areas associated with drainage-ways and convergent headwalls primarily upslope (north) of Units 136 and 138. A small area of potentially unstable terrain is excluded with the riparian protection buffer associated with Unit 136. No potentially unstable areas overlap with proposed treatment unit boundaries, and proposed treatments would not affect these areas. The DN will be updated to include this clarifying information about project design.

**Objector Statement #12:** Objector also states that logging in riparian reserves to meet Aquatic Conservation Strategy (ACS) Objectives is not scientifically supported and that the EA did not address the trade-offs of logging in riparian reserves (loss of wood quantity and less reliable input of wood); did not disclose that unthinned trees continue to grow and that thinning has a modest effect on tree size; did not address the fact that multiple pieces of small wood can make up for any lack in size; did not address the fact that most of the affected streams are small and smaller wood is still functional; and is contradictory in saying that small wood decays faster, yet accumulates to create a fire hazard. OW at 35-41. Objector believes that the conclusion that logging in riparian reserves is consistent with the ACS because "it would lead to improved conditions in the long term" is not supported by literature. OW at 37-41.

**Response:** I find that the project analysis adequately examined the effects of thinning in riparian reserves through analysis of the No Action Alternative and the Proposed Action. Adequate consideration was given to best-available science and available literature when planning treatments in riparian reserves to meet the purpose and need of the project while maintaining consistency with ACS objectives.

The regulation at 36 CFR 220.7(b)(3) requires that an EA include a discussion of the environmental effects of the proposed action and alternatives.

Stated goals for the 129 acres of proposed riparian reserve treatments (there are over 1,000 acres of riparian reserves in the project area) are: improving understory species composition, enhancing structural diversity, and improving future quality of downed wood and instream large wood. EA at 7. The stands proposed for treatment are highly-stocked early- to mid-seral stands that exhibit little growth and lack snags and downed wood that meet riparian and wildlife objectives. Objector OW at 38 cites the 2013 Science Review Team Wood Recruitment Subgroup report, which emphasizes in its key points that thinning in riparian reserves is most beneficial in dense, uniform young stands where thinning has the most potential to accelerate development of older forest structure and associated larger trees and more desirable dead wood; these are the types of riparian reserves proposed for thinning with this project and it is important to note that less than 5% of the total perennial stream length in the watershed would have any treatments in the outer riparian zone, and the inner zone would be intact and protected. EA at 24; Hydrology Report at 18; Fisheries Report at 3. Thirty- to sixty-foot untreated riparian protection buffers are included in the proposed action, and the analysis determined that recruitment of woody debris would remain high. Hydrology Report at 18; Fisheries Report at 5.

The existing condition analysis shows that large wood presence and recruitment potential throughout the project area is variable (ranging from previously clear-cut areas with very little downed wood to more mature stands with large trees available). In addition, most perennial stream miles are confined, high-gradient transport reaches where bedload and woody debris are relatively transient. Hydrology Report at 10 and 11. The analysis concludes that there would be a decrease in the potential for downed wood recruitment for about 70 years as a result of the limited riparian reserve treatments (which are confined to the outer riparian reserves), but there would be either no effect or only a slight decrease in large wood recruitment to streams due to protection buffers meeting or exceeding the height of site potential trees and treatments retaining the largest size classes of trees. Fisheries Report at 22 and 23.

See the response to Objector Statement #13 for discussion of channel-forming wood and how wood smaller than that specified in the Forest Plan Standard FW-095 functions in these reaches. Issues related to relative importance of quantity and size are adequately discussed. The Fisheries Report at 17 acknowledges that smaller wood provides habitat and channel stability benefits within many of the smaller streams in the project area, but emphasizes that the smaller wood does not provide the same benefits that would be provided by larger wood within larger streams in the project area. There is a need to encourage future recruitment of larger wood for these reaches.

The analysis and assertions regarding rapid rate of decay versus accumulation and fire risk of smaller downed wood are not, as stated, contradictory. A distinction must be made between the lifespan and function of an individual log in the stream environment versus the risk associated with accumulation of small downed wood in the riparian environment. The analysis acknowledges the importance of smaller wood, particularly in smaller streams, for storing sediment, reducing erosion, and maintaining channel stability. EA at 31. See also the response to Objector Statement #13. The EA at 12 and 17 discusses the risk of wildfire due to existing stand conditions, as does the response to Objector Statement #6.

The Vegetation Report (at 9-14) discloses the direct and indirect effects of not thinning. Within this analysis, model runs demonstrate the height and diameter predictions when they continue to grow in an un-thinned condition. When compared to the direct and indirect effects of the proposed action, there is a clear demonstration of the beneficial effects of the proposed treatment. The treatment results in an

increase in diameter of the trees, and the re-initiation of the next cohort of trees, along with the encouragement of huckleberry growth. In addition, this thinning occurs only in the outer reaches of the riparian reserves (outside the 30- to 60-foot riparian exclusion zone). The recruitment of coarse woody material would remain high within this near-stream zone, and material has a higher probability of reaching the channel due to proximity. Only the outer trees in the treated portion of the riparian reserve would benefit from thinning. These trees have a lower probability of reaching the stream channel.

Objector OW questioned the scientific validity of the District's conclusion that riparian reserve treatments are consistent with ACS because of "improved conditions in the long term;" it is important to note that the project does not propose to treat within riparian reserves for the express purpose of meeting ACS objectives or improving conditions associated with ACS objectives. The purpose of the project is to enhance huckleberry habitat, and the analysis shows that this can be achieved while maintaining or benefitting riparian conditions associated with ACS objectives.

Finally, the Consideration of Comments at 10 specifically addressed Units 136 and 138, noting that PDC have been developed to minimize soil disturbance and erosion, and that buffers and slope limitations are described in those PDCs.

**Objector Statement #13:** Objector also states that the EA failed to compare the effects of the alternatives to the large wood per mile standard in the Forest Plan, which requires 106 suitable pieces of large wood per mile of stream, noting that large wood is defined as 35 feet long, with 80% of the log at least 12" in mean diameter and at least 20% of the log over 20" in mean diameter. OW at 36-41.

**Response:** I find that Fisheries Resource Report adequately addressed consistency with Forest Plan standard FW-095, which specifies 106 pieces of suitable large wood per mile (defined above) be *maintained* (emphasis added).

The regulation at 36 CFR 220.7(b)(3) requires that an EA include a discussion of the environmental effects of the proposed action and alternatives.

The Fisheries Report at 15 states that "None of the surveyed stream reaches in the action area met the standard based on the stream survey data that is available. However, most channels had numerous pieces of "channel forming" wood. Channel forming wood is smaller in length and diameter than pieces meeting the Forest plan, but is large enough to store sediment, reduce erosion, and maintain channel stability." The Fisheries Report at 15 notes that the current potential to recruit "suitable" large wood in the project area is very limited due to the prevalence of dense, young stands, though there is not objective protocol to measure recruitment potential. The proposed action would not impact existing levels of in-stream or near-stream wood, would not impact the near-term recruitment of channel-forming wood due to protection buffers providing a sustained source, and would likely increase future recruitment of "suitable" large woody debris. Fisheries Resource Report at 23.

**Objector Statement #14:** Objector states that the modification included the deferral of treatment in riparian reserves 'where they are directly adjacent to shelterwood treatment areas' lacks rationale for this deferral. Instead, the EA contains analysis that is counter to this deferral and supports the benefits associated with thinning in riparian reserves. AFRC at 3.

**Response:** I find that the Responsible Official clearly articulated that the rationale for the modification of the shelterwood treatment was to better meet Forest Plan objectives. Draft DN/FONSI at 5. See also the response to Objector Statement #10.

**Final Remedies/Resolutions for Aquatic/Riparian Habitats:** As documented in the response to Objector Statement #12, I instruct the Responsible Official to add the clarifying explanation regarding slope stability to the project's website.

### ***Wildlife Impacts/Old Forests***

**Overview and Objector's Suggested Remedies:** These objection issues surround the concern that this project does not adequately address the impacts to wildlife or their habitat. Suggested remedies by Objector OW is to drop logging on Mt. Defiance, and issue a clear decision that protects mature and old growth-trees and stands and protects important habitat features for native species of terrestrial and aquatic flora and fauna.

**Objector Statement #15:** Objector states that the District failed to take a hard look at the adverse impacts of logging on northern spotted owls, and failed to address the adverse competitive interactions with barred owls, stating that logging or downgrading suitable habitat for the northern spotted owl would increase the chance of adverse competitive interactions between the two species and could result in "competitive exclusion." OW at 2, 6, 19-22.

**Response:** I find that the EA and Wildlife Report adequately addressed impacts of the project on the northern spotted owl, including the potential for competitive interactions between the northern spotted owl and barred owl.

The regulation at 36 CFR 220.7(b)(3) requires that an EA include a discussion of the environmental effects of the proposed action and alternatives.

Specifically, the potential for competitive interactions between the two species is discussed with respect to effects of timber harvest and considers the influence of differences according to the portion of the northern spotted owl's range, as well as differential effects of timber harvest on the prey of the two species. EA at 41-42; Wildlife Report at 4-8. See also the response to Objector Statement #8.

**Objector Statement #16:** Objector states that the District failed to take a hard look at the trade-offs of impacting carbon, wildlife habitat, recreational/scenic values, suppressing growth of invasive plants and hazardous ladder fuels, and maintenance of cool/moist microclimates, with the adverse impacts of logging on mature and old-growth forest habitats, noting that regeneration harvest does not mimic natural disturbance and reduces the population of small mammals that provide food for the northern spotted owl. OW at 2, 6-9, and 24-25.

**Response:** I find that the EA and resource reports adequately addressed the trade-offs of the proposed action on the different resource areas mentioned by the objector.

The regulation at 36 CFR 220.7(b)(3) requires that an EA include a discussion of the environmental effects of the proposed action and alternatives.

The EA and Wildlife Report discuss both beneficial and adverse impacts to a variety of wildlife species and habitats that could result from the proposed action. EA at 41-48; Wildlife Report at 1-35. For effects on the spotted owl, including potential effects on prey species, see response to Objector Statements #8 and #15. The analysis showed that species of spotted owl prey such as the northern flying squirrel may be negatively impacted, the woodrat may show a mix of positive and negative impacts, and species such as brush rabbits and other rodents may benefit from proposed treatments. Wildlife Report at 5-6. The Wildlife Report also discusses the potential for the proposed action to have both positive and negative impacts on the gray wolf, Western bumblebee, Johnson's hairstreak, mule deer, elk, and migratory birds. Wildlife Report at 10-19, 32-35. The report also discusses the potential positive and negative impacts of the proposed action on species associated with snags, down wood and older forest, including the pileated woodpecker and marten. Wildlife Report at 19-32.

See the responses to Objector Statements #6 and #8 which address the other resources mentioned by the objector. Invasive species are addressed in the EA at 11-14, in the Invasive Species Report at 1-10, and in the project design criteria at 2.

Maintenance of moist and cool microclimates is addressed by maintaining riparian reserves, as described in the EA at 7, which states that "Perennial streams, wetlands, lakes, and ponds would all have a minimum of 60-foot protection buffer and intermittent streams would have a minimum 30-foot protection buffer. Protection buffers would serve to maintain current shade conditions, maintain small wood recruitment to streams, maintain snags for standing and down wood recruitment, and protect streams from sediment generated from timber harvest activities", and as described in the project design criteria (PDC) document at 3 under PDC 3-VT-AQF: "Protection buffer widths are defined in Table 1. No tree felling would occur within protection buffers except felling associated with skyline yarding (corridor creation), and sapling thinning by hand. Trees felled within skyline corridors within protection buffers would be left. Trees would be directionally felled away from streams" and PDC 4-VT-AQF: "If a tree located outside of a protection buffer is felled on lands wholly or partially within the protection buffer, the portion of the tree within the protection buffer must not be removed."

**Objector Statement #17:** Objector states that the District "failed to take a hard look at the adverse effect of logging on recruitment of snags and dead wood habitat, and failed to consider the adverse effects of logging in light of new information that the LRMP snag standards are scientifically discredited and it is understood that wildlife need more snags for a wider variety of life functions than previously recognized." OW at 2, 6 and 14-19.

**Response:** I find that the EA and Wildlife Report adequately addressed the effect of the proposed action on snags and down wood, including potential effects on existing levels as well as future recruitment.

The regulation at 36 CFR 220.7(b)(3) requires that an EA include a discussion of the environmental effects of the proposed action and alternatives. See the response to Objector Statement #8.

The EA at 46-48 and Wildlife Report at 24-32 address snags and down wood. Specifically, the Wildlife Report discussed current snag and down wood conditions in the project area and related that to DecAID tolerance levels for wildlife species. Wildlife Report at 24-29. The snag and down wood analysis considered the effects of treatments on snag and down wood recruitment. Wildlife Report at 30-32. The Wildlife Report specifically provided tables showing recruitment of snags under current conditions and recruitment that is projected to occur under the proposed action. Wildlife Report at 30-31. The Wildlife Report at 30-31 disclosed that the proposed action would recruit fewer snags over time

compared to the no action alternative. This is mainly because thinning activities would reduce the canopy cover to approximately 30 percent and there would be fewer trees per acre to provide future snags. The analysis continued on to discuss the proposed action impacts to down wood. Wildlife Report at 31-32.

Snags and down woody material are also considered as an important factor to the effects analyses for down wood-dependent species, such as the pileated woodpecker and American marten, which were discussed in the Wildlife Report at 19-21 and at 22-23, respectively. Additionally, the effects to large wood recruitment potential and in-stream large wood are disclosed in the Fisheries Resource Report at 22-23.

**Objector Statement #18:** Objector further states that the “analysis does not compare the projected snags levels to the needs of wildlife, such as the tolerance levels in DecAID. However even if it did there is no connection between DecAID and any standards that define sufficient snag habitat, but there is science raising concerns that we are not leaving enough snags after logging” noting that shelterwood harvest would result in a “snag gap” with serious consequences. OW at 14-19.

**Response:** I find that the EA and Wildlife Report adequately addressed the effect of the projected snag levels on wildlife.

The regulation at 36 CFR 220.7(b)(3) requires that an EA include a discussion of the environmental effects of the proposed action and alternatives. See the responses to Objector Statement #8 and #17. In addition, the EA at 46-48 and Wildlife Report at 19-32 addressed snags and down wood, as well as DecAID.

Specifically, the Wildlife Report at 24 provided a description of the applicability of DecAID modeling. Tolerance levels for wildlife are discussed in the Wildlife Report at 25, with respect to current snag and down wood levels by size and decay class in the project area. The report stated that “The current condition of the stands in the project area is below the 30 percent tolerance levels as identified in DecAID.” Wildlife Report at 25. The report then provided the number of snags in a given size class and the percent cover of down wood that DecAID identifies for the 30 percent tolerance level in the Eastside Mixed Conifer and Montane Mixed Conifer wildlife habitat types (as defined by DecAID) that are found in the analysis area. Wildlife Report at 25.

The Wildlife Report at 31 provided a description of the effects analysis for down wood stating: “While some snags may be more prone to fall after thinning and then become down wood, there will be fewer trees after thinning that would contribute to future down logs. Recruitment would not be measurable at the watershed scale. Skips and streamside protection buffers would provide short and mid-term recruitment of down wood similar to the levels under the current condition.”

Cumulative effects are summarized in the Wildlife Report at 32 stating: “Snag and down wood levels would remain relatively unchanged when considered at the watershed scale and therefore the cumulative effects to snags and down wood are insignificant.”

I have asked my staff to clarify the rationale behind choosing the 30 percent tolerance level used in the snag and down wood DecAID analysis of the Wildlife Report at 25. Staff confirmed that the rationale for managing the area was based on the fact that current conditions were below the 30 percent tolerance level (Wildlife Report at 25), and that timber practices on state and private lands have the potential to

reduce snags and down wood on the landscape. In addition, private lands are not likely to contribute snags and downed wood in the foreseeable future, and overall, snag and down wood levels would remain relatively unchanged when considered at the watershed scale. Therefore, it would have been unrealistic to choose a tolerance level higher than 30 percent for the analysis. Staff also indicated that the values reported for the 30 percent tolerance level were derived from the cumulative species curve, which considers snag and down wood needs for a variety of species.

The Consideration of Comments at 8 states that there are no treatments in suitable habitat for the two snag dependent species and that tolerance levels for those two species are only relevant within suitable habitat. The Consideration of Comments at 8 also states that in consideration of the comment regarding buffers around snags, groups of snags may be included in areas defined as “skips.”

**Objector Statement #19:** Objector believes that regeneration harvest to create early seral forests is not needed, because this type of forest is not in short supply, noting that there is too much early seral forest in the Oregon Coast Range, and that there are other methods of enhancing early-seral forests (including that climate change will create more early seral forests) without “sacrificing mature forests.” OW at 25-35.

**Response:** I find that the EA and resource reports adequately addressed the issue of early seral forest.

The regulation at 36 CFR 220.7(b)(3) requires that an EA include a discussion of the environmental effects of the proposed action and alternatives. This area of the Mt. Hood National Forest is part of the Cascade Range and is distinctly separated from the Oregon Coast Range by the Willamette Valley.

The purpose and need for the project relates to enhancing huckleberry within the Mt. Hood National Forest, for ecological benefits to plant and wildlife diversity and for cultural and recreational benefits. EA at 4.

The project proposes to reduce canopy in certain stands to allow more sunlight to reach the forest floor, in order to create beneficial growing conditions for huckleberry plants. The vegetation treatments (variable density thinning, intermediate thinning, shelterwood regeneration harvest) that are in the proposed action are intended to “enhance existing huckleberry shrubs and increase huckleberry development and productivity across the Waucoma project area.” EA at 5. As stated in the EA at 5, “Huckleberry shrubs are most common within open, early-seral stands.”

Of the approximately 2,557 acres proposed for treatment within the 7,320 acre planning area, 555 acres are proposed for shelterwood harvest (i.e., early seral conditions as described by the objector). Of the 555 acres of proposed shelterwood, a portion (not all) of those acres would receive treatments given the Forest Plan management requirement for no more than 60 contiguous acres of created openings (EA at 5, 6, and 19).

The EA at 44-45 and Wildlife Report at 17 discussed the declining amount of early-seral on the Mt Hood National Forest and the reasons behind the continuing decline. In addition, the Vegetation Report at 3-6 discusses the existing stand conditions within the project area and watershed, which shows that only a relatively small percent of the area in the early seral condition. Table 7 in the report also shows a comparison of current stand types to historical range by percent. Vegetation Report at 10.

**Objector Statement #20:** Objector believes that the analysis that there is no significant impact because this is a small percentage of the forest is flawed and that these older forests remain an important reservoir for carbon and old growth dependent species. FK at 1.

**Response:** I find that the conclusions about significance by the District were adequate. The conclusions were based on local, cumulative, and forest-wide contexts. They concluded that the proposal, including PDCs, would not have a significant effect. See the responses to Objector Statements #6, #8, #9 and #16, which address off of the objector's concerns.

**Objector Statement #21:** Objector states that the analysis failed to disclose that logging in riparian reserves would harm terrestrial wildlife due to degraded microclimates and loss of dead wood. OW at 41-43.

**Response:** I find that the District adequately addressed the effects of the proposed action on terrestrial wildlife.

The regulation at 36 CFR 220.7(b)(3) requires that an EA include a discussion of the environmental effects of the proposed action and alternatives.

See the responses to Objector Statements #6, #8, #12, #13, #15, #16, #17, and #18.

**Final Remedies/Resolutions for Wildlife Impacts/Old Forests:** As documented in the response to Objector Statement #18, my staff clarified the rationale for the DecAID tolerance level. No other remedies or resolutions are needed.

### **Roads**

**Overview and Objector's Suggested Remedies:** This objection issue surrounds the concern that the proposal does not adequately map or disclose the impact of temporary roads. Suggested remedies include providing a map of proposed temporary roads and having all resource specialists analyze the impacts of temporary roads while taking into account the effectiveness of project design criteria.

**Objector Statement #22:** Objectors state that they are concerned about habitat fragmentation due to road building, particularly because the temporary road locations were not specified, noting that many of the areas likely to contain roads are adjacent to the Mark O. Hatfield Wilderness, which could cause degradation of wilderness characteristics and ecological impacts to forested areas. FK at 1; OW at 2; BARK at 3-13.

**Response:** I find that the District adequately analyzed and found no significant impact regarding temporary roads.

The regulation at 36 CFR 220.7(b)(3) requires that an EA include a discussion of the environmental effects of the proposed action and alternatives.

There are four proposed treatment units (39, 38, 4, and 6) that are "likely" to require temporary roads for access/haul (draft DN/FONSI at 13) that appear to be near the boundary with the Mark O. Hatfield Wilderness; in actuality, these would be separated from the wilderness boundary by an existing system road. The wilderness area boundary does not have a buffer, and the land use allocation outside of the

wilderness area does not prohibit temporary roads. Additionally, effects to resources due to the proximity to the wilderness area are disclosed throughout the document. EA at 37-39.

The potential for fragmentation of habitat is addressed in the Wildlife Report at 21 for the pileated woodpecker (relative to treatments that reduce canopies), and it is also addressed for marten, noting that “Stands that currently provide suitable habitat for martens would not be treated under the proposed action.” Wildlife Report at 22-23. No suitable owl habitat is included in the proposed treatment units; as such, no fragmentation would occur. Wildlife Report at 6; EA at 41.

**Objector Statement #23:** Objector notes that this is the first vegetation management EA released by the Forest (in at least a decade) that does not include the location or type of temporary road, which means that the impacts of these roads are not understood or known by the public. Objector listed several past timber sales as examples where knowing the temporary road locations ahead of time was important for public involvement and engagement. BARK at 10-13.

**Response:** I find that the District identified the likely areas where temporary roads may be necessary to meet the goals of the project.

The regulation at 36 CFR 220.7(b)(3) requires that an EA include a discussion of the environmental effects of the proposed action and alternatives.

The location and type of temporary roads are disclosed in the EA at 8 stating that “Temporary roads would be constructed in areas where minimal resource impacts would be achieved as described in the PDC. To minimize impacts, pre-existing alignments would be utilized where possible.” The draft DN/FONSI at 6, and 13-16 further clarifies the information in the EA providing “extent”, “timing”, and “location” descriptions for temporary roads. The PDC and a map of units where temporary roads are likely are included as Appendix A of the draft DN.

According to the District, the past timber sales mentioned by the objector are on different ranger districts and present different resource characteristics. In a letter dated June 25, 2020 from Kameron Sam to the collaborative, page 4 indicates that there have been previous projects on the Hood River Ranger District where the decision included the following statements about temporary roads: “The exact location of temporary roads may change during the layout phase of this project” and that “changes will have to meet the design criteria.” These included the Polallie Cooper Hazardous Fuels Reduction Decision Notice (11/30/17), pages 7-8, Lava Restoration Decision Notice (4/29/15), page 5, and Red Hill Restoration Decision Notice (5/29/13), page 6.

See also the response to Objector Statement #25.

**Objector Statement #24:** Objector states that the design features note that units 2, 3, 4, 7, 9, 28 and 43 would have late-successional characteristics preserved, and that treatments would be focused around existing huckleberry patches and along roads. However, objector notes that units 4, 7 and 43 have been identified as likely to have temporary roads, which would degrade these forests. FK at 1.

**Response:** I find that the historic land use and previous fires have already disturbed these stands in the past, and documented in the project record.

The regulation at 36 CFR 220.7(b)(3) requires that an EA include a discussion of the environmental effects of the proposed action and alternatives.

The Vegetation Report at 8 states that “Timber harvesting has been a major contributor to the change in vegetative conditions that have occurred across the project area as well as the Lower West Fork of Hood River and Odell Creek subwatersheds. This has altered the stand structure and species composition within the project area.” The Vegetation Report notes that “In the project area, records show that approximately 1,668 acres have been treated in the past 50 years during the time period from 1970 to 2019 (see Table 6 below). Within the project area the Forest has limited records of federal timber harvest before 1970, however, stand age and structure would indicate that active harvest was occurring during this time.”

It is likely the previous timber harvests have already created road templates in some units; however, if a new temporary road must be constructed, then the PDCs in the EA at 8 document in detail the criteria for temporary road construction. In addition, a number of PDCs minimize impacts from temporary roads, including the following: 20-G-WDLF, 18-VT-REC, 29-VT-SOIL/HDRO, 39-VT-VIS, 4-RR-AQF/HDRO, 5-RD-ENG, 9-RD-HDRO, 10-RD-HDRO, 11-RD-HDRO/SOIL/AQF/REC, 12-RD-HDRO/SOIL, 13-RD-HDRO/SOIL, 14-RD-REC, 15-RD-SOIL and 3-H-HDRO. See also the response to Objector Statement #25 and #26.

**Objector Statement #25:** Objector is concerned that the EA failed to take a hard look at the impacts of temporary roads and that this failure is a violation of NEPA. The objector states that the proposed action has approximately 8 miles of temporary road construction and that “the locations of these roads are not included in the Proposed Action, nor was analysis of the environmental impacts of the temporary roads.” BARK at 3.

**Response:** I find that the District considered the potential impacts of temporary roads in the EA and specialist reports.

The regulation at 36 CFR 220.7(b)(3) requires that an EA include a discussion of the environmental effects of the proposed action and alternatives.

The District used an approach of minimizing impacts from temporary roads through the use of project design criteria (PDC) as explained in the responses to Objector Statements #22, #23, #24 and #26.

The Fisheries Report at 2 describes that the parameters most likely to be impacted from the proposed action [including temporary road construction], which include “stream shade and subsequently water temperature; substrate fine sediment levels in streams and wetlands; pool quantity and quality; future large wood recruitment potential; and existing in-stream large wood levels.” The Fisheries Report at 21 summarizes effects related to sediment and turbidity, noting that “haul would only occur in dry weather on roads that cross or are in proximity to LFH/EFH. And PDC are in place to effectively prevent measurable sediment from routing into LFH/EFH from the action area. Therefore, sediment and turbidity will have a negligible effect on aquatic species/habitat in the action area.” The Fisheries Report at 2 summarizes effects, stating that “project activities, especially culvert removals, may impact, but will not likely contribute to a trend towards federal listing or loss of viability to the population or species for Basalt Juga or Rocky Mountain dusksnail individuals or habitat.”

The Hydrology Report at 2 describes the application of PDCs to minimize effects as “BMPs and PDCs are the primary tools intended to avoid or mitigate potential effects to hydrologic resources that could result from the proposed action.” The Hydrology Report at 18 discusses the potential impacts haul has on the introduction of sediment into waterways, noting that “the potential for log-haul and activities by heavy equipment to increase road-generated sediment would be minimized by BMPs and PDCs aimed specifically at preventing unwanted effects to water quality.”

The Soils Report describes temporary roads as a component considered in the analysis, and that “management actions that displace, severely burn or compact soil or that remove ground cover are considered to result in a greater risk to soil productivity.” Soils Resource Report at 2.

The Wildlife analysis describes that “disturbance [from the proposed action] could temporarily displace animals and may potentially affect the health of individuals if the disturbance occurs near active calving or wintering sites. Project activities would not all be occurring at the same time, but in a few places at any one time. The potential disturbance would be small in scale, temporary in nature and only impact a few individuals at any given time. The project is not expected to cause a measurable reduction or increase in the current local population size for either deer or elk.” EA at 45.

The Botany Report states that “the use of equipment or vehicles during project implementation has a risk of invasive weed introductions, which can alter or degrade sensitive species habitat. PDC are in place to prevent the introduction of invasive or undesired species.” Botany Report at 13.

**Objector Statement #26:** Objector is concerned that the few PDCs for road construction are not enough to ensure that all impacts will be minimized and is especially concerned that there are no PDCs for soil condition, presence of invasive species, or existing road density. BARK at 5-6.

**Response:** I find that the PDC developed for temporary road construction are sufficient to ensure minimal impacts to watershed resources and to avoid introducing or spreading invasive species. PDC regarding existing road density are not needed for temporary road construction.

The regulation at 36 CFR 220.7(b)(3) requires that an EA include a discussion of the environmental effects of the proposed action and alternatives.

To minimize impacts, pre-existing alignments would be used where possible. EA at 8. Watershed resources are adequately addressed through PDC listed under Road Related Operations (RD) (for system and temporary roads) (PDCs at 7), which avoid or minimize impacts related to erosion, sediment transport, soil compaction/damage, and increased peak flows by imposing prescriptive recommendations and restrictions for construction and use of temporary roads. PDCs also adequately address post-project obliteration of temporary roads. The Soil Resources Report describes soil types within the project area as being uniformly rocky and resistant to equipment damages (Soil Resource Report at 3), and notes that there are no sensitive soil types (outside of expressly-excluded areas) where construction of temporary roads would cause particular concern.

The Invasive Species Resource Report references known populations of invasive species along roads and trails within the project area, and limited occurrences within proposed treatment units (Invasive Species Resource Report at 5 and 6). The report discloses a risk of invasive species infestation from activities such as timber removal, slash piling, temporary road construction, and road maintenance. PDCs related to invasive plants require that machinery be cleaned of dirt and weed seed before entering NFS lands,

and that any source material sites be inspected for invasive plants before use and transport (PDC 11-G-BOT/AQF and 12-G-BOT, PDC Document at 2). Monitoring and aggressive treatment of known/discovered weed populations would minimize opportunity for spread (EA at 14). Under the 2008 Site-Specific Invasive Plant Treatment EIS, roadside populations would be treated regularly (EA at 14).

Open road density is addressed as part of the existing condition analysis for wildlife. EA at 45; Wildlife Report at 18-19. The analysis shows that overall open road density, open road density in summer range lands, and open-road density within inventoried deer and elk winter range are all below Forest Plan standards. Temporary roads, (which are to be used for project-related activities only for a relatively short window of time and are not open for public use, 14-RD-REC, PDC Document at 8) would not contribute to open road density. Where pre-existing, currently-driven alignments are used for temporary roads and obliterated after project activities (11-RD-HDRYO/SOIL/AQF/REC) (PDC Document at 8), a net improvement in functional open road density would result from the project.

**Objector Statement #27:** Objector is concerned that the EA fails to discuss the ecological impacts of temporary roads in any of the specialist reports, noting that the only analysis of impacts of temporary roads was in the Botany Report. BARK at 7-11.

**Response:** I find that effects from temporary roads were considered in individual resource analyses, particularly through development of design features.

The regulation at 36 CFR 220.7(b)(3) requires that an EA include a discussion of the environmental effects of the proposed action and alternatives.

The project record contains a document titled “20200600TempRoadsAnalysisNotes” that has clarifying information about how the interdisciplinary team considered potential impacts from temporary roads. The document contains explanations of how specialists considered the effects of temporary road construction, use, and obliteration. During project development, each affected resource areas contributed PDCs related to temporary roads which minimized or avoided effects to resources. In order to provide clarity, I instruct the Responsible Official to add the 20200600TempRoadsAnalysisNotes document that has clarifying information about temporary roads analysis to the project website.

**Objector Statement #28:** Objector is concerned that “neither project design criteria nor best management practices can guarantee that temporary roads have an insignificant environmental impact as the effectiveness of such measures, and whether they are implemented at all is in question.” BARK at 9. Objector states that past monitoring has shown that the PDCs and BMPs were not fully effective, nor were they implemented 100% of the time. BARK at 9-10.

**Response:** I find that resource effects analyses considered the environmental impacts of temporary road construction, usage, and decommissioning, and found them to be insignificant so long as PDC are implemented.

The regulation at 36 CFR 220.7(b)(3) requires that an EA include a discussion of the environmental effects of the proposed action and alternatives.

The PDCs will be fully implemented as written in the EA and draft DN for this project. While BARK questions the likelihood of implementation of PDC and BMP and asserts that they may not be 100% effective, monitoring on the Mt. Hood NF has shown that PDC and BMP have been largely reliable in

minimizing delivery of road-related sediment related to log haul, and the analysis determined that road-related sediment contributions to streams would decrease as a result of project activities. EA at 25.

**Final Remedies/Resolution for Roads:** The Invasives Report states that the project will follow the requirements of the Site Specific Invasive Plant Treatments for Mt. Hood National Forest and Columbia River Gorge National Scenic Area in Oregon, including Forest Plan Amendment #16 (Record of Decision, Final Environmental Impact Statement, 2008), and the USDA Forest Service, Region 6, Pacific Northwest Region Final Environmental Impact Statement for the Invasive Plant Program, Preventing and Managing Invasive Plants, (Record of Decision, 2005). I instruct the Responsible Official to add information to the DN that clarifies this approach.

### ***Unroaded Areas***

**Overview and Objector's Remedies:** This objection issue surrounds the concern that that the project would impact unroaded areas. Suggested remedies by Objector OW are to drop logging in unroaded areas.

**Objector Statement #29:** Objector states that the District failed to take a hard look "at the adverse effect of logging on the disproportionate ecosystem services provided by unroaded areas" and "The FS Failed to Consider New information on the Significant and Disproportionate Ecological Value of Unlogged Unroaded Areas >1,000 acres." OW at 2, 9-14. Objector further articulates that the EA failed to analyze effects to unroaded areas, because the EA "erroneously" thinks that roadless areas are "only valued as potential wilderness" which discounts ecosystem services such as "clean water, hydrologic stability, soil conservation, slope stability, habitat for a wide variety of wildlife (source habitat, refugia, connectivity, and centers of dispersal), carbon storage, recreation and scenic values." OW at 9.

**Response:** I find that the analysis of unroaded areas and ecosystem services was adequate.

The regulation at 36 CFR 220.7(b)(3) requires that an EA include a discussion of the environmental effects of the proposed action and alternatives.

The Consideration of Comments at 3 responded to the request for disclosure of consideration of ecosystem services, explaining that "A comment was received requesting disclosure of effects or the trade-offs to values associated with ecosystem services to achieve timber objectives. Ecosystem services can be defined as a number of different things associated to public values around natural resources. The comment suggests that the environmental analysis does not disclose effects to the following ecosystem services: clean water, hydrologic stability, and soil conservation, slope stability, habitat for wildlife, services associated with dead wood, carbon storage, and recreation and scenic values. The environmental analysis incorporates by reference each report provided by the interdisciplinary team of specialists who analyzed the effects of the project's proposed action. For each of the listed ecosystem services, an analysis is provided and the effects of the proposed action on each resource is disclosed. Effects related to clean water, hydrologic stability, and soil conservation can be found in the sections 6.4, 6.4.2, 6.4.3, and 6.6 of the environmental analysis and in the Hydrology and Soils reports. Effects related to wildlife and deadwood can be found in sections 6.10 and 6.10.4 of the environmental analysis and in the Wildlife report. An analysis of carbon storage and climate change is also found in section 6.11.2 of the environmental analysis and respective Climate Change report. Recreation and visual effects from the proposed action are disclosed in section 6.8 and 6.9 of the environmental analysis and in the Recreation and Visuals reports."

Additionally, the district did not propose any activities in Inventoried Roadless Areas (IRAs). EA at 49 and 51. In addition, when this issue was raised during the EA comment period, the objector suggested that the areas adjacent to IRAs should also be dropped from the proposed action. The District responded by explaining that “Inventoried roadless areas do not overlap proposed treatment areas. Defining the boundaries of a “de facto unroaded area” is outside of the scope of the project. The A-5 Unroaded Recreation Area land use allocation does not have any proposed treatment units within it.” Consideration of Comments at 10.

**Final Remedies/Resolution for Unroaded Areas:** Unroaded areas and ecosystem services were adequately addressed. No remedy or resolution is needed.

### ***Climate Change***

**Overview and Objector’s Suggested Remedies:** These objection issues surround the concern over impacts of this project on climate change. Suggested remedy is to conduct a carbon analysis.

**Objector Statement #30:** Objector states that the EA failed to discuss impacts of this project on climate change and that “no substantive analysis of the impact of this project has been done, nor has the cumulative impact been properly examined.” TR at 1.

**Response:** I find that the Responsible Official discussed the impacts on climate change from the project, including a consideration of cumulative effects.

The regulation at 36 CFR 220.7(b)(3) requires that an EA include a discussion of the environmental effects of the proposed project, including disclosing the direct, indirect and cumulative effects. The Washington Office’s January 13, 2009 Memo on “Climate Change Considerations in Project Level NEPA Analysis” documents that when relevant, the analysis should document the project’s effects on climate change and the effects of climate change on the project.

In its consideration of public comments on the project, the District recognized that a “quantitative carbon analysis at the project scale would require many assumptions about methodology for which there is little consensus in the scientific literature” and that a site-specific analysis would not likely “lead to changes to the proposed action or to the creation of other alternatives that achieve the purpose and need.” Consideration of Comments at 9.

The District did include climate considerations in the effects analysis for the project. A Climate Report completed for the project included analysis of project effects on carbon emissions and sequestration and how the project may help or hinder the “forest’s ability to deal with climate change.” Climate Report at 1. Section 6.11.2 of the EA (at 48) summarize the Climate Report’s determination.

The project’s Climate Report notes that the project may have indirect, qualitative effects on climate change. The report discloses that vegetation treatments aimed at enhancing the health of the stand could leave residual trees “better able to withstand stresses such as dry summer conditions.” The report reveals that equipment needed to log the stands will emit fossil fuels and carbon would be released into the atmosphere from burning associated with slash. Some debris will be left on the ground which will increase carbon sequestration and trees removed are likely to be used as long-term wood products

which may lead to a “more favorable carbon balance when compared to other building materials such as steel, concrete or plastic.” Climate Report at 2-3.

Because the project is expected to have negligible indirect effects to climate change, the Forest concluded and disclosed that the “contribution to cumulative effects on global greenhouse gasses and climate change would also be negligible.” Climate Report at 3.

**Objector Statement #31:** Objector states that “The FS failed to take a hard look at the adverse effect of logging on carbon emissions/storage and climate change.” OW at 2, 6 and 43-47. Objector also states that the “NEPA analysis also needs to account for the fact that managing forests for water quality, water quantity, quality of life, and carbon storage for a stable climate will contribute far more to community stability than propping up the timber boom-bust industry with subsidized logging.” OW at 43.

**Response:** I find that the Responsible Official took a hard look at carbon emissions/storage and climate change.

See the response to Objector Statement #30.

**Objector Statement #32:** Objector states that “There is no evidence in the record that the FS considered the full range of viewpoints on carbon and climate information. It seems more clear that the FS continues to rely on flawed and misleading information in the carbon template from the Regional office. The NEPA analysis should consider the adverse climate consequences of GHG emissions caused directly and indirectly by logging.” OW at 44. Objector goes on to list six ways the analysis is flawed. OW at 44-45.

**Response:** I find that the District did consider comments related to climate change. The Responsible Official followed Agency direction in documenting effects of the project on climate change factors.

The regulation at 36 CFR 220.7(b)(3) requires that an EA include a discussion of the environmental effects of the proposed action and alternatives. The Washington Office’s January 13, 2009 Memo on “Climate Change Considerations in Project Level NEPA Analysis” documents that when relevant, the analysis should document the project’s effects on climate change and the effects of climate change on the project.

The District complied with direction from the Pacific Northwest Regional Office and Washington Office for a project-level NEPA analysis. A Climate Report completed for the project included analysis of project effects on carbon emissions and sequestration and how the project may help or hinder the “forest’s ability to deal with climate change.” Climate Report at 1. Section 6.11.2 of the EA (at 48) summarizes the Climate Report’s determination.

The Consideration of Comments document at 9 describes how climate/carbon comments were considered. In addition, the District documented consideration of climate science viewpoints and literature provided by commenters during the planning of the project. Consideration of Science Related to Climate Change from the Waucoma Huckleberry Enhancement Draft Environmental Assessment at 1-8.

**Objector Statement #33:** Objector states that the “analysis makes several inaccurate and misleading” statements about the carbon consequences of logging and refutes the District’s findings and conclusions regarding carbon emissions and/or sequestration. OW at 45-47.

**Response:** I find that the Responsible Official adequately disclosed the impacts on climate change from the project. See response to Objector Statement #30, #31 and #32.

**Objector Statement #34:** Objector states that the EA failed to recognize that wood products are a source of carbon emissions, not a sink and that the carbon value of wood products is “often over-estimated.” OW at 47-60.

**Response:** I find that carbon was adequately addressed. See also response to Objector Statement #30, #31 and #32.

The Climate Report at 3 discloses that “there is growing concern over the impacts of climate change on US forests and their current status as a carbon sink...timber management projects can influence carbon dioxide sequestration in four main ways: (1) by increasing new forests (afforestation), (2) by avoiding their damage or destruction (avoided deforestation), (3) by manipulating existing forest cover (managed forests), and (4) through transferring carbon from the live biomass to the harvested wood product carbon pool. Land-use changes, specifically deforestation and regrowth, are by far the biggest factors on a global scale in forests’ role as sources or sinks of carbon dioxide, respectively.”

The Responsible Official acknowledged that much of the Forest is managed with no or low timber harvest because of land designations such as wilderness areas, late-successional reserves, and designated critical spotted owl habitat and provide a carbon sink. Consideration of Comments at 9. The District, while recognizing that there will be carbon emissions as a result of the project, explains that trees removed are likely to be used as long-term wood products which may lead to a “more favorable carbon balance when compared to other building materials such as steel, concrete or plastic.” Climate Report at 2-3.

**Final Remedies/Resolutions for Climate Change:** The Forest followed direction from the Pacific Northwest Regional Office and Washington Office for a project-level NEPA analysis, in compliance with policy. A quantitative analysis was not necessary to inform the decision for the project and the climate report and consideration of science related to climate change disclosed methodology and the analysis consideration for climate impacts, as well as science presented by commenters. No remedy or resolution is needed.



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**File Code:** 1570; 1950  
**Date:** September 29, 2020

Michael Krochta  
BARK  
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Portland, OR 97212

email: michael@bark-out.org

Dear Mr. Krochta:

This letter is in response to your objection (#20-06-06-0004-218(B)) to the draft Decision Notice (DN) and Finding of No Significant Impact (FONSI) for the Waucoma Huckleberry Enhancement Project, Hood River Ranger District, Mt. Hood National Forest. I have read your objection and reviewed the project record, the draft DN/FONSI, and the final Environmental Assessment (EA). My review of your objection was conducted in accordance with the regulation at 36 CFR 218 (2013).

### PROJECT DESCRIPTION

The legal notice announcing the Predecisional Administrative Review (Objection) Period for the draft DN/FONSI for the Waucoma Huckleberry Enhancement Project EA was published in *The Oregonian* on June 1, 2020. In the Draft DN/FONSI, the Responsible Official selected the proposed action with minor changes to project design criteria. The proposed action would authorize the following:

- Vegetative treatments on 2,557 acres that include thinning and regeneration harvest (shelterwood harvest) to enhance the huckleberry understory. Throughout the treatment units an average canopy cover of 30% would be maintained. Sapling thinning is also proposed to reduce competition between younger trees.
- Associated actions include maintenance or reconstruction of 36 miles of road and the construction of up to eight miles of temporary road to facilitate safe haul and operations.
- After operations, approximately ten miles of existing system roads within the project area would be closed and a half-mile of road would be decommissioned.

### OBJECTION ISSUE DISCUSSION AND CONCLUSION

Specific to your objection, you raised issues regarding the following: failure to take a hard look at impacts of temporary roads, in violation of NEPA, including use of a condition-based framework, the effectiveness and implementation of project design criteria; lack of knowledge of



the location of temporary roads and understanding of impacts; and failure to analyze and/or adopt an alternative that meets the purpose and need, specifically raising issue with the silviculture prescription and enhancement of huckleberries and long-term challenges with the shelterwood prescription.

As you know, we had an objection resolution meeting scheduled for September 14, 2020, but due to the unprecedented active fires on the forest, along with evacuations affecting forest personnel, we did not hold the meeting. Unfortunately, there was not adequate time to reschedule the meeting before the end of the review period and as such, no meeting was held (36 CFR 218.11). Although we were unable to meet to further discuss concerns specific to the District's approach to describing and analyzing temporary roads, I am hopeful that we can continue to discuss this issue, most likely within the setting of the Hood River Forest Collaborative Group. I believe I have a good understanding of the concerns expressed, and I have thoroughly reviewed the documentation and met with staff to discuss temporary roads. While you may disagree with the approach the District took in addressing temporary roads, I find that temporary roads were appropriately considered in the analysis. While the analysis was appropriate, perhaps there is a partnership opportunity here, in which we could work together in post-treatment monitoring. For example, we could work in conjunction with the Hood River Forest Collaborative Group to monitor temporary road placement and closure effectiveness utilizing the National Best Management Practices Monitoring Program. The information gathered from monitoring could then help to inform future projects. Also, by working together, we may be able to strengthen relationships and build additional trust since it is important to me that you know the forest has no intentions of confusing or withholding any information. I welcome your feedback on engaging with us in monitoring efforts.

During the review I found two areas where the decision could be clarified. With regard to unstable areas, I asked my staff for clarification regarding the consideration of potentially unstable areas. The project hydrologist provided a site-specific interpretation of the bare-earth LiDAR data to show how potentially unstable areas were considered for Units 136 and 138. There are some potentially unstable areas associated with drainage-ways and convergent headwalls primarily upslope (north) of Units 136 and 138. A small area of potentially unstable terrain is excluded with the riparian protection buffer associated with Unit 136. No potentially unstable areas overlap with proposed treatment unit boundaries, and proposed treatments would not affect these areas. The DN will be updated to include this clarifying information about project design.

The second area where clarification can be added is with regard to impacts from temporary roads. The project record included notes from meetings with interdisciplinary staff that helps explain how specialist considered effects of temporary roads; for clarity, I instruct the Responsible Official to add these notes to the project's website, and include clarifying information in the final DN.

In summary, I conducted my review of the record, final EA, and draft DN/FONSI and found that other than the clarifications noted above, no other remedies or resolutions are needed. Based on my review, I conclude the following:

- The draft decision clearly describes the actions to be taken in sufficient detail that the reader can easily understand what will occur as a result of the draft decision.
- The draft decision considered a range of alternatives that was adequate to respond to the Purpose and Need. The purpose and need and alternatives considered in the final EA reflect a reasonable range of alternatives, consistent with law, regulation and policy.
- The draft decision is consistent with or moves toward attainment of Forest Plan standards and guidelines.
- The draft decision is consistent with policy, regulation, law, direction, and the final EA contains adequate evidence to support the decision. The record and final decision contain site-specific documentation regarding resource conditions, and the Responsible Official's draft decision document is based on the record and reflects a reasonable conclusion.

This concludes my written review of the project. By copy of this letter and the enclosed response document, the Responsible Official may sign the decision after including the clarifications noted above, then notify interested and affected persons in accordance with the regulation at 36 CFR 218.12 and 36 CFR 220.7(d). This written response is the final administrative review by the Forest Service or the Department of Agriculture [36 CFR 218.11(b)(2)].

Sincerely,

RICHARD PERIMAN  
Forest Supervisor  
Objection Reviewing Officer

Enclosure: Waucoma Objection Statements and Responses Final.pdf

cc: Kameron Sam; Michelle Lombardo; Amber Sprinkle; Ashley Popham; Debbie Anderson; Heidi Hopkins