# U.S. DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT ASHLAND FIELD OFFICE

## **DECISION RECORD**

Bear Grub Vegetation Management Project (DOI-BLM-ORWA-M060-2020-0001-EA)

#### Introduction

The Medford District Bureau of Land Management (BLM), Ashland Field Office has conducted an environmental analysis for the Bear Grub Vegetation Management Project, which proposed forest management actions, including commercial timber harvest, follow-up activity fuels and non-commercial hazardous fuels treatments, on up to 4,915 acres of BLM-administered lands located primarily in the Bear Creek watershed, Little Applegate watershed, and Middle Applegate watershed. The analysis is documented in the Bear Grub Vegetation Management Project Environmental Assessment (EA). A Finding of No Significant Impact (FONSI) has been completed and the signed FONSI will be issued concurrently with this Decision for the Bear Grub Timber Sale, hazardous fuels reduction treatments, and other vegetation management actions.

#### **Decision**

My decision is to implement actions proposed and analyzed under Alternative 3. My decision will implement actions in locations described below and will include all required project design features (PDFs) as described in the EA (Appendix B) and clarified in the *PDF Clarifications* section below. PDFs are an integral part of the project and were developed to avoid or reduce the potential for adverse impacts to resources. Where applicable, PDFs reflect Best Management Practices (BMPs) as outlined in the 2016 Southwestern Oregon Record of Decision and Resource Management Plan (2016 ROD/RMP, Appendix C) and standard operating procedures.

My decision is based on site-specific analysis, supporting information in the project record, management direction in the 2016 ROD/RMP, the current timber market, and public comments. See the *Decision Rationale* and *Public Involvement* sections for more information. A Finding of No Significant Impact (FONSI) was completed for all the activities proposed in the Bear Grub Vegetation Management Project and I have determined those activities do not constitute a major federal action that will have a significant impact on the human environment.

My decision is to authorize the following actions:

## Bear Grub Timber Sale

- Timber harvest and follow-up activity fuels treatments<sup>1</sup> on approximately 1420 acres of BLM-administered lands in the following locations (See Maps 1, 2, 4 through 13, 15, and 16 in Attachment 1):
  - o T. 37 S., R. 03 W., section 33;
  - o T. 38 S., R. 02 W., sections 21, 23, 26 through 29, 32 through 34;
  - o T. 38 S., R. 03 W., sections 8 through 11, 13, 14, 16, 17, 21, 22, 23, 25, 26, 35 and 36;
  - o T. 39 S., R. 01 W., sections 7, 17, 18, 21, 22, 27 and 28;
  - o T. 39 S., R. 02 W., sections 1 through 12, 15, 17 and 21;

<sup>&</sup>lt;sup>1</sup> The BLM will conduct a fuels assessment within each treatment unit following activity to determine the fuel hazard and fire risk to determine what type of activity fuel treatment is needed (EA, Appendix B.3.4). Activity fuels treatments may include any of the following: lop-and-scatter, hand pile and burn, underburning, biomass removal, or sold for firewood (*Id.*).

o T. 39 S., R. 03 W., sections 1, 12 and 15; Willamette Meridian; Jackson County, Oregon.

Table 1. Summary of Timber Harvest by Treatment Type and Harvest Method.

<b>Commercial Treatments</b>	Total Acres (Approximate)
Selection Harvest	1443
Riparian Reserve Commercial	7
Thinning	
Total	1420
<b>Logging Systems</b>	<b>Total Acres</b>
Ground-Based Yarding	150
Skyline-Cable Yarding	662
Helicopter Yarding	638
Total	1420

- Temporary route construction and follow-up decommissioning of approximately 0.53 miles in:
  - o T. 38 S., R. 02 W., Section 27;
  - T. 39 S., R. 01 W., Section 17;
  - o T. 39 S., R. 02 W., Section 12; Willamette Meridian; Jackson County, Oregon.
- Road reopening and follow-up long-term reclosure of approximately 3.74 miles in:
  - o T. 38 S., R. 02 W., Section 13 and 29; Willamette Meridian; Jackson County, Oregon.
- Permanent road construction of approximately 0.30 miles in:
  - o T. 38 S., R. 02 W., Section 23; Willamette Meridian; Jackson County, Oregon.
- Hauling of timber on approximately 68.94 miles (of which 49.76 miles would be available for wet season haul and an additional 27.87 miles available if the purchaser chooses to add adequate rock to the road<sup>2</sup>) of BLM-administered roads in:
  - o T. 37 S., R. 03 W.;
  - o T. 38 S., R. 02 W<del>.;</del>
  - o T. 38 S., R. 03 W.;
  - o T. 39 S., R. 01 W.;
  - o T. 39 S., R. 02 W.; Willamette Meridian; Jackson County, Oregon.
- Road renovation along approximately 68.11 miles of timber haul routes in:
  - o T. 37 S., R. 03 W.;
  - o T. 38 S., R. 02 W.;
  - o T. 38 S., R. 03 W.;
  - o T. 39 S., R. 01 W.;
  - o T. 39 S., R. 02 W.; Willamette Meridian; Jackson County, Oregon.

<sup>&</sup>lt;sup>2</sup> See EA, See Table B-3 in Appendix B.2.6 for specifics on roads available for wet season haul.

Three units that were analyzed in the EA but not included in the Bear Grub Timber Sale due to economic viability and unit locations, and will be offered separately under two small sales:

## Small Sale 1 (Buncom)

- Timber Harvest and follow-up activity fuels treatments<sup>3</sup> on a total of approximately 22 acres of BLM-administered lands in Units 13-8 and 13-9.
  - o T.39S., R.3W., section 13; Willamette Meridian; Jackson County, Oregon
  - o Unit Map 14 in Attachment 1
- Associated road renovations and the hauling of timber on roads that may be made available for wet season haul if additional rock surfacing is added, approximately 0.75 miles.
  - o T.39S., R.3W., section 13; Willamette Meridian; Jackson County, Oregon.

# Small Sale 2 (Bunny)

- Timber Harvest and follow-up activity fuels treatments<sup>5</sup> on approximately 8 acres of BLM-administered lands in Unit 15-1 in the following locations:
  - o T.38S., R.3W., section 15; Willamette Meridian; Jackson County, Oregon
  - Unit Map 3 in Attachment 1
- Associated road renovations and the hauling of timber on roads available for wet season haul, approximately 0.6 miles.
  - o T.38S., R.3W., section 14 and 15; Willamette Meridian; Jackson County, Oregon.

### Hazardous Fuels Reduction Treatments

• Noncommercial Hazardous Fuels Reduction treatments<sup>4</sup> and understory reduction on approximately 3,465 acres (see EA, Appendix B.4.4.2, Table B-8 and Maps 1-16 in Appendix B.4.5 for locations) (Also, Attachment 1 and 2).

#### **PDF Clarifications**

The following project design features (PDFs) clarifications have been modified to add clarity for implementation purposes.

#### **B.1.3 Fuels Management and/or Pre-Commercial Thinning**

Objective 2: When fuels treatments occur within units NC7-2, NC7-3, NC15-8, NC16-5, NC27-1, NC35-1, NC35-2, and NC35-3, conduct fuels treatments that will not negatively impact Gentner's fritillary habitat restoration, in accordance with the 2015 Conservation Agreement for Gentner's fritillary in Southwestern Oregon and the 2013 Medford Programmatic Botany BA.

Objective 3: Implement measures to avoid impacts to Bureau Sensitive Plant Species.

• *Phymatoceros phymatoides* (PHPH7) is a Bureau Sensitive hornwort. A site is known from fuels reduction unit NC15-8. A 25-foot buffer surrounding the perimeter of the site is to be flagged with orange "Plant Buffer" flagging. Within the PHPH7 buffer, no work may take place while the

<sup>&</sup>lt;sup>3</sup> The BLM will conduct a fuels assessment within each treatment unit following activity to determine the fuel hazard and fire risk to determine what type of activity fuel treatment is needed (EA, Appendix B.3.4). Activity fuels treatments may include any of the following: lop-and-scatter, hand pile and burn, underburning, biomass removal, or sold for firewood (*Id*.).

<sup>&</sup>lt;sup>4</sup> The BLM will conduct a fuels assessment within each treatment unit to determine the fuel hazard and fire risk and what type of fuel treatment is needed (EA p. B-5). Fuels treatments may include any of the following: lop-and-scatter, hand pile and burn, underburning, biomass removal, or sold for firewood (*Id.*).

ground is wet or muddy. When conditions permit, loose, dead fuels, or pruned dead tree or shrub branches may be removed by hand from within the buffer. No fuels may be piled within the PHPH7 buffer.

- Diplacus congdonii (DICO21), a Bureau Sensitive monkeyflower, was recorded in fuel reduction unit NC16-4. A 25-foot buffer surrounding the perimeter of the site is to be flagged with orange "Plant Buffer" flagging. Within the DICO21 buffer, no work may take place while the ground is wet or muddy. When conditions permit, fuels treatment may take place within the buffer, but fuels must be hand-removed from within the buffer and no fuels may be piled or burnt within the buffer.
- Rafinesquia californica (RACA), a Bureau Sensitive chicory, is known from fuels reduction units NC7-2, NC7-3, NC26-1, and NC35-2. Sites are to be flagged prior to activities. Fuel piling is not permitted within RACA sites. Wherever possible, burning through sites is encouraged.

Objective 7: Minimize fuels treatment impacts to designated recreational trails.

• Debris must not be left covering the trail tread surface and the trail must be made passable after fuels treatments have been completed.

#### **Decision Rationale**

My decision is based on consideration and evaluation of how well the purpose and need are met, the current timber market, public input, and the associated environmental consequences of implementing or not implementing the Bear Grub Vegetation Management Project, as analyzed in the EA, and documented in the FONSI. I have read the comment letters we received during the EA public review period and I have considered them fully. The BLM has completed all required Special Status Species (terrestrial wildlife and plants) and cultural surveys and required Section 7 consultation (see *Consultation and Coordination* section below).

My decision to authorize the selected actions (analyzed in Alternative 3) as described in the *Decision* section above best fits the purpose and need for action as presented in the EA (Section 1.3) and provides the best balance of cost-benefit timber harvest costs (both short- and long-term) and impacts to natural resources.

The EA analyzed four alternatives for the management of the BLM-administered lands in the Project Area: Alternative 1 (No Action), Alternative 2 (High Intensity Group Select Harvest), Alternative 3 (Moderate Intensity Group Select Harvest) and Alternative 4 (Low Intensity Group Select Harvest). Because the three action alternatives (Alternatives 2, 3 and 4) were designed to meet the purpose and need for the project, the degree to which each alternative best meets the purpose and need provides the basis for my decision.

## Purpose and Need

I have chosen to implement the selected actions from Alternative 3 because it most completely meets the identified purpose of and need for the project for the following reasons.

Alternative 1 (No Action) would not meet the purpose and need for this project because no actions would be taken at this time. Fuel reduction treatments and timber harvest activities would not occur. No timber volume would be made available for use. Stand densities would not be reduced and would continue to increase their susceptibility to disturbance (e.g. uncharacteristic wildfire, insect and disease outbreaks, etc.). Roads would remain in their current, un-maintained condition.

The three action alternatives analyzed in the EA, Alternatives 2, 3 and 4, proposed the same amount of noncommercial treatments outside of the commercial units, and same amount of road decommissioning.

Alternative 3 provides more available acres for treatment in the HLB-UTA via selection harvest (1,262 versus 1,100 acres in Alternative 2 and 867 acres in Alternative 4) that provides more opportunities to meet the purpose and need. Specifically, Alternative 3 allows for approximately 2 MMbf more volume than Alternative 2 and 4 MMbf more volume than Alternative 4 (EA, section 3.2.5, FONSI p. 3).

Due to variable stand conditions in the Bear Grub project area, not all stands can be treated to their maximum group selection size as allowed by the RMP. There are several reasons why group selection openings would vary from one stand to another. Alternative 3 proposes a wide range of gap sizes to accommodate these variable stand conditions. For example, Alternative 3 proposes smaller group select openings (on average less than 1 acre), in several stands that have a higher number of trees per acre that were established prior to 1850 and are greater than 36" DBH. For example, because some stands have more than 2 trees per acre of this age and size per acre, incorporating large group selections of up to 4 acres in these stands would compromise the 2016 RMP group selection definition<sup>5</sup>.

Similarly, a stand that has so many trees greater than 36" DBH and established prior to 1850 may not be treated to a Relative Density (RD) of 0.20 due to the fact that these larger and older trees would need to be harvested in order to meet such a low density target. Therefore, this prescription component would not meet the management direction and/objectives because it would compromise the RD range allowed in the 2016 RMP.

Alternative 3 proposes to treat 181 acres of Late-Successional Reserve-Dry in order to promote the development of nesting-roosting habitat and/or more complex forest habitat in the future for the Northern Spotted Owl (NSO). The stands identified for treatment do not currently support Nesting Roosting habitat because they are not currently structurally complex as defined by the 2016 RMP (EA, p. 24). Alternative 2 only proposes the treatment of 108 acres and Alternative 4 is proposing the treatment of a slightly less amount than Alternative 3, 162 acres.

Alternative 3 also provides for slightly more thinning treatments in the outer zones of the Riparian Reserve-Dry (7 acres versus 6 and 5 acres in Alternatives 2 and 4) that would ensure that stands are able to provide trees that would function as stable wood in the stream (EA, p. 8; 2016 ROD/RMP, p.82)

## **Environmental Effects**

In preparing the EA, the BLM interdisciplinary team analyzed in detail the effects of the alternatives for the following issue topic areas: contribution to the ASQ; forest resiliency effects; effects to water quality and aquatic habitat; impacts to stand fire resistance; impacts from treatments in the Late-Successional Reserve -Dry; impacts to pacific fisher and its habitat; and impacts to the ERMAs and SRMAs in the project area. The BLM considered numerous other issues for analysis but did not analyze them in further detail for a variety of reasons. Appendix A of the EA documents the BLM's rationale for not analyzing these issues in detail (EA, Appendix A.1). I have determined the effects will be within those analyzed in the *Proposed Resource Management Plan and Final Environmental Impact Statement for the Resource Management Plans for Western Oregon* (2016 PRMP/FEIS) or are otherwise insignificant. Please see the EA (Chapter 3) and Finding of No Significant Impact (FONSI) documents for more detailed discussion of those effects.

All the Action alternatives contributed ASQ would allow the Medford SYU to meet the combined ASQ for fiscal years 2020 and 2021. Alternative 3 would contribute the most to the ASQ at 11.8 MMbf but Alternatives

<sup>&</sup>lt;sup>5</sup> The 2016 ROD/RMP defines group select openings as areas with ≤ 2 live trees ≥ 7" DBH per acre (2016 ROD/RMP, p. 72)

2 and 4 would also allow the Medford SYU to achieve the 40% variation allowed under the RMP (2016 ROD/RMP, p. 6) for the combined ASQ for Fiscal Years 2020 and 2021 (EA, p. 3.2.5). All action alternatives will reduce stand density, accelerate the development of heterogeneous stand structure, increase species diversity, and contribute to overall forest resilience to stands in the Bear Grub Project Area (EA, section 3.3.4). Each action alternative would have a difference in the intensity and the number of acres treated. Alternative 2 would treat fewer acres and have the highest decrease in basal area (58%), canopy cover (51%) and relative density (64%). Alternative 4 would treat the fewest acres and have the least amount of decrease in the basal area (21%), canopy cover (17%) and relative density (28%). The decrease in basal area (43%), canopy cover (37%) and relative density (48%) for Alternative 3 would be slightly higher than the medians for Alternatives 2 and 4.

The analysis in the EA also concluded that the effects to aquatic habitat and water quality would be similar by alternative (EA, section 3.4.7). Inputs resulting from this project would range from 2.5 cubic yards under Alternative 2, to 1.6 cubic yards (Alternative 4) (EA, section 3.4.8). Alternative 3 would result in 2.3 cubic yards of sediment. Given the small overall magnitude and the spatial and temporal distribution of the inputs, and the seasonal timing of inputs, and that the majority of inputs would occur well upstream of fish bearing streams, sediment and turbidity contributed to aquatic habitats and water quality by this project would be undetectable behind background levels in downstream fish habitat, and therefore would not result in adverse effects to fish, fish habitat, or water quality (EA, section 3.4.9).

All action alternatives would improve resistance to stand-replacement fire in dry forest and non-conifer treatments, compared with the No Action Alternative, by modifying potential fire behavior through the reduction of canopy fuel connectivity, increase of stand diameter, and the reduction of surface and ladder fuels. Alternative 3 would result in the most acres with improved and sustained resistance to stand replacement fire of any of the Action Alternatives. Additionally, Alternative 3 or 4 would create patchy heterogeneous conditions most representative of low-mixed severity fire regimes. Alternative 2 would create the most open conditions and may result in more rapid regeneration of surface fuels, which may necessitate earlier and more frequent maintenance treatments. Under any alternative application of prescribed underburning will result in the highest canopy base heights and lowest surface fuels and maintenance disturbance will be needed to sustain stand-level resistance (EA, section 3.5.8).

Foraging habitat for NSO would be reduced by 2% of current NRF habitat present in LSR within the wildlife analysis area in Alternatives 3 and 4. Alternative 3 would produce a 2% increase in dispersal only habitat, while Alternative 4 would produce a 5% increase. Alternative 2 would result in a 1% decrease in foraging habitat and a corresponding 1% increase in dispersal habitat. While reductions in foraging habitat would be anticipated to have some negative effects on spotted owls that may be present in the area, the long term improvement of habitat quality and increase in habitat quantity anticipated as a result of these treatments is expected to offset any short term negative consequences. All alternatives would help to move the treated acres of LSR toward the type of complex forest structures desired for this land use allocation without delaying this development by more than 20 years (EA, section 3.6.4).

The proposed commercial treatments under Alternatives 2, 3, and 4 would remove fisher denning and resting habitat. Additionally, treatments would retain key habitat characteristics such as large snags and coarse woody debris (CWD) to maintain existing and provide for future habitat for fishers. However, in Action Alternatives 2, 3, and 4, between 539 and 740 acres of fisher denning and resting habitat would be reduced in canopy cover and would no longer be considered suitable for use by fisher for these life history activities. This would reduce the amount of habitat in the Wildlife Analysis Area available to fishers for denning, resting, and foraging by approximately 5 to 6 percent.

The effects of the proposed actions on the naturalness of the Recreational Management Areas (RMAs) would be similar across all alternatives. The naturalness for the 5 Extensive Recreation Management Areas (ERMAs) and

3 Special Recreation Management Areas (SRMAs) within the Bear Grub Project Boundary was found to either maintain the current naturalness of the RMAs or to shift the Naturalness Recreation Setting Classification from its current state toward the Naturalness Recreation Setting Classification that is identified in the RMA Frameworks. There is a difference in the number of commercial units between alternatives within two of the RMAs. Woodrat SRMA has one less commercial unit proposed under Alternatives 2 and 4 as compared to Alternative 3. Anderson Addition ERMA has 8 commercial units in Alternative 2, 15 commercial units under Alternative 3 and 7 commercial units in Alternative 4.

In summary, the analysis in the EA shows me that the anticipated environmental effects between the three action Alternatives are very similar.

## Public Input

The Interdisciplinary Team and I have reviewed the written comments received in response to the EA. The review concluded that the EA comments would lead to only minor corrections or additions/clarifications to the EA document. The EA comments would not lead to a change in the decision and no new information or issues were presented that would change the conclusions for the effects analysis. The BLM has responded to substantive comments in Attachment 3 of this Decision Record.

The BLM Interdisciplinary Team provided 147 replies to comments from the public (See attachment 3). Some of the comments were the similar and the same reply applied to them all, these were identified as bullets in the comment column of Attachment 3. The comments varied depending on the publics interests.

The resources or subjects identified in the comments as the subject of the above claims included noxious weeds, listed or sensitive plant species, climate change, carbon sequestration, local economies, viewsheds, scenic value, listed terrestrial species, listed fish species, fire resistance of forests, fire plans, safety of surrounding private lands, traffic, tribal consultation, sediment loads, flooding, windthrow, Recreation Management Areas, recreational activities, riparian areas, fish bearing streams, off road vehicles, trails, tree marking, previous harvests, gap sizes, Timber Production Capability Classification, downgrade of Late-Successional Reserve habitat, migratory birds, canopy cover, Bureau sensitive wildlife species, barred owl encroachment, and the Siskiyou Mountain Salamander.

#### Summary

I have considered how the alternatives analyzed in the EA meet the purpose and need, the associated environmental effects, and public input. Based on these considerations, I have decided that Alternative 3 provides the best opportunity to meet the purpose and need described for this project, while minimizing the potential for adverse effects on the environment. The required implementation of PDFs will provide for the protection of resources consistent with existing laws and policy and direction in the 2016 ROD/RMP.

#### **Plan Conformance**

My decision is in conformance with the 2016 Southwestern Oregon Resource Management Plan (2016 RMP). The Bear Grub Vegetation Management Project EA is tiered to this document as permitted by the National Environmental Policy Act (NEPA) (40 CFR 1502.20).

The project is also consistent with the *Revised Environmental Assessment for Integrated Invasive Plant Management of the Medford District* (February 2018) and the *Decision Record for Integrated Invasive Plant Management for the Medford District* (February 2018).

#### **Public Involvement**

The BLM initiated a 30-day public scoping period for the Bear Grub VMP on October 1, 2019. The BLM sent over 600 scoping letters to adjacent landowners on record, permittees, agencies, and other interested parties. A legal notice appeared in the *Mail Tribune of Medford Oregon* on October 1, 2019. The BLM also posted the scoping notice on the BLM national ePlanning Register website. The BLM received over 1,100 comment letters during the formal scoping period. Over 700 of these were identical or nearly identical form letters sent by interested public who downloaded the letter from internet websites. All scoping comment letters and emails received are in the administrative project record (EA, section 1.5)

A public comment period for the EA was held from June 11, 2020 to July 13, 2020. Notice of the EA's availability was provided by letter or email to federally recognized tribes, government agencies, local governments, interested parties, and those that responded to scoping. A legal notice of EA availability was published in the *Medford Mail Tribune* newspaper on June 11, 2020. The EA was also posted on the BLM's National Register ePlanning website at *https://go.usa.gov/xw8Vw*.

On June 23 and June 25, the Ashland Field Office hosted virtual webinars where interested public were invited to participate.

The BLM received thirteen letters or emails containing comments on the EA from the following agencies and organizations: American Forest Resource Council, Applegate Neighborhood Network, Applegate Partnership and Watershed Council, Applegate Trails Association, Bear Grub Outreach Committee, Environmental Protection Agency, Rogue Valley Audubon Society, Save Wildlands Council, Siskiyou Chapter Native Plant Society of Oregon, Siskiyou Upland Trails Association, Southern Oregon Climate Action Now, Southern Oregon Forest Restoration Council, and Southern Oregon Timber Industries Association. The BLM received 143 letters or emails from private individuals who provided substantive comments which we reviewed. Similar comments or comments which specialists would have provided the same response to were grouped or combined to reduce the redundancies in the answers. The BLM received over 40 letters or emails from private citizens that were either for or against the project, advocated one of the organizations listed above's comments or provided no substantive comment, and a petition. The BLM reviewed and considered all substantive comments in the final decision-making process (see *Attachment 3* and *Decision Rationale* section above).

#### **Consultation and Coordination**

The federally threatened northern spotted owl is the only threatened and endangered wildlife species within or near the Bear Grub Vegetation Management Project Area (EA section 4.1.4). The Medford District BLM met with the Level 1 consultation team in March 2020 for a meeting and field trip to provide an overview of the project and discuss potential effects to northern spotted owls (*Id.*). Formal consultation with the USFWS for the northern spotted owl began when the Medford District BLM sent the Biological Assessment (BA) to the USFWS in May 2020 (USDI, BLM, FY 20 Batch BA). A Biological Opinion (BO) from the USFWS was received on July 24, 2020 (Reference Number 01EOFW00-2020-F-0508). The Opinion determined that spotted owls are likely be adversely affected by the proposed action, but the proposed action is not likely to jeopardize the continued existence of the spotted owl, or result in the destruction or adverse modification of critical habitat. The FWS does not anticipate the Bear Grub proposed actions will incidentally take any spotted owls (USFWS 2020).

The Bear Grub Vegetation Management Project is within the range of the federally-listed Southern Oregon Northern California Coast Coho (SONCC) Salmon (EA, section 4.1.3). The BLM consulted on Alternative 3 as it would equate to a greater number of acres disturbed compared to Alternatives 2 and 4 and would have a greater likelihood of affecting listed fish species and their habitat (*Id.*). The anticipated effects are within those consulted on with the National Marine Fisheries Service (NMFS) in the Biological Assessment/Biological

Opinion for the Western Oregon Proposed Resource Management Plan, and the Programmatic Biological Assessment/Opinion for the BLM's Forest Management Program for Western Oregon (WCR 2017-7574). The NMFS agreed that the Bear Grub Vegetation Management Project activities were within the scope of the Programmatic for Forest Management Program for Western Oregon Biological Opinion, and provided a Letter of Concurrence to the BLM on March 25, 2020, after formal project notification was received March 23, 2020 from the BLM.

The Bear Grub Vegetation Management Project is within the range of one listed plant species, the federally endangered Gentner's fritillary (*Fritillaria gentneri*). The Medford District's 2013 programmatic consultation for T&E plants generically covers the activities proposed in this EA. The Project Design Criteria in the Letter of Concurrence (#01EOFW00-2014-I-0013) for the Biological Assessment ensure that management actions would not likely adversely affect populations or habitat. The BLM has completed surveys to protocol. All known listed plant sites within project units, save one, are located within hazardous fuels treatment units; the remaining site is located within a commercial sale unit where the populations will be avoided for harvest activities. The BLM will treat eight identified fuels units (see Appendix A.1.1, Issue 2) using PDFs adapted from the 2015 Conservation Agreement for Gentner's Fritillary in Southwestern Oregon as well as the 2013 Biological Assessment. Therefore, the BLM determined that the actions proposed under Alternatives 2, 3 and 4 would have no significant effect upon T&E plants or their critical habitat. (EA, Appendix A.1.1, Issue 2).

Letters describing the preliminary Proposed Action initiating consultation with the local federally recognized Native American Tribes were sent in October 2019 and an opportunity to comment on the EA was sent in June 2020. The Tribes did not request consultation.

Consultation with the State Historic Preservation Office (SHPO) was not needed as the BLM determined that the project would have "no effect" to cultural resources (EA, section 4.1.6).

#### **Administrative Remedies**

The decision described in this document is a forest management decision and is subject to protest by the public. In accordance with Forest Management regulations at 43 CFR Subpart 5003—Administrative Remedies, protests of a decision, including a timber sale decision, may be filed with the Authorized Officer within 15 days of the publication date of the Notice of Decision or Notice of Sale in the *Medford Mail Tribune* newspaper, Medford, Oregon. The protest must clearly, and concisely state which portion or element of the decision is being protested and the reasons why the decision is believed to be in error.

When timber is offered for sale, a Notice of Sale will be published in a newspaper of general circulation, in this case the *Medford Mail Tribune*. Publication of the *first* Notice of Sale establishes the effective date of the decision for the portions of this Decision to be implemented by the Bear Grub Timber Sale. The protest of the Bear Grub Timber Sale must be made within 15 days of the publication of the *first* Notice of Sale.

In accordance with BLM Forest Management Regulation 43 CFR § 5003.2 (a and c), the effective date of this decision, as it pertains to actions that are **not** part of an advertised timber sale, will be the publication date of the Notice of Decision in the *Medford Mail Tribune*. Any contest of this decision should state specifically which portion or element of the decision is being protested and cite the applicable regulations.

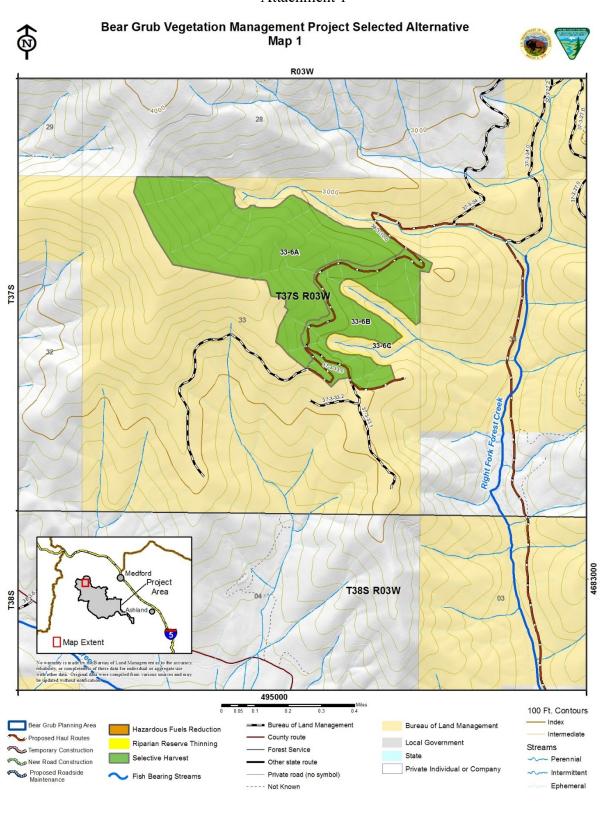
43 CFR § 5003.3 subsection (b) states, "Protests shall be filed with the authorized officer and shall contain a written statement of reasons for protesting the decision." Protests of this decision must be filed either electronically by email or by mail, with the Medford District, Ashland Field Office, within fifteen (15) days after first publication of the notice of sale. Protests submitted electronically by email must be submitted to BLM\_OR\_AFO\_VMP@blm.gov and must be received by the authorized officer before 4:30 p.m. PST. The Medford District Office is located at 3040 Biddle Road, Medford, Oregon 97504.

43 CFR § 5003.3 subsection (c) states: "Protests received more than 15 days after the publication of the notice of decision or the notice of sale are not timely filed and shall not be considered." Upon timely filing of a protest, the authorized officer shall reconsider the project decision to be implemented in light of the statement of reasons for the protest and other pertinent information available to him. The Authorized Officer shall, at the conclusion of the review, serve the protest decision in writing to the protesting party(ies). Upon denial of a protest, the Authorized Officer may proceed with the implementation of the decision as permitted by regulations at 5003.3(f).

If no protest is received by the close of business (4:30 p.m.) within 15 days after publication of the Notice of Decision or *first* Notice of Sale, this decision will become final. If a timely protest is received, the project decision will be reconsidered in light of the statement of reasons for the protest and other pertinent information available, and the Ashland Field Office will issue a protest decision.

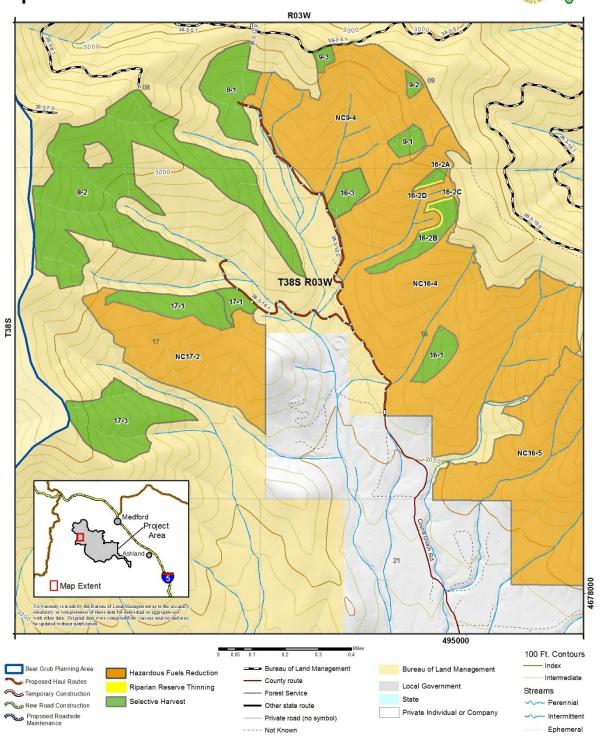
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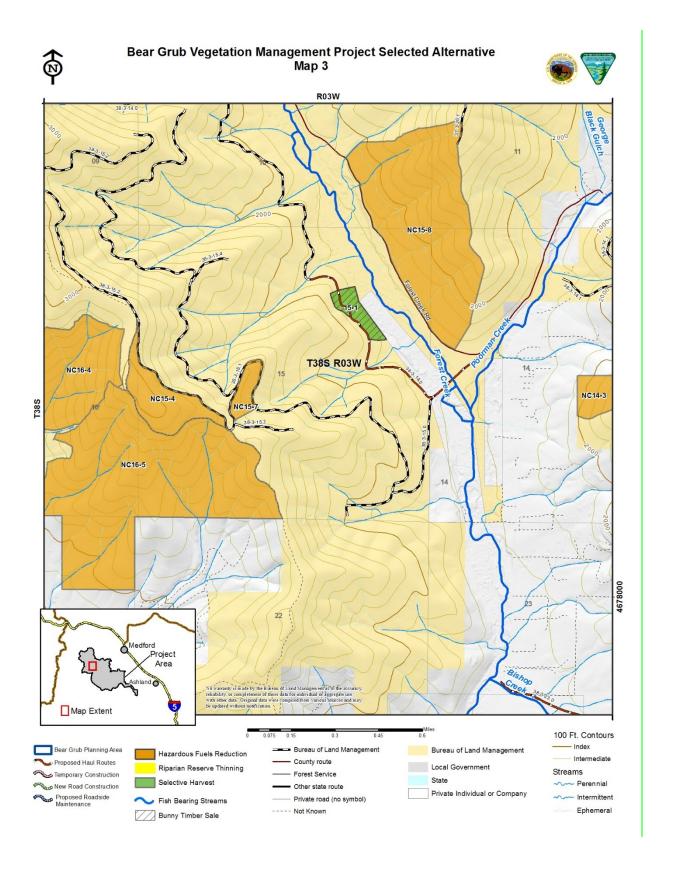
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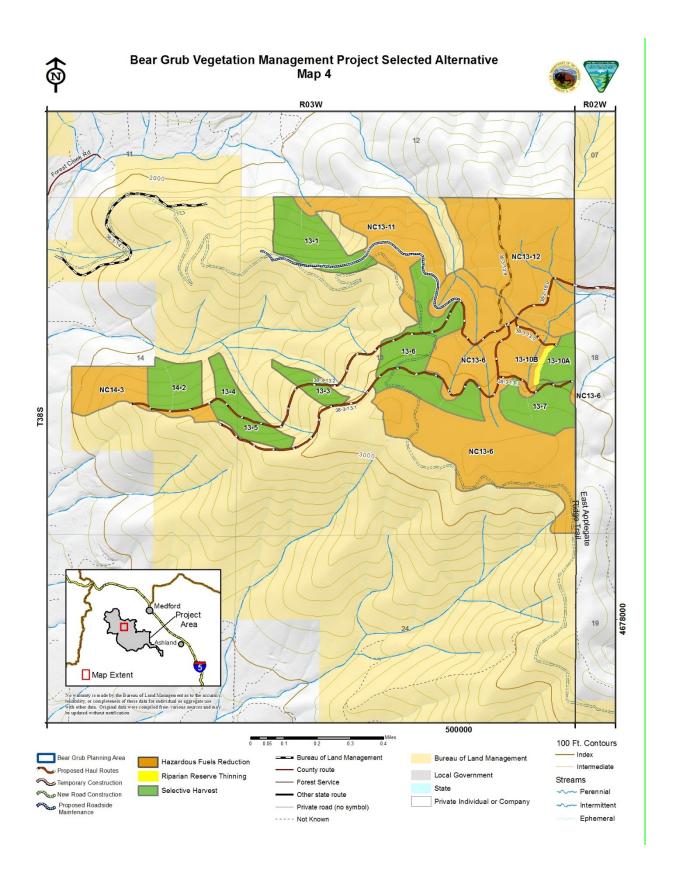






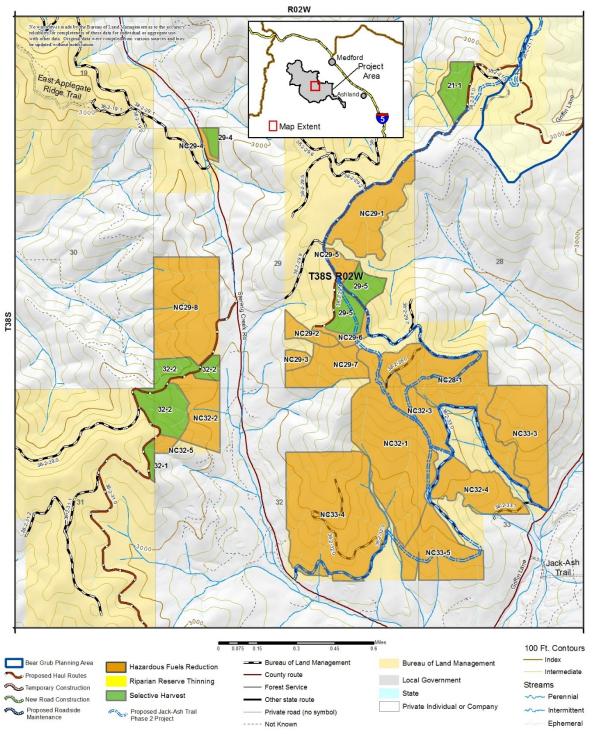






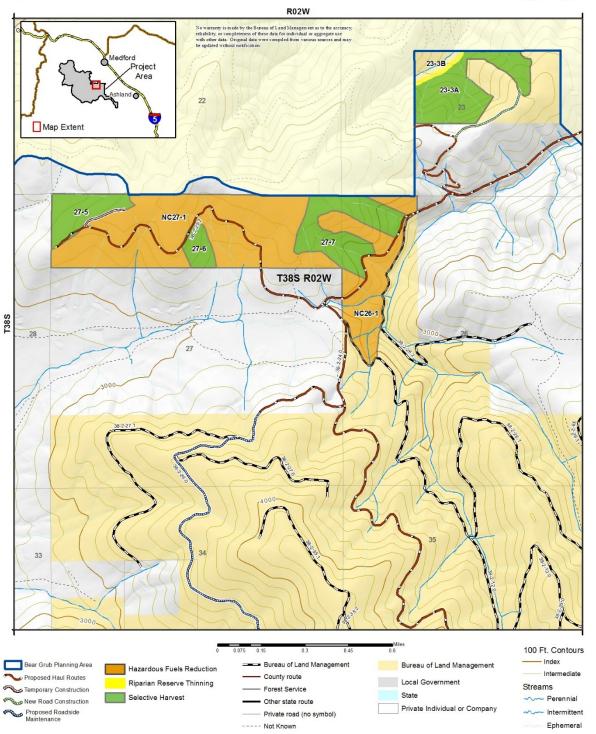


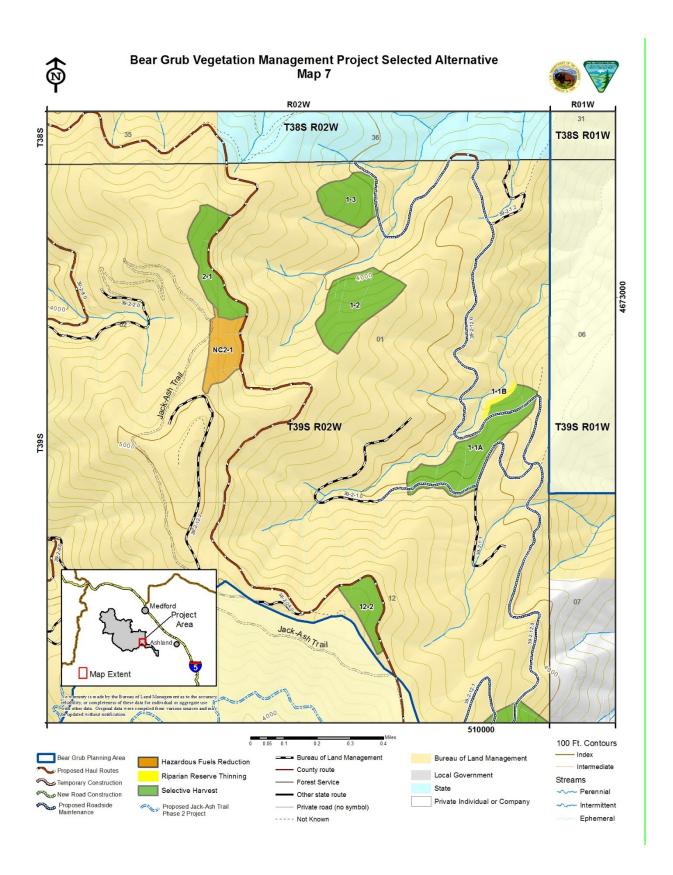






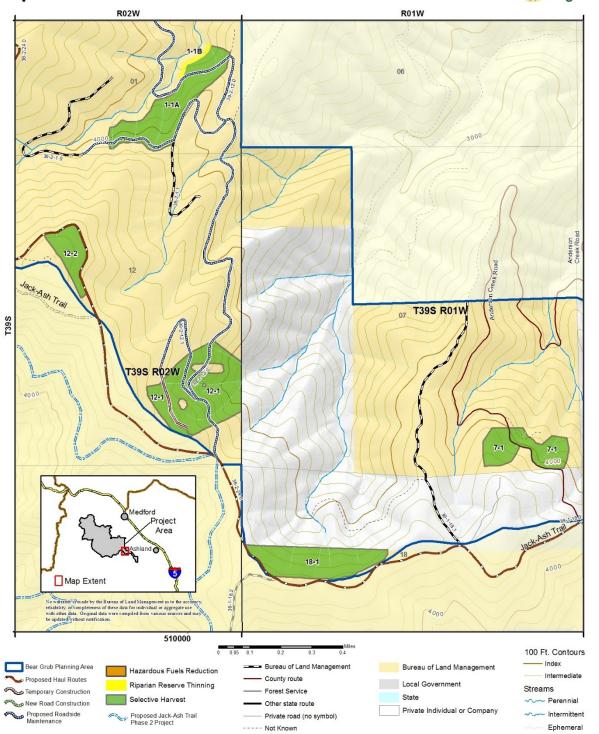






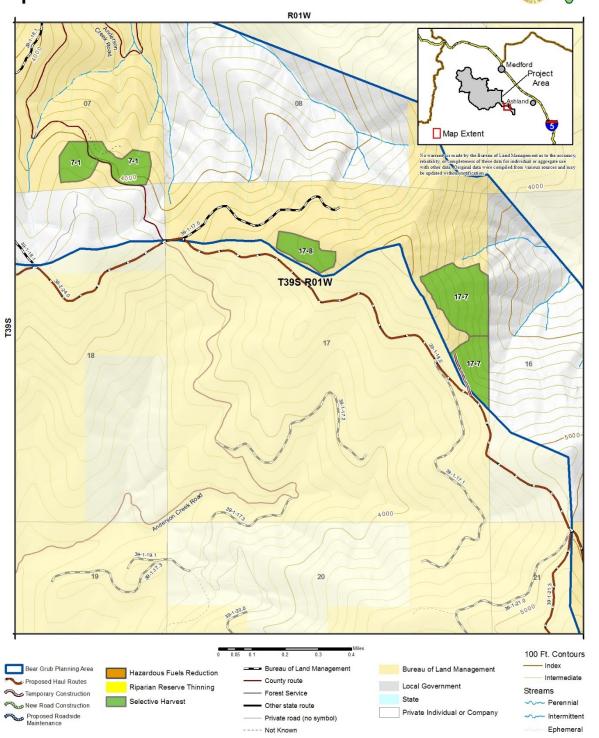






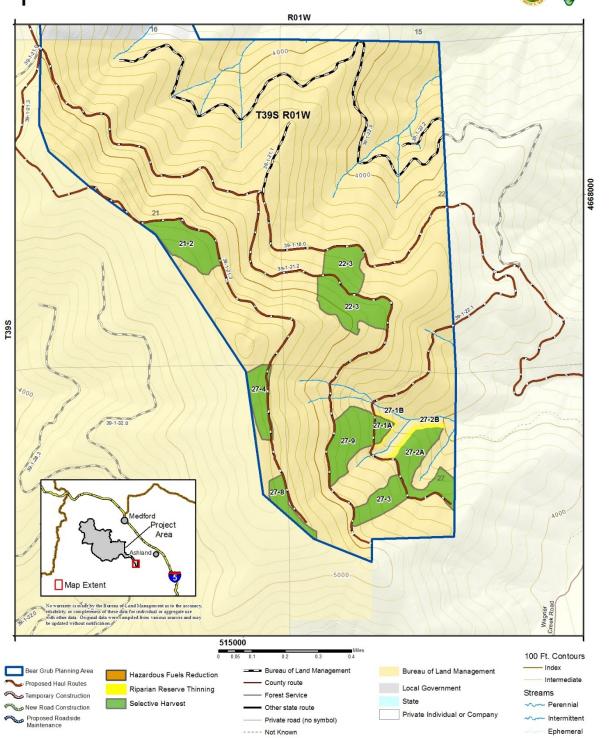


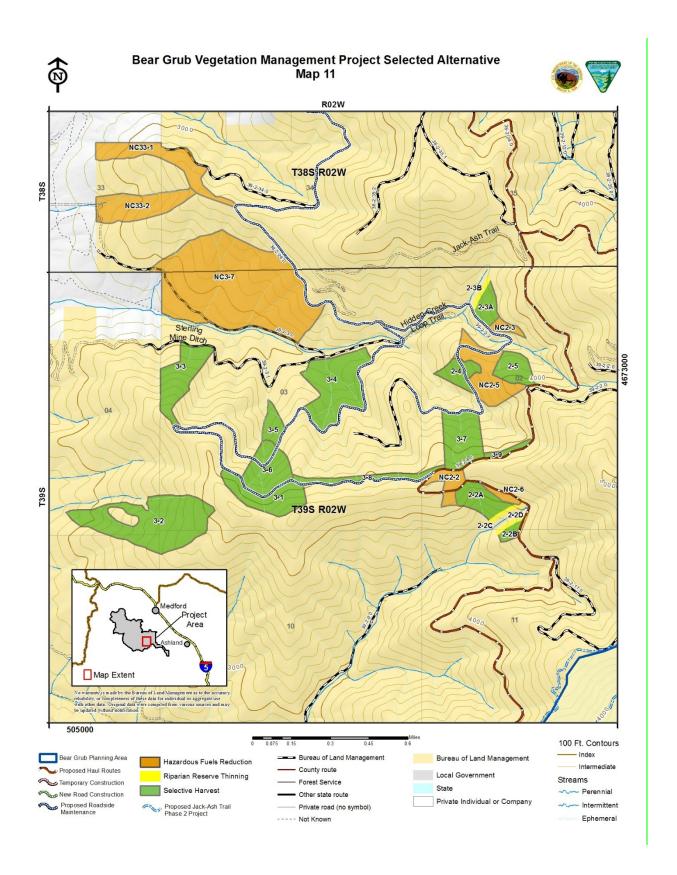






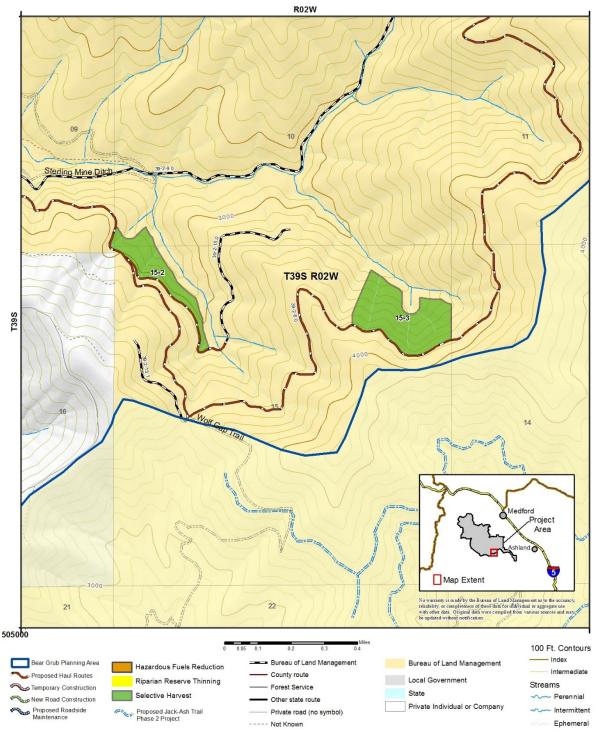






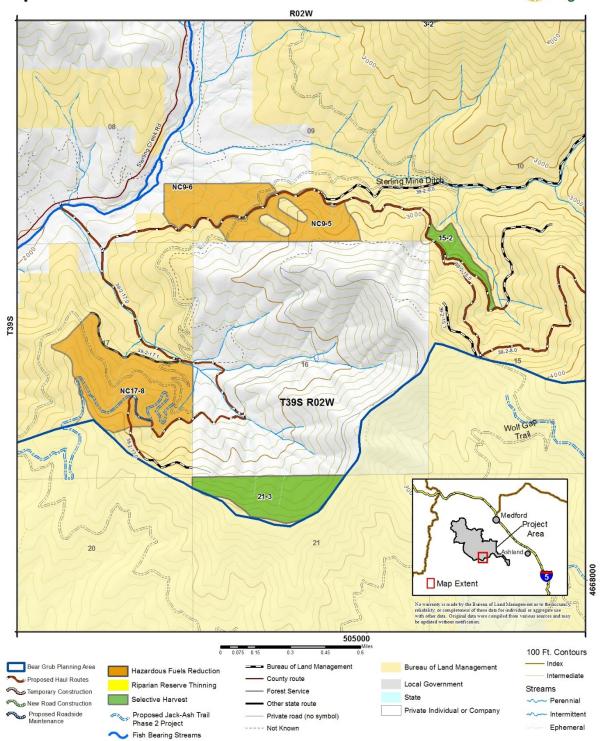


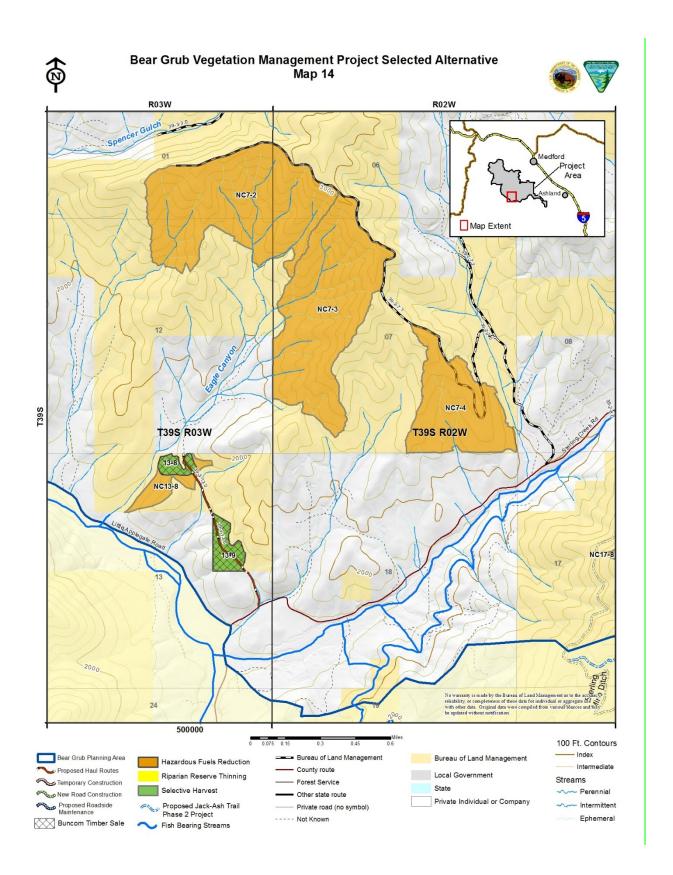


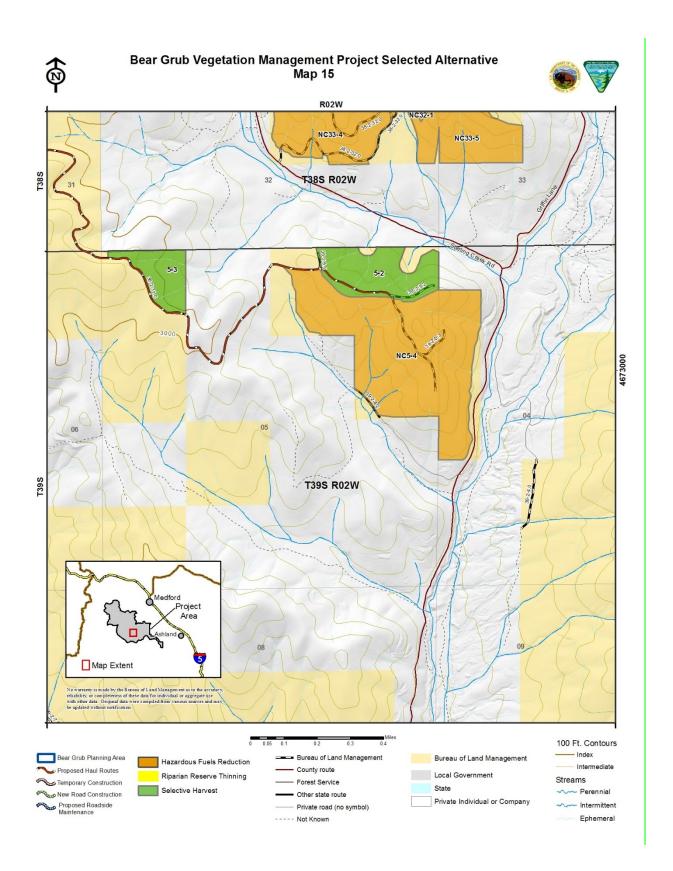












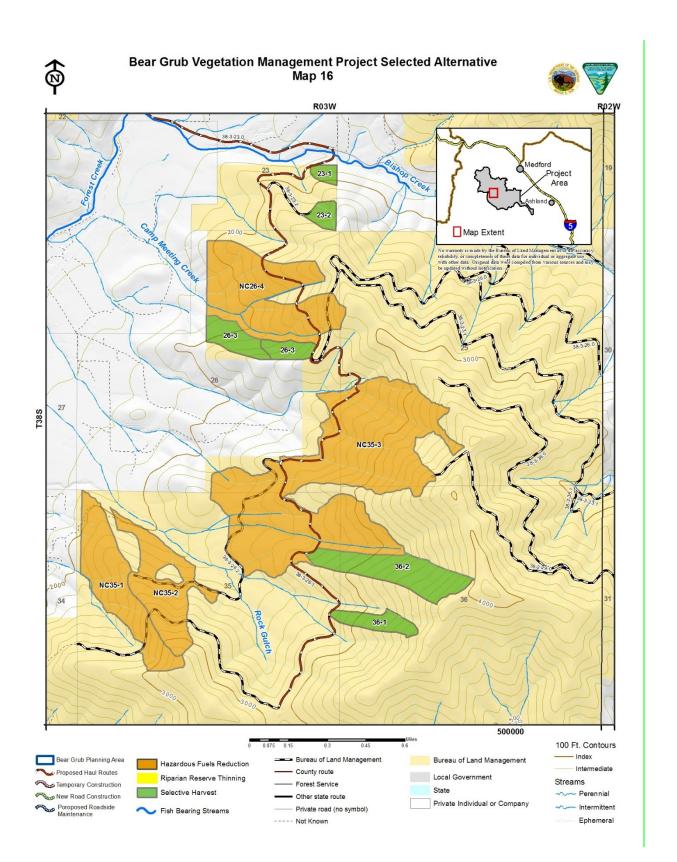


Table DR-1 · Selecte	d Alternative Com	mercial and Non-Co	ommercial Harvest Units
Table DK-1: Selecte	a Anemalive Com	imerciai and Non-Co	ommerciai marvest units

Unit	T-R	Section	Commercial Treatment	Acres	Harvest Method	LUA	Associated Non- Commercial Treatment
1-1a	39S-2W	1	SH	27	CABLE	UTA/LSR	Activity, UR
1-1b	39S-2W	1	RRT	1*	CABLE	RR	Activity, UR
1-2	39S-2W	1	SH	23	HELICOPTER	UTA	Activity, UR
1-3	39S-2W	1	SH	14	HELICOPTER	UTA	Activity, UR
2-1	39S-2W	1,2	SH	15	CABLE	LSR	Activity, UR
NC2-1	39S-2W	1,2	N/A	12	N/A	UTA/LSR	HFR
2-2a	39S-2W	2	SH	12	CABLE	LSR	Activity, UR
2-2b	39S-2W	2	SH	3	CABLE	LSR	Activity, UR
2-2c	39S-2W	2	RRT	1*	CABLE	RR	Activity, UR
2-2d	39S-2W	2	RRT	1*	CABLE	RR	Activity, UR
NC2-2	39S-2W	2	N/A	8	N/A	UTA/LSR	HFR
2-3a	39S-2W	2	SH	7	HELICOPTER	UTA/LSR	Activity, UR
2-3b	39S-2W	2	RRT	1*	HELICOPTER	RR	Activity, UR
NC2-3	39S-2W	2	N/A	3	N/A	LSR	HFR
2-4	39S-2W	2	SH	8	CABLE	LSR	Activity, UR
2-5	39S-2W	2	SH	9	CABLE	UTA	Activity, UR
NC2-5	39S-2W	2	N/A	20	N/A	UTA/LSR/DDR- TPCC	HFR
NC2-6	39S-2W	2	N/A	3	N/A	DDR-TPCC	HFR
3-1	39S-2W	3	SH	17	HELICOPTER	UTA	Activity, UR
3-2	39S-2W	3,4,9	SH	47	HELICOPTER	UTA/LSR	Activity, UR
3-3	39S-2W	3	SH	19	CABLE	UTA	Activity, UR
3-4	39S-2W	3	SH	33	CABLE	UTA	Activity, UR
3-5	39S-2W	3	SH	6	CABLE	UTA	Activity, UR
3-6	39S-2W	3	SH	18	CABLE	UTA	Activity, UR
3-7	39S-2W 38S-2W	3 33,34	SH	20	CABLE	UTA	Activity, UR
NC3-7	39S-2W	3	N/A	114	N/A	UTA/LSR/DDR- TPCC/RR	HFR
3-8	39S-2W	3	SH	8	CABLE	UTA	Activity, UR

Table DR-	Table DR-1: Selected Alternative Commercial and Non-Commercial Harvest Units (cont.)						
Unit	T-R	Section	Commercial Treatment	Acres	Harvest Method	LUA	Associated Non- Commercial Treatment
3-9	39S-2W	3	SH	3	CABLE	UTA	Activity, UR
5-2	39S-2W	5	SH	29	CABLE	UTA	Activity, UR
5-3	39S-2W	5	SH	16	CABLE	UTA	Activity, UR
NC5-4	39S-2W	4,5	N/A	108	N/A	UTA/DDR- TPCC/RR	HFR
7-1	39S-1W	7	SH	16	CABLE/HELICOPTER	LSR	Activity, UR
NC7-2	39S-2W 39S-3W	1,12 6,7	N/A	194	N/A	UTA/DDR- TPCC/RR	HFR
NC7-3	39S-2W	6,7	N/A	180	N/A	UTA/LSR/DDR- TPCC/RR	HFR
NC7-4	39S-2W	7	N/A	94	N/A	UTA/LSR/DDR- TPCC/RR	HFR
8-1	38S-3W	8	SH	21	GROUNDBASE	UTA	Activity, UR
8-2	38S-3W	8,17	SH	115	HELICOPTER	UTA	Activity, UR
9-1	38S-3W	9	SH	5	HELICOPTER	UTA	Activity, UR
9-2	38S-3W	9	SH	2	HELICOPTER	UTA	Activity, UR
9-3	38S-3W	9	SH	2	HELICOPTER	UTA	Activity, UR
NC9-4	38S-3W	9,16	N/A	101	N/A	UTA/RR	HFR
NC9-5	39S-2W	9	N/A	52	N/A	UTA/DDR-TPCC	HFR
NC9-6	39S-2W	8,9	N/A	43	N/A	UTA/DDR- TPCC/RR	HFR
12-1	39S-2W	12	SH	38	GROUNDBASE/CABLE	UTA	Activity, UR
12-2	39S-2W	12	SH	9	GROUNDBASE	LSR	Activity, UR
13-1	38S-3W	13	SH	23	CABLE	UTA	Activity, UR
13-3	38S-3W	13	SH	7	CABLE	UTA	Activity, UR
13-4	38S-3W	13,14	SH	8	CABLE	UTA	Activity, UR
13-5	38S-3W	13,14	SH	9	CABLE	UTA	Activity, UR
13-6	38S-3W	13	SH	38	GROUNDBASE	UTA	Activity, UR
NC13-6	38S-3W	13	N/A	130	N/A	UTA/LSR/DDR- TPCC/RR	HFR
13-7	38S-3W	13	SH	18	GROUNDBASE	UTA	Activity, UR
13-8	39S-3W	13	SH	7	GROUNDBASE	UTA	Activity, UR
NC13-8	39S-3W	13	N/A	15	N/A	UTA	HFR

Table DR-	Table DR-1: Selected Alternative Commercial and Non-Commercial Harvest Units (cont.)						
Unit	T-R	Section	Commercial Treatment	Acres	Harvest Method	LUA	Associated Non- Commercial Treatment
13-9	39S-3W	13	SH	15	GROUNDBASE	UTA	Activity, UR
13-10a	38S-3W	13	SH	8	GROUNDBASE	UTA	Activity, UR
13-10b	38S-3W	13	RRT	1*	GROUNDBASE	RR	Activity, UR
NC13-11	38S-3W	13	N/A	40	N/A	UTA/RR	HFR
NC13-12	38S-3W	13	N/A	76	N/A	UTA/DDR- TPCC/RR	HFR
14-2	38S-3W	14	SH	15	CABLE	UTA	Activity, UR
NC14-3	38S-3W	14	N/A	22	N/A	UTA	HFR
15-1	38S-3W	15	SH	8	CABLE	UTA	Activity, UR
15-2	39S-2W	10,15	SH	15	CABLE	UTA	Activity, UR
15-3	39S-2W	15	SH	28	CABLE	UTA	Activity, UR
NC15-4	38S-3W	15,16	N/A	27	N/A	UTA/DDR- TPCC/RR	HFR
NC15-7	38S-3W	15	N/A	8	N/A	UTA	HFR
NC15-8	38S-3W	10,11,14,15	N/A	134	N/A	UTA/DDR- TPCC/RR	HFR
16-1	38S-3W	16	SH	7	HELICOPTER	UTA	Activity, UR
16-2a	38S-3W	16	SH	2	HELICOPTER	UTA	Activity, UR
16-2b	38S-3W	16	SH	9	HELICOPTER	UTA	Activity, UR
16-2c	38S-3W	16	SH	1*	HELICOPTER	RR	Activity, UR
16-2d	38S-3W	16	SH	1*	HELICOPTER	RR	Activity, UR
16-3	38S-3W	16	SH	7	GROUNDBASE	UTA	Activity, UR
NC16-4	38S-3W	9,16	N/A	219	N/A	UTA/DDR- TPCC/RR	HFR
NC16-5	38S-3W	15,16,21	N/A	207	N/A	UTA/DDR- TPCC/RR	HFR
17-1	38S-3W	17	SH	19	GROUNDBASE/HELI	UTA	Activity, UR
NC17-2	38S-3W	17	N/A	72	N/A	UTA/DDR-TPCC	HFR
17-3	38S-3W	17	SH	31	HELICOPTER	UTA	Activity, UR
17-7	39S-1W	17	SH	30	CABLE/HELICOPTER	UTA	Activity, UR

Table DR-	1: Selected A	Alternative (	Commercial and	Non-Con	nmercial Harvest Units (co	nt.)	
Unit	T-R	Section	Commercial Treatment	Acres	Harvest Method	LUA	Associated Non- Commercial Treatment
17-8	39S-1W	17	SH	8	HELICOPTER	UTA	Activity, UR
NC17-8	39S-2W	17	N/A	107	N/A	UTA/LSR/DDR- TPCC/RR	HFR
18-1	39S-1W	18	SH	24	CABLE	LSR	Activity, UR
21-1	38S-2W	21	SH	13	CABLE	UTA	Activity, UR
21-2	39S-1W	21	SH	13	HELICOPTER	UTA	Activity, UR
21-3	39S-2W	21	SH	56	HELICOPTER	UTA	Activity, UR
22-3	39S-1W	22	SH	22	CABLE/HELICOPTER	UTA	Activity, UR
23-1	38S-3W	23	SH	4	HELICOPTER	LSR	Activity, UR
23-2	38S-3W	23	SH	6	HELICOPTER	UTA	Activity, UR
23-3a	38S-2W	23	SH	36	CABLE	UTA	Activity, UR
23-3b	38S-2W	23	RRT	1*	CABLE	RR	Activity, UR
NC26-1	38S-2W	26,27	N/A	44	N/A	UTA/LSR/DDR- TPCC/RR	HFR
26-3	38S-3W	26	SH	23	CABLE/HELICOPTER	UTA	Activity, UR
NC26-4	38S-3W	25,26	N/A	89	N/A	UTA/LSR/DDR- TPCC/RR	HFR
27-1a	39S-1W	27	SH	2	CABLE	UTA	Activity, UR
27-1b	39S-1W	27	RRT	1*	CABLE	RR	Activity, UR
NC27-1	38S-2W	27	N/A	117	N/A	UTA/DDR- TPCC/RR	HFR
27-2a	39S-1W	27	SH	14	CABLE	UTA	Activity, UR
27-2b	39S-1W	27	RRT	1*	CABLE	RR	Activity, UR
27-3	39S-1W	27	SH	7	CABLE	UTA	Activity, UR
27-4	39S-1W	27	SH	8	CABLE	UTA	Activity, UR
27-5	38S-2W	27	SH	18	CABLE	UTA	Activity, UR
27-6	38S-2W	27	SH	8	CABLE	UTA	Activity, UR
27-7	38S-2W	27	SH	34	HELICOPTER	UTA	Activity, UR
27-8	39S-1W	27	SH	5	CABLE	UTA	Activity, UR
27-9	39S-1W	27	SH	13	CABLE	UTA	Activity, UR
NC28-1	38S-2W	28,29,33	N/A	60	N/A	UTA/LSR/DDR- TPCC/RR	HFR

Table DR-	Table DR-1: Selected Alternative Commercial and Non-Commercial Harvest Units (cont.)						
Unit	T-R	Section	Commercial Treatment	Acres	Harvest Method	LUA	Associated Non- Commercial Treatment
NC29-1	38S-2W	29	N/A	36	N/A	UTA/LSR/DDR- TPCC/RR	HFR
NC29-2	38S-2W	29	N/A	7	N/A	UTA/DDR-TPCC	HFR
NC29-3	38S-2W	29	N/A	4	N/A	UTA	HFR
29-4	38S-2W	29	SH	3	CABLE	UTA	Activity, UR
NC29-4	38S-2W	29	N/A	2	N/A	RR	HFR
29-5	38S-2W	29	SH	21	GROUNDBASE/CABLE	UTA/LSR	Activity, UR
NC29-5	38S-2W	29	N/A	6	N/A	UTA/LSR/RR	HFR
NC29-6	38S-2W	29	N/A	5	N/A	UTA/DDR-TPCC	HFR
NC29-7	38S-2W	29	N/A	23	N/A	DDR-TPCC/RR	HFR
NC29-8	38S-2W	29	N/A	62	N/A	UTA/DDR- TPCC/RR	HFR
32-1	38S-2W	29,32	SH	3	CABLE	UTA	Activity, UR
NC32-1	38S-2W	29,32,33	N/A	81	N/A	UTA/LSR/DDR- TPCC/RR	HFR
32-2	38S-2W	29,32	SH	33	GROUNDBASE/CABLE	UTA	Activity, UR
NC32-2	38S-2W	29,32	N/A	24	N/A	UTA/RR	HFR
NC32-3	38S-2W	29,32,33	N/A	19	N/A	UTA/DDR- TPCC/RR	HFR
NC32-4	38S-2W	32	N/A	29	N/A	UTA/LSR/DDR- TPCC/RR	HFR
NC32-5	38S-2W	29,32	N/A	3	N/A	DDR-TPCC	HFR
NC33-1	38S-2W	33,34	N/A	20	N/A	UTA/DDR-TPCC	HFR
NC33-2	38S-2W	33,34	N/A	20	N/A	UTA/ DDR- TPCC/RR	HFR
NC33-3	38S-2W	33	N/A	45	N/A	UTA/LSR/DDR- TPCC/RR	HFR
NC33-4	38S-2W	32	N/A	106	N/A	UTA/LSR/DDR- TPCC/RR	HFR
NC33-5	38S-2W	32,33	N/A	38	N/A	UTA/LSR/DDR- TPCC/RR	HFR
33-6a	37S-3W	33	SH	114	HELICOPTER	UTA	Activity, UR
33-6b	37S-3W	33	SH	53	CABLE	LSR	Activity, UR
33-6c	37S-3W	33	RRT	3	CABLE	RR-Dry	Activity, UR

Table DR-	Table DR-1: Selected Alternative Commercial and Non-Commercial Harvest Units (cont.)							
Unit	T-R	Section	Commercial Treatment	Acres	Harvest Method	LUA	Associated Non- Commercial Treatment	
NC35-1	38S-3W	35	N/A	56	N/A	UTA/DDR- TPCC/RR	HFR	
NC35-2	38S-3W	35	N/A	49	N/A	UTA/DDR- TPCC/RR	HFR	
NC35-3	38S-3W	25,26,35,36	N/A	232	N/A	UTA/DDR- TPCC/RR	HFR	
36-1	38S-3W	36	SH	12	HELICOPTER	UTA	Activity, UR	
36-2	38S-3W	36	SH	39	HELICOPTER	UTA	Activity, UR	

## Attachment 3: Response to Comments

After receiving public comments on an EA, the BLM evaluates whether the comments are substantive. The BLM is required to consider all substantive comments. However, the BLM is not required to provide written responses to any comments as part of an EA process (unlike an EIS) (BLM NEPA Handbook, p. 65). Substantive comments are those that:

- question, with reasonable basis, the accuracy of information in the EIS or EA.
- question, with reasonable basis, the adequacy of, methodology for, or assumptions used for the environmental analysis.
- present new information relevant to the analysis.
- present reasonable alternatives other than those analyzed in the EIS or EA.
- cause changes or revisions in one or more of the alternatives.

Comments that merely express opposition or favor for a selected alternative, or that challenge decisions made prior to the EA (such as direction or land use allocations in a relevant resource management plan), are not substantive comments (BLM NEPA Handbook, p. 66).

While not required in the EA process, the BLM chose to provide written responses to substantive comments for this EA to provide further clarity on the EA and revisions. The responses to comments below are intended to guide the reader towards analysis or information contained in the Environmental Assessment (EA), and other applicable documents. Many comments are already addressed in Appendix A of the EA, Issues Considered but Not Analyzed in Detail. Where appropriate, the response provides clarity that further explains BLM's use of the 2016 Southwestern Oregon Record of Decision and Resource Management Plan (2016 ROD/RMP) and other management direction or guiding documents. In addition, the table below includes responses to some comments that, while technically not substantive, present discrete questions to which the field office determined there was reasonable value in providing clarifying information. In some situations, the response to several comments were the same or similar. In the table the similar comments were bulleted under the Comment Summary column and a single response given in the Response/Rationale column.

The BLM received numerous submissions of citations to various literature or other reference materials. Where those literature submission were accompanied by rational and specific explanations of how the cited literature presents new information that would affect the analysis in the EA (as opposed to general challenges to the overarching resource management plan and related environmental analysis), the BLM considered those submissions.

Comment (C) Number (N)	Comment Summary	Response / Rationale
CN-1	Would logging facilitate the spread of noxious weeds?	Timber harvest activities, like many activities, may facilitate the spread of invasive plant species such as noxious weeds. In order to reduce the risk that proposed project activities (such as logging) would spread invasive species, project design features for the prevention of weed introduction and spread are proposed for implementation in all action alternatives. See Appendix A, A.1.1, Issue 4 for more information.
CN-2	Would the use of herbicides to control noxious weeds increase toxic exposure to native plants and aquatic life?	A variety of methods for controlling invasive plant species, including the use of certain herbicides, are analyzed for environmental impacts and authorized for use in the 2018 Integrated Invasive Plant Management for the Medford District Revised Environmental Assessment and Decision Record (2018 IIPM EA), which is available to the public on the BLM EPlanning website at: <a href="https://eplanning.blm.gov/eplanning-ui/project/70303/">https://eplanning.blm.gov/eplanning-ui/project/70303/</a> . The 2018 IIPM EA directs herbicide use only in accordance with label direction, tiering to 2007 and 2016 environmental impact statements concerning herbicide use on BLM lands in the American west (for further details, please read the 2018 IIPM EA). The Bear Grub project does not propose any additional invasive plant treatment methods.
CN-3	The Bear Grub EA fails to mention or analyze impacts to Calochortus persistens, despite its status as a listed species in the state of Oregon.	Analysis of Calochortus persistens relative to this project may be found in Appendix A, A.1.1, Issue 4.
CN-4	The BLM refused to analyze or disclose "in detail" the impacts of the proposed logging and road construction on noxious weed populations in the project area and instead relies upon a generic list of "project design features" (PDFs) that have continually failed to arrest the spread of noxious weeds throughout the Ashland Resource Area and the Medford District BLM.	As mentioned in Appendix A, A.1.1, Issue I, Conclusion, this EA tiers to detailed analysis in the Western Oregon PRMP FEIS pp. 419-437; because this project remains within the scope of activities analyzed in the PRMP FEIS, detailed analysis would be redundant.  Arresting the spread of invasive plants such as noxious weeds is not part of the purpose of or need for action that has resulted in this project proposal.
CN-5	BLM did not analyze or disclose "in detail" the impacts of logging and road construction on	Appendix A, A.1.1, Issue 3, explains the decision to analyze project impacts to Bureau Sensitive botanical species in brief. In part it states: "The project design

	Bureau Sensitive plant species that are located in	takes measures to ensure that Bureau Sensitive plant occurrences either remain
	and adjacent to logging units.	unaffected by project activities, such that they remain in the state that would be
		expected under the No Action alternative, or would benefit the rare plant
		populations This conforms to 2016 ROD/RMP Rare Plants direction to "[m]aintain
		or restore natural processes, native species composition, and vegetation structure
		in natural communities through actions such as applying prescribed fire, thinning,
		removing encroaching vegetation" (2016 PRMP/FEIS, pg. 106)."
CN-6	The Final EA should clarify if proposed fuel	Eight fuels treatment units either contain or abut Gentner's fritillary populations or
	treatments would occur on five (p. 75) or eight	overlap with special fritillary management areas where there is a heightened
	units (Appendices p. 9) that include Gentner's	emphasis on Gentner's fritillary habitat management. The units are specified in
	fritillary populations.	Appendix B, B.1.3, Objective 2. The mention of "five" units was an error and has
		been corrected to "eight" in the revision of this EA.
CN-7	The Draft EA states that consultation was	The 2013 Medford Botany Programmatic BA (which may be found online at
CITY	conducted using a 2013 Biological Assessment (p.	https://www.blm.gov/or/districts/medford/plans/files/botanyBA.pdf) predates the
	75). EPA did not locate links to the BA and other	2016 RMP. The 2013 BA focuses primarily on basic kinds of activities (e.g. logging,
	consultation documents, including the 2015 U.S.	thinning, grazing, recreation developments) that could affect the species, proposing
	Fish and Wildlife Service/BLM Conservation	project design features and evaluating the environmental effects to Fritillaria
	Agreement for Gentner's Fritillary in	gentneri that could result from implementing the various activities with the project
	Southwestern Oregon in the Draft EA. EPA	design features in place. While the RMP changed some strategies, locations, and
	recommends the Final EA provide a description of	intensities for proposed activities, it did not change the activities
	why the 2013 BA pre-dates the 2016 PRMP/FEIS	themselves. Therefore, the analysis of the 2013 BA remains relevant and valid.
	in which the Draft EA is tiered.	
CN-8	Removal of shrub cover can have negative	Fritillaria gentneri is reasonably assumed to have evolved along with deer as well as
	consequences to F. gentneri (FRGE) due to	with periodic removal of shrub overstory through natural causes, particularly fire.
	increased deer browse. There was no mention of	Since shrub-removing fire would be expected to take place under the no-action
	the potential for increased FRGE browse by deer	alternative (cf.3.5.6) at some point, the effects upon FRGE due to shrub removal
	due to Bear Grub Project activities in the EA.	and consequent increased potential for deer browse are expected to be similar to
		those for implementation of the action alternatives. While the eventual removal of
		shrubs and concomitant increased vulnerability to deer browse is certain under all
		alternatives, the action alternatives are likely to reduce fire intensity and thereby
		diminish plant mortality relative to the no-action alternative. A larger plant
		population at the time of shrub removal would diminish the overall impact of deer

		browse to the FRGE populations in question, assuming roughly equal deer predation under all alternatives.
CN-9	Regarding PDF at B.1.1. Objective 4, bullets 2 and 3: It is unclear if the 25-foot plant buffer is a nocut buffer or if treatment can occur inside of it. Please clarify.	Harvest activities, including falling, skidding, and yarding, may not take place within 25 feet of <i>Fritillaria gentneri</i> sites. Other sale activities may take place outside this buffer unless doing so would reduce canopy coverage of trees and shrubs within the 25 foot buffer to below 40%.
CN-10	The planning area, the Siskiyou Mountains and the Applegate Watershed are known for their botanical diversity and rare plant species. We do not support any direct or indirect impacts to sensitive plant species in the planning area. See spreadsheet at 129-27 for specific plants, only applies to sensitive plants impacted by proposed activities not OHV route closure.	As noted in Appendix A, A.1.1, Issue 3: all proposed treatment units have been surveyed for special status botanical species. Project design features to prevent adverse impacts to all known special status plant sites may be found in Appendix B, B.1.1, Objectives 4 and 5; and B.1.3, Objectives 2 and 3. Given implementation of project design features, impacts to all known special status plant species potentially affected by the proposed project alternatives were analyzed in brief in Appendix A, A.1.1, Issues 2, 3, and 4.
CN-11	The BLM has not submitted a comprehensive water quality restoration plan	Water Quality Restoration Plans (WQRP) have been completed for the West Bear Creek Analysis Area and the Applegate Sub-basin (USDI BLM 2005, 2006) to meet the requirements of Section 303d of the 1972 Federal Clean Water Act. WQRPs describe how the BLM will meet Oregon water quality standards for 303(d) listed streams on federal lands. Proposed activities in this project maintain or improve Riparian Reserve and are thus consistent with the system potential stream shading objectives in the WQRPs.
CN-12	The BLM has not justified the negative impact of road-building causing erosion.	The EA analyzed the effects of road building and haul to aquatic habitat, which is inclusive of Coho Critical Habitat. The analysis concluded that some sediment would likely result from haul, but that it would be too diffuse to detect beyond background levels and would most likely be manifest as brief and undetectable turbidity plumes which would quickly be passed through fish habitats during high flow events. Proposed roads are not hydrologically connected with any streams and would have no causal mechanism to affect streams. The BLM consulted with NMFS on anticipated affects to CCH, and the NMFS concurred that the project was in compliance with FOMBO, and that the project was "Not Likely to Adversely Affect" Coho or Coho Critical Habitat.

CN-13	The BLM has neglected to justify impacts of road-	The project design includes features for preventing introduction of noxious weeds
	building bringing in noxious weeds into sensitive	into project areas, including sensitive plant areas (EA, Appendix B.1.5. See also CN-
	plant areas.	1.
CN-14	If allowance can be given in the treatments for	Some flexibility has been built into proposed fuels treatments. Silvicultural
	relative drought tolerance among species, surely	prescriptions consider changes in the potential vegetation based on factors such as
	allowance should equally be given to retaining	aspect, slope, available moisture, and soil type, in addition to species composition
	species with a greater potential ability to tolerate	and stand density (EA, section 2.2.2).
	at least short-term climate changes expected	Hazardous fuels reduction is designed to accomplish forest health thinning and
	within the treatment area. For example, without	fuels reduction treatments in conifer forests, hardwood woodlands, and
	compromising the 8-inch thinning guidelines for	shrublands. This treatment consists of cutting small trees (generally less than 8
	the fuel reduction action, it should be possible to	inches diameter) (EA, Appendix B.3.4).
	promote removal of Douglas fir and retention of	
	Ponderosa pine, Pacific madrone, and oaks where	
	these are on the diameter cusp.	
CN-15	This is surprising since the EA acknowledges (p.	Climate change was addressed, along with carbon sequestration and greenhouse
	54) without explanation, that "future trends	gasses, on a regional scale in Appendix A.1.4. The EA addressed, as the commenter
	suggest the suitability for large wildfire growth is	stated, the effects from the proposed action, forest management. Halofsky et al
	expected to increase" The main reason for this	concluded that management actions "(i)n drought- and fire-prone forests of the
	expectation is climate change increasing	Northwest (e.g., ponderosa pine and dry mixed-conifer forests east of the Cascades
	temperature and reducing soil and vegetation	and in southwestern Oregon), reducing forest density can decrease crown fire
	moisture. Yet, the only effects that are considered	potential. As well as "(d)ecreases in forest stand density, coupled with hazardous
	in the EA are those resulting from forest	fuel treatments, can also increase forest resilience to wildfire in dry forest types."
	management itself as this affects light	These are two of the actions proposed in the Bear Grub VMP.
	penetration and competition among stems for	
	resources. This omission occurs despite the	
	availability of an abundance of reports (e.g.	
	Halofsky et al. 2020) and data regarding how	
	climate change is currently impacting and is	
	expected further to impact Southern Oregon. The	
	only reference to climate occurs in discussion (p.	
	56) of the impact of thinning on wind and stand	
	micro-climate.	

CN-16	The EA completely failed to address carbon production/emissions associated with timber harvest, yarding activities, transportation of logs, etc in the Bear Grub Vegetation Management Project. Timber production including commercial thinning has a negative effect on both carbon sequestration and output (Law etal. 2018). Research conducted at OSU demonstrates that the timber industry is the largest producer of greenhouse gasses in the state of Oregon. The loss of carbon through forest management activities is not just associated with clearcut logging on private land. Federal timber sales also contribute to carbon emissions associated with timber production.	The Bear Grub EA addressed Greenhouse Gas Emissions, Carbon Storage, and Climate Change in Appendix A.1.4. The article by Law et al does not mention commercial thinning as the commenter suggests. The article also does not state that the timber industry is the largest producer of greenhouse gasses. The article compares the end products of timber in the sequestration of carbon such as bioenergy, lumber for houses, leaving on the ground in the forest and the burning of forests.
CN-17	Final EA should describe the outcome of tribal consultation between the BLM and each of the tribal governments within the project area, issues that were raised (if any), and how those issues were addressed.	See Appendix A.1.10, Issue 2. Consultation did not result in the identification of any sites of concern to tribes.
CN-18	Because the cultural resources report was not completed at the time the Draft EA was published (p. 76), we also recommend including a summary of this report's findings in the Final EA.	EA language was update for Tribal Consultation and the status of the cultural report (section 1.4.5, Appendix A.1.10).
CN-19	How many jobs will be created at the county level? How much money will the county receive from logging taxes? In what way does the proposed logging support recreation communities of hang gliders, hikers and bicyclists who use areas on or adjacent to the proposed sites of Class IV logging?	The Bear Grub VMP was not proposed with the purpose of creating jobs at the county level, contributing monies to logging taxes, or to support the recreation community.
CN-20	<ul> <li>Conditions have changed since the 2016 RMP, as visitor serving industries are growing rapidly and are an essential part of our local economy.</li> </ul>	Forest management on public and private land has been occurring in the Applegate Valley for more than 100 years. Over the last 100 years, recreation and tourism in the Applegate Valley has continued to increase and diversify, and housing prices

	The impact to the growing number of wineries and related services such as restaurants, lodging, and others, such as the "Allaboard" Trolley and Wine Hopper Tours, must be evaluated.  • Economic analysis in the EA failed to consider non-timber related economic values, including recreation, tourism, wineries, property values, agriculture and other local and regional economic values. The impact to these values should be quantified and compared to the value of sustainable harvest in the planning area.	have increased regardless of forest management activities conducted on private or public lands, therefore it is not anticipated that the Bear Grub VMP would adversely impact the recreation economy in the Applegate Valley (see Appendix B, p. B-11).
CN-21	The EA fails to address the Woodrat ERMA's economic values. The Woodrat SRMA is a 3,875-acre area that "offers access to hiking trail opportunities and serves as a premiere hang gliding and paragliding destination." (Medford RMA Frameworks 187.) The RMA Frameworks allow for some forest management within strict guidelines that boil down to allowing only those management practices that do not interfere with the recreational uses. Again, "recreation and visitor services management is recognized as the predominant land use plan focus," (RMP 259), and yet there is absolutely no analysis in this EA regarding how the agency intends to perform approximately 97 acres of commercial timber harvest and 426 acres of non-commercial harvest in this special management area without adversely impacting it, and while complying with its own direction to prioritize this area for "recreation and visitor services." (EA Appendix B.4.) In fact, the EA just skips this SRMA in its	The analysis for the Woodrat SRMA was added to section 3.8 of the EA revision. Based on this comment the accidental omission of the Woodrat ERMA was identified and corrected.  Decisions regarding RMAs and timber harvest were made at the RMP level. This EA complies with those RMP decisions regarding the allowable level of harvest and fuels treatments in each ERMA and SRMA.

	evaluations of environmental consequences to the action alternatives.	
CN-22	Logging mature, fire resistant forests along the Applegate Ridge Trail and within the Wellington Wildlands will significantly impact scenic values, public recreational values and regional economic values.	Impacts to visual resources were analyzed in appendix A.1.6. Section 3.8.5 of the EA analyzed the East Applegate Ridge Trail ERMA. The Wellington Land with Wilderness Characteristic (LWC) unit was not carried forward in the 2016 RMP/ROD. Economic values were addressed in Appendix A.1.2 as explained above in CN-20.
CN-23	<ul> <li>Why hasn't the EA addressed the impact of logging on the EART view shed? Likewise, why isn't the view shed of the hang gliders and paragliders on Woodrat Mountain described? Or that of the residents near areas where logging is planned?</li> <li>Almost the entire project will have a major impact not just on the Sterling Mine Ditch Trail but also will impact the beauty of the East Applegate Ridge Trail (EART), the Jack Ash Trail, Wellington Wildlands and the backyards of a number of homes whose houses back up to the Bear Grub project. Of particular concern are units SH/GS units 23-1,23-2, 26-3, 36-1 and 36-2, all of which are visually prominent. For a project with such a major impact on the landscape, why was this not addressed but simply listed under "Issues Considered but not Analyzed in Detail"?</li> </ul>	The BLM is required to manage for visual resources using the visual resource management process and objectives, and not by viewshed analysis. Visual resource management analysis for this project can be found in Appendix A.1.6. which also contains a rationale as to why it was not analyzed in detail.
CN-24	The agency planners were requested to disclose the presence of "critical habitat" for Northern spotted owls and coho salmon in the project area.	Coho and Coho Critical Habitat distribution are presented in the EA, section 3.4.4, and in Table 3-7.  Northern spotted owl Critical Habitat is disclosed on pages 74 and 76 of the Biological Assessment for Medford BLM FY20 Batch of Projects (FY 20 Batch BA). The BA can be found in the ePlanning Website for the Bear Grub Vegetation Management Project.

CN-25	The project knowingly includes an area that will affect Forest Creek which contains the Southern Oregon Northern California Coast Coho (SONCC) Salmon. These salmon depend upon streams that have small gravel in which to spawn (USFWS). As a member of ODFW's AQI team, I have personally observed 50 juvenile Coho Salmon in one pool in Forest Creek. The activities in the project area would release sediment into stream channels through erosion and runoff. The EA document admits to having haul routes and roads that will directly affect this stream, rendering the necessary gravel that Coho require to spawn covered in sediment and therefore unusable for spawning. Given the ecosystem, recreational, and cultural benefit of these fish, it would be a great loss to threaten a stream that is crucial to their spawning and survival. I propose that the project be modified to at least remove the roads, and therefore impact, from such a close proximity to Forest Creek.  USFWS. Retrieved from:  https://www.fws.gov/fisheries/freshwater-fishofamerica/coho_salmon.htmlCohosalmonspawn onlyonce,totheirnatalspawningstreams.	Lower reaches of Forest Creek do provide habitat for Coho. No new road construction is proposed in Forest Creek, nor near any fish bearing streams. Sediment resulting from haul was predicted to increase sediment in the Forest Creek subwatershed by up to 1,784 lbs, (Table 3-8) which is less than a cubic yard o sediment. However, the inputs would occur over a very wide spatial and temporal scale; in Forest Creek, inputs would be spread out among the 37 stream crossings across the entire the sub-watershed. Most of these are located far from Forest Creek proper itself, and they would occur over a three-year period. Because of these scales of input, and because the inputs would primarily occur during high water events (when Forest Creek would be turbid regardless of haul), the sediment would not likely settle out in gravels; it would more likely be transported downstream as a brief small turbidity pulse. The amount of sediment generated by haul over the three-year period would be undetectable in Forest Creek in any given year, and biologically meaningless to Coho which are adapted to survive short periods of elevated turbidity in the wintertime. The roads near Forest Creek in the vicinity of Coho provide access to private residences and other private lands and cannot be removed and is outside of the scope of this project.
CN-26	The loss of canopy and large, fire resistant trees will lead to increased fire hazards and fuel loading, which was not adequately addressed in the Bear Grub Vegetation Management Project Environmental Assessment (EA). The project as proposed will increase understory fuel loading by regenerating young, highly flammable vegetation. The increase in fire	The BLM accounted for a greater increase in understory and ladder fuel loading by regenerating understory vegetation in the years following treatment prescriptions that reduce canopy cover to below 30%. The moderate-term (10-30 year) surface fuel models, shift to <i>moderate load</i> grass-shrub (GS2) (EA p.53, Appendix C, Figure C-2, p.95). Additionally, the EA states on p. 56 that "Alternative 2 would create the most open conditions and may result in more rapid regeneration of surface fuels, which may necessitate earlier and more frequent maintenance treatments." In Appendix C of the EA maintenance of treatments is discussed along with vegetation

- hazards is particularly troubling given the proximity of timber sale units to homes and communities. The BLM has an obligation to reduce fire hazards surrounding these communities; however, the Bear Grub Timber Sale will instead threaten local homes and communities with increased fire risks.
- The EA does not sufficiently address fire impacts for private property owners, especially those adjacent to proposed SH/GS units where impacts from rapid regrowth of brushy materials and burn piles may increase risk.
- This EIS seems to do the analysis of wildfire hazards, in terms of "stand resistance", for each alternative across all the treated acres combined. That is not adequate. It does not give the true picture of the increased fire risk for the areas subjected to "group-harvest" logging. That is, increased risk in terms of reduced resistance to "stand-replacement" fire, for those specific areas.
- Table 3-2 clearly shows that early, mid closed, and mid open seral stages dominate the Bear Grub Analysis Area. Only about 7% is in the two late seral stages. Yet, BLM is proposing to decrease the amount of late seral stage area even further, leaving behind cleared areas of up to 4 acres, only to have them quickly develop into high fire risk early seral stages. The late stage areas should not be subject to group selection logging that is this aggressive if fire resiliency is truly the goal.
- The drastic canopy reductions proposed in the Bear Grub Timber Sale (to as low as 25%) will

re-growth (EA p.98). The BLM represented areas of less than 40% canopy cover with low-load grass-shrub surface fuel models for up to 10 years after treatments. As stated on p. 48 of the EA, "the BLM assumed canopy base height and surface fuel models resulting from proposed action alternatives among the Action Alternative would reflect outcomes indicated by local Medford District monitoring data, literature, assumptions in the Rogue Basin Strategy for post-treatment fuel transitions (Metlen et al. 2017), and LANDFIRE post-disturbance rules." Additionally, in Appendix C., p. 98 of the EA, the BLM discussed the variability of vegetation regrowth. While the following literature submitted related to this comment provide evidence of understory shrub response after thinning, many studies are from plantations (which are not being managed in this EA) and other forest types or geographic locations, nor do they provide information related to better representation of surface fuel models at given timeframes following thinning. Weatherspoon and Skinner 1995 is referenced in the Activity fuel section of Assumptions 3.5.3, regarding the need for follow-up treatment of activity fuels. The authors (Weatherspoon and Skinner 1995) found the dominant variable influencing subsequent fire severity in mature stands was whether or not the stand had been treated to reduce activity fuels. As they state "clearly, stands that had been partialcut with no subsequent fuel treatment suffered the most fire damage." They found that more open conditions resulted in higher fire severity in some plantations, this EA is not proposing to create or treat plantations.

Odion et al. 2004 is referenced in the FEIS, which this EA tiers to.

The exception in this list of references, is **Franklin and Johnson 2009** who do not discuss understory shrub response in their Dry Forest restoration strategy, explicitly, other than to recognize that maintenance will be required. The EA addresses the need for maintenance in Appendix C.3.3.

Zald and Dunn 2018 found that many variables influenced fire severity in the 2013 Douglas Complex The paper states "there is strong scientific agreement that fire suppression has increased the probability of high severity fire in many fire-prone landscapes (Miller et al. 2009, Calkin et al. 2015, Reilly et al. 2017), and thinning as well as the reintroduction of fire as an ecosystem process are critical to reducing fire severity and promoting ecosystem resilience and adaptive capacity (Agee and Skinner 2005, Raymond and Peterson 2005, Earles et al. 2014, Krofcheck et al. 2017). However, in the landscape we studied, intensive plantation forestry appears

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increase understory and ladder fuel loading by regenerating dense shrubby understory vegetation and young conifers in the years following "treatment." The phenomenon is known as "shrub response" or "understory response" and is associated with canopy thinning, especially in mixed conifer systems with significant shrub and hardwood associates, like those in southwestern Oregon (Franklin/Johnson 2009).

 The Bear Grub EA failed to adequately analyze the issue of "understory response" and its association with canopy reduction to 50% or lower. to have a greater impact on fire severity than decades of fire exclusion." This EA is not proposing even-aged or plantation management, and is proposing thinning and prescribed fire.

Wilson and Puettmann 2007 synthesized results of variable density management treatments, mostly in young Douglas-fir stands throughout Western Oregon and Washington in the mesic, low-elevation western hemlock and Doulas-fir zones of the Coast Range and Cascades. Among their findings, including an increase in shrub foliage following treatments, they suggest that "silvicultural prescriptions that increase within-stand variability can provide important habitat features across multiple scales and enhance habitat quality beyond that provided by stand-level prescriptions." This paper compiled results from more mesic areas than the Bear Grub project area and found an increase in shrub density following treatment. Similarly, the Campbell et al. 2008 study was conducted within nearly pure plantations, however the general site location and natural tree species composition are more representative of the Bear Grub project area.

Agee (1996) states that "more herb and shrub fuels usually imply more open conditions, which are associated with lower relative humidities and higher windspeed." The BLM has incorporated this reference into Appendix A.1.3 Fuels – Issue 1. Additionally, the BLM accounted for differences of fine dead fuel moisture between "exposed" (<50% canopy cover) and "shaded" (> 50% canopy cover) conditions, along with the sheltering effect of canopy on surface wind speeds, in the fire behavior modeling inputs in detailed analysis of Alternatives on stand-level fire resistance (or fire hazard) (Issue 4 and Appendix C.3). Agee (1996) does acknowledge that "the effect of herb and shrub fuels on fireline intensity is not simply predicted." He goes on to state that "perhaps most important though, is the effect of the live fuels on moisture content of the fuelbed" and in discussion of management of fuel strategies, identifies one which is "often the result of thinning operations: recruitment of understory vegetation, both shrubs and herbs, that maintain high moisture content and provide a dampening effect on fire behavior." In addition to summarizing findings from Thompson and Spies (2009) post-Biscuit Fire study, Lesmeister et al. 2019 suggest that "fuel-reduction treatments such as mechanical thinning can effectively reduce fire severity in the short term, but these treatments, by themselves, may not effectively mitigate long-term dynamics of fire behavior under severe weather conditions and may not restore the natural

		complexity of historical stand and landscape structure (Schoennagel et al. 2004). On the other hand, prescribed fire that mimics severity and return intervals of natural fire regimes in forests that historically experienced fire can result in landscapes that are both self-regulating and resilient to fire (Parks et al. 2015). Prescribed fire is generally considered to be the most effective way to reduce the likelihood of high-severity fire in combination with mechanical treatments (Stephens et al. 2009)."  Thinning combined with prescribe fire are the proposed actions in this EA. The authors go on to say: "Many fire-prone forests will require active management to restore ecosystem function, but no single prescription will be appropriate for all areas and, in some portions of the forests, minimal maintenance may be more sustainable in the long term (Noss et al. 2006)." Most of the non-commercial natural hazardous fuel reduction proposed in this EA is maintenance of areas previously treated.
CN-27	Do these larger trees actually serve as a buffer to slow the spread of fire in more fire prone surrounding areas?	Large trees have thicker bark, which insulates the cambium and protects it from fire damage. Large trees tend to have higher crown bases, so their foliage and buds are less likely to be damaged from scorch of surface fires, than small trees, or trees with crowns that extend to the forest floor. Chapter 2 — Principles of Fire-resistant Forests in this Oregon State University Extension Catalog Publication: "Reducing Fire Risk on Your Forest Property" is a good reference and provides additional details, <a href="https://catalog.extension.oregonstate.edu/pnw618">https://catalog.extension.oregonstate.edu/pnw618</a> .
CN-28	As has been well documented, early seral stands that result from commercial logging, notably clear cutting, results in increased fire risk for a substantial period. They can lead to a self-perpetuating cycle of intense fires. Perry, 1995.Trends in Ecol & Evol (10):241-244	Clearcutting is not proposed in this EA.  Regarding the article (Perry 1995) referenced by the commenter, it is not relevant here. Perry is speaking in this context at a large landscape scale. His discussion regards a landscape on which a particular fragmentation threshold is crossed, feeds on itself in a perpetuating cycle of fire. This is a generalization and his examples regard the Amazon. It's relevance to this project assumes that the small gaps proposed in the commercial harvest units of this project will exceed this threshold and the commenter provides no evidence to support this. And it assumes a scale of size large enough for ignition sources to be connected to large chunks of land. Furthermore, Perry goes on to say that the hydrologic cycle is a key indicator of fire risk. This is true as it impacts fuel moisture. But again, his context is at the large landscape scale. The size and scope of these small gaps will not impact the hydrologic cycle.

CN-29	Unit 21-2 provides a relatively cool, shaded, and green understory in this fire-prone area. Just a few miles west/southwest of Ashland and Talent, these natural firebreaks should be preserved at all costs. This unit is proposed for heavy thinning down to a canopy cover as low as 25%. This will lead to desiccation of the forest floor, death of many fire-resistant understory species, and regrowth of thick underbrush and doghair that the agency admits will increase fire risk in the WUI! Fire-wise forestry mandates that the agency maintain the integrity of shaded, relatively cool and mature forest stands by minimizing or eliminating all operations that would heavily thin or group select/clearcut intact forests like these.	It is part of the purpose and need of this project to reduce wildfire risk to our local communities. Thinning from commercial harvest serves to reduce wildfire risk by breaking up and reducing the canopy fuels. This is described in the EA, section 3.5.3. In short, by spreading out the remaining tree canopies, crown fire is less able to roll uncontrolled across the forest. These are the large-scale wildfire events that most typically threaten life and property.  Treatment of fuels from harvest activity would follow in 1-2 years following the completion of commercial activities. These follow up prescribed fire treatments in these harvest units will reduce surface fuels loads and raise the base canopy heights of the remaining trees. The former serves to reduce potential surface fire spread and to reduce flame lengths that could reach up into the overstory canopy. The latter serves to make it more difficult for fire to spread vertically into the crowns by making the lowest branches higher above the surface.  • Appendix A, section 1.3, pages 11 and 12 discuss the effect of potential drying in the microclimate and that the difference between thinned and unthinned is insignificant.  • Fire breaks across the resource area are intended to be maintained.  • There are no clear cuts proposed in this EA.
CN-30	The Bear Grub Project area includes steep slopes and a variety of elevations. How can the BLM make assumptions about the fire behavior and severity over such a mixed area without doing a thorough analysis?	Assumptions regarding slope in the analysis of relative stand-level resistance to replacement fire are stated in Appendix C.3.2. A minor edit has been incorporated into section 3.5.2 to reflect this. Slope does vary across the project area. In areas proposed for the full suite of actions, commercial and non-commercial thinning and prescribed fire, the slope ranges from 3-51 percent, averaging 28 percent. The maximum slope of 50% was used in analysis of relative fire resistance by Alternative across proposed commercial units. For analysis of non-commercial proposed action effect to relative stand-level resistance by Alternative, flame lengths resulting from predicted Fire Behavior Fuel Models of 20 mile per hours 20 foot windspeeds were compared using the fuel model compare spreadsheet from pyrologix <a href="http://pyrologix.com/downloads/">http://pyrologix.com/downloads/</a> , which does not include slope, but is a reasonable tool for comparative analysis. Minor edits have been added to Chapter 3 and Appendix C to clarify.
CN-31	If hand-pile and under-burning are essential to reduce wildfires with this treatment plan, what	The BLM is committed to completing our tasks of prescribed fire, whether it is underburning or pile burning. The BLM strives to burn all hand piles created within

	will the BLM do if burning is not possible? There	1-2 winters after the piling has been completed. There are at times circumstances
	are alternatives listed but will the BLM commit to	outside of our control, be it weather conditions or unseen events that could delay
	doing chipping etc., if burning is not allowed?	implementation. What we may not be able to do in one year, we'll burn in the next
	During the Virtual Public Meeting on June 25,	year. With GPS and Geographic Information Systems we track and account our pile
	Jerry Serabia, BLM Fuels Specialist, answered	burning progress.
	basically that if no burning is allowed then BLM	
	would return another year to burn the piles.	
	What is BLM's commitment to return the next	
	year if needed?	
CN-32	This part of the EA seems to contradict some of	The context for the reference in section 3.5.2 is a discussion for predicting fire
	the earlier portions. There is a mention of taking	effects in any one single location, while understanding a condition class analysis and
	slope into account when determining treatment.	classification across the landscape is valid without considering slope. This is to say
	However, in section 3.5.2, it is stated that slope	that the RMP acknowledged in their analysis that there would be variables in any
	was not taken into consideration. Which is	individual location, such as slope, that will effect fire severity but that it wasn't a
	correct?	necessary consideration for their analysis across the landscape. This is different
		than prescribing a fuels treatment, where we will take slope into account. The fuels
		treatment unit is an individual location requiring a specific treatment prescription
		and slope is considered.
CN-33	The FA weavely lists DAADs. The DIAM fails to dissues	The DINA did not site and sifically identify aventhy where your discours conserve
CIN-33	The EA merely lists BMPs. The BLM fails to discuss	The BLM did not site-specifically identify exactly where road improvements
	the ineffectiveness of proposed BMPs and	(including additional cross drains, crowning, out-sloping, etc.) in the EA. Rather, the
	resulting fine sediment transport to streams.	roads engineer identified a list of roads that will be used for haul and that could be
	Edwards et al. 2016. For the majority of these	improved on an as-needed basis, in accordance to BMPs and using appropriate
	BMPs the EA fails to identify specific or even	PDFs to reduce sediment to stream transport potential. In response to the
	general road locations where they would be	"ineffectiveness" of BMPs referenced by <b>Edwards et al 2016</b> ; the paper did not
	implemented or which BMPs would be	state BMPs are ineffective, but rather tried to quantify their efficacy, and noted that
	implemented. For example, cross drains are	blanket reliance on them may not work in every situation, and that few studies
	important for reducing connectivity of roads	have been conducted to this end. It should also be noted the paper relies heavily on
	within the stream system but the EA does not	data from the southeast United States, a much wetter climate. The paper goes on
	specify a single cross drain location or indicate	to list numerous examples of BMPs to reduce erosion that are proven to be
	how many new cross drains would be installed to	effective, such as addition of rock, and installation of drainage devices. The
	reduce connectivity of new haul roads and	implementation of proposed maintenance and restoration of roads to be used for
	existing haul roads. The EA only addresses	haul were designed to allow the BLM flexibility. It is not always possible to know if
	sediment abatement with BMPs in a	the purchaser of a timber sale is willing to invest the money to meet BMPs in order

	programmatic fashion. Effectiveness of this	to improve all or certain roads for winter haul, they may choose to do dry haul
	approach is highly uncertain since there are no	only.
	required site-specific BMP identified (e.g.,	PDFs to reduce sediment from road use include adding rock, reshaping of prisms as
	additional cross drains).	necessary to improve drainage, not pulling ditches near streams unless needed, and
	Since the EA fails to identify structural BMPs	doing the work in the dry season. Additional BMPs that are effective at reducing
	needed to disconnect the road system from the	transport of sediment to aquatic habitat include Riparian Reserves and are listed in
	stream system they cannot be incorporated into	the assumptions for the aquatic analysis.
	project contracts or road upgrades. In other	Regarding reducing connectivity of existing roads to streams, if the road engineers
	words, contract BMPs will only address drainage	identify that additional cross drains would be needed, they would add them. Re-
	and protection of the road surface and not reduce	shaping of road prisms is also an effective way to reduce connectivity of roads to
	existing connectivity with streams.	streams, and addition of rock makes those portions of roads that are connected to
		streams more resilient to traffic and weather, and therefore this activity can also
		reduce sediment to streams. The aquatic section analyzed these activities in
		relation to road to stream sediment transport (EA, section 3.4.6).
CN-34	Implement road improvements, storm proofing,	The EA proposes improvements, maintenance, storm proofing of closed roads, and
	maintenance, or decommissioning to reduce or	decommissioning of no longer needed roads (section 2.2.1) and identifies that
	eliminate chronic sediment inputs to stream	additional cross drains may be added if needed, Appendix B.2.4.
	channels and waterbodies. This could include	
	maintaining vegetated ditch lines, improving	
	road surfaces, and installing cross drains at	
	appropriate spacing. (RMP, 93).	
CN-35	"Decommission roads that are no longer needed	Both closure and decommissioning, and PDFS would be applied as needed to ensure
	for resource management and are at risk of	disturbed ground was stabilized and the closed roads put in long term storage state.
	failure or are contributing sediment to streams,	the primary reason being they are no longer needed for resource mgt. None of
	consistent with valid existing rights. (RMP,	these roads have hydrological connectivity with streams, so they are not at risk to
	93). Fully decommission or obliterate (permanent	deliver sediment to aquatic habitat.
	closure) roads with no future resource	
	management need. Decommission (long-term	
	closure) roads not currently needed for resource	
	management but that will be used and	
	maintained again in the future. Apply road	
	closure BMPs as needed (Appendix C). Close roads	

	only with the approval of affected permittees consistent with valid existing rights. (RMP, 96)."	
CN-36	"Implementation of the above management direction for roads within the planning area would identify at least some road miles needing treatment. The alternatives are inadequate to implement management direction and the BiOp because no roads other than newly constructed temporary roads and roads being replaced with longer permanent roads would be decommissioned or obliterated."	In addition to the decommissioning of the temp roads after use, the EA proposes to decommission 3.74 mi of roads that are currently not open to the public, but may be used for authorized projects, while building only 0.3 mi of permanent roads. It is not mandatory that BLM decommission any roads as part of this sale and what we are proposing is consistent with both our management direction and the BO with NMFS. The comment does not show how the alternatives are inadequate for the implementation of management direction.
CN-37	It is clear from the 2016 BiOp that NMFS assumed that management direction and BMPs would be implemented to reduce sediment and vehicle pollutants from roads. The following is excerpted from the 2016 BiOP pages 199-200.  The following are a subset of the BMPs that could be implemented for road work:  • Locate roads and landings on stable locations, ridge tops, stable benches, or flats, and gentlemoderate slopes.	The roads and landings are proposed on the landscape features listed. See Appendix B.1.1, which includes this PDF.
CN-38	Locate roads and landings away from wetlands, Riparian Reserve, floodplains, and waters of the State, unless there is no practicable alternative. Avoid locating landings in areas that contribute runoff to channels.	No new roads or landings are proposed in Riparian Reserves.  The roads and landings are proposed on the landscape features listed. See Appendix B.1.1, which includes this PDF.
CN-39	Disconnect road runoff to the stream channel by outsloping the road approach. If outsloping is not possible, use runoff control, erosion control and sediment containment measures. These may include using additional cross drain culverts ditch lining, and catchment basins. Prevent or reduce	The road maintenance as proposed includes many of these tools (See Appendix B.1.1). These Project Design Criteria (PDCs from NMFS) are directly tied to our BMPs/PDFs. They are implemented as applicable. For example, some are specific to specific activities, and allow for the use of one method over another as situations warrant.

	ditch flow conveyance to the stream through cross drain placement above the stream crossing. Effectively drain the road surface by using crowning, insloping or outsloping, grade reversals (rolling dips), and waterbars or a combination of these methods.  Avoid concentrated discharge onto fill slopes unless the fill slopes are stable and erosion proofed.  • Locate cross drains to prevent or minimize runoff and sediment conveyance to waters of the State. Implement sediment reduction techniques such as settling basins, brushfilters, sediment fences, and check dams to prevent or minimize sediment conveyance. Locate cross drains to route ditch flow onto vegetated and undisturbed slopes.  • Space cross drain culverts at intervals sufficient to prevent water volume concentration and accelerated ditch erosion. At a minimum, space cross drains at intervals referred to in the BLM Road Design Handbook 9113-1 (USDI BLM 2011), Illustration 11 – Spacing for Drainage Lateral.' Increase cross drain frequency through erodible soils, steep grades, and unstable areas.  • Install cross ditches or waterbars upslope from stream crossing to direct runoff and potential sediment to the hillslope rather than deliver it to the stream.	
CN-40	Luce and Black (1999) found that incorporating design features such as crossdrains and ditch relief culverts into roads reduced the hydrological connection of these structures.	This citation is in the EA regarding hydrological connection. See above comments (CN-33). If the BLM identifies that additional cross drains are needed, the EA states they may be installed (B.1.1 Objective 2). Road maintenance activities as proposed by BLM are, among other things, intended to reduce sediment to stream transport.

CN-41	Forest vegetation buffers flow and prevents sediment from reaching streams. Copstead et al.	The EA acknowledges the efficacy of vegetative buffers (EA, section 3.4.3), The EA cites Rashin at al, which is not at odds with this comment.
CN-42	1998. (2016 BiOP, 199-200).  "We conclude that the Bear Grub project fails to implement actions to substantially reduce sediment from the use of existing haul roads and log haul on proposed new roads."	The BLM concluded that haul would input sediment to aquatic habitat, however, PDFs, as identified in Appendix B.1.1, are in fact designed to limit sediment resulting from haul.
CN-43	We propose that the Jackson and Josephine County Integrated Fire Plan be listed as a reference and its goals and objectives be incorporated into the purpose and need.	The BLM added to section 3.5.1 of the Bear Grub VMP that "principles are consistent with those articulated in the Rogue Valley Integrated Fire Plan (RVI CWPP Table 5-1, p.103)."
CN-44	<ul> <li>The Bear Grub EA also states, "Portions of or all of the proposed commercial units under Action Alternatives may be included in a future planning area and may be grouped with other units to create a new project, in as soon as five years." (DOI. 2020. P. 54 Bear Grub EA).*Actually stated on page 51, under Fuels.</li> <li>Finally, if group-selection logging is used and sizable open space is created, with no reforestation and no maintenance planned how will these actions reduce fire activity and increase forest resilience? How can you achieve a mixed forest of varying ages if treatment is done every 5years as stated in the EA?</li> </ul>	Section 3.5.5 and the quoted statement were revised to clearly show that the statement was only applicable to Alternative 1 (No Action). This statement was not meant to imply that the BLM would return to commercial units under any of the action alternatives, if selected, within five years.  The paragraph was modified to read: "If Alternative 1 (No Action) were selected, portions of or all of the proposed commercial units included in the Action Alternatives may be included in a future planning area and may be grouped with other units to create a new project, in as soon as five years. Those proposed actions may have similar effects to the Action Alternative described below."
CN-45	We are concerned that severe cutting of large canopy trees will result in potential flooding during large and intense rainfall events, increased fire risk and increased danger from wind throw during seasonal (primarily winter) intense wind events.	For analysis purposes, forested lands with canopy cover 30% or greater are considered hydrologically recovered and at low risk of augmented flows in response to storm events (EA, section A.1.5). Under Alternatives 3 and 4, 30% canopy cover or greater will be retained in all proposed harvest units (EA, section 2.2.1, Table 2-1). Additionally, any compacted ground from harvest- related activity will be decompacted and rehabilitated after use (EA, B.1.1).  See response to fire risk in CN-26.

CN-46		Generally, the prescriptions designed for the Bear Grub VMP focus on removing low vigor trees, and leaving the structural elements in the stand, which would allow the "stronger" retained trees to respond physiologically to the decrease in stand density. Therefore, the project design minimizes the potential impact to windthrow in the event of such a windstorm. (EA, Appendix A.1.11)
CN-46	Any damage or blockage of the trail should be quickly remedied. Slash piles should be burned during the next wet season.	PDFs addressing damage or blockage of trails is addressed In Appendices B.1.1, Objective 6 and B.1.3, Objective 7. Slash piles will be burned when environmental conditions allow the following fall/winter after any mechanical treatment.
CN-47	The BLM is proposing to decommission 3.74 miles of road from the Bear Grub Project Area, yet these was no analysis for potential adverse impacts to fire suppression efforts due to the reduced access caused by the reduction in the road network.	Decommissioned roads would be closed long term with earthen berm barricades, (EA, Appendix B.1.1). Roads surface will remain and could be reopened with minimal equipment for fire suppression access.
CN-48	The placement and marking of commercial and hazardous fuels units within SRMAs and ERMAs is out of line with management actions and allowable use decisions outlined in the RMP and is thus arbitrary and capricious.	An analysis of the proposed actions, including commercial and noncommercial treatments, impacts to SRMAs and ERMAs was completed in section 3.8, Issue 7 of the EA.  Within SRMAs, recreation and visitor services management is recognized as the predominant land use plan focus, where specific recreation opportunities and recreation setting characteristics are managed and protected on a long-term basis. Management of ERMAs is commensurate with the management of other resources and resource uses (ROD/RMP, p. 259), such as timber harvest and the management of fuels.
CN-49	Our organizations are extremely concerned that the proposed logging followed by the establishment of early seral conditions may increase fire hazard in the Bear Grub planning area.  The practice of converting mature forests into early seral stands significantly increases fire hazard in the mid- to long-term. Young stands are more susceptible to intense fire behavior and severe fire effects than unlogged mature forests,	The BLM accounted for a greater increase in understory and ladder fuel loading by regenerating understory vegetation in the years following treatment prescriptions that reduce canopy cover to below 30%. The moderate-term (10-30 year) surface fuel models, shift to <i>moderate load</i> grass-shrub (GS2) (EA p.53, Appendix C, Figure C-2, p.95). Additionally, the EA states on p. 56 that "Alternative 2 would create the most open conditions and may result in more rapid regeneration of surface fuels, which may necessitate earlier and more frequent maintenance treatments." In Appendix C of the EA maintenance of treatments is discussed along with vegetation re-growth (EA p.98). The BLM represented areas of less than 40% canopy cover with low-load grass-shrub surface fuel models for up to 10 years after treatments. As stated on p. 48 of the EA, "the BLM assumed canopy base height and surface fuel

including burned forests. DellaSala et al. 1995; Odion et al. 2004a.

Also cited: Frost and Sweeny 2000 Huff et al. 1995 Perry D. A. 1995 Hann et al 1997 Van.Wagtendonk.1996 models resulting from proposed action alternatives among the Action Alternative would reflect outcomes indicated by local Medford District monitoring data, literature, assumptions in the Rogue Basin Strategy for post-treatment fuel transitions (Metlen et al. 2017), and LANDFIRE post-disturbance rules." Additionally, in Appendix C., p. 98 of the EA, the BLM discussed the variability of vegetation regrowth. While the following literature submitted related to this comment provide evidence of understory shrub response after thinning, many studies are from plantations (which are not being managed in this EA) and other forest types or geographic locations, nor do they provide information related to better representation of surface fuel models at given timeframes following thinning. The sources cited do not present any new information or impact the nature of the BLM's response to the commenter's statement.

The **DellaSala et al 1995** article is an opinion-position piece meant to argue for policy direction. Their argument is against clear cuts and none are proposed for this project. Furthermore, **DellaSala et al.** incorrectly frame the position of active management as trying to create "fire-proof[ing]" forests. Much of their argument fails to understand the objective of fuels management is not to fire-proof, but instead mitigates fire intensity, severity and spread. These effects of fuels management impact wildfire risk reduction to our local communities. Quoting from the **DellaSala et al.** article: "the long-range goal of prescribed fire management should be to gradually restore historic fire cycles and habitat mosaics..." This is the long-term goal of this project and the purpose of the small gaps within harvest units. The purpose of the prescriptions in these units is to introduce more un-even aged stand complexity into our forest structure so to create conditions more reflective of low and mixed severity fire regimes (EA 3.5.7) Finally **DellaSala et al.** argue for intensive management in the wildland-urban interface. The Bear Grub project is 100 percent in the WUI boundary from the Rogue Valley Integrated Fire Plan.

Regarding the **Odion et al.** study, their conclusions do not relate to this project for the following reasons: the study area was landscape level at 500,000 hectare or 1,235,526 acres. Areas of impact for this project are small openings less than two acres. Second, the **Odion et al 2004** article did not incorporate two of the three elements of fire behavior, weather or topography. Correlations to the Bear Grub project based on this study are suspect.

		Frost and Sweeny 2000, Huff et al. 1995, Perry D. A. 1995, Hann et al 1997, and Van.Wagtendonk 1996 are used by the commenter to support points that are not contentious.
CN-50	We have several concerns regarding future management implications resulting from these non-commercial treatments; that pre-commercial thinning proposed here could reduce the density levels on these acres (3,470) to a degree that will prohibit future commercial thinning opportunities. Were these future impacts considered?  Non-commercial treatments in the HLB must conform with the management objectives listed on p. 62 of the RMP.	The direction in the 2016 RMP (p. 62) is to "conduct silvicultural treatments to enhance timber values and to reduce fire risks and insect and disease outbreaks." The BLM may have to treat some stands non-commercially depending on stand conditions post-harvest. Pre-commercial thinning provides more growing space and resource allocation to the residual stand, increasing tree vigor. Some stands may not need pre-commercial thinning depending on factors such as natural regeneration, density, stocking levels, etc. Treating stands with thinning allows trees to release and take up additional growth by primary (height-vertical) and secondary (diameter-horizontal). Silvicultural prescriptions consider changes in the potential vegetation based on factors such as aspect, slope, available moisture, and soil type, in addition to species composition and stand density, from page 12 of the EA in Section 2.2.  Lastly, this comment appears to misunderstand the nature of management objectives in the RMP. As stated in the RMP (p. 47), management objectives are intended to describe resource conditions that the BLM envisions, or desires would eventually result from implementation of future actions consistent with the decisions in the RMP. Land use allocations and management direction are designed to accomplish RMP objectives. Management objectives are not rules, restrictions, or requirements by which the BLM determines which implementation actions to conduct or how to design specific implementation actions (Id.).
CN-51	Marking the boundary of the unit is not a buffer. In the past we were given 300' of lighter touch to the big trees only taking the fire prone brush. Will the BLM implement a real buffer of trees between homes and the edge of the cutting?	Trees may have been marked along or near the property boundary with orange (leave tree) paint. The BLM in accordance with the 2016 RMP, "will not defer or forego timber harvest of stands in the Harvest Land Base for reasons not described in the management direction or this appendix." (2016 ROD/RMP, p. 127). Therefor trees are not required to be buffered out as may have been done under previous RMPs.

CN-52	SOFRC has also highlighted missed opportunities	Proposed non-commercial fuel treatments are all maintenance actions of previously
-	to reduce risk to communities in a complicated	treated areas and were originally implemented in strategic locations, prior to local
	landscape at high fire risk to the local community	POD identification efforts. The map in Appendix C has been updated to include the
	and high value natural resources. In addition to	proposed actions, so it now illustrates proposed actions in relation to PODS.
	the prescribed burn treatments you propose,	There are other previously treated areas in the planning area that have not been
	consider:	included in this EA as proposed actions, the prior treatments in these areas are still
	<ul> <li>Development of potential operational</li> </ul>	effective and have low loading fuel profiles. The proposed actions included by the
	delineations (POD)s to help inform the	BLM are those acres that have the greatest need for maintenance actions.
	project;	Regarding retention of chapparal patches, the BLM strives to balance community
	Roadside and ridgeline treatments;	protection objectives with ecological objectives in this complex habitat type.
	Additional fuels treatments that include	Section B.3.4 - Non-Commercial Treatment Prescriptions has been revised to
	Rx fire	address this site-specific prescriptive flexibility. The BLM recognizes larger patches
	<ul> <li>Prioritizing treatments on the extensive</li> </ul>	of chaparral provide important habitat qualities and Gillespie and Stephens (2020)
	BLM managed lands near houses and key	also suggest if retaining smaller patches to group them together.
	ingress and egress roads.	
	Retention of chaparral patches at a minimum of 5	
	to 15 acres in size. Smaller patches were found in	
	the BLM Table Rocks fuels treatments to under-	
	perform for six chaparral associated species of	
	songbirds (Gillespie & Stephens 2020). Designing	
	these patches within and around management	
	will be very important for the extensive areas of	
	noncommercial units.	
CN-53	Historical references (such as those cited in the EA	See page 5 of the Decision Record for the explanation for the selection of
	in Appendix C) support group openings generally	Alternative 3's group selection opening sizes.
	<1 acre, averaging closer to 0.1 acre in dry forest	
	types and we recommend that guidance be	
	followed, despite the allowances of the RMP.	
CN-54	Only Alternative 2 increases the QMD, even if	Alternative 2 (pg.29, Bear Grub EA) actually does not show an increase in QMD.
	only by 2 inches. The lack of increase in QMD	Alternative 3 (pg.31, Bear Grub EA) does however show an increase in QMD after a
	(quadratic mean diameter) post-harvest,	Selection Harvest in the HLB for UTA and LSR dry stands. Because stands do not
	indicates that the largest trees, so important as	increase in QMD immediately after harvest does not mean that the largest trees are
	habitat function and most resistant to wildfire,	being removed. Bear Grub prescriptions are developed to manage an uneven aged
	are not being retained.	stand by balancing diameter distributions (proportional thinning), so it is important

		to not focus on cutting only one size of trees like a typical "thin from below" would.  Please refer to section 3.3.5, Stand Structure, in the Bear Grub EA
CN-55	The EA failed to clearly identify the spatial extent and location of previous timber harvest and noncommercial fuel reduction projects in the planning area from 1990 to the present. This information is important in understanding and analyzing the frequency of logging and manual treatment disturbances.	The BLM analysis was constructed by examining the existing conditions within the project area. The proposed treatments within the alternatives are considered to meet the purpose and need of this EA to achieve the desired conditions on the landscape. Understanding past treatments may have use for informing the trajectory of arriving at our existing conditions, but it does not impact the contemporary analysis in real time.
CN-56	The RMP claims that management activities will increase forest health, reduce fuel loading and future fire severity, yet does not produce evidence or regional monitoring data to support these claims.	Please see section 3.5.2 Methodology and Appendix C.3.2 of the EA, these sections include results from local monitoring of fuel treatment and wildfire interactions and of treatment objective attainment.
CN-57	Stand drying will occur if canopies are reduced to 50% canopy cover or below. The Bear Grub EA calls for canopy cover reductions to as low as 25%, which will certainly dry out forest stands and increase fuel loading.	The BLM acknowledges the potential sheltering effect that canopy has on surface winds and fuel moisture and has accounted for canopy cover effects on fine dead fuel moisture in analysis of stand-level fire resistance. The BLM increased fine dead fuel moisture by 2% for areas with greater than 50% canopy cover (Appendix C.3.2). However, the effects of this on fuel conditions of a thinned versus un-thinned stand is statistically insignificant. Please see EA, Appendix A.1.3.
CN-58	The refusal to analyze connected actions pertaining to artificial reforestation is a violation of NEPA and skews fire/fuel analysis in the EA. Although artificial tree planting is inextricably linked with group selection logging the BLM refused to analyze this connected action to mask the true impact of the group selection logging units in the Bear Grub Timber Sale. SEE Accompanying text for 129-23.	In section 3.5.9, of the EA, the BLM indicated that the moderate-term surface and ladder fuel accumulating account for re-growth of understory vegetation, including the varied effects of reforestation. The BLM has also included an edit in assumptions (EA, section 3.5.3) regarding this and FEIS analysis of reforestation.
CN-59	BLM fails to describe how their fuels treatments will reduce the fuel load on non-forested	"Burning of material (hand piles and underburning) has the potential for detrimental heating of the soil and increased erosion" (EA, section A.1.8, Issue 2)

	reserves, what the impacts of prescribed burns will be on soils or how they will prevent them.	Burning fuels as either a handpile or broadcast burn does have the potential to detrimentally disturb the soil. Detrimental disturbance from burning is limited to a 20% areal extent, along with every other type of detrimental soil disturbance. Management practices the BLM uses to ensure there are no significant impacts to soil resources from burning specifically include: scheduling burning when weather and fuel conditions allow for lower intensity fires, dispersing slash piles across the treatment areas and burning when soil and duff moisture content is high, limiting handpile sizes, only constructing machine piles on already disturbed soils such as landings, and placing erosion control techniques such as waterbars on firelines where the potential for soil erosion is high (Appendix B.1.3, Objective 6).
CN-60	The EA fails to acknowledge or analyze this scientific research in the Bear Grub VMP EA and instead relies on often repeated assumptions without a solid scientific foundation. The agency provides no evidence to support its claim that oak and hardwood communities were significantly more open than the current condition.	The EA (Appendix C.3.3) references the FEIS which cited these references ( <b>Duren et al. 2012</b> , <b>Hickman and Christy 2011</b> and <b>DiPaolo and Hosten 2015</b> ) in this statement "historically, frequent low- to mixed- severity fire interacted with the complex landscape, vegetation, and climate to create and maintain patchy, mixed seral stages of shrubland, woodland, and mixed conifer/hardwood forests, in both open and closed conditions" (FEIS p. 225). The BLM strives to balance community protection objectives with ecological objectives in the complex chapparal habitat type. Section B.3.4 - Non-Commercial Treatment Prescriptions has been revised to address this site-specific prescriptive flexibility. The BLM recognizes larger patches of chaparral provide important habitat qualities and Gillespie and Stephens (2020) also suggest if retaining smaller patches to group them together. Additionally, oak trees are generally not a primary target for removal during non-commercial hazardous fuel reduction treatments. Oak systems historically would have been maintained by frequent fire and proposed actions include maintenance prescribed fire in previously treated areas.
CN-61	The SOP guide language specific to "Mechanical Fuels Reduction and Biomass Removal" is not included in the EA.	"A Synopsis and Updated Guide of the Standard Operational Practices for Upland Soil Productivity in Western Oregon" ("SOP Guide") is not part of Southwestern Oregon RMP management direction. The EA includes required coarse woody debris retention consistent with Dry LSR management direction in Appendix B.1.1, Objective 2.
CN-62	We also asked the BLM to disclose Total Maximum Daily Loads (TMDLs) and Water	Water Quality Restoration Plans (WQRP) have been completed for the West Bear Creek Analysis Area and the Applegate Sub-basin (USDI BLM 2005, 2006) to meet

	Quality Restoration Plan (WQRP) requirements associated with 303(d)-listed waterbodies in the project area.	the requirements of Section 303d of the 1972 Federal Clean Water Act. WQRPs describe how the BLM will meet Oregon water quality standards for 303(d) listed streams on federal lands. As stated in in the EA, p.38, no streams within the Analysis Area are listed as water quality limited for sediment on the Oregon Department of Environmental Quality (DEQ) 303(d) list (DEQ 2012). Several streams within the Bear Grub Analysis Area are listed for temperature and identified in the West Bear Creek TMDL and WQRP, and in the Applegate Sub-basin TMDL and WQRP. However, proposed activities in the Bear Grub project maintain or improve Riparian Reserve stand conditions and are thus consistent with maintaining or attaining the system-potential stream shading targets identified in the WQRPs. Stream temperatures would be maintained because proposed treatments would occur outside the primary shade zone; therefore, stream shade would not be affected.
CN-63	Attached to our scoping comments was a peer- reviewed article by Colombaroli and Gavin (2010) that indicates the past 50 years of logging and road construction in the Siskiyou Mountains have had much greater impacts to sediment loading to watersheds than have wildfire events. These findings are directly relevant to the proposal to construct more logging roads in the Bear Grub project area. Yet the EA ignores them.	The EA acknowledges that roads are a primary contributor of sediment to the aquatic system. This is not in conflict with the findings of <b>Colombaroli and Gavin</b> . The roads proposed for construction in BG are ridge top, upland areas that do not have any connectivity with streams, and therefore would have no potential to increase sediment to streams (EA, section 3.4.6).
CN-64	The 2016 PRMP/FEIS analyzed stream shading over a large planning area, and states that modeling design and constraints overlook multiple factors that may affect stream shading on a local scale (PRMP/FEIS p. 373). EPA recommends the Final EA discuss the project-level effects of outer riparian zone vegetation management on stream shading within the	BLM actions proposed in Bear Grub would not reduce primary shade. Stream shade would be maintained at current levels. No commercial treatments would occur in RRs adjacent to fish bearing streams (EA, section 3.4.4).

	project area (Table 3-7, p. 38). We also recommend overlaying Map 3-1 (p. 37) with the Bear Grub VMP Planning Area and treatment units to better illustrate where vegetation management will occur in regard to fish-bearing streams.	
CN-65	82-7 DW) The BLM failed to obtain or identify Oregon Department of Environmental Quality (DEQ) corroborating reviews and support for the EA claim that there would be "no impact to water quality" in the BGVMP. All three (3) relevant Alternatives in the EA propose to discharge a minimum of 3,400 – 5,200 pounds of sediment into creeks inside BGVMP boundaries. As the representative State agency, DEQ regulates impacts to water quality. It is important that DEQ review and comment on these proposed impacts prior to any project implementation, to insure such a loading does not adversely affect the water quality of the streams, and that these reviews be made available.	The BLM consulted with DEQ during development of the RMP (2016 ROD/RMP, p. 163), and BMPs to maintain water quality were developed. This EA is in compliant with the RMP, includes the appropriate BMPS and PDFs and therefore is in compliance with the Clean Water Act (CWA). ODEQ did not submit any comments regarding water quality concerns from this project.
CN-66	The EA action alternatives fail to identify specific BMPs/PDFs and mapped locations for BMP/PDF implementation for each proposed new road segment and each haul route road segment to decrease connectivity of roads with the stream channel system.	BMPs and PDFs are applied site specifically as conditions warrant.
CN-67	The BLM should have included the helicopter landing locations on a map and their proximity to haul routes available for winter haul.	See Appendix B.3.2, Map B-1.
CN-68	Regarding impacts on Northern Spotted Owls (NSO), the Bear Grub EA states "The BLM did not analyze this issue in further detail because there	The Bear Grub VMP EA appropriately tiered the NSO impact analysis to the 2016 ROD/RMP. A NEPA document 'tiers' to another NEPA document when the prior document covers general matters in a broad context, and the subsequent

	is no potential for significant effects beyond	document narrows the environmental analysis, incorporating by reference the prior
	those already analyzed in the 2016 Proposed	analysis. 40 C.F.R. 1502.28. Tiering is appropriate when it helps the BLM focus on
	RMP/Final EIS, to which this EA is tiered" (A-21).	the issues which are ripe for decision and exclude from consideration issues which
	The entire NSO section of the EA (Section A.1.9)	are already decided or not yet ripe. Id. Agencies are encouraged to tier
	repeatedly attempts to justify BLM's failure to	environmental analyses to reduce repetitive discussions of the same issues. 40
	conduct site-specific analysis by referring to the	C.F.R. 1502.20. A decision based on an EA tiered to an EIS will be upheld where BLM
	2016 RMP. This violates NEPA, which holds that	has taken a "hard look" at the environmental impacts and demonstrates that the
	relying on a broad programmatic analysis to	EIS addressed any significant impacts, or that significant impacts will be eliminated
	inform a site-specific plan ("tiering") is allowed	or reduced to insignificance by mitigation measures. Southern Utah Wilderness
	only when that programmatic analysis actually	Alliance, 182 IBLA 377, 386 (2012) (citing Powder River Basin Resource Council, 180
	includes site-specific data. The RMP contains no	IBLA 32, 47-48 (2010); The Wilderness Workshop, 175 IBLA 124, 132-33 (2008);
	data concerning Northern Spotted Owls specific	Wyoming Outdoor Council, 173 IBLA 226, 235 (2007).
	to the Bear Grub project area.	
CN-69	The BLM should consider a reasonable alternative	In all Action Alternatives, the BLM proposes to reduce hazardous fuels, via non-
	where fuels are reduced in the project area; Small	commercial thinning and prescribed fire across at least 3,400 acres. The thinning of
	trees in overly dense stands are thinned;	dense stands is proposed under all action alternatives for non-commercial
	Remaining mature forests and large diameter	treatments, see section 2.2.2 of the EA. Retention of trees over 20 inches was
	trees (over 20" inches DBH) are retained;	addressed in the EA in Appendix B.6.4. The downgraded and removed NSO habitat
	Downgrading and removal of suitable spotted	is identified in Table A-6 through A-8 of Appendix A.1.9. There is no potential for
	owl habitat is avoided; Existing roads are	significant effects beyond those already elucidated in the FEIS. The maintenance
	upgraded; and Road density is reduced.	and renovation of existing roads for the use as haul roads is a part of the proposed
		action. Under all action alternatives there would be 3.47 miles of road
		decommissioned that are currently not open to the public, but may be used for
		authorized projects. Under Alternative 2 there would be 0.45 miles of new or
		temporary road and under Alternative 3 there would be .83 miles of new and
		temporary road. Under alternative 4 there would be no new or temporary road
		construction. Under all action alternatives there would be more miles of road

ss Workshop, 175 IBLA 124, 132-33 (2008); 226, 235 (2007). poses to reduce hazardous fuels, via nonfire across at least 3,400 acres. The thinning of tion alternatives for non-commercial A. Retention of trees over 20 inches was 1. The downgraded and removed NSO habitat of Appendix A.1.9. There is no potential for dy elucidated in the FEIS. The maintenance he use as haul roads is a part of the proposed here would be 3.47 miles of road ot open to the public, but may be used for e 2 there would be 0.45 miles of new or e 3 there would be .83 miles of new and there would be no new or temporary road construction. Under all action alternatives there would be more miles of road decommissioned than constructed (section 2.3, Table 2-2) In the end, the BLM has included an adequate range of alternatives in the EA. The BLM is required to include a discussion of a range of reasonable alternatives to the which meet the purpose and need, and which have a lesser environmental impact.

		"concise public document" that discusses whether or not an EIS needs to be prepared and provides the evidence for that decision. 40 C.F.R. 1508.9; League of Wilderness Defenders et al, IBLA 2012-190, *6, 2012 WL 6726358 (2012). No specific or minimum number of alternatives is required. 43 C.F.R. 46.310(b); 43 C.F.R. 46.415(b); Native Ecosystems Council v. Forest Service, 428 F.3d 1233, 1246 (9th Cir. 2005); Biodiversity.
CN-70	What efforts has BLM made to engage local stake holders and forest preservation groups in the affected areas (Applegate and Rogue Valleys) as recommended by the Department of the Interior?	Between October 1 and November 1 of 2019 the Ashland Field Office reached out by letter and email to local residents and interested parties to invite comments during the scoping period of the Bear Grub VMP. Between June 11 and July 13 local residents and interested parties were given the opportunity to provide written comments on the EA prior to a decision. On June 23 and June 25, the Ashland Field Office hosted virtual webinars in order to provide clarifying information and answer questions from the public that were asked during scoping and the meeting. The IDT reviewed the written comments received and responded to those that were substantive. (EA, section 1.5)
CN-71	The BLM developed a biased need statement that reflects the BLM's preference for logging both the HLB and LSR land use allocations.	The project's purpose and need was developed based on management direction in the 2016 ROD/RMP (EA, section 1.3); this project carries out that management direction.
CN-72	BLM failed to include in their purpose and need the RMPs direction for Uneven-aged Timber Area (UTA) land use allocations (LUAs) to "[t]reat fuels to improve, enhance, or maintain landscape and ecosystem resilience." (RMP, pg. 69)	The BLM is not required to include every possible management direction for the Harvest Land Base Land Use Allocation. Purpose 4 of the EA, section 1.3, includes the management of activity fuels to modify the fuel profile (i.e. surface, ladder and canopy fuels and heterogeneity) and reduce potential fire behavior and severity.
CN-73	We specifically ask the BLM to take note of 43 C.F.R. 46.110(a), "[Consensus-based management] seeks to achieve agreement from diverse interests on the goals of, purposes of, and needs for bureau plans and activities, as well as the methods anticipated to carry out those plans and activities" and make meaningful attempts to achieve agreement from diverse interests.	The BLM has involved the public in the EA process. (See Bear Grub Decision Record, p. 8, 9) The NEPA is a public process. 42 U.S.C. 4331(a); 40 C.F.R. 1500.1(b); 40 C.F.R. 1501. The BLM shall involve the public in preparing and implementing the agency's NEPA practices. 40 C.F.R. 1506.6. How the BLM involves the public is at the discretion of the BLM, so long as the opportunity for meaningful involvement is provided. 43 C.F.R. 46.305. The BLM, when preparing an EA, "must provide the public with sufficient environmental information, considered in the totality of circumstances, to permit members of the public to weigh in with their views, and thus inform the agency decision-making process." Bering Strait Citizens for Responsible Resource Development v. U.S. Army Corps of Engineers, 524 F.3d 938,

		953 (9th Cir. 2008); Wildearth Guardians, 183 IBLA 165, 171 (2013). The methods of
		doing so are at the discretion of the agency. 43 C.F.R. 46.305.
CN-74	The EA contains either A) erroneous information	The intent of the project location legals, in Table 1-2 of the EA, were to give the
	about the location of management treatment	public a general location of the project. Two fuels units were unintentionally
	units or B) erroneous information about the	omitted from Table 1-2. However, this does not change the analysis completed in
	boundaries of the BGVMP area. To date, the	the EA since the analysis was based on the location of the units identified in the unit
	Council has found at least two treatment areas in	tables, Table B-4 and B-5, the Unit Maps (EA, Appendix B.4.5), and the shapefiles
	Tables B-4 and B-5 of the Appendix that are not	generated in GIS. The legal locations for NC 13-8 and NC 15-8 were added to the
	included as part of the BGVMP Project Areas as	project location Table 1-2 as you requested. In addition, full legals for the fuels units
	identified in Table 1-2 of the EA. BLM must	were added to Tables B-4, B-5, and B-6.
	correct the EA, accurately identify the proposed	
	management treatment units and the project	
	area, and then allow the public time for review	
	and comment.	
CN-75	The EA fails to adequately address the	Socioeconomics was addressed in Appendix A.1.2.
	significance of the BGVMP on the human	See also CN-20.
	environment in and adjacent to Medford	
	Metropolitan Statistical Area (MMSA). CEQ	
	regulations are clear in regard to the BGVMP EA	
	and its obligation to adequately assess the effects	
	on the human environment. Commercial timber	
	extraction from this recreational corridor is	
	inappropriate given that, to a greater extent than	
	more remote areas, BGVMP lands are used by	
	nearby urban and rural populations on a daily	
	basis.	
CN-76	If the projects are integral to meet the ASQ, and	The BLM determines conformance of an action with the RMP by reviewing it against
	the ASQ was determined based on the models	the management direction. It is outside the scope of this project to consider
	from the RMP EIS, then the projects should be	whether this individual project is complying with the RMP models. The appropriate
	compliant with the models to meet the ASQ.	scale for evaluating whether the predictive outputs of the RMP models are being met is at the decadal scale, with a plan evaluation at 5-year intervals (2016 ROD/RMP, pp. 33-34).

		7
CN-77	The BLM should include the requirement to treat 1,700 acres of LSR-Dry to the Purpose 2 and its Need in the EA on p. 8.	To clarify, the BLM is not required to include all management direction from the RMP in a project's purpose and need to make it applicable. The SWO RMP states for LSR-Dry LUA to "apply selection harvest or commercial thinning treatments to at least 17,000 acres per decade in the Medford District." (2016 ROD/RMP, p.74) The temporal and spatial scale are beyond the scope of this individual project; therefore, it would be inappropriate to directly quote this management direction as part of the purpose and need for this project.
CN-78	The EA did not address inappropriate use of ground based and skyline yarding corridors by ORVs as a foreseeable present and future action.	OHV use of ground based and skyline yarding corridors not authorized for motorized use was not included as a foreseeable present or future action because they are not an authorized use. There is currently not a foreseeable action proposed for the use of ground based and skyline yarding corridors to be used as OHV trails. PDFs have been provided to reduce the ability for the inappropriate use of skid trails (EA, Appendix B.1.1, Objective 3).
CN-79	The EA fails to adequately disclose impacts to the human environment as required by NEPA. The trade-offs of high-quality natural forests for the enjoyment of humans (e.g., me) for timber volume has not been discussed in the EA nor in the RMP FEIS. This is a significant impact because it is long term and affects many citizens who have come to depend on these native BLM forests for a quality nature experience. Science has found that humans have a need for quality time in natural forests. The EA fails to provide the decision maker with analysis about lost nature opportunities to the public.	The EA addresses the impacts to the naturalness to eight Recreational Management Areas, which include Extensive Recreational Management Areas and Special Recreation Management Areas, affected by the proposed actions in the Bear Grub Vegetation Management Project area (EA, section 3.8.5).  The forests within the project area have been treated and modified in the past and are currently being enjoyed by individuals seeking a nature experience. There is no reason to believe that continuation of treatments in the same area would change this. See CN-20The proposed timber harvests do not eliminate forests from the landscape. See Appendix B.1.16, Figure B-1.
CN-80	The BLM failed to include a monitoring section in the EA that outlines implementation and effectiveness monitoring plans.	The BLM included a monitoring section in the EA (Appendix B.5) which outlines the details for when and how implementation and effectiveness monitoring would occur.
CN-81	Commercial timber harvest in the planning area cannot be conducted in a manner consistent with the 1937 O&C Act.	The proposed actions are located on revested Oregon & California Railroad (O&C) lands. The O&C Act of 1937 governs management of the O&C lands. The O&C Act requires the Secretary of the Interior to manage O&C lands for permanent forest

The Bear Grub EA fails to consider the need under the O&C Act to maintain stream flows and protect watersheds and instead focuses on timber production above all other values.

production for the purpose of providing a permanent source of timber supply, protecting watersheds, regulating stream flow, and contributing to the economic stability of local communities and industries, and providing recreational facilities (2016 ROD/RMP, p. 5).

The BLM measures its performance under the O&C Act not project-by-project, but in whether BLM's practice of sustained yield forestry is achieving the myriad purposes of the Act across the O&C lands as a whole. It is through the dominant use of timber production, (see Headwaters v. BLM, 914 F2d 1174, 1183-84 (9th Cir. 1990)), and the Act's directive that BLM "sell, cut, and remove" timber on a sustained yield basis, that BLM has authority to strive toward achieving the Act's purposes. While the Act's broad purposes present objectives BLM strives to achieve through its management of the O&C lands as a whole, these purposes or objectives are not discrete, mandatory conditions or duties, and the performance of which are not measured at the site specific, individual timber sale scale. C.f. Norton v. S. Utah Wilderness Alliance, 542 U.S.

55, 64 (2004); Pacific Rivers v. BLM, No. 6:16-CV-01598-JR, 2018 WL 6735090, at \*17 (D. Or. Oct. 12, 2018), report and recommendation adopted, No. 6:16-CV-01598-JR, 2019 WL 1232835 (D. Or. Mar. 15, 2019) (purposes of O&C Act are "not ends in themselves" but "by definition" achieved through sustained yield management). Even if some of the Act's listed objectives— purposes—could be taken out of context and applied at the site-specific, individual timber sale scale, read together in context with all of the listed purposes of sustained yield management reveals that an individual sale could never, taken by itself, achieve all of the Act's broad objectives, leaving the only possible interpretation that the Act's broad purposes are for the O&C lands as a whole. Id.

The Ashland Field Office designed the Bear Grub Vegetation Management Project to conform to the 2016 ROD/RMP which is the governing land use plan for this area (EA, p. 9). The Federal Land Policy & Management Act (FLPMA) requires the BLM to manage public lands in accordance with the applicable land use plan. 43 U.S.C. 1732(a); 43 C.F.R. 1610.5-3(a); Klamath-Siskiyou Wildlands Center, et al. 182 IBLA 199, 207 (2012) (internal citations omitted). The ROD/RMP addresses how the BLM will comply with all applicable laws, regulations, and policies in western Oregon, including the O&C Act (2016 ROD/RMP, p. 5).

CN-82	<ul> <li>The agency failed consider the impact of project activities or to even mention the unique and important values represented by the Wellington Wildlands in the Bear Grub VMP EA. Instead of addressing the issue with analysis, BLM claims that area needs no further consideration in the Bear Grub VMP EA.</li> <li>The assumption that the BLM cannot protect O&amp;C land, such as Wellington Wildlands, for uses other than timber production is</li> </ul>	See CN-22. The BLM cannot comment on pending litigation. The Wellington Lands with Wilderness Characteristics unit was considered in the RMP and was not carried forward for management as an LWC unit in the 2016 ROD, and therefore this area carries no special designation. The Bear Grub VMP was designed to comply with decisions made in the 2016 ROD.
CN-83	unfounded and has been upheld during litigation surrounding the Cascade-Siskiyou National Monument. Ongoing ORV use in the project area is having a	This EA is not proposing any changes to OHV area or trail designations. Project
	continuing unanalyzed significant impact on the human environment and the potential for the timber sale to exacerbate these impacts must be analyzed and disclosed in an EIS.	Design features found at Appendix B.1.1. have been developed in order to mitigate any potential proliferation of unauthorized OHV use as a result of the project. Objective 3 of the PDFs specifically addresses this "Camouflage and block skid trails leading off system roads or radiating from landings by placing woody debris or other appropriate barriers (e.g., rocks, logs, and slash) on the first 100 feet of the skid trail in all ground-based yarding units upon completion of yarding to block and discourage unauthorized vehicle use (TH 19). Also, where material such as logs and other organic debris exists, this material would be placed along the length of skid trails as determined by the Contract Administrator. The intent is to minimize erosion and routing of overland flow to streams and to protect site productivity to ensure successful reforestation by decreasing disturbance (e.g., unauthorized use by OHVs).
CN-84	BLM's stated purpose and need to produce timber volume conflicts with the RMP's management direction and purpose of designating Extensive Recreation Management Areas (ERMAs) and Special Recreation Management Areas (SRMAs).	Management Frameworks for Extensive Recreation Management Areas (ERMAs) cannot restrict the implementation of timber harvest in the Harvest Land Base that is in conformance with the Harvest Land Base management direction. In the development of the RMP, ERMAs were designated to be managed commensurate with other resource uses (ROD/RMP, p. 259), such as the Harvest Land Base management direction. This is consistent with BLM Manual 8320, which states management of Extensive Recreation Management Areas 'is commensurate with

		the management of other resources and resource uses.' Furthermore, this manual
		explains that land use plan decisions for management of Extensive Recreation
		Management Areas will be ' compatible with other resource objectives.' Because
		management for recreation values in Extensive Recreation Management Areas is
		intended to be done in a manner that is compatible with other resource uses, such
		as sustained-yield timber production, designation of Extensive Recreation
		Management Areas would not necessarily conflict with sustained-yield timber
		production. (PRMP/FEIS, pp. 18-19).
CN-85	An important aspect of the trail user experience is	BLM's policy is to manage the visual resources using visual resource management
	of course the viewshed, not just the area	(VRM) and not viewshed analysis. Visual resource management analysis for this
	immediate to the trail. It is difficult to tell from	project can be found in Appendix A.1.6 of the Bear Grub VMP EA. The Jack ash
	the maps provided to what extent the views from	ERMA and East Applegate Ridge Trail ERMA both reside within VRM Class IV. The
	SMDT, J-A, and ART will be affected.	Sterling Mine Ditch Trail SRMA is within VRM Class II, however only a small fuels
		reduction unit is proposed in the SRMA and it meets VRM Class II management
		objectives.
CN-86	The BLM has failed to itemize the subsequent	Visual resource management impacts have been considered but not analyzed in
	visual conditions that would exist for years, and	detail in Appendix A.1.6 of this EA. Visual contrast rating analysis determined that
	decades, after the BGVMP was completed. In	the level of modification to the landscape was consistent with management
	light of its proximity to the Medford Metropolitan	direction for allowable change within the underlying VRM classifications
	Statistical Area (MMSA) and the largest	established in the RMP. VRM accounts for permanent changes to the landscape as
	population center in southern Oregon, Visual	well as short term. All proposed actions have been found to be within the limits of
	Resource Management (VRM) considerations are	acceptable change within the given VRM classifications.
	significantly and highly relevant.	
CN-87	The EA does not identify the field	Visual resource management analysis for this project including KOP locations and
	methodology underlying the assessments, or	the visual contract rating analysis can be found in Appendix A.1.6. All VRM
	the Key Observation Points (KOP's) from	assessments for this project were conducted in accordance with the BLM's VRM
	which the EA's VRM assessments occurred in	Manual 8400, which provides guidance for VRM assessments on BLM lands.
	accordance with BLM Manuals 8400, 8431,	The underlying VRM class for the area near the East Applegate Ridge Trail is VRM
	8410-1 and related FLPMA, and NEPA	class IV which allows for major modification of the existing character of the
	legislation. In light of the proximity of the	landscape (2016 RMP/ROD p.113). This project is not expected to result in major
	MMSA, recreational trails and tourism	modifications to the existing character of the landscape.
	infrastructure, and heavy real estate	
	investment associated with the aesthetics of	
	the area, it is especially important to	

	consider specific evaluations from selected KOPs to identify relevant and specific problem areas.	
	<ul> <li>The EA fails to clearly identify specific locations of KOPs on the heavily used East Applegate Ridge Trail, nor does it clarify the specific visual resource impact (scenic views) that the BGVMP is expected to affect. Please note that the NGO/private sector have an ongoing investment in this trail. It has been funded and staffed with NGO and private sector resources, and continues to be maintained with public resources as well as</li> </ul>	
CN-88	BLM resources.  The Jack-Ash, Sterling Ditch and East Applegate Ridge Trail should be protected by a half mile	The RMP already established the management direction for the SRMA and ERMA which does not restrict non-commercial treatments alongside the trails.
CN-89	non-commercial buffer.  The EA fails to clarify the location, nature and mitigation of expected damages to the heavily-used East Applegate Ridge Trail. Please note that	PDFs were developed and will be adhered to in order to minimize damage to trails as a result of proposed activities. A list of these PDFs is located in Appendix B at B.1.1, Objective 6.
	the NGO/private sector have an ongoing investment in this trail. It has been funded and staffed with NGO and private sector resources,	
	and continues to be maintained with public resources as well as BLM resources.	
CN-90	123-5 DW) The Woodrat SRMA is a 3,875-acre area that "offers access to hiking trail opportunities and serves as a premiere hang gliding and paragliding destination." (Medford	Analysis of the environmental consequences for the Woodrat SRMA has been added to section 3.8.5. of the EA. Section 3.8 of this EA analyzes in detail the impacts to the recreation setting characteristics of the ERMAs and SRMAs in the project area, as provided for in the RMP. Allowable timber harvest within RMAs was
	RMA Frameworks 187.) The RMA Frameworks allow for some forest management within strict guidelines that boil down to allowing only those management practices that do not interfere with	identified in the RMP, and this EA complies with those RMP decisions. Within each of these designated areas, the BLM has established recreation and visitor service objectives and identified supporting management actions and allowable uses (2016 ROD/RMP p 259 and Appendix C.4 of this EA).
	the recreational uses. Again, "recreation and	

	visitor services management is recognized as the	
	predominant land use plan focus," (RMP 259),	
	and yet there is absolutely no analysis in this EA	
	regarding how the agency intends to perform	
	approximately 97 acres of commercial timber	
	harvest and 426 acres of non-commercial harvest	
	in this special management area without	
	adversely impacting it, and while complying with	
	its own direction to prioritize this area for	
	"recreation and visitor services." (EA Appendix	
	B.4.) In fact, the EA just skips this SRMA in its	
	evaluations of environmental consequences to	
	the action alternatives (see list of RMAs impacted	
	and that Woodrat SRMA is missing, and note that	
	"Woodrat Mtn. Gliding Sites SRMA" is a different	
	management area, EA 71.)	
CN-91	The EA makes some assumptions that are quite	All three of the trail systems utilize preexisting, existing prior to the designation of
	concerning. For example, the EA states "Linear, or	the trail, BLM road segments to connect between trail segments or to reach a
	trail based RMAs such as the East Applegate	trailhead. Guidance to establish a no harvest buffer a defined distance off of
	Ridge Trail, Jack Ash and Connector Trails, and	centerline for "all linear trails" was identified in the RMA frameworks for both the
	Sterling Mine Ditch Trail will be analyzed for the	Sterling Mine Ditch Trail SRMA and the Jack-Ash and Connector Trails ERMA (EA,
	trail segments that are designated for trail uses	Appendix C.4).
	and not existing road segments which are used to	By definition, a road is not a trail:
	connect trail segments." (EA 70.) This seemingly	Trail - "A linear route managed for human-powered, stock, or off-road vehicle forms
	innocuous sentence may conceal an alarming	of transportation or for historical or heritage values. The BLM does not generally
	disregard for the efforts behind trail system	manage trails for use by four wheel-drive or high-clearance vehicles."
	development. What does "existing road segments	Road - A linear route declared a road by the owner, managed for use by low-
	which are used to connect trail segments" mean?	clearance vehicles which have four or more wheels, and are maintained for regular
	This is not explained but lends itself to a potential	and continuous use" (BLM MS-1626 Travel and Transportation Management).
	understanding that road segments slated for	As such, the no harvest buffers described in the RMA Frameworks for the 2016
	future trail development may not be protected	RMP, which in the case of this EA are the Jack-Ash, and the Sterling Mine Ditch Trail
	from logging here.	systems, only apply to the segments of the designated trail systems and not the
		road systems (EA, section 3.8.3). There are no route designation changes proposed
		in this project.

CN-92	The logging contractor should be required to post timely notices, at the kiosks at each end of the trail, when they are actively logging.  Furthermore, the trail should be temporarily closed, should the logging pose a danger to hikers along the trail.	Project design features listed in Appendix B.1.1 address the public safety of hikers. "Where operations are present, signs will be placed at access points indicating temporary closure for public safety and removed upon completion."
CN-93	The EA contains no analysis of timber harvest compatibility with recreation objectives, recreation opportunities, and site characteristics for the East Applegate Ridge Trail.	See section 3.8, Issue 7.
CN-94	Treating recreational facilities such as hiking trails as "harvest land base" dedicated only to timber production is simply not consistent with the mandates of the O&C Act.	The analysis in the RMP accounted for HLB and compatibility with the recreation. Land use allocations were determined under the 2016 RMP which designated these areas as HLB.). Both the O&C Act and the RMP provide for both timber harvest and recreation on the harvest land base, the two are not mutually exclusive. The O&C Lands are to be managed "for permanent forest production, and the timber thereon shall be sold, cut, and removed in conformity with the principle of sustained yield for the purpose of providing a permanent source of timber supply, protecting watersheds, regulating stream flow, and contributing to the economic stability of the local communities and industries, and providing recreational facilities" (2016 ROD/RMP, p. 5).
CN-95	The EA also does not acknowledge known and documented impacts of increased traffic on dust, noise, and resident quality of life. The final sentence of this section suggesting there is "no potential for the increased traffic from haul to have significant effects on public safety" is simply not true.	The distance between units would reduce the amount of traffic that would occur in any one area <b>reducing</b> the potential for an effect on public safety. There are 5 exit points from BLM roads onto the paved County roads where timber haul would occur. These exits are China Gulch Road, Forest Creek Road, Griffin Creek Road, Sterling Creek Road and Wagner Creek Road.  Use of multiple exit points would not occur all at once but occur as the timber harvest moved into each group of units. The exit point and accesses would thus reduce the number of haul vehicles at any one point and minimize impacts to public safety. Traffic, noise and dust would be impacted only while the removal of lumber is occurring and would only cause a temporary increase. (EA, A.1.7, Issue 1)
CN-96	The EA fails to identify the locations of road decommissioning despite BLM recommendations to reduce road density in the BGVMP and associated watersheds.	The Bear Grub EA identifies 3.74 miles of road for decommissioning (long term closure). Currently the roads are not open to the public but may be used for authorized projects. See Bear Grub VMP EA, Appendix B.2.6, Table B-3, for roads identified for Long Term Closure. This will not reduce road density. By definition,

		decommissioned roads in the Southwest Oregon 2016 RMP pg. 311-312:  Decommission (long-term) —The road segment will be closed to vehicles on a long-term basis but may be used again in the future. Prior to closure the road will be left in an erosion-resistant condition by establishing cross drains, eliminating diversion potential at stream channels, and stabilizing or removing fills on unstable areas. Exposed soils will be treated to reduce sediment delivery to streams. The road will be closed with an earthen barrier or its equivalent. This category can include roads that have been or will be closed due to a natural process (abandonment) and may be opened and maintained for future use.
CN-97	Since it takes 60-80 years for firs and pines to grow to full size, how can we harvest sustainably from our arid, slow growing forests every 20 years and still expect to harvest more wood in the future? According to the EA, the Basal Area of the logged forests will decrease by as much as half. In what year will continued harvesting become unsustainable?	Nowhere in the Bear Grub EA does the BLM claim that forests will be harvested every 20 years or that these tree species grow to full size in 60-80 years. The EA does, however, predict that Alternative 2 would have basal areas reduced by as much as half. The BLM is implementing management actions in the Bear Grub EA that are consistent with the purpose of "providing a sustained yield of timber" in the 2016 SWO RMP (pp.21-22).
CN-98	In our timely scoping comments, we asked the BLM to analyze and disclose the number of large diameter trees (greater than 20" DBH) proposed for logging.	There are no requirements that mandate the BLM to disclose the precise percentage or number of trees marked in proposed harvest units for the Bear Grub EA.  Klamath-Siskiyou Wildlands Ctr. v. Gerritsma, 638 Fed. App'x 648, 650-51 (9th Cir. 2016) (memorandum disposition) (rejecting a NEPA challenge to BLM Medford timber project and finding that BLM "is not required to set forth exact locations and numbers of trees that would, or might be removed").
CN-99	<ul> <li>Is there going to be tree planting in the project area? If so, why is it not disclosed in the EA?</li> <li>The EA fails to analyze BLM's future plans for possible tree planting in the project area. This omission demonstrates a failure to fully disclose the environmental impacts of the Bear Grub Project.</li> <li>The EA fails to address replanting and other post-harvest revegetation activities</li> </ul>	Tree planting or "replanting" will depend on post-harvest stand conditions, tree planting is considered as a foreseeable action that is described in Appendix C (pg. 92) of the Bear Grub EA.  In the FEIS, the BLM incorporated post-harvest tree planting into the vegetation modeling and subsequent post-harvest structural stages (FEIS Appendix C), thus the FEIS analysis of structural stage resistance to stand-replacement fire, which this analysis tiers to (see Methodology) accounts for presumed post-harvest replanting. Additionally, the moderate-term surface fuels and ladder fuels accumulation have accounted for re-growth of understory vegetation, including the varied effects of reforestation within gaps (EA, section 3.5.3)

	including their contribution to fuel loading and future fire behavior.	
CN-100	AFRC urges the BLM to broaden and diversify their thinning prescriptions from the typical "thin from below" based on diameter, to thinning throughout the diameter range, and using group selection/gap creation.	The Bear Grub silvicultural marking guidance aims to broaden and diversify thinning prescriptions through "proportional thinning" rather than "thinning from below". "The removal and retention of all age and size classes (proportional thinning) helps achieve the stated RMP objectives for the UTA and LSR land use allocation" (pg.27 Bear Grub EA). "Group selects would be applied to 30% of the unit acres in HLB-UTA and 25% in LSR-dry to promote multi-age stands (multi-layers). These group select sizes will differ depending on LUA to promote diverse stand structure (multi-layers)" (pg.30 Bear Grub EA).
CN-101	More information is needed regarding the harvesting of timber. Timber tallies are essential information for members of the public. Also, further clarity regarding marking of trees is needed. Markings on trees should indicate which trees will be cut, for each alternative.	NEPA does not require BLM to set forth exact locations, numbers, and size of trees to be removed or similar precise numbers. The project does not log any tree over 36" DBH that was established prior to 1850, as required by the 2016 ROD/RMP (p. 68). In the EA, Appendix A.1 gives the PDFs to be used when marking and Appendix B.3.3 through B.5 describe the prescriptions to be used when marking.
CN-102	Must all of those board feet come from mature or near-mature trees? There are many more options these days that make small diameter timber harvest economically viable. If the small-diameter conifer trees and non-target species could be turned into woodproducts, such as OSB engineered wood, rather than just being burned, that would be a win-win. The US ForestService has had some success in this field. A good description of the USFS programs to monetize small-diameter timber is located at: https://www.fpl.fs.fed.us/documnts/fpmu/sd_success_stories.pdf	All board foot volume that results from harvest would come from conifer trees >8 inches diameter at breast height. The Bear Grub EA considers using alternative management activities (small-diameter timber harvest) that is similar to those referenced by the USFS document located at https://www.fpl.fs.fed.us/documnts/fpmu/sd_success_stories.pdf , for management of small diameter material ( <8 inches diameter at breast height) under the "Non-Commercial Treatment Prescriptions" found in Appendix B.3.4 of the EA "Whole trees or tree-tops yarded to landings and limbs removed and piled at the landings may be hauled away as biomass or sold as firewood."
CN-103	Stands in the Bear Grub project area have been previously harvested using commercial thinning prescriptions in the last 15-30 years or less. Tree growth since that time, simply has not been sufficient to justify another harvest.	The BLM manages forests when stand conditions warrant treatments based on the professional judgement of a forester. Unexpected natural disturbance events and their effect on forests condition, such as high periods of drought induced tree mortality, may warrant more frequent harvest intervals. There is no set harvest

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		return interval that the 2016 RMP directs for each forest stand in the Harvest Land Base in the Bear Grub Project Area.
CN-104	Given the dry, marginal nature of these forests, we believe that continued timber production will reduce productivity in the long term. In the Applegate Watershed this could permanently or semi-permanently convert forested habitats into hardwood forest, woodland and/or chaparral. These effects were not analyzed in the Bear Grub VMP EA or in the 2016 RMP.	The BLM follows a Timber Production Capability Classification (TPCC) system, in which all BLM lands are defined into different categories based on their ability to sustainably produce timber or not. No areas within Bear Grub receiving commercial treatments are identified as being unsuitable for sustained-yield timber production. The BLM's TPCC handbook defines these classifications and is cited on pg.152 of the Bear Grub EA.
CN-105	Gap size proposed in proposed in the Bear Grub Timber Sale is not within the range of variability. See accompanying text for 129-24.	This comment is challenging the management direction to incorporate group selection (gaps) from the 2016 SWO RMP that states "Do not create group selection openings more than 4 acres in size" (pp. 68 and 72). All proposed Bear Grub harvest units follow the gap size (group selection) size range that is directed from the 2016 SWO RMP.  Due to variable stand conditions in the Bear Grub project area, not all stands can be treated to their maximum group selection size as allowed by the RMP. There are several reasons why group selection openings would vary from one stand to another. The selected alternative proposes a wide range of gap sizes to accommodate these variable stand conditions. For example, smaller group select openings (on average less than 1 acre), are proposed in several stands that have a higher number of trees per acre that were established prior to 1850 and are greater than 36" DBH. Also, because some stands have more than 2 trees per acre of this age and size per acre, incorporating large group selections of up to 4 acres in these stands would compromise the 2016 RMP group selection definition.
CN-106	Reference conditions identified in the Bear Grub Timber Sale do not reflect the best available science surrounding reference ecosystems in the Applegate Foothills.	This comment is challenging that reference conditions used in the 2016 SWO RMP is not the "best available science". The Bear Grub EA (pp.23-24) identifies the same reference conditions, described as stratified structural stages in the 2016 SWO RMP. "The stratified structural stage GIS data was derived from the 2016 Proposed Resource Management Plan: Final Environmental Impact Statement (Appendix C Vegetation Modeling) and from the Landfire Biophysical Settings Layer" (pg.21, Bear Grub EA).  One of the references provided was <b>Taylor and Skinner 1998</b> which was referenced in the FEIS, which this EA is tiering to.

		Hosten et al, 2007; Muir, P and Hosten P(a); Muir, P and Hosten P(b); Muir, P and Hosten P; DiPaolo and Hosten 2015; and Duren and Hosten 2012 are references that describe changes in Shrubland and woodland vegetation in Southern Oregon or does not describe site specific conditions of the Project units in the Bear Grub EA. The Bear Grub EA proposes forest management of conifers on productive land and not unproductive lands, like shrubland and woodlands. The BLM follows a Timber Production Capability Classification (TPCC) system, in which all BLM lands are defined into different categories based on their ability to sustainably produce timber or not. No areas within Bear Grub receiving commercial treatments are identified as being unsuitable for sustained-yield timber production. The BLM's TPCC handbook defines these classifications and is cited on pg.152 of the Bear Grub EA.  Hickman and Christy, 2011 is a report that covers a broad geographical area of Central Southwest Oregon and does not describe site specific conditions of the Project units in the Bear Grub EA.
CN-107	Commercial harvest in the planning area will increase susceptibility to high levels of bark beetle mortality.	The Bear Grub EA does not attempt to claim that timber harvest will reduce tree susceptibility from "bark beetle" infestations. There are several types of bark beetles in the forests of the Applegate valley, and it is unclear from the comment which bark beetle they are referring to. The flat-headed fir borer is not a bark beetle. Bear Grub commercial harvest prescriptions are developed to reduce the likelihood of insect mortality by reducing stand densities (Selection Harvest) and the abundance of susceptible species like Douglas-fir, while retaining species (i.e. Ponderosa pine) with greater resilience to beetle related mortality. The Bear Grub EA emphasizes that species composition is also an important factor that determine the level of tree susceptibility from beetle related mortality, then just stand structure and stand density alone. "As mentioned earlier in this section, the overabundance of mid-closed forests and the relatively high percentage or composition of Douglas-fir trees vs. more shade intolerant species in the Bear Grub Project Area have left these forests in a more vulnerable condition to drought, fire, and insects" (pg. 25, Bear Grub EA).  The following research (below) was submitted by members of the public during the EA comment period. The BLM reviewed and considered all of these readings during the EA process for the Bear Grub VPM. However, every research article supplied addresses forest types, forest conditions, and/or insect or diseases that are not the

same as those in the Bear Grub Project Area. The referenced materials below are documents that addresses a scientific study in a different forest type (Analysis Area) then what is proposed in the Bear Grub EA. The Bear Grub EA (pg.92, Appendix C) is proposing forest management activities in the southwest region of Oregon, in which tree species (vegetation) differ from those described in the following document. The Bear Grub EA analysis does not address this issue because it is a much different forest condition/environment in the local Project Area. (Santoro et al., 2001)

Rocky Mountains (Curculionidae: Scolytinae) (MPB; Dendroctonus ponderosae), (DFB; Dendroctonus pseudotsugae), and spruce beetle (SB; Dendroctonus rufipennis); (Six. et al., 2018) Rocky Mountains-(MPB; Dendroctonus ponderosae); Sanchez-Martínez 2002) Southwest U.S. Arizona (Coleoptera: Curculionidae, Scolytinae); (Goyer et al., 1998) Southeast U.S.- (Coleoptera: Curculionidae: Scolytinae); (Paine and Baker 1993) Rocky Mountains-(MPB; Dendroctonus ponderosae), (Dendroctonus frontalis); (Hagle and Schmitz,1993) Pacific Northwest- (Laminated and Armillaria root rot); (Hughes and Drever 2001) Pacific Northwest- (Dendroctonus ponderosae) Lodgepole pine; (Hindmarch and Reid 2001) Alberta, Canada- (Coleoptera: Curculionidae, Scolytinae) Lodgepole pine; (Cronin, Turchin, Hayes and Steiner 1999) Southeast U.S.- (Coleoptera: Curculionidae, Scolytinae); (Campbell 2008 FEM) Sierra Nevada mtn., CA-Ponderosa pine plantations; (Wilson et al, 2007) Young Douglas fir plantations and wildlife response; (Roland 1993) Boreal Forests of Eastern Canada-Tent Catepillers. The Science and Myths Behind Managing Forest Insect "Pests", also known as the Black Report (Black, S.H. 2005), is often submitted by commenters to support the opinion that there is no evidence that logging can control bark beetles or defoliators once an outbreak occurs and in the long run could increase the likelihood of epidemics. The Black Report was reviewed by Forest Health Protection Entomologists from Region 6 of the U.S. Forest Service in November 2005, who concluded that the report contained many erroneous statements that were not even supported by the report's cited literature and included many citations taken out of their proper context. The Black Report was reviewed by BLM silviculturists who concurred with the findings reported by Region 6 Forest Service entomologists. Many papers cited in the report support BLM's approach to managing forests to prevent bark beetle epidemics.

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A recent paper, "The effectiveness of vegetation management practices for prevention and control of bark beetle infestations in coniferous forests of western and southern United States (Fettig et al., In Press), reviews tree and forest stand factors associated with bark beetle infestations and analyzes the effectiveness of vegetation management practices for mitigating the negative impacts of bark beetles on forests. The review draws from the examination of 498 scientific publications concerning the topic referenced above and other related topics. Fettig et al. reports that native tree-killing bark beetles are a natural component of forest ecosystems and periodic outbreaks will occur as long as susceptible forests and favorable climatic conditions exist. Recent epidemics of some native forest insects have exceeded historical records and management to reduce stand or landscapelevel susceptibility must address factors related to tree density. Increased competition among trees for water, growing space, and nutrients causes trees to become stressed and compromises their resistance mechanisms, thus increasing their susceptibility to bark beetle attacks. The report concludes that while gaps do exist in information available for some forest cover types and common bark beetle species, thinning as a preventive measure to reduce the amount of bark-beetle caused tree mortality and its effectiveness is supported by scientific literature for most forest cover types including ponderosa pine and Douglas fir forests, which are the primary focus of concern for bark beetle infestations in the Bear Grub analysis area. Ruediger 2017B Squishybug – The article describes the impacts and protocols of a beetle infestation salvage harvest authorized under a Categorical Exclusion and would not contribute additional information to the decision maker. Bear Grub VMP is an EA analyzing fuels and timber harvest treatments. We have surveyed numerous timber sale units Members of the public during the EA comment period submitted a list of 14 trees utilizing and increment borer to age a very small that they believe needed retention based on age or diameter requirements stated sampling of trees in the 30"-45" DBH diameter in the Bear Grub EA (Appendix B.3.5). Of the 14 trees, only 7 were identified by the public as being ≥36" inches DBH and established prior to 1850, the retention criteria class. We found numerous trees in the small of the 2016 RMP (p. 68). The BLM conducted a reinspection of the identified units

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	sample we have taken that both exceed the upper diameter and age limit. We have also found trees under 36" DBH that clearly exceed the age limit and should not be removed.	to verify the 7 trees in the field, based on the location description provided by the public. The reinspection found: One tree identified was located on the edge of a gap and even though it was originally marked for harvest the inspector could see that the surveyors had remarked it with black paint to identify it for retention. The coordinates given for some of the trees identified by the public were outside of harvest units. The reinspection of one unit that had not yet been marked had a 40-inch Douglas-fir that was in the unit, the inspector marked it for retention. No trees marked for harvest in the identified units were found to be over 36".
CN-108	The BLM's proposal to manage LSRs primarily for timber production runs afoul of the RMP and is a significant action necessitating completion of an EIS for the Bear Grub timber sale.	The BLM states a "Purpose and Need" in section 1.3 of the Bear Grub EA that describe the intent of forest management in the Dry-LSR or non-HLB (harvest land base). Timber production is not the primary management direction in the non-HLB. Refer to pg(s).70 and 74 of the 2016 SWO RMP.
CN-109	Clearcutting (group selection logging) on up to 25% of treated LSR stand would preclude recovery of LSR stands, which currently provide NSO foraging habitat, for decades. This result violates the RMP.	The 2016 RMP gives management guidance to incorporate group selection up to 25% in LSR stands. The treatments proposed within LSR are consistent with the 2016 RMP in that they are designed so as to not delay development of NRF habitat by greater than 20 years (2016 ROD/RM), p. 72). This is covered in section 3.3 of the EA.
CN-110	Previous timber sales should be compared to predictions, models and analysis in the applicable EAs and used to monitor results and demonstrate compliance or a lack thereof with previous NEPA analysis.	The BLM performed more recent data collection to address current conditions of forest stands in the Project Area, then just simply relying on previous timber sales that could be outdated. Not all timber stands proposed in Bear Grub have had previous timber sales, so all stands in the Project Area needed to be inventoried and run through growth and yield models. "Stand-level inventory plot data was collected and was processed for input into ORGANON Growth and Yield Model (Hann 2013). Once entered, existing stand conditions were modeled through a series of harvest or cutting scenarios, whereby a diversity of tree size classes were retained and removed (proportional thinning trials)" (section 3.3.2, Bear Grub EA).
CN-111	Please explain how the BLM got from the estimated volume per acre number to the ASQ outputs in Table 3-1.	Section 3.2.1 of the EA has been revised to give a more detailed explanation as to how the ASQ outputs were developed and to provide updated numbers utilizing cruise data.

CN-112	The BLM failed to analyze and disclose the impacts of the Bear Grub timber sale on Timber Production Capability Classification (TPCC) "slope gradient" fragile soils that present a "high potential for surface ravel."	"This issue was considered but not analyzed in further detail because the design of the timber sale, through the use of helicopter, cable yarding, and temporary road placement, greatly reduces the potential for surface erosion and impacts to slope stability. PDFs in Appendix B.1.1 also address slope stability and erosion issues associated with FG soils." (Bear Grub EA, Appendix A.1.8) No areas within Bear Grub receiving commercial treatments are identified as being unsuitable for sustained-yield timber production. All areas identified under the fragile suitable category in the commercial treatment area, also known as restricted (see maps added to appendix A.1.8), will not have any significant impacts from commercial harvest in line with analysis in the 2016 RMP and TPCC handbook (1988).
CN-113	The BLM must discuss the agency's methodology for logging on TPCC lands and how this interacts with the BLM's interpretation of the O&C Act (43 U.S.C. §1181(f)) and its guidance regarding "annual sustained yield capacity."	The methodology for logging is discussed extensively throughout the EA. TPCC classifies all BLM lands into categories based on their ability to sustainably produce timber, which is further defined in the TPCC handbook cited in this EA.
CN-114	The BLM's refusal to disclose data, analysis, or any information regarding TPCC FG soils is a violation of NEPA and the TPCC handbook.	The EA is to "Briefly provide sufficient evidence and analysis for determining whether to prepare an EIS or a finding of no significant impact. 40 C.F.R. 1508.9(a)(1). Not all background information is required to be part of the NEPA document. 40 C.F.R. 1502.1.  The TPCC handbook makes no statement regarding disseminating information to the public. Documentation described within the handbook is for internal quality control purposes during the initial mapping of BLM lands using the TPCC system. No additional mapping was made to the TPCC during field inspections of the Bear Grub commercial project area. Instead, field site inspections confirmed previous mapping and commercial treatments are avoided in areas determined to be non-suitable.
CN-115	The BLM does not disclose where access, exit roads are located, what roads will have maintenance, yarding corridors, where or what the underlying TPCC soils are that may be effected.	Maps have been added to the Bear Grub EA detailing what TPCC soils designation is underlying roads if any. Maps already included in the EA have all required disclosures with regards to transportation. Corridor locations are selected by operators and then must be approved by BLM sale administrators prior to use. Because there are no 'fragile non-suitable' TPCC categories of soil within commercial treatment units, and proper PDFs are applied to all yarding activities, there will be no yarding corridors that cause significant impacts to soils resources.
CN-116	The cumulative impacts of landings, ORV routes, and skid trails, when combined with the	Refer to section 3.4.8, cumulative effects for the contribution of sediment to streams due to soil erosion.

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	significant existing impacts of the extreme road density must be quantified and disclosed in the forthcoming NEPA document.	
CN-117	The Bear Grub EA contains no acknowledgment, analysis or data concerning the location, soil types, slope, or impacts associated with temporary road construction.	The Bear Grub EA maps the location of all proposed temporary roads. The impacts associated with temporary roads are effectively mitigated through appropriate application of BMP's listed in the EA. Furthermore, all impacts from any detrimental soil disturbances including temporary road construction are limited in their areal extent. All other information regarding soil type and slope are publicly available through other sources and are not required to be disclosed in this EA.
CN-118	Is the BLM aware of the Golden Eagle Family located on the north/northwest side of Woodrat Mountain?	Golden eagles are known to use habitat throughout the Applegate River valley including portions of the planning area. No golden eagle nests have been documented within the planning area. If a golden eagle nest is located near a proposed treatment unit appropriate seasonal restrictions and nest site protections will be applied. (EA, Appendix B.1.4, Objective 2)
CN-119	What effect would group selection logging have on listed bird and aquatic species who are dependent on this forest?	Effects of group selection logging on ESA listed bird species (only the NSO meets this definition) have been disclosed in Appendix A.1.8, Issue 1, of the Bear Grub EA. Effects to coho salmon habitat can be found in section 3.4.
CN-120	Has an assessment of migratory bird presence been performed?	No. Such an assessment is not required.
CN-121	The agency planners were requested to disclose the presence of "critical habitat" for Northern spotted owls and coho salmon in the project area.	See page 74 and 76 of the Biological Assessment For Medford BLM FY20 Batch of Projects (located in ePlanning Bear Grub VMP site) for maps of NSO NRF and CHU overlaid on the treatment units.  The Bear Grub VMP EA identified the location of coho salmon critical habitat within the planning area in section 3.4.4.
CN-122	The BLM failed to analyze the impacts to neotropical bird populations while making reference to a generic PDF and refuses to disclose whether it will abide by this "recommendation" or to analyze what impacts will result should it elect not to follow its own recommendation.  The potential effects on migratory birds is not addressed at all, let alone in detail. This omission is justified on p. A-24. Clearly, assessment of	The BLM discloses the effects of the proposed projects on migratory birds and bird species of conservation concern (BCC) in the EA (Appendix A.1.9, Issues 2, 3 and 4). An explanation of why the PDF provides the BLM flexibility to burn when conditions are optimal is provided in Appendix B.3.4, under Natural Hazardous Fuels Reduction.

	impacts can be done, and should be done, on other than a regional level.	
CN-123	EA also fails to disclose why the project is "likely to adversely affect" spotted owls and their habitat. (EA, 75).	"The BLM has determined the proposed actions, when considered at the project scale, may affect, and would likely adversely affect (LAA) spotted owl critical habitat because the proposed actions result in a measurable removal of (NSO NRF and dispersal habitat, which are considered) essential physical or biological features (PBFs)." (FY 20 Batch BA p.49)  The BLM has determined the removal of 381 acres of dispersal-only and 1,156 acres of NRF habitat may affect, and would likely adversely affect (LAA) spotted owl critical habitat because it would result in a measurable removal of an essential physical or biological feature. (FY 20 Batch BA p.47)
CN-124	EA fails to disclose the location of NRF stands in the HLB and the LSR that the BLM intends to downgrade or remove. (EA, 64).	See Map 1 and Map 3 (pages 74 and 76) of FY 20 Batch BA.
CN-125	The BLM improperly tiers to the FEIS of the RMP as a surrogate for site-specific analysis of impacts to the twenty-five historic owl sites within the Bear Grub project area.	The proposed project is located within the provincial home ranges of 25 known NSO sites. In the past 2 years (2018 and 2019), none of the known sites in the Analysis Area had a pair of NSOs. None of the sites had resident or pair status within the last two to 10 years. The reduction in nesting-roosting and foraging habitat (5-6%) would occur outside currently occupied owl sites, and if any new sites were to become occupied, the BLM would modify treatments and follow guidance from the USFWS if future protocol surveys determine NSO occupancy status within 1.3 miles of treatments in habitat. Therefore, this project does not have the potential to cause incidental take of spotted owls from timber harvest. In addition, this project would not result in substantially different effects than what was analyzed for in the FEIS, to which this EA tiers, and there is no new information that would substantially change the conclusion reached in the FEIS (EA, Appendix A.1.9, Issue 1).
CN-126	The BLM did not analyze in detail the effects of the non implementation of recovery act 10 and 32 of the NSO Recovery Plan on NSO.	In an effort to reduce effects to NSOs from barred owls, Recovery Action 10 and Recovery Action 32 are being implemented as stated in the following text from the FY 20 Batch BA (p. 51):  The BLM worked to meet the intent of Recovery Action 10 in the projects in the Bear Grub project by planning the project to minimize adverse effects to NSO. This included staff wildlife biologists and silviculturists working together to design treatments that would not result in an incidental take determination by the Service

and be consistent with the SWO RMP/ROD (USDI BLM 2016a, pp. 30, 127). Spotted owl sites are being surveyed to protocol and if spotted owls are located, the District intends to drop or modify treatment units to reduce potential adverse effects to spotted owls.

The BLM is also a collaborator in Recovery Actions that address barred owl issues, such as the implementation of Recovery Action 32 recommendation. The intent of Recovery Action 32 is to maintain the older and more structurally complex multilayered conifer forests on federal lands in order to not further exacerbate the competitive interactions between spotted owls and barred owls. Management Direction in the SWO RMP/ROD (USDI BLM 2016a, p. 71) directs "protection" of structurally complex forests specifically identified in the stand level mapped LSR (RA32)

The following literature citations were reviewed in an effort to more thoroughly respond to this comment:

### Anthony R.G. 2013

This study concludes that thinning generally has negative effects on the abundance of prey species favored by NSOs. Given the limited acreage targeted for thinning by this project, such effects would be expected to be minimal.

## Tilman and Lehman 1997

The topic covered in this material is extinction and population dynamics. This level of population assessment and study is beyond the scope of this NEPA process.

## Tilman.etal.1997 --- Non-substantive

This study finds a correlation between plant diversity and overall species richness within an ecosystem. The Bear Grub project is not expected to reduce plant diversity.

### Wiens.etal.2014

An examination of the interplay between NSOs and barred owls. This paper doesn't examine in fine enough detail the relationship between habitat patch size and NSO/barred owl occupancy/interaction to provide an analytical underpinning for further analysis in the EA.

# Courtney et al. 2004

Similar reports have come out in the intervening 16 years since the publication of this report with more up to date information.

# Gaggiotti and Hanski 2004

		The topic covered in this material is extinction and population dynamics. This level of population assessment and study is beyond the scope of this NEPA process.
CN-127	The BLM must review its proposed actions to determine whether or not special Pacific fisher occupy or use the affected area or if habitat for such species could be affected by the project, and must modify, relocate, or abandon proposed actions that contribute to the need to list Pacific fisher under the ESA.	The BLM analyzed all suitable forest habitats within the project areas as being used by Pacific fisher. An analysis appears in section 3.7 Issue 6.  The following literature citations were reviewed in an effort to more thoroughly respond to this comment:  Zielinski 2004: Examines resting habitat selection by fisher noting preference for forest stands with large trees (46"+/- 17" (mean+/- SE), large snags, dense canopy cover. The Bear Grub project will retain or create snags to meet the RMP requirement and does not target large trees. Canopy cover will be reduced in some treatment units but be retained across the majority of the landscape within the project area.  Zielinski 2006: Examines the use of landscape suitability models to reconcile conservation planning for fisher and northern spotted owl. Affirms that some habitat components are shared in common by these 2 forest predators. This sort of landscape level model implementation is beyond the scope of the Bear Grub EA.  Sterling Sweeper EA: Fisher analysis for this EA also used court case reference used in Bear Grub EA (KS Wild v. US BLM, Case No. 06-3076-PA, Order and Judgment 9/10/2007). (EA, section 3.7.3)
CN-128	Also, on p. A-24, BLM states "The various proposed alternatives would not yield different outcomes in terms of impacts on tropical migratory bird species at the regional scale. This examination leads to the conclusion that there is no potential for significant effects." There is no way to know if the outcomes would be different or not, given that the outcomes have not been explored. Even if it is the case that the proposed alternatives would not differ in effects on bird populations, no difference in their effects does not equal no effects. It just means they would all have the same effect, which has not been addressed. At all. One cannot logically conclude NO effect from SAME effect.	There is no attempt to equate "No effect" with "Same effect". The analysis merely concludes that the scale of analysis appropriate to this suite of species is regional rather than local and thus the effects from this local project would not be significant at a regional scale. A separate conclusion is that the effects would not differ between Alternatives.

• Another item on n. A.24 states RIM will	The following was added to Appendix B.3.4: When practicable, prescribed fire
•	treatments would be carried out in Fall or Winter, rather than spring, to avoid
<u>.</u>	disturbance or mortality to spring nesting birds and native pollinators. The ability to
	only burn in the Fall and Winter will be dependent on the availability of time and
	personnel and weather conditions. If prescriptions and personnel do not allow for
	fall burning the BLM may need to conduct prescribed burning in the Spring.
•	Tail burning the belief may need to conduct prescribed burning in the Spring.
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	Pacific Fisher are a Bureau Sensitive Species (BSS) across the Medford BLM District.
Fisher habitat is not grounded in good science.	Surveys are not generally required for BSS. The use of NSO NRF habitat as a proxy
On p. 62, the EA states, "Field surveys have	for fisher habitat has legal precedence, as identified in 3.7.3. Wildlife staff have
shown that spotted owl NRF habitat can	assessed all proposed treatment units and those classified through this process as
contain similar decadent attributes or	meeting the definition of NSO NRF habitat would by definition contain habitat
structural elements that fisher use for denning	components of importance to fisher (e.g. large, older trees with deformities and/or
and rest sites." There is no citation to these	nest structures, mistletoe clumps, large limbs as well as multiple layers of canopy
field surveys, nor any presentation of the data	and down wood).
from the surveys, just this general assurance.	
Likewise for the statement on p. 62, "Habitat	
classified as (NRF) by these generally possess	
the vegetative and structural components	
important to fishers for their life cycle	
functions"	
<ul> <li>A court case is cited, but no meaningful</li> </ul>	
scientific studies. The proxy habitat approach	
critical for fishers, and also whether some	
	Fisher habitat is not grounded in good science. On p. 62, the EA states, "Field surveys have shown that spotted owl NRF habitat can contain similar decadent attributes or structural elements that fisher use for denning and rest sites." There is no citation to these field surveys, nor any presentation of the data from the surveys, just this general assurance. Likewise for the statement on p. 62, "Habitat classified as (NRF) by these generally possess the vegetative and structural components important to fishers for their life cycle functions"  • A court case is cited, but no meaningful scientific studies. The proxy habitat approach would only be valid if it was known what elements of NSO habitat specifically were

	other critical element was absent from some	
	NSO areas. Correlation has its uses, but a	
	modest correlation leaves open a great deal of	
	room for distinct differences.	
CN-131	The EA summarizes published research that	The following is a summary of literature citations provided:
	fishers use large diameter trees for life history	Zielinski et al., 2004 is informative on this topic. Here is a summary of management
	requirements. In addition, two studies in	implications as quoted from this publication:
	California showed that large diameter trees were	"Based on our results, managers can maintain resting habitat for fishers by favoring
	preferred for denning and resting by fishers.	the retention of large trees and the recruitment of trees that achieve the largest
	Zielinski et al., 2004. J Wildlife Mgmt 68(3):475-	sizes. Maintaining dense canopy in the vicinity of large trees, especially if structural
	492	diversity is increased, will improve the attractiveness of these large trees to
	Higley & Matthews, 2007. USFWS Final report	fishers."
	Project #2006-FISHER-04	The use of NSO NRF habitat as a proxy for fisher habitat is an effective mechanism
		to accomplish this management outcome.
		Higley & Matthews does not speak to the issue of habitat use. This Final Report on
		the use of PIT tags and cameras in population assessment of fishers is informative
		on those topics but does not address habitat selection.
CN-132	Since the location of fishers relative to the	The percentage of habitat suitable for use by fishers is disclosed in the EA, section
	proposed treatments is not provided, the loss of	3.4.7, and is small enough to conclude that effects to fisher would not be
	large diameter trees in the commercial logging	significant. A more detailed study of fisher habitat use is not needed to reach this
	areas has an unknown, but potentially high,	conclusion.
	probability of negatively affecting them. More	
	detailed study of fisher habitat use in the	
	proposed treatment areas is needed prior to	
	suggesting simply that they will "likely move to	
	another part of their home range while the	
	activity is taking place".	
CN-133	The fact that fishers typically have large home	It is a well-documented fact that fishers do have large home ranges (EA, section
	ranges is potentially problematic. BLM states on	3.7.1) and the well-spaced nature of treatment locations leads directly to the
	p. 63, "fire suppression, road building, and timber	conclusion that the proposed treatments can be expected to have no significant
	harvest throughout the Wildlife Analysis Area	effect on the fisher population in the area as most habitat suitable for fisher use will
	have resulted in habitat modification and	remain unchanged post project implementation.
	fragmentation and have changed the distribution	
I	j. agcaaaaacccagca the alstinuation	

	the Wildlife Analysis Area." Without specific information on the use of late successional habitat by fishers in the proposed action areas,	
	the increase in fragmentation due to commercial logging that could clear cut many 4-acre size openings in the forest cannot be assumed to be	
	harmless to fishers.	
CN-134	The BLM EA fails to justify the loss of northern spotted owl (NSO) habitat by proposing a plan to encroach, disturb and damage significant NSO habitat without adequate study, using conjecture, and based on limited field surveys.	EA conclusions regarding effects to NSO are not based on conjecture. Extensive field surveys over the last few years have been conducted to meet USFWS NSO Survey Protocol standards (EA, Appendix A.1.9 Issue 1). In addition, all proposed treatment units have been assessed on the ground by wildlife biologists to document their current fitness for use by NSOs and to predict their post-treatment suitability for use by NSOs.
CN-135	The EA fails to justify loss of fisher habitat and fails to address fisher habitat requirements.  Although the pacific fisher can tolerate some fuels reduction, according to wildlife biologists there is a need to maintain a 60% canopy cover and large and/or deformed trees they can use when resting, which is inconsistent with the alternative goals listed in Table 2-1 of the EA.	Effects of proposed treatments to fisher and their habitat is well documented in the Bear Grub EA.  Fishers do not necessarily require 60% canopy cover to make habitat useful for their various life stages. More important is the retention of snags and deformed trees which is supported by guidance in the Bear Grub EA for both commercial and non-commercial activities.(EA, Appendix B.1.4, Appendix B.3.3)
CN-136	The EA does not consider the impact of heavy thinning and group selection logging on regional connectivity for wildlife. In particular, the canopy reduction proposed in the Bear Grub Timber Sale will impact connectivity for late successional species such as the Northern spotted owl, Pacific fisher and gray wolves that have all been documented in the planning area.	Effects of thinning and group selection treatments are considered in the EA (section 3.7, Appendix A.1.9). The relatively small size and dispersed spacing of proposed treatment units will not result in a significant change in connectivity on the landscape of the Bear Grub project. The majority of habitat within the Wildlife Analysis Area will remain untouched and thus continue to serve as connectivity corridors for a variety of wildlife species.
CN-137	The Bear Grub EA failed to fully analyze the impacts to pollinators through ground disturbance activities associated with commercial logging operations in the timber sale portion of the Bear Grub project. When ground disturbance	Effects to pollinators associated with commercial logging operations would be anticipated to be immeasurably small. Most pollinators are associated with open habitats: meadows and open woodland. Few pollinators would be anticipated to be impacted by commercial logging because the conifer forest stands proposed for logging do not tend to have significant floral resources upon which pollinators are

	is addressed in the Bear Grub Decision Record it	dependent for their survival. Conifer tree species are wind pollinated and do not
	should include information regarding ground	require the services of pollinators of any sort, thus they are a poor habitat for
	nesting pollinators that can be impacted by	pollinators to inhabit.
	ground disturbance.	
CN-138	The BLM cannot properly analyze for NSO if the	The BO, which is an agency to agency consultation document, (Formal Consultation
	BO has not been completed and released by	on the Medford District of the Bureau of Land Management's FY20 Batch of
	USFWS.	Projects that May Affect the Northern Spotted Owl and its designated Critical
	The Biological Opinion for the Bear Grub VMP has	Habitat (Reference Number 01EOFW00-2020-F-0508)) has been completed and
	not been completed and was not made available	referenced for the analysis of effects to NSO. The BO is authored by US FWS, and is
	for the public to review during the EA comment	not a BLM document. Please contact the FWS for a copy of the BO. The BA, written
	period. We believe this information regarding	by the BLM, is located on the project ePlanning website.
	impacts to endangered species and their habitat	The completed BO did not change the proposed actions or analysis in the EA.
	is relevant to the public and their ability to	
	provide substantive comments on this project.	
	Please extend the public comment period until 30	
	days after the Biological Opinion is released.	
CN-139	123-4 DW) All project planning should be stopped	
	until the BO is complete and has been fully	The BO (Tails #: 01EOFW00-2020-F-0508 ) has been completed and utilized for the
	considered internally as well as externally	analysis of effects NSO. NSO CHU and its overlap with proposed treatment units can
	through the vehicle of an EIS. This cursory	be found on pages 74 and 76 (Maps 1 and 3) of the BO (FY 20 Batch BA).
	dismissal of the importance of this issue – by	
	failing to include USFWS' assessment, much less	
	even a map of where harvest units overlay critical	
	habitat or the location of	
	nesting/roosting/foraging habitat proposed to be	
	downgraded or removed by this project –	
	absolutely mandates this EA be returned to the	
	drawing board.	
CN-140	In contravention of the RMP, the agency admits	It is unclear what this comment is referring to. Complete surveys for NSO were
	that it has not and does not intend to survey the	conducted in the planning area to standards set forth in the USFWS NSO Survey
	planning area for spotted owls prior to	Protocol (2012) (EA, Appendix A.1.9 Issue 1). These surveys were completed in 2020
	implementation. (ROD/RMP 30.) It states that all	and thus reflect the most recent information possible.
	of this was done in the RMP EIS process – but in	

	analysis of owl habitat in the Bear Grub planning area. In actuality here, the agency will be flying blind into this harvest. It has no idea where owls may currently be or whether temporal or spatial buffer zones need to be implemented. By extension, the public does not know these things either, and so cannot provide meaningful input on the matter.	
CN-141	The Bear Grub timber sale EA did not analyze or disclose the impacts of the timer sale on Bureau Sensitive wildlife species in the project area "in detail."	The Bear Grub EA analyzed effects of proposed treatments on Bureau Sensitive Species to the extent required. (EA, section 3.7)
CN-142	161-2 DW) This is part of a repeated pattern in which the EA fails to provide site-specific analysis or information. For example, the EA does not list the location of NSO Nesting-Foraging-Roosting (NRF) stands that will be affected by the planned logging and road construction. It also fails to outline any measures to protect NSO habitat from encroachment by Barred Owls, despite stating that:The last two years of annual reports for this study area [the South Cascade Demography Study area, located approximately20 miles east of the Bear Grub project area]indicated a decline in the spotted owl population and an increase in barred owl detections (Dugger et al., 2019, Dugger et al., 2020, Lesmeister et al., 2019, Lesmeister et al., 2020), which supports the overall spotted owl population decline predicted in the PRMP/FEIS.(A-23)	See Map 1 and Map 3 (pages 74 and 76) of FY 20 Batch BA See response to comment 58-12 above for discussion of the implementation of Recovery Actions 10 and 32 with regard to protecting the existing NSO population against increases in the barred owl population.
CN-143	LSR logging will preclude or delay the development of northern spotted owl habitat in	See Silviculture section of EA for LSR post-treatment projections, section 3.3.6. As well as the conclusion in section 3.6.4 that all action alternatives would help to

	the planning area in both the long and short	move the treated acres of LSR toward the type of complex forest structures desired
	term.	for this land use allocation without delaying this development by more than 20
	<ul> <li>Commercial timber harvest will have lasting</li> </ul>	years.
	effects on northern spotted owl habitat	
	conditions in the Planning Area.	
CN-144	The EA failed to adequately analyze direct and	An analysis of effects to Pacific fisher appears in the EA in section 3.7, Issue 6.
	indirect impacts to Pacific fisher populations and	
	habitat. It also failed to consider the importance	
	of the planning area for connectivity and as a	
	source population. The analysis in the Bear Grub	
	VMP EA regarding impacts to the Pacific fisher is	
	inadequate See spreadsheet for more info.	
CN-145	Project prescriptions will dramatically reduce	"Thermal cover" is not an issue of concern for any Special Status Species known to
	canopy cover and created group selection	occur within the planning area. "Thermal cover" is a metric commonly applied to
	openings throughout the landscape degrading	habitat for big game species (e.g. deer and elk). Big game species do not have
	the quality of thermal cover habitat affecting	protected status within the planning area. "Thermal cover" is not used as a metric
	wildlife habitats, populations, prey sources,	for NSO or Pacific fisher.
	reproduction and survival According to	
	standards for thermal cover the retention of 60%	
	canopy cover is required, along with more	
	interior closed canopy conditions. These	
	conditions will not be met following proposed	
	logging treatments, especially as proposed in	
	Alternative 2 and Alternative 3. The loss of	
	thermal cover will impact winter range values,	
	reduce available nesting, resting, and denning	
	habitat for a variety of species and lead to	
	potential population declines. These issues were	
	not addressed in the Bear Grub VMP EA.	
CN-146	The Bear Grub VMP EA failed to consider or	The Siskiyou Mountains Salamander ( <i>Plethodon stormi</i> ) is not present within the
	disclose the impact of project activities on the	project area. This species is restricted to habitats west of the Little Applegate River
	Siskiyou Mountain Salamander. Stand conditions	and south of the Applegate River. This range is well documented and may be
	such as closed canopy (over 70%), habitat	viewed in any amphibian field guide for this area. The two references would not
	complexity, and large, shade producing trees, and	assist the decision maker since they would not apply to this project.

	dense understory growth are common	
	characteristics of Siskiyou Mountain Salamander	
	habitat (Ollivier, et al. 2001 & Olson. 2007).	
CN-147	The BLM should have included the helicopter	In Appendix B.1.15, Map B-1 was added to the EA to show the haul routes in
	landing locations on a map and their proximity to	relation to the helicopter landings.
	haul routes available for winter haul.	

### Attachment 4:

References for the Decision Record, FONSI, and Response to Comments.

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Cascade Siskiyou National Monument. Bureau of Land Management, Medford District, September 30, 2013. 63 pp. <a href="https://www.blm.gov/or/districts/medford/plans/files/botanyBA.pdf">https://www.blm.gov/or/districts/medford/plans/files/botanyBA.pdf</a>

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United States Department of the Interior, Bureau of Land Management. (2016). Recreation management area frameworks for the Medford district. Medford, OR. <a href="http://www.blm.gov/or/plans/rmpswesternoregon/rod">http://www.blm.gov/or/plans/rmpswesternoregon/rod</a>

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